



FINAL
January 2015

Summary Report

HARFORD COUNTY MASTER PLAN



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INTRODUCTION

Located in northeastern Maryland, Harford County (“County”) is the sixth most populous county in the State. Based on Maryland Department of Planning (“MDP”) data, the County’s projected population will reach 254,650 by 2015.

The County has an area covering approximately 437 square miles making it the 11th largest County in Maryland. Originally formed in 1773 through a divestiture from Baltimore County, Harford County has a charter form of government with elected leadership including a County Executive and a seven member County Council (“Council”)¹. Other elected positions that are purely County funded include the Sheriff and Register of Wills. The Clerk of the Circuit Court and States Attorney are also elected but funded by the State of Maryland (“State”).

As currently constituted, the nine member School Board is a body of six elected members and an additional three members appointed by the Governor². Functions that directly report to the County Council include the Office of the County Auditor, Board of Health, Cultural Arts Board, Harford Cable Network, Office of the County Attorney and People’s Counsel, and Zoning Appeals Board.

A Director of Administration reporting to the County Executive is responsible for daily operations of the County. Thirteen Departments are fully funded by the County. Eleven additional Departments under State law are funded partially or wholly by County appropriation.

To provide necessary government services to its citizens, Harford County currently employs over 1,500 personnel. The County utilizes over 8.4 million square foot of space for political leadership, administration, and client contact; Schools; Courts; Public Safety; Health services; maintenance, and other functional activities.

Despite the difficulties imposed by the recession that began in 2008, the County has continued to maintain its AAA bond rating. This is reflective of a fiscally conservative management approach to County affairs.

¹ In December 1972, the County enacted a Charter providing for home rule, which created the current form of County government. <http://www.harfordcountymd.gov/history.cfm>

² This form of the school board was formed pursuant to Senate Bill 629 effective July 1st, 2009.

Project Purpose

There are many competing demands for scarce resources made all the more difficult with the ongoing challenging economic environment. To continue providing necessary services, the County has determined that a broader, systemic, and forward-looking strategy is necessary to most efficiently utilize existing facility related resources and identify future requirements.

A direct outcome of this is establishing a reasoned priority of needs for capital and operating budget planning purposes. Equally important, this approach establishes a framework that will provide a consistent, living process to evaluating ongoing requests for facilities, leases, and related future expenditures.

Included Department and Agencies

This project involved the following Departments and Agencies including:

- Harford County Government:
 - All Departments excluding Water & Sewer.
 - Sheriff's Office.
 - State's Attorney's Office.
 - Circuit Court.
 - Elections.
- Harford County Public Schools.
- Harford County Public Library.
- Harford Community College.
- Harford County Health Department.
- Harford County Volunteer Fire Companies.

Jacobs Project Scope

Against this backdrop, Jacobs Engineering, Inc. ("Jacobs") in association with DeJong Richter and Grimm+Parker Architects (collectively known as the "Jacobs Team" or "Project Team") was engaged to prepare a long range County Wide Facilities Plan (also referred to as "Master Plan" or "Facilities Master Plan") for the previously identified Departments and functions. Importantly, this Master Plan has a high-level focus and forms an overall basis for future detailed planning of specific projects.

In summary, focus areas include:

- Develop a high-level Facilities Master Plan that identifies current and future requirements for the next ten years.
- Become familiar with County facilities and identify opportunities to optimize the use of existing and available properties, share resources through joint use to affect common objectives, and streamline redundant functions.
- Conduct a physical and functional evaluation of existing County facilities to assess deferred maintenance needs and suitability for current and future use.
- Develop recommendations that respond to County requirements.
- Create a framework and living process that allows for maintaining the currency of the information and action plan as assumptions and requirements change over time.

Report and Information Organization

This facility master plan is organized as follows:

- Summary Report that generally presents the process by which the work was accomplished, major results, and appendices that are directly relevant to the report.
- MAPPS™ database that includes facility condition information, operational assessments of facilities evaluated, drawings where available, and other information.
- Additional supporting information that includes other items such as State of the Facilities report, pilot study reports, presentations with preliminary findings, decision briefings, and the like.
- Prioritization Tool, which is an EXCEL based decision model that works in conjunction with the MAPPS™ database.

Given the volume of the material and information gathered, the bulk of the detailed information is stored in electronic format for easy retrieval.

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SUMMARY WORK PROCESSES

Introduction

A major intent of this project was to develop a consistent, repeatable, and independent approach to identifying requirements for capital investment planning. To accomplish this, the Jacobs Team utilized several interrelated systemic processes to gather and analyze information in an unbiased manner, with each step building off the last.

Importantly, this process was performed to provide an independent third party assessment of current operations as well as future requirements.

The following section briefly reviews the overall four-step work plan utilized to implement the project. It also generally discusses the prioritization process used to rank projects, as well as the Pilot Report presented to the Steering Committee prior commencing with evaluating the entire portfolio. Additional information regarding these work processes can be found in the appendices of this report.

Overall Process

As summarized in Figure 1, four major steps were utilized to implement the required scope of work. These steps include:

- Facility Condition, Functional, and Needs Assessment.
- Identifying the Portfolio of Available Facilities.
- Scenario Planning / Analysis.
- Developing Recommendations.

The following pages outline the goal of each step and how the work was performed.

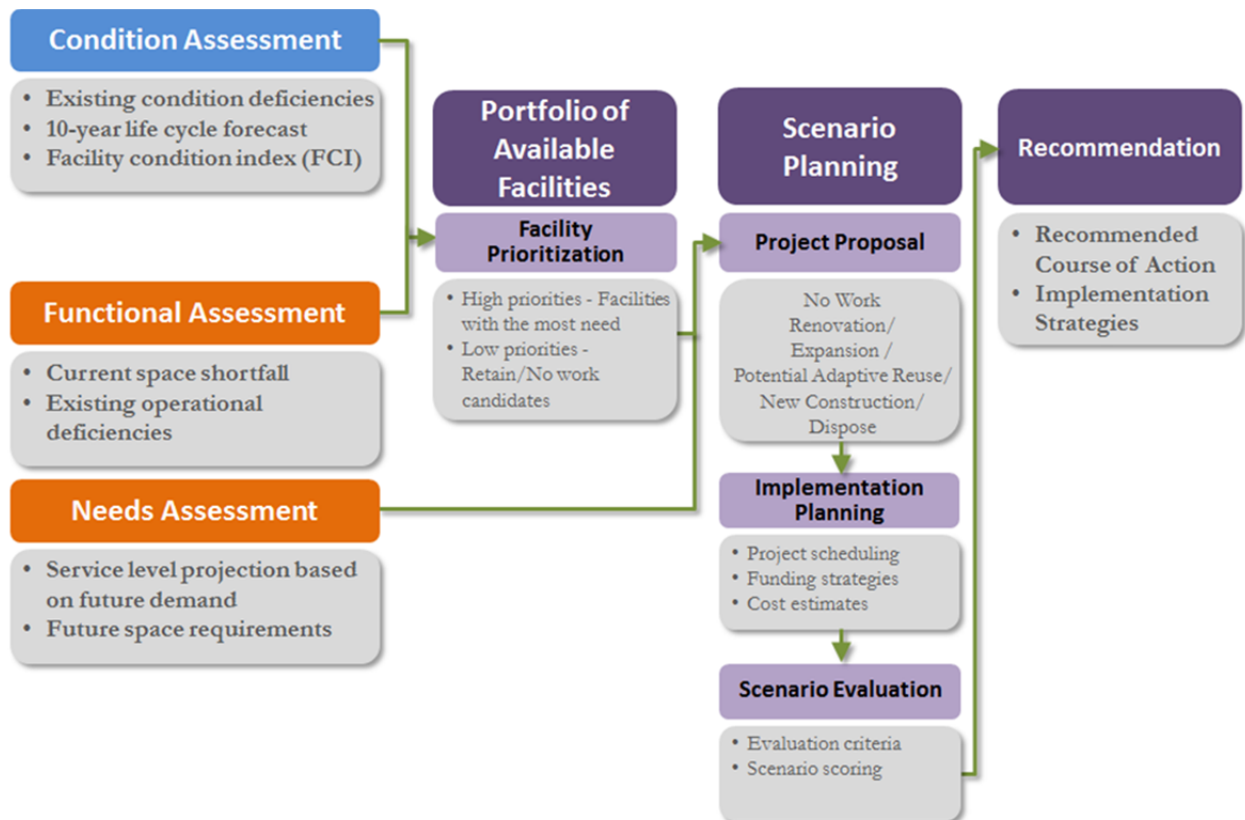


Figure 1: Overall Study Process

Condition Assessment: Condition assessment focused on physical building and system deficiencies. Three teams composed of specially trained architects and engineers systematically evaluated each facility through a standardized, consistent process. These teams were continuously deployed from late January to April 2014. Leased facilities were specifically excluded from this part of the project, as the County is generally not obligated for maintenance and sustainment of these. Information gathered by these teams is contained in the MAPPS™ database and is summarized in the “The State of the Facilities” report, which is a companion document to this summary report.

Functional Assessment: Functional assessment focused on how existing leased and owned facilities met functional and operational requirements. This assessment evaluated how a facility meets or enables a Department or function in meeting its mission requirements. This functional assessment was performed by a team of content specialists with relevant experience in each facility type. This team was separate from that involved with the aforementioned condition assessment.

As part of the evaluation process, the Project Team identified industry practices and standards, and in the case of the schools, educational specifications, to serve as independent benchmarks for the functional assessment. Compliance with these standards was evaluated through field assessments of each facility, which took place from late March through May 2014. References to these standards can be found in the Summary Functional and Operational Reports in the appendices. Application of these standards for specific facility types is contained within the aforementioned prioritization tool.

Importantly, leased facilities were evaluated under the functional assessment as they are directly involved in service delivery.

A more detailed discussion of this specific data gathering process can be found in the appendices of this report, in the “Functional Analysis Process and Methodology” Section.

Needs Assessment: In parallel with the condition and operational / functional assessments, a high-level needs assessment was also performed to provide an estimate of future requirements based on projected facility demand. Demand is driven by multiple factors including demographics, legal mandates, changing service delivery expectations, technology, and the like. The team involved with the functional assessment performed this analysis.

A discussion of the specific data gathering process for this is found in the appendices.

Portfolio of Available Facilities: Functional and condition assessments were integrated to determine those facilities which should be retained, needed repair or renovation, potentially suitable for adaptive reuse, or disposed of.

Scenario Planning / Analysis: Ultimately, these assessments informed scenario planning / analysis, which considered a range of project options to meet County requirements. This analysis was facilitated through a prioritization methodology and prioritization tool that integrates physical, operational, and other requirements to rank projects by need. A summary discussion of this methodology and associated tool is found in the appendices of this report.

Analysis results were briefed to County personnel and Steering Committee in a series of onsite work sessions during early June 2014. The purpose of these briefings was to validate and confirm

findings as a basis to proceed with developing potential alternatives to address issues and requirements. Each of the presentations can be found in the project folder, as companion documents to this report.

The Jacobs Team's work plan anticipated a second charrette in early July, 2014 to meet with the same participants in small group sessions to review potential options and any additional analysis prior to developing budget recommendations. Based on discussions with the County, the second charrette was not implemented and the Jacobs Team was directed to proceed with recommendations based principally upon the scoring methodology and prioritization tool.

Recommended Course of Action: A recommended course of action to meet these requirements along with a proposed implementation strategy was developed. This implementation strategy took into account the limitations imposed by the County's debt affordability cap. Results were briefed to the County in July and again in August 2014. This summary briefing can be found in the project folder, as a companion document to this report.

Based on the August 2014 briefing, the Jacobs team was directed to prepare a summary report, which was provided in draft form in September 2014. *The draft report was amended based on comments received from the County in November and December 2014.*

Prioritization Process

As previously noted, all facilities in the County's portfolio including Schools were prioritized in an objective and quantifiable manner to determine those facilities with the greatest need. These facilities may require work ranging from major renovation, expansion, through complete replacement. Facilities with the least need can continue to function with minimal repair or improvement.

Information gathered from the condition and functional/operational facilities assessments was used to populate an EXCEL based scoring / prioritization tool. This information was loaded into the tool through a series of data entry sheets as well as a direct linkage to the MAPPS™ database. As projects are addressed and implemented, the tool provides a highly flexible means to update overall County and Departmental priorities for management decision making.

Figure 2 presents a summary flow chart that provides a summary overview of the prioritization process.

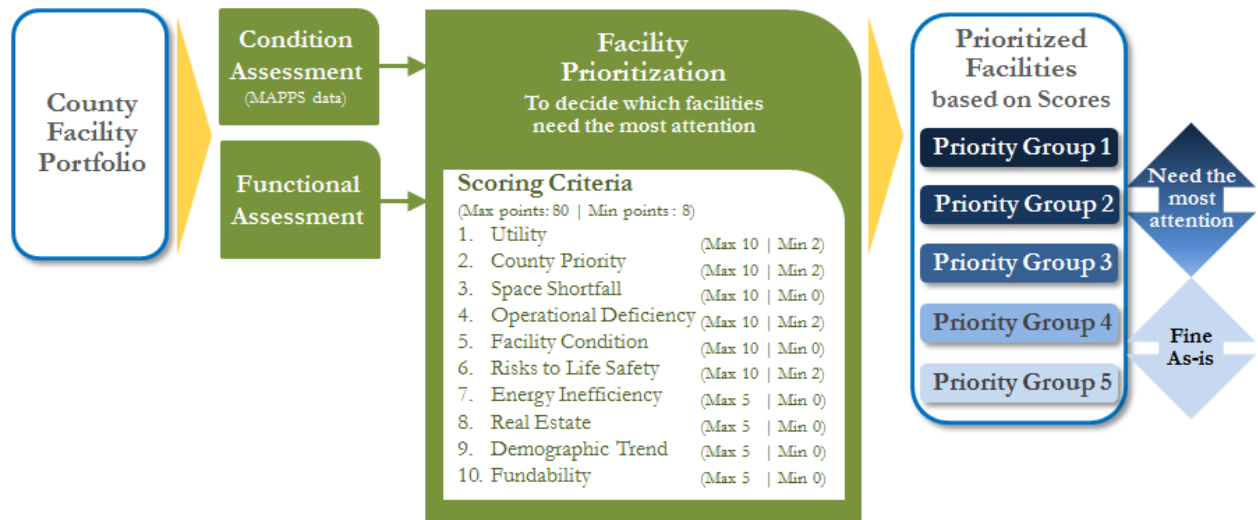


Figure 2: Prioritization Process

Major criteria for the prioritization process and associated EXCEL based scoring tool include:

- **Utility** - A measure for how many people the facility currently serves within the County. 10 points – maximum, 2 points – minimum.
- **County Priority** – Indicates priorities within various facility types in relation to the County’s stated goals and objectives. 10 points – maximum, 2 points – minimum.
- **Space shortfall** – Indicates how short the facility is on space to carry out its mission. 10 points – maximum, 0 points – minimum.
- **Operational deficiency** –Indicates inefficient functional space adjacencies and any deficiencies with tools/equipment at a facility. 10 points – maximum, 2 points – minimum.
- **Facility Condition Index (FCI)** – General indicator of a building physical condition. 10 points – maximum, 0 points – minimum.
- **Life Safety** – Indicates risks to life safety within a facility. 10 points – maximum, 2 points – minimum.
- **Energy Inefficiency** – Indicates the level of energy inefficiency at a facility. 5 points – maximum, 0 points – minimum.
- **Real Estate** – Indicates property ownership. 5 points – maximum, 0 points – minimum.
- **Demographics** – Indicates population growth at a facility location or in its service area. 5 points – maximum, 0 points – minimum.

- **Fundability** – A measure of how likely a facility will receive funds. 5 points – maximum, 0 points – minimum.

Based on this scoring model, each facility can have a maximum ranking of 80 points. Higher scores indicate more need either physically and/or operationally and should warrant initial or earlier consideration. Conversely, lower scores indicate a facility is in better condition and/or is better supporting daily operations.

Seventy-five percent of the total weight of these criteria is associated with the first six criteria. Although generally summarized in this section, detailed discussions of the criteria are found in the appendices of this report. While the aforementioned criteria provide a general framework for comparing facilities Countywide, each facility type was evaluated against relevant industry standards. For example, library standards were not used to evaluate Court facilities.

References to these industry standards can be found in the “Departmental Summary Functional and Operational Analysis” sections in the appendices of this report. Implementation of these standards can be found in individual worksheets in the prioritization /scoring tool.

Additional discussions regarding the functionality of the prioritization / scoring tool can be found in a stand-alone training manual, which is a companion document to this report.

Pilot Study

As part of the project scope, a pilot study on a sample set of six County facilities was conducted prior to fully deploying the condition, functional, and needs assessments teams. Specific outcomes of this study included:

- Establishing and tuning communications between the County and Jacobs Team.
- Establishing and tuning County and Jacobs Team work processes prior to assessment of County facilities included in this project.
- Presenting and fine-tuning information to be gathered during the broader assessment of County facilities included in this project.
- Validate the prioritization process and associated tool.

The six facilities in the pilot study are presented in Figure 3 and include:

- Darlington Public Library Facility, 1134 Main Street, Darlington.
- Harford Community College Facility, 401 Thomas Run Road, Bel Air.
- Havre de Grace Middle School Facility, 401 Lewis Lane, Havre de Grace.
- McFaul Community Center Facility, 525 West MacPhail Road, Bel Air.
- Sheriff's Headquarters Facility, 45 South Main Street, Bel Air.
- Whiteford Volunteer Fire Company Facility, 1407 Pylesville Road, Whiteford.

The condition assessment pilot was conducted in November 2013 on these six County facilities. Results including an introduction to the MAPPS™ Database were presented to the County in early December 2013, and again in January 2014. The Steering Committee provided comments in both large group and small group work sessions. Based on this, the Jacobs Team was authorized to proceed with condition assessment of the entire portfolio of facilities under its project scope.

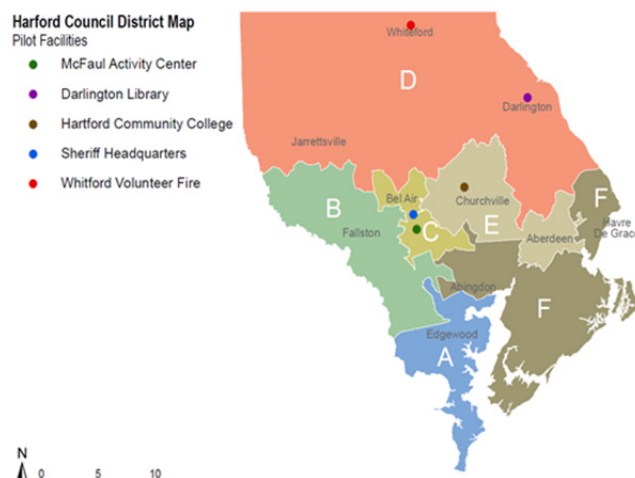


Figure 3: Location of Pilot Project Facilities

The operational / functional assessment was similarly conducted in February and early March 2014³. In late March 2014, the Jacobs Team presented its findings and the prioritization model. The Steering Committee approved this second report and the prioritization model, and authorized Jacobs to move forward with functional and operational assessments of the overall portfolio.

The Harford County Master Plan pilot study, *Pilot Functional Assessment Report – Draft*, can be found as a standalone document, which is a companion to this summary report.

³ This split start date was due in part to extremely bad weather which prevented work from being completed, as well as splitting the contract into two phases with the second having a delayed start date.

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SUMMARY FINDINGS

Introduction

The following section presents major findings that are material to developing a long-range facility strategy. Summary discussions for each Department / facility type can be found in appendices of this summary report, with detailed information in the MAPPS™ database, and in companion documents.

Public Schools and Harford Community College Represent Bulk of Portfolio

Of the 8,429,948 SF of owned property evaluated, Harford County Public Schools (“HCPS”) and Harford Community College (“HCC”) represent nearly 81% of the entire owned facility portfolio equating to 6,814,990 SF.

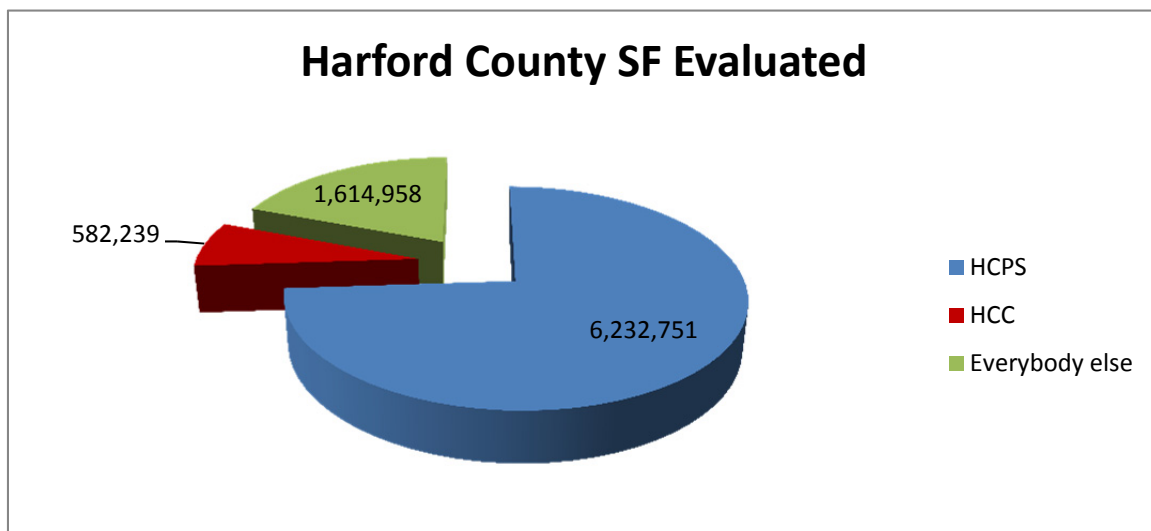


Figure 4: Total Owned Facility Area by Use in 2013

The estimated current undepreciated replacement cost of the owned portfolio is approximately \$2.902 billion. HCPS and HCC facilities represent 80% of this amount totaling \$2.322 billion.

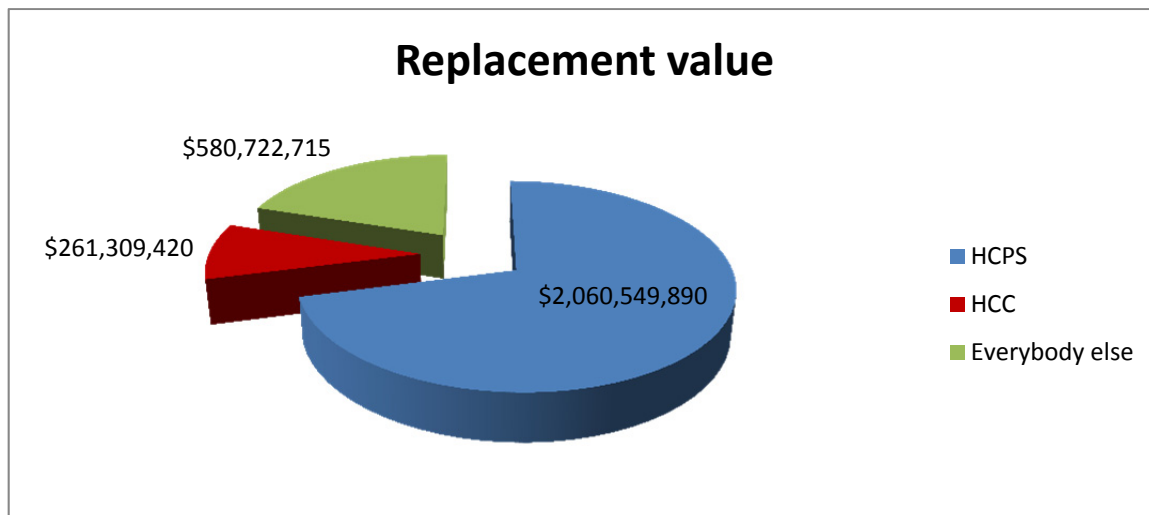


Figure 5: Total Owned Undepreciated Replacement Facility Value by Use in 2013

High Costs for Not Addressing Facility Maintenance

Deficiencies specifically related to bringing facility infrastructure and building systems to original level of function are currently estimated to be \$265,172,900 for the entire portfolio. This will increase to \$336,265,756 by 2018 and \$576,212,000 by 2023 if not systematically and consistently addressed.

Importantly, addressing these deficiencies does not account for improvements necessary to accommodate additional space, modernization, or new facilities necessary for meeting current and future program needs.

HCPS facility deficiencies in aggregate represent about 86% of the total current deficiency cost of the entire portfolio. Similarly, five-year deficiencies in aggregate for all HCPS facilities are \$277,694,829 representing about 82% of the entire portfolio⁴. Again, these deficiencies do not take into account improvements or enhancements necessary to address programmatic requirements. These are summarized in Figure 6.

⁴ The data presented here represent all HCPS facilities evaluated under Jacobs project scope. A more refined and nuanced analysis was subsequently prepared specific to the schools to account for buildings and structures that would not necessarily be renovated or expanded. This would include for example trailers, out structures and similar facilities.

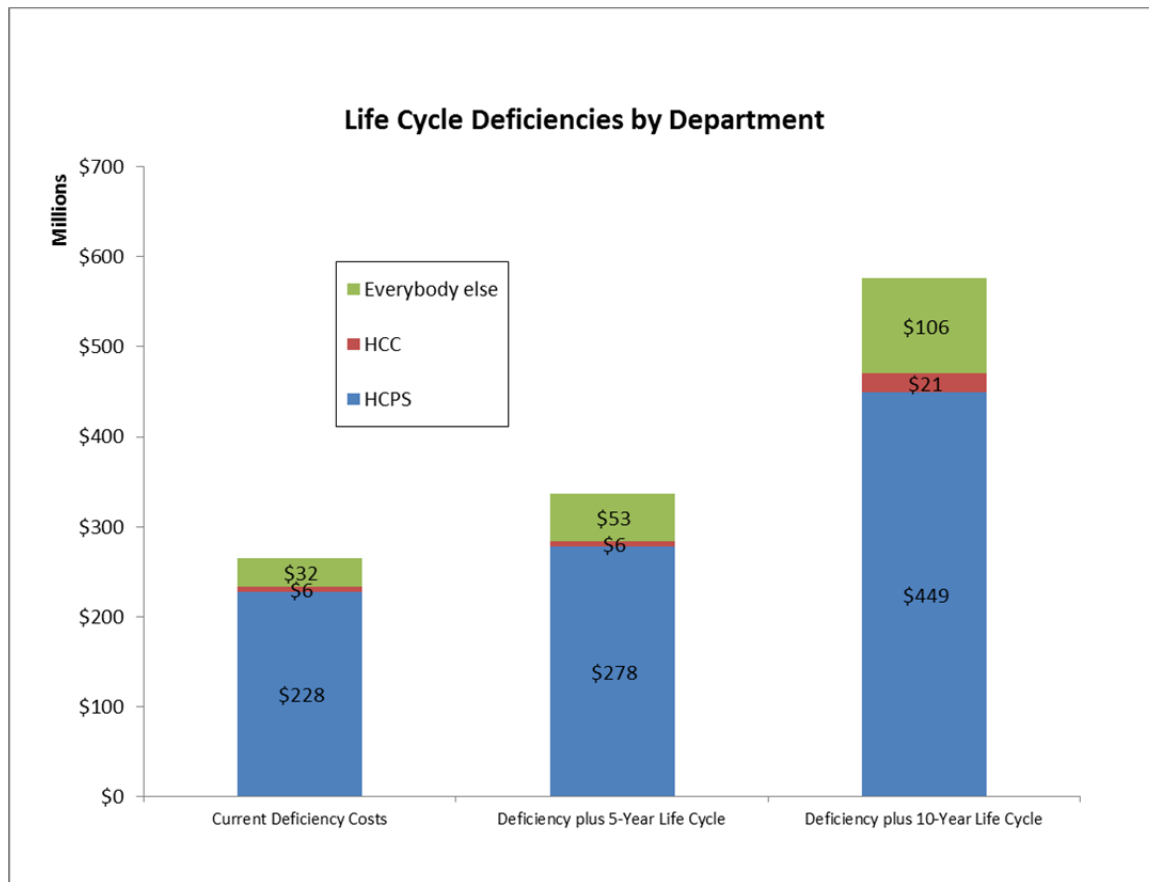


Figure 6: Facility Deficiencies by Use

On a per square foot basis by use, current deficiencies for all HCPS, HCC, and all other County uses are respectively \$36.52, \$9.57, and \$19.80⁵. These will respectively increase to \$72.04, \$36.46, and \$65.62 by 2023 if not addressed. Figure 7 summarizes this information.

⁵ Ibid.

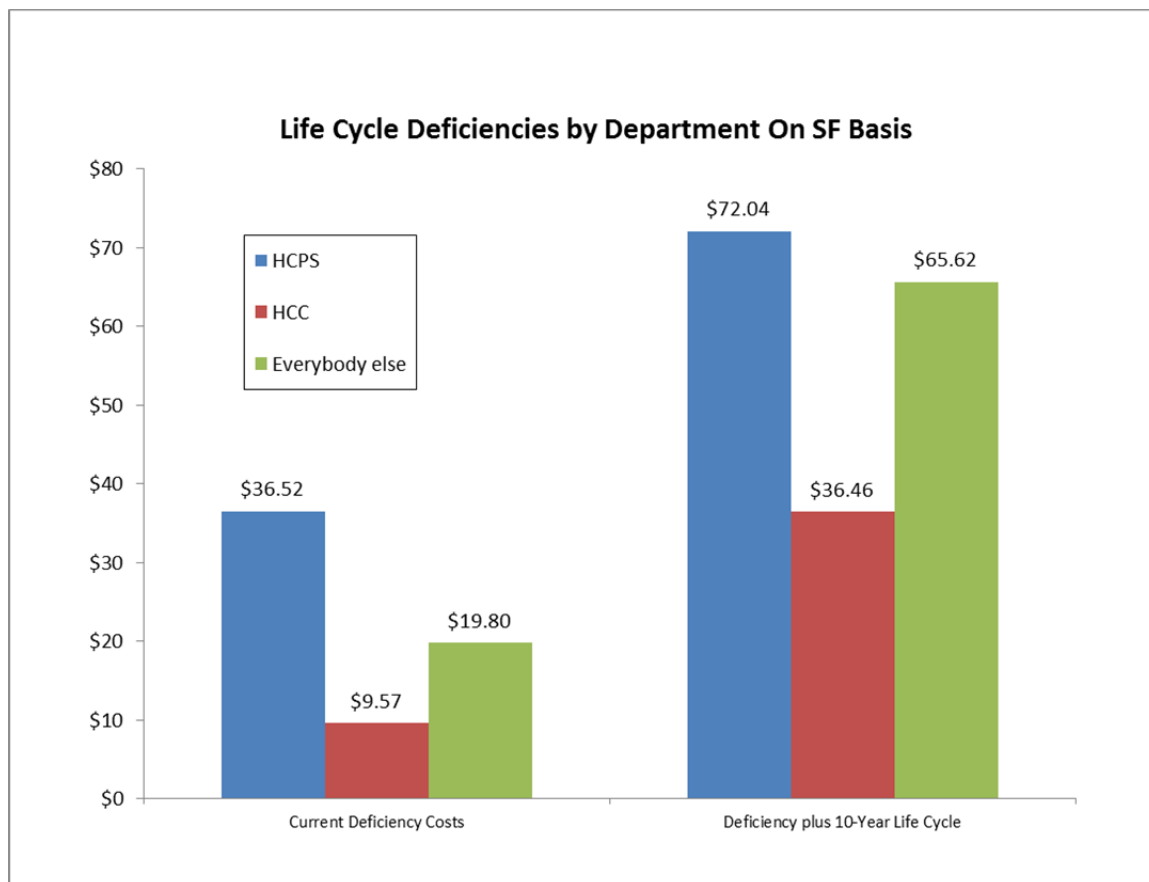


Figure 7: Facility Deficiencies by Use on a Per SF Basis

Facilities are Aging

The County's owned facility portfolio in aggregate is relatively old with an average age of 40 years. In general, Government facilities are designed and constructed for a 40 to 50 year lifecycle. Many County owned facilities are approaching or near the end of their lifecycle.

HCPS and HCC facilities are slightly younger with Departmental averages of 38 and 37 years respectively. Owned facilities used for all other County operations and activities have an average age of 44 years. Of note, certain County buildings are very old including the historic Court House, which was built in 1850.

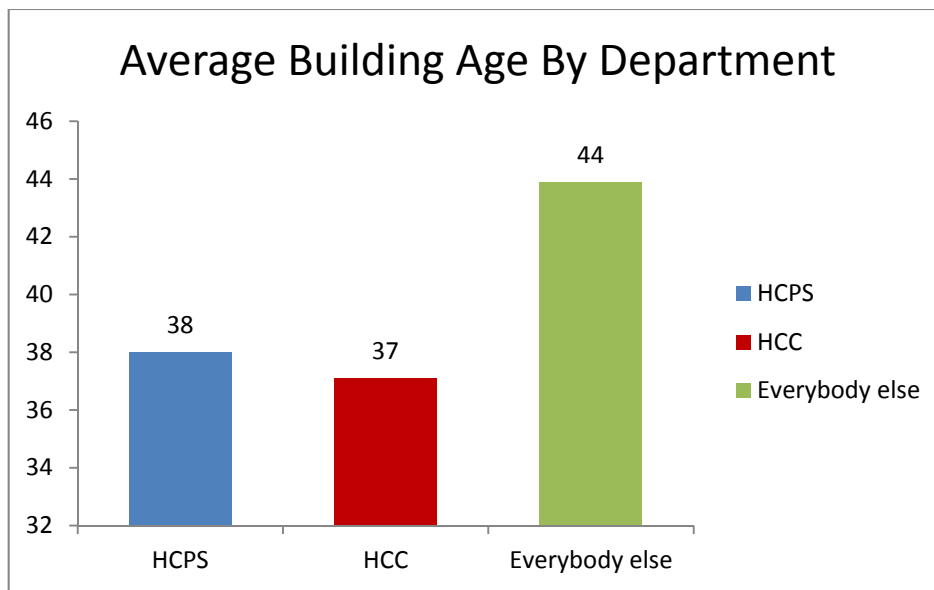


Figure 8: Facility Age by Use as of 2013

Facility Condition Index Trending to Low Average to Poor Condition

The Facility Condition Index ("FCI") is a dimensionless, general measure of a building's physical condition and allows for comparison across different facility types. This is an industry-recognized formula that is calculated by dividing the total cost of repair into the total replacement cost. Importantly, this measure does not take into account operational functionality, the need for additional space, and similar factors.

If physical deficiencies are not addressed, the physical condition of County facilities will worsen. By 2023, the FCI's will increase to 0.22 for HCPS, .08 for HCC, and 0.18 for the remaining County owned facilities, as indicated in Figure 9. For HCPS and remaining County facilities in particular, this would indicate low average to nearly poor condition.

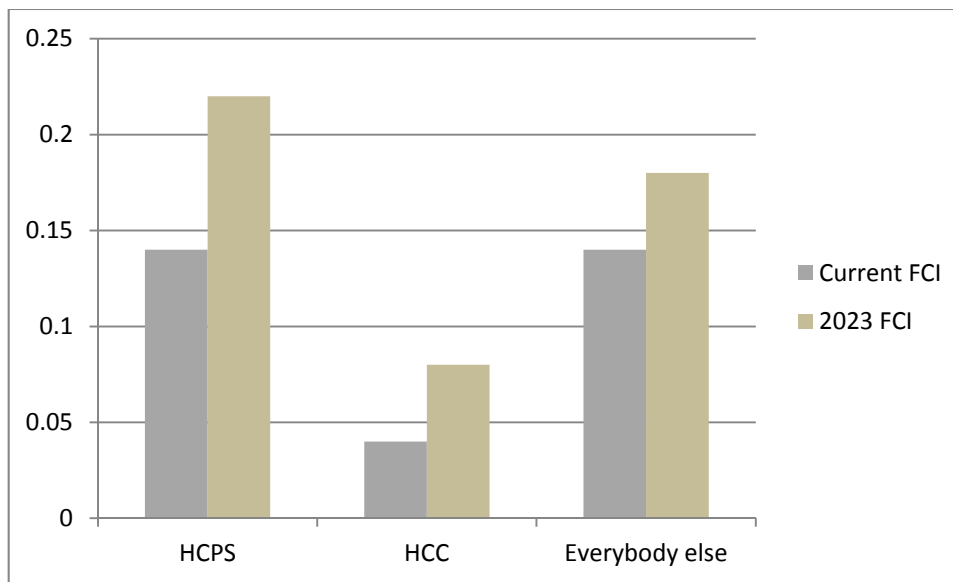


Figure 9: 10-year FCI Change if Physical Deficiencies are not addressed

When reviewing the FCI data, specific facilities could be in very poor physical condition and have a concomitantly high FCI. Alternatively, the replacement cost of a facility may be very high so while it may require substantial capital investment to address physical deficiencies, the FCI would nonetheless be relatively low. A good example of this is the Courthouse, which will require over \$7 million to address five-year deficiencies, but has a very high replacement cost.

Information specific to each Department and for specific facilities can be found in the companion “State of the Facilities” document and by querying the MAPPS™ database.

Substantial Funds Being Allocated to Leasing Facilities

The County annually leases 167,975 SF for mostly non-educational uses including State’s Attorney, Sheriff, Department of Health, and others. Total base rent excluding operating expenses is \$2,100,818 annually⁶. This equates to an average base rent of about \$12.51 per SF annually. Operating expenses would be in addition to this. Table 1 summarizes this information.

⁶ Rent information excerpted from that provided to the Jacobs Team by the County.

Table 1: Leased Facilities Used by Harford County

Use	Location	City	Area	Base Rent	LeaseType	Annualized Rent
Office	109E and 115D North Main Street (Lease-3 Suites)	Bel Air	5,600	\$8,776.56	Monthly	\$105,318.72
Office	15 North Bond Street (Lease)	Bel Air	10,000	\$11,721.50	Monthly	\$140,658.00
Office	319 South Main Street (Lease)	Bel Air	4,625	\$6,443.70	Monthly	\$77,324.40
Office	1321 Woodbridge Station Way-Comm.Action Agency & Health Dept. (Lease)	Edgewood	21,584	\$37,114.23	Monthly	\$445,370.76
Health Dept	2204 Hanson Road-Dental Clinic (Dual Payee)	Edgewood	2,240	\$3,614.88	Monthly	\$43,378.56
Office	11-15 South Main Street (Lease)	Bel Air	5,030	\$2,459.72	Monthly	\$29,516.64
Elections	133 Industry Lane (Lease)-Election Office	Forest Hill	16,200	\$10,286.29	Monthly	\$123,435.48
Office	1201 Technology Drive (Heat Center) (Lease)	Aberdeen	520	\$600.00	Monthly	\$7,200.00
Office	10 South Main Street (Lease)	Bel Air	1,800	\$2,100.00	Monthly	\$25,200.00
Office	101 South Main Street-Suites 100,102,104 & SAO (Lease)	Bel Air	16,078	\$3,263.26	Monthly	\$39,159.12
Office	101 South Main Street-Family Court Svcs (Lease)	Bel Air	16,078	\$9,273.61	Monthly	\$111,283.32
Office	101 South Main Street-Lower Level Sheriff's Office (Lease)	Bel Air	16,078	\$7,208.00	Monthly	\$86,496.00
Office	110 South Main Street (Lease)	Bel Air	2,040	\$2,550.00	Monthly	\$30,600.00
Office	112 Hays Street (Lease)	Bel Air	3,754	\$6,068.21	Monthly	\$72,818.52
Office	125 North Main Street (Lease)	Bel Air	6,300	\$10,613.11	Monthly	\$127,357.32
Office	23 North Main Street (Lease)	Bel Air	9,800	\$13,653.62	Monthly	\$163,843.44
Office	5 North Main Street (Lease)	Bel Air	3,000	\$11,685.00	Quarterly	\$46,740.00
Law Enforcement	2201 Commerce Road-Sheriff/CID	Forest Hill	16,200	\$15,963.37	Monthly	\$191,560.44
Office	132-A Industry Lane-Sheriff (Lease)	Forest Hill	6,546	\$7,098.11	Monthly	\$85,177.32
Office	19 Newport Drive (Lease)	Forest Hill	3,380	\$2,527.98	Quarterly	\$10,111.92
Office	2335 Rock Spring Road (Lease)	Forest Hill	6,000	\$3,500.00	Monthly	\$42,000.00
Health Dept	120 Hays Street-Health Department-Administration/Medical	Bel Air	26,878	\$22,723.05	Quarterly	\$90,892.20
Health Dept	1007 Edgewood Road-Health Department-Storage #1 & #2	Edgewood	400	\$448.00	Monthly	\$5,376.00

The long-term capitalized value⁷ of these leases is about \$26.3 million equating to about \$156 per square foot (SF). Although the base rent per SF is substantially less than the replacement costs for comparable new County owned facilities, the County must annually appropriate a significant ongoing expense. It also does not reflect the inherent operational costs and barriers to organizational efficiency associated with a dispersed workforce.

Importantly, leasing facilities is useful when there is a short-term demand for space that does not support investing in a permanent owned facility. Similarly, leasing also provides a viable alternative when grant funds prohibit use for building facilities or contractual terms require the County to provide facilities.

⁷ Assumes an 8% capitalization rate. Capitalized value is a common measure of the present value of a long term, ongoing multi-year cash flow.

Public Safety and Judicial Facilities are Functionally Obsolete

Circuit Court

As currently utilized, the Circuit Court facility is undersized by at least 36% to meet the requirements imposed on it. It does not have the operational and organizational adjacencies and circulations necessary for a modern trial court building. Of particular note, cross circulations exist between in custody detainees, judge's chambers, and staff work areas. Due to insufficient space, Court Administration, Clerk of the Circuit Court, and Register of Wills operations are physically dispersed at multiple locations, which impairs efficient daily operations.

Significant safety issues were identified including blocked or narrowed emergency egress paths. Storage of excessive numbers of files has created a potential fire hazard. Judges and other senior court leadership do not have access to secure parking creating a personal hazard. By 2018, the Circuit Court building will require at least \$7 million to address physical, non-programmatic deficiencies.

Sheriff Headquarters

There are significant adjacency and safety issues due to interior renovations for functions not intended in the original design. This has resulted in a poor overall operational workflow and inefficient operations. Administrative functions cannot be consolidated into a single location without expanding the facility. Possible code and egress issues were observed that potentially create a high risk to life safety. By 2018, at least \$4.63 million will be required to address physical deficiencies with building systems.

State's Attorney

The State's Attorney is currently headquartered at the Circuit Court House and is subject to the physical and operational issues endemic to that facility. Of particular note, in custody detainees who are docketed for the large courtroom in the historic structure must circulate through the State's Attorney work area. Similarly, witnesses and those participating in Grand Jury activities must wait in a stairwell for lack of proper waiting space. Emergency egress routes were severely impinged with furniture, equipment, and other items.

Equally important is that State's Attorney operations are currently split between three leased facilities and the Court House, which significantly impairs efficient daily operations. Efficiencies could be gained if District Court, Juvenile, and Headquarters functions were consolidated at a single location. Similarly, Family Law and Domestic Violence, along with CASA and the Court Administration's Family Law Unit should be consolidated into a single location.

Coverage Gaps Existing in Emergency Response

Twenty percent of the County population is outside an 8 min drive time of the existing volunteer fire companies. Within the County's development envelope, about 50 percent of the population is outside a 4 min drive time including 68% of Bel Air's population, 35% of Abingdon's population, and 23% of Joppa's population. Importantly, these are driving times from each station and does not account for time necessary for volunteers to arrive at the station.

Figure 10 and Figure 11 visually present these coverage gaps.

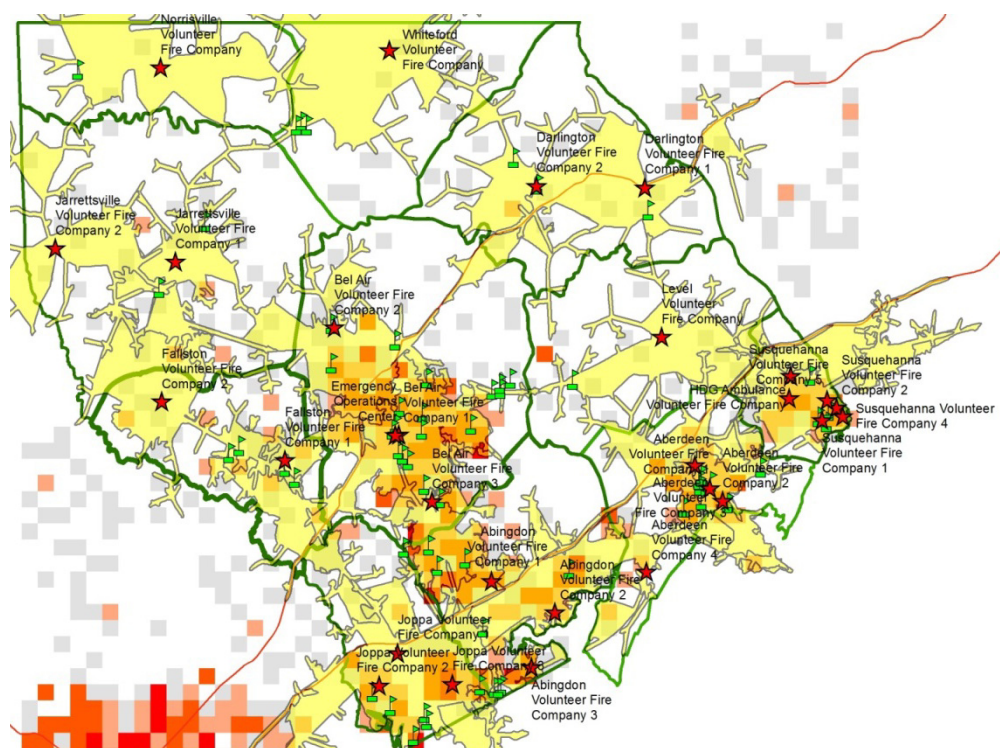


Figure 10: Overall Coverage Map for the Entire County

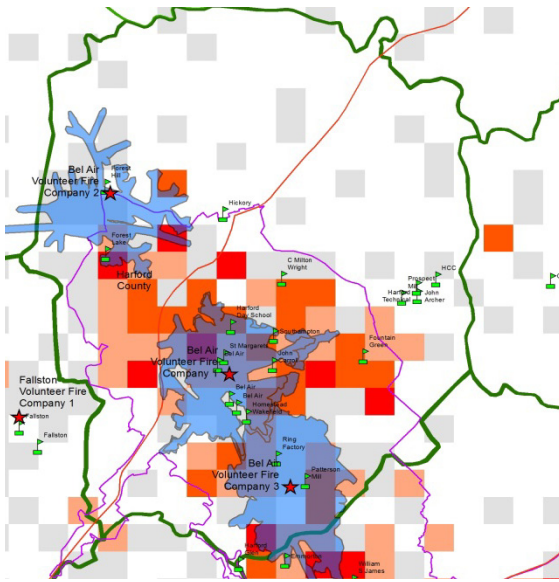


Figure 11: Coverage Map for Bel Air

New Community Health Care Facility Needs to be Augmented with Satellite Locations

Operations at 34 North Philadelphia Boulevard, Aberdeen, 1 North Main Street, Bel Air and 253 Paradise Road, Aberdeen no longer function effectively to carry out their mission due to deteriorating building conditions and deficient layouts/design.

The new Southern Resource Center building will help the Health Department alleviate the operational deficiencies found in their leased facilities when it is completed. This new \$23 million, 73,426 SF facility is well designed to meet the needs of the Health Department, and will centralize many service delivery and administrative activities of the Health Department at a single location at the southern edge of the County. The building is being planned to house all the Health Department units and storage units with the exception of the Environmental Health Department, Infants and Toddlers and Teen Diversion. The building is currently already designed and partially funded, with the anticipation for full funding in 2015, before construction can commence.

Although the new Southern Resource Center building's design will be functional and efficient, access for residents from the other parts of the County may be inconvenient. The Southern Resource Center is located at the southeastern part of the County in Edgewood. A drive-time

analysis of its location reveals access to less than 20% of the County's population within a 10-minute drive, although the location is close to the County's Health Professional Shortage Area (HPSA). Other residents living in the northern and western parts of the County will have more difficulty accessing services given the location of the Southern Resource Center building, especially those dependent on public transportation.

Given the demographic findings, we recommend developing a satellite location in Bel Air in the near term due to its central location to complement the Southern Resource Center building. A new centralized government administrative complex in Bel Air that has been identified as one possible option in this Master Plan, will be a good candidate for co-locating these satellite services. An additional satellite location in Aberdeen should be considered in the future due to the growing population there. Services that would be good candidates at the Bel Air satellite location include Addiction Services (close to Courthouse), WIC (relocation from Aberdeen Community Center), HIV and Healthcare for the Homeless (satellite location in Bel Air; primary location will remain in the Southern Resource Center Building).

Substantial Space Shortfalls Exist for Major Programmatic Functions

Libraries

Libraries in aggregate across the County currently have a utilization of 0.7 SF per capita as compared to the State recommended 1.0 SF per capita requirement. Darlington (77% shortfall), Havre de Grace (40% shortfall), Aberdeen (37% shortfall) have significant space shortfall issues. Similarly, Edgewood (23% shortfall), Bel Air (19% shortfall), and Abingdon (18% shortfall) also have high space shortfalls. While there is a space shortage, there are duplications in service, which can be reduced by consolidating select libraries.

Parks and Recreation

Parks and Recreation currently has 0.83 SF per capita for activity centers and ideally needs to be at 0.8 to 1.1 SF per capita. Population growth will soon result in shortfalls relative to these benchmarks. While within the range of offering a high level of service at the County level, there is a significant difference in the square foot per capita within the service areas, providing some areas with a much higher level of service than others do.

Additionally, not all Activity Center space is adequate to service the population within the service area. McFaul Community Center (37% shortfall), Forest Hill / Hickory Activity Center (36% shortfall), and Edgewood Recreation Center (34% shortfall) have significant space shortfall issues. Parks & Recreation – Administration (23% shortfall) also has high space shortfall.

Senior Centers

The northern area of the County cannot support a standalone senior center based on population density and current participation rates. Additionally, older model facilities including Aberdeen and Edgewood, are short on activity (gym) space.

Significant Programmatic and Functional Issues Exist for HCPS

Thirty out of sixty-one HCPS sites have space shortfalls greater than 15 percent. The majority of those are elementary school facilities.

The presence of sufficient electrical outlets in teaching spaces is going to continue to be an issue in the future as the program moves towards a digital one-to-one curriculum. Several facilities, especially those that are open plan have major operational deficiencies due to lack available outlets in the classroom.

Homestead – Wakefield ES, William Paca – Old Post Rd. ES, and Youth’s Benefit Primary – Intermediate ES currently are operating on a split (primary + intermediate) facility model. This creates many programmatic challenges as well as safety and security issues.

The current John Archer School has inadequate facilities for the dedicated special educational program it serves. The facility is not in an optimal location to include the students in a regular school environment as necessary.

Havre de Grace Middle and High Schools are also relatively small programs when compared to the other high schools and middle schools. The facilities are also in marginal physical condition.

Several small elementary school facilities have enrollment or capacity less than 400 students and are not optimal from a programmatic or operating standpoint. Alternatively, other elementary facilities also have significant space shortfalls.

Several support elements do not directly apply to the primary mission of education, but do have high operational costs that do affect the District's ability to deliver on its mission. These include Hickory Annex, Center for Educational Opportunity, and Forest Hills Annex.

Several elementary facilities have a permanent kindergarten building that is not directly attached to the main facility. This raises many concerns because students are exposed to the elements when they leave their building to go to the main facility for specials, as well as security concerns.

Obsolete Facilities Drive Inefficient Space Utilization

The County has substantial leadership and administrative operations located at 212 South Bond Street, 220 South Main Street, 1311 Abingdon Road (Transit Center), and many other locations. The physical configuration of many of these facilities drives poor utilization of the total space available, with some Departments having either too much space with utilizations of approximately 319 USF per person while other Departments have as little as 99 USF per person.

Other facilities, such as 220 South main, have significant life safety issues and require significant capital investment to address this concern, and yet future renovations cannot be implemented without major modifications as required by the Fire Marshall. Equally significant is the hazard created by pedestrian traffic walking between 220 S. Main and 212 S. Bond.

The bulk of these County office and office hybrid operations are located throughout Bel Air and elsewhere, many of which are located in leased space.⁸ These operations include:

- All Agencies – 220 S. Main Street existing County owned building
- All Agencies – 212 S. Bond Street existing County owned building
- Community Services Administration – 319 S. Main Street existing Leased facility
- Office of Aging – 145 N. Hickory Avenue existing County owned building
- Human Resources – 112 Hayes Street existing Leased facility

⁸ The office environment within this master plan refers to sites where employees work on a daily basis within an office-building environment, where agencies work mainly within their own departments, and where agencies seldom interact with the public. The office-hybrid environment within this master plan refers to sites where employees work on a daily basis within an office building environment, where agencies work mainly within their own departments, but interact with the public (County residents) frequently, and where agencies require the use of specialized spaces within their work environment, such as a workshop or a cashier counter.

- Housing Agency – 11-15 S. Main Street existing Leased facility
- Risk Management – 125 N. Main Street existing Leased facility
- DPW – 15 N. Bond Street Leased facility
- Facilities & Operations (possibly Animal Control) – 611 Fountain Green Way County owned building
- Health Department (Administrative functions only):
 - 1 N. Main Street Leased facility
 - 120 S. Hays Street Leased facility
 - 1321 Woodbridge Station Way Leased facility
- Parks & Recreation (Administrative functions only):
 - Edgely Grove Farm
 - 702 North Tollgate Road
- Sheriff's Department (Administrative functions only):
 - 45 S. Main Street County owned building
 - 101 S. Main Street Leased facility
 - 23 N. Main Street Leased facility
 - 110 S. Main Street Leased facility
 - 2201 Commerce Street Leased facility
 - New, proposed Central Precinct

The very low base rents the County pays make it difficult to justify investing capital in government buildings as a purely economic matter on a cash flow basis. However, the highly dispersed work force as well as issues associated with facilities such as 220 South Main create a potential opportunity to achieve operational efficiencies through a consolidation into a central County Government Center.

County Population will Grow Relatively Slowly

The County is divided into six Districts (A-F) as illustrated in Figure 12. The population represented in each district is approximately 16 to 17 percent of the total County population. From 2010 to 2018, Council districts B, C, and F that include Abingdon, Havre de Grace, and Bel Air areas are projected to be the top three districts by population.

Between 2013 and 2018, total County population is anticipated to grow at about 0.92% annually representing a net increase of about 1,560 persons annually.

A more detailed demographic analysis can be found in the appendices.

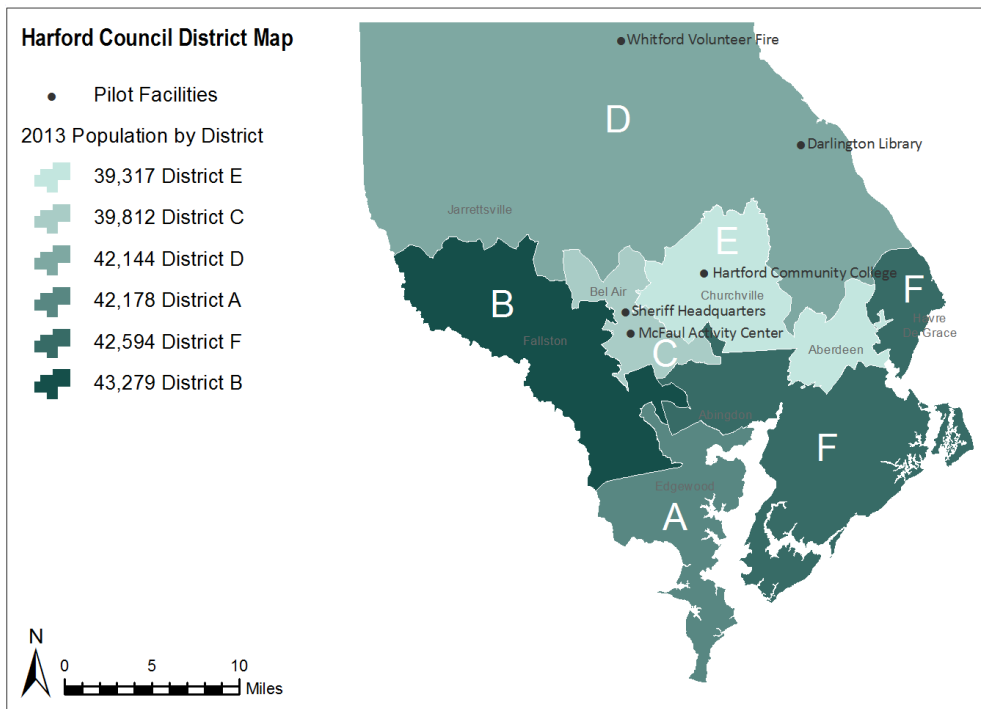


Figure 12: 2013 Population by each Council district

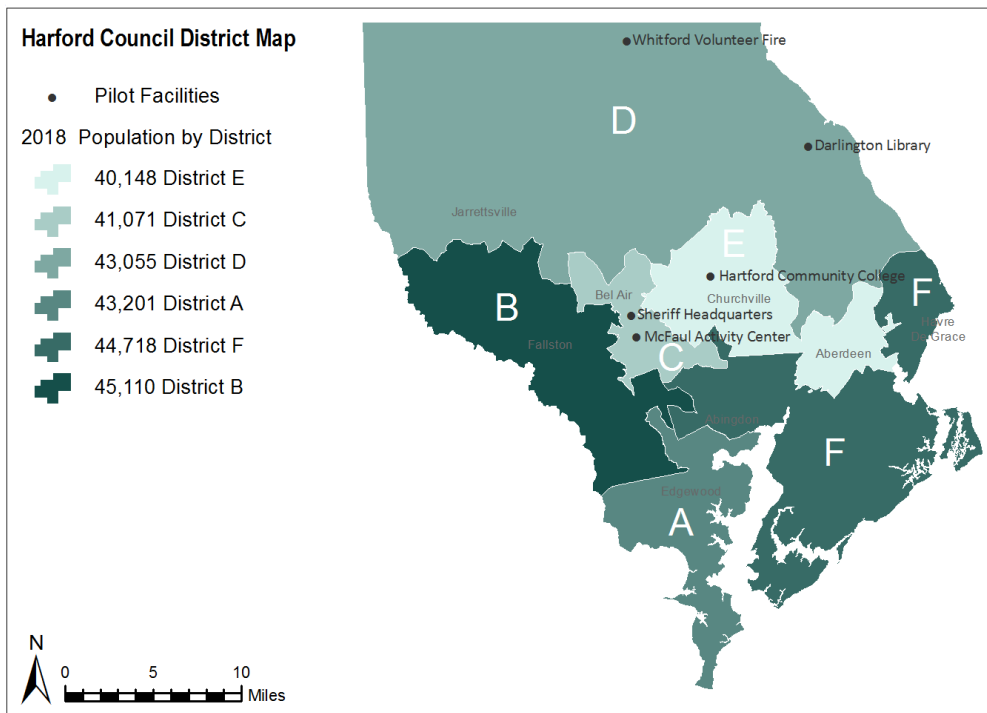


Figure 13: 2018 Population by each Council District

Substantial Opportunities for Joint Use

The County has embraced an approach where facilities are jointly used by multiple Departments. Through this approach, it is effectively able to leverage its assets and stretch scarce resources to provide a high degree of services to its constituents. Specific areas where this was observed include:

- **Harford County Public Schools and Parks and Recreation:** Existing partnership allows Park and Recreation Council Districts across Harford County to utilize Public School facilities after school hours and school sponsored activities.
- **Harford County Parks and Recreation and Senior Centers:** Through this existing partnership, there are joint use facilities including Havre De Grace and Roni Chenoweth. Although there are separate facilities in Edgewood, seniors also have access to the Edgewood Activity Center.
- **Harford County Parks and Recreation and Harford County Public Libraries:** There is a joint Use facility in Norrisville.

This approach should be continued in the future and expanded where possible. Potential specific examples include:

- **Senior Center and Parks and Recreation Joint Use:**
 - Use the Edgewood Activity Center as a joint use center between Parks and Recreation and Senior Center. This will require moving Catholic Charities (currently in the Edgewood Activity Center) to the Edgewood Senior Center.
 - Aberdeen presents an opportunity for a partnership between Parks and Recreation, Library and Senior Center. This facility may also include some Health Department functions.
 - North Harford presents an opportunity to move Senior Center functions to Norrisville Activity Center and Library as well as Whiteford Library.
- **HCPS and General County Government:** The Hickory Annex and Hickory II vehicle maintenance facilities for both HCPS and general County government are in very poor physical condition, not functionally adequate to meet their mission requirements, and present risks to personnel. A new, jointly developed facility to service both HCPS and general government facilities would better leverage capital and operating investments.
- **HCPS and other Uses:**
 - Office the print shop function in a joint County facility

- Consider the addition of a food production center at Forest Hills Annex to provide service to other Departments outside of HCPS.
- Consider joint use of the conference center at HCC for HCPS to use for professional development.

Substantial Opportunities for Adaptive Reuse

Substantial opportunities exist for the potential adaptive reuse of existing facilities or the harvesting of value of underutilized assets. Specific areas where potential opportunities exist include:

- **Potentially Excess Harford County Public School Facilities:**
 - John Archer (67,152 SF)
 - Darlington Elementary (24,237 SF)
 - Center for Educational Opportunity (110,272 SF) – May need for swing space for another school project.
 - Hickory Annex (40,150 SF) – Assess if the site is worth more in an alternative use than the current buildings and improvements.
 - Norrisville Elementary (37,417 SF)
 - Riverside Elementary (55,711 SF)
- **Surface Parking – Bel Air:** There are several large parking lots associated with facilities at 220 S. Main, 212 S. Bond, HCPS Roberty Building, and the Circuit Court. The potential for harvesting value or putting into higher and better uses should be further evaluated for these.

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RECOMMENDATIONS

Introduction

The following section presents recommendations for the top 18 projects flowing from the prioritization process and other factors. Overarching guiding principles are also presented. A complete listing of the prioritization results and an implementation plan is presented in the appendices.

Guiding Principles

The following are overall recommendations and guiding principles that create context for specific actions to be taken.

Adaptive reuse of existing facilities where feasible: While one Department may no longer require space within a particular facility, the space itself may have value in another, adapted use. For example, when the schools build a new facility, the County should consider repurposing the existing, vacated facility

Fund projects that enhance service delivery: Capital should be invested so that government service delivery to constituents is materially improved. Consideration should be given to driving activities into a virtual model where feasible when evaluating options in the capital budgeting process.

Fund projects that provide multiple / joint uses: Multiple joint- use opportunities exist between Parks and Recreation, Schools, Senior Centers, Library's, and for maintenance facilities between schools and general government. This will more fully leverage scarce capital funds.

Perform projects in downtown Bel Air in context of broader urban development: The County has major operations in downtown Bel Air. Surface parking that could be potentially used in higher and better uses to generate economic activity and create a place surrounds most of these facilities.

Consolidate Locations of Government Facilities: The County has administrative and headquarters operations located at 19 facilities, the bulk of which are in Bel Air. Consideration should be given to consolidating these into either single central campus or fewer facilities.

Sustainment of existing facility portfolio is a priority: Given the \$2.9 billion value of the County's facility portfolio, it is recommended to undertake a consistent, systematic long-term asset management plan to maintain the physical condition and operational functionality of this valuable public asset.

Consider reorienting overall priorities when other fund sources are available: Scarce County debt affordability should be leveraged when outside sources of funds such as Federal and the State are available.

Other Actions

Several HCPS projects were planned prior to the start of this project but were nonetheless vetted through this effort. The projects listed below are not in the first priority of the prioritization results. It is recommended that these proceed in the near term due to state matched funding and include:

- **Joppatown High School.** Phased renovation to address condition issues while the school continues to operate. Based on a 2009 scope study, the estimated construction costs is \$32.9 .
- **Havre De Grace Middle and High Schools.** Replace both facilities on the current site and then demolish the existing facilities for athletic fields. Based on a 2013 scope study, the estimated construction costs for this effort are \$80M.

Specific Recommendations based on Prioritization Process

Consistent with processes identified earlier in this summary report, facilities utilized by the County and Schools for their operations were systematically evaluated to determine those having the greatest needs.

Figure 14 presents the overall results of the prioritization process. Eighteen projects were identified as having the most critical needs and warrant the greatest consideration for capital funding. The first cost for the first 18 projects is estimated to be \$336.5 million. Projects in categories two through five were found to have less need and in aggregate represent an additional \$461.6 million in capital investment.

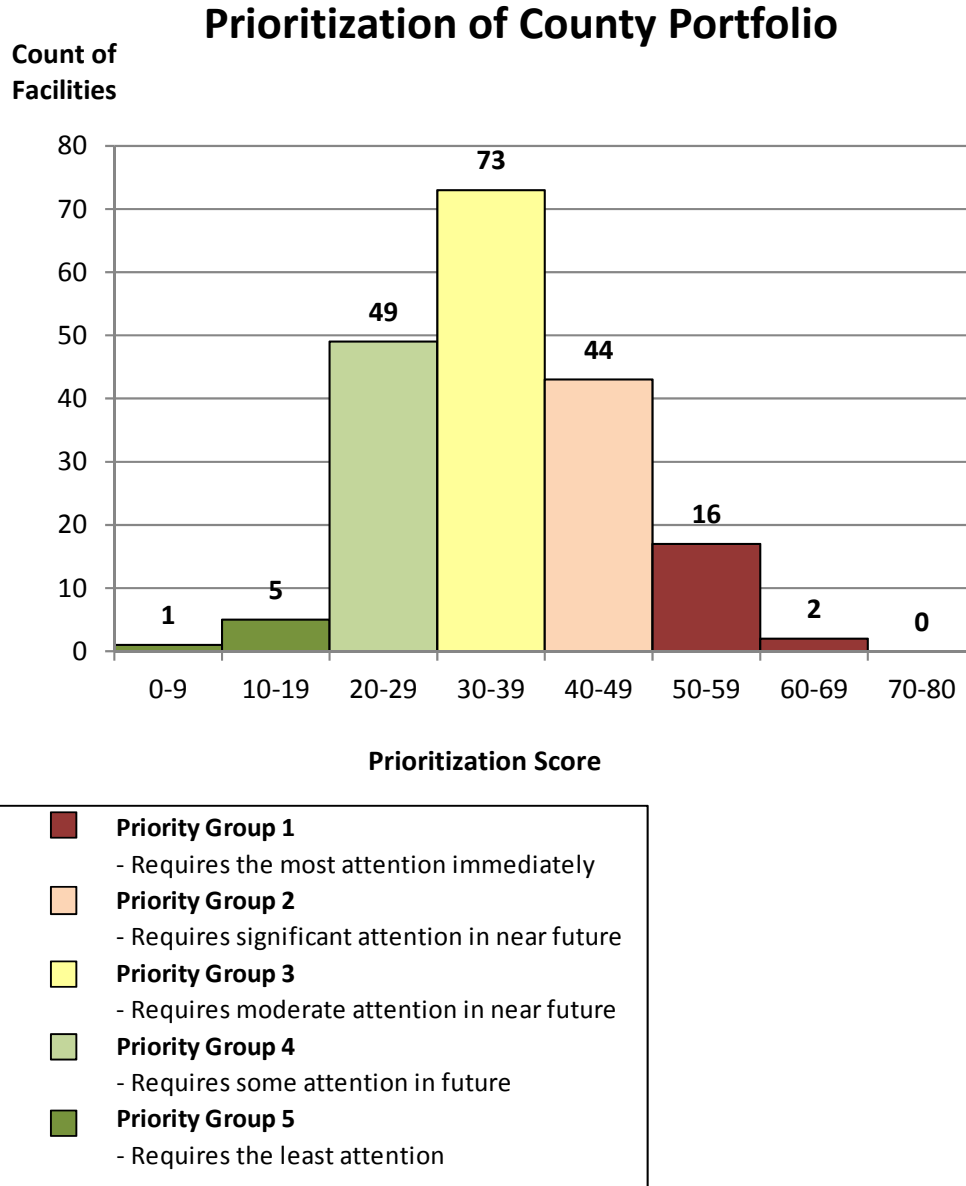


Figure 14: Project Counts by Priority Group

Table 2 further elaborates on the top 18 projects identified through the prioritization process.

These were identified as having the immediate needs along with a recommended course of action.

A ranking list for all County wide facilities by priority is found in the appendices, as is a concept implementation plan.

Table 2: Summary Project List – Priority Group One

Facility Name	Department	Total Score	Risks to Life Safety	FCI	Space Shortfall / Surplus	Final Rank
Circuit Courthouse	Judicial	61	High	0.1923	36%	1
Hickory II - Fleet Maintenance	Dept of Public Works	60	High	0.9976	42%	2
Youth's Benefit Elementary School - Intermediate Building	Schools	59	High	0.3876	23%	3
Homestead/Wakefield Elementary School - Homestead Building	Schools	59	High	0.3412	19%	4
John Archer School/Infants and Toddlers	Multi-Use	59	High	0.3261	-67%	5
Wm Paca/Old Post Rd Elementary School - Old Post Rd ES	Schools	59	High	0.2572	16%	6
Youth's Benefit Elementary School - Primary Building	Schools	59	High	0.1251	36%	7
Sheriff's Headquarters	Sheriff's Office	57	Medium	0.2523	30%	8
Aberdeen Volunteer Fire Company 2	Emergency Operations	57	Low	0.4868	136%	9
Hickory Annex - Public School Facilities	Schools	56	High	0.3597	25%	10
Wm Paca/Old Post Rd Elementary School - Main Building (Wm Paca)	Schools	54	High	0.1585	21%	11
Prospect Mill Elementary School	Schools	54	High	0.1429	23%	12
Hickory Elementary School	Schools	54	High	0.1309	17%	13
Roye-Williams Elementary School	Schools	54	High	0.1151	17%	14
Center for Ed. Opportunity/Teen Diversion	Multi-Use	53	High	0.2656	0%	15
Wm S. James Elementary School	Schools	52	High	0.2456	22%	16
Darlington Public Library	Library	52	Medium	0.4091	77%	17
Fallston High School	Schools	50	Medium	0.3176	3%	18

- 1) **Circuit Courthouse:** As currently utilized, the existing 75,600 SF facility is undersized to meet the requirements imposed on it. It also does not meet operational and organizational adjacencies and circulations necessary for a modern trial court building. Of particular note, cross circulations exist between in custody detainees, chambers, and staff work areas. Significant safety issues were identified including blocked or narrowed emergency egress paths. Storage of excessive numbers of files has created a potential fire hazard. Judges and other senior court leadership do not have access to secure parking creating a personal hazard. By 2018, the circuit court building will require at least \$7 million to address non-programmatic physical deficiencies.
 - a. **Recommendation:** Unless funds are available for a new modern 131,300 SF trial court facility, the existing facility should be modernized and used as a pure trial court facility only. All functions not directly related to daily trial court activities would need to be relocated elsewhere. An additional 39,800 SF will be required for State's Attorney, Family Law, CASA, and related operations. It is recommended to prepare a detailed scope study to address the feasibility of adaptive reuse of the existing facility and an overall master plan including all Court, State's Attorney, Clerk, and Register of Wills operations.
- 2) **Hickory II – Fleet Maintenance:** The facility is too small to meet current operational requirements. A shortage of bay workspace requires working on vehicles outside including in the winter. Lack of storage hinders operations and restricts ability to service additional equipment in the future.

There are multiple material facility deficiencies including no oil/water separator, no overhead crane, undersized service yard, undersized shop bays, not ADA compliant, etc. Significant safety issues exist including roof leaks, no floor drains resulting standing water in shop, poor ventilation, and old electrical wiring. An employee broke their leg last winter due to falling. Over the next five years, at least \$1.032 million will be required to address physical deficiencies.

- a. **Recommendation:** Develop a new modern 45,000 SF Fleet Maintenance facility to replace the existing operation. This new facility should be a joint use between the County and School system to gain operational efficiencies. Based on the projected size of a new combined facility and associated supporting parking requirements, it is unlikely the existing site will support this operation. A detailed scope study and master plan of the site (shared with DPW Admin and 2nd District) would need to be conducted to confirm. Additionally, an analysis of the existing site in an alternative use should be considered as well.
- 3) **Youth Benefit Elementary School – Elementary and Intermediate Building:** These facilities currently operate as a split upper and lower grades campus, which contributes to a high operational deficiency. The Intermediate building is open plan. The physical condition of both facilities is marginal to poor with FCI's of 0.13 and 0.39. There is a significant space shortfall (23% and 36%) at both facilities.
 - a. **Recommendation:** Replace on same site with one new building and demolish existing buildings after construction. A scope study was completed in 2007. This project would be combined with project number 7.
- 4) **Homestead / Wakefield Elementary School – Homestead Building:** The facility is part of a combined split campus with Wakefield Elementary. It has high operational deficiencies and space shortfalls of 19%. The facility has an FCI of 0.34 and in poor physical condition.
 - a. **Recommendation:** Demolish the existing facility after implementing the Wakefield Addition. Per Scope study, this site will then be used for the Bel Air MS / John Archer addition.
- 5) **John Archer School:** This self-contained special education facility is not suited to the required program. There are significant life safety issues due to hallway storage of durable medical equipment. The facility is in poor physical condition with an FCI of 0.32. The location of the program is not optimal for inclusion in a regular school program as needed.
 - a. **Recommendation:** Vacate and repurpose the existing facility for adaptive reuse. Move program and make an addition at Bel Air middle school. Infant and toddlers (County Program) to move together with John Archer to Bel Air middle school.

- 6) **Wm Paca / Old Post Road Elementary –Old Post Road:** This facility currently operates as a split upper and lower grades campus and this contributes to a high operational deficiency. The Old Post building is open plan. The physical condition of both facilities is marginal with FCI's of 0.26 and 0.16. There are space shortfalls at both facilities (16% and 21%).
 - a. **Recommendation:** Replace on site combining with both buildings. Demolish existing building after construction for playfields. A scope study was completed in 2009. This project would be combined with project number 11.
- 7) **Youth's Benefit Elementary School – Primary Building: See recommendation no. 3.**
- 8) **Sheriff's Headquarters – 45 South Main Building:** This facility is functionally obsolete and has significant adjacency, operational workflow, code, and life safety issues. By 2018, at least \$4.63 million will be required to address physical deficiencies with building systems.
 - a. **Recommendation:** Develop a new 55,000 SF Sheriff's Office HQ facility in downtown Bel Air downtown that incorporates a central precinct and combine other functions currently located in lease space including Records, Family Justice Center, Megan's Law, and CID/Property Management. Consideration should be given to locating this facility with other County Government departments to create a Government Complex.
- 9) **Aberdeen Volunteer Fire Company 2:** This facility is too small for current operation including space shortfalls for apparatus, residential, administrative, and support spaces. It also does not have back up power or EMS support. The building itself needs a new roof, the gas piping is damaged, the underground water tank needs to be replaced, as does the roof.
 - a. **Recommendation:** It is recommended that this facility be replaced. However, a broader analysis of VFC operations indicated that there are coverage gaps in emergency response times. Prior to funding any further VFCs, an overarching plan should be prepared to address these coverage issues.
- 10) **Hickory Annex – HCPS:** The facility is jumble of out buildings that has significant operational, space, and life safety issues. The bus service garage is inadequate and is not equipped with lifts or pits. There are life safety issues related to stairs and egress. The parking lot is used both for cars and for buses. The facility is at least 25% short of space.
 - a. **Recommendation:** Develop a new modern 45,000 SF Fleet Maintenance facility to replace the existing operation. This new facility should be a joint use between the County and School system to gain operational efficiencies. A detailed scope study and master plan of the site (shared with DPW Admin and 2nd District) would need to be conducted to confirm. Additionally, an analysis of the existing site in an alternative use should be considered as well.

- 11) **Wm Paca / Old Post Road Elementary – Main Building:** See recommendation no. 6.
- 12) **Prospect Mill Elementary School:** This open plan facility has significant functional deficiencies a space shortfall of 23%. The facility is in a growth area of the County.
- a. **Recommendation:** Due to the extreme costs associated with renovating an open plan facility to current standards, this facility should be demolished and replaced with a new one on the existing site.
- 13) **Hickory Elementary School:** Facility is over-utilized and in a growth area of the county. It also has a moderate space shortfall of 17% There is a detached kindergarten outbuilding which is a security concern.
- a. **Recommendation** This facility requires minor renovations. The attendance area should be rebalanced to reduce enrollment. Adjacent underutilized schools include Prospect Mill and Forest Hill Elementary schools. The existing Kindergarten out building should be vacated and considered for adaptive reuse. Through the combination of space reconfiguration during a renovation and reduced enrollment due to a boundary change, the space shortfall may be remedied.
- 14) **Roye-Williams Elementary School:** Although this facility is underutilized, there nonetheless is a moderate space shortfall of 17% of programmatically required space. There are safety issues with mixed bus and car traffic on site. The detached kindergarten out-building located across the parking lot contributes to the facility's functional deficiency.
- a. **Recommendation:** : Renovate the main structure to accommodate prekindergarten and kindergarten now being conducted in the existing out building. The existing Kindergarten out building should be vacated and considered for adaptive reuse.
- 15) **Center for Educational Opportunity / Teen Diversion:** This facility was retired for use as a comprehensive high school and is in marginal physical condition with an FCI of 0.27. It does not have air conditioning. There are three separate programs operating in the facility that do not have clear delineation including Teen Diversion, Alternative Education Program, and Professional Development
- a. **Recommendation:** The existing building should be vacated with programs moved elsewhere. Potential alternatives include an addition to Joppatown or Fallston for the Alternative Program/HCPS (Harford County Public Schools) and Teen Diversion. Harford Community College or the vacated John Archer facility should be considered for Professional Development Space. The existing facility should be considered for adaptive reuse. It is recommended that a scope study be prepared to determine space needs for professional development.

- 16) **Wm S. James Elementary School:** This facility is open plan has significant functional deficiencies and a significant space shortfall of 22%. The facility is in marginal physical condition with an FCI of 0.25. There are traffic issues based on close proximity to the road. A comprehensive HVAC replacement was performed in the summer of 2014 after the facility was assessed.
- a. **Recommendation:** Due to the recent investment in the infrastructure of the facility, consider an open plan conversion to reduce risks to life safety and operational deficiencies.
- 17) **Darlington Public Library:** This facility has a 77% space deficiency and is composed of an older building as well as a modular trailer. The modular building has an FCI of 2.3 percent while the older building has an FCI of 59.6 percent. There are major issues with building systems, particularly in the older structure. The parking lot is used as a driveway to access an adjacent residential property. This facility also services about 4,942 persons of which only 29% are registered at this library.
- a. **Recommendation:** While capital investment in the older facility may address physical issues, the facility is too small and functionally inadequate for its intended purpose. It is recommended that this facility should be closed. Residents within the Darlington service area are an appropriate distance and may access either the Whiteford or Aberdeen/Havre De Grace Library instead.
- 18) **Fallston High School:** This facility is in marginal physical condition with an FCI of 32%. The underground water tank needs to be replaced. The facility is too small to meet current operational requirements.
- a. **Recommendation** The facility has a comprehensive HVAC replacement scheduled for the summer of 2015, which will significantly reduce the FCI. The recommendation is to retain the facility with its current use. Facility renovation and add additional building area in the west wing will address the space shortfall, functional space adjacencies, and life safety issues.

APPENDICES

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FUNCTIONAL ANALYSIS PROCESS AND METHODOLOGY

Introduction

Facilities are one indicator of how an organization goes about accomplishing its mission responsibilities. They can either enable or further the accomplishment of productive work towards these responsibilities, or they can be a hindrance and prevent work from effectively occurring.

Comprehensively evaluating facilities requires both physical and functional evaluations. Physical evaluation focuses on the state of the physical space, including site, envelope and fenestration, building systems, and the like⁹. The functional evaluation addresses how the facility performs in meeting mission requirements.

A general discussion of the functional analysis process and methodology is presented herein.

Process

Non-School Facilities

For the purposes of this project, functional assessment of non-school based facilities involves a five-step process. These steps include:

- Data collection.
- Develop assessment questionnaire.
- Conduct facility walkthrough to assess functional and operational deficiencies.
- Analysis.
- Reporting.

Public School Facilities

While following a similar overall evaluation process, the public schools require that their functionality be evaluated and benchmarked in a different manner than most other County facilities.

⁹ As has been previously noted, physical evaluation is a separate, parallel data gathering process. The results of this analysis can be found in the “State of Facilities” report which is companion to this document and MAPPS™ database.

For benchmarking purposes, schools are evaluated in the context of an educational specification (“ED SPEC”). These ED SPEC’s are developed to meet curriculum and other teaching requirements.

The following summarizes these process steps.

Step 1: Data Collection

The data collection effort took place at several levels including information generally applicable to the entire County, as well as compiling relevant industry standards and best practices for specific Departments. Categories of information are summarized below.

Information Applicable to All Departments

General categories applicable to all Departments include:

- Facility locations.
- Facility site plans.
- Floor plans with space utilization info/Adjacencies.
- Service areas.
- Land use and zoning layer data.
- County owned properties/sites/ Leased facilities.
- Demographic data maintained by the County.
- Aerial images or photos of existing facilities.
- Overall macro-level information regarding existing organization, operations, and vision.
- Mission, current and projected staffing, and operations relationships.
- County long range plan/Master plan.
- Upcoming neighborhoods/future development listing.
- Operating and maintenance costs by each facility type/location
- Existing space standards if available (office or non-office space) by each division/ department/ branch.
- County Budget Plan.
- Consolidated annual financial report (CAFR).

Standards and Best Practices

A major point of emphasis of this project is to provide an independent view of County operations and their impact on facilities. Towards that end, industry standards and/or best practices were

identified and used as benchmarks against which County facilities will be evaluated. These are referenced in the Summary Functional Reports elsewhere in these appendices and applied in scoring / prioritization tool.

Step 2: Develop Assessment Questionnaire

Assessment questionnaires were developed to capture the following elements at a facility:

- Site access/Layout
- Functional space components
- Operational requirements
- Technology
- Safety

Step 3: Conduct Facility Walkthroughs

Walkthroughs of the facilities were conducted using the assessment questionnaire as a guideline to collect information. The focus of the site observation was on current space usage, functionality, and operations.

Step 4: Analysis

As part of the functional and operational analysis, facilities were analyzed for any notable risks to life safety, space, functional, and operational deficiencies. The current deficiencies were determined based on comparing Harford County facilities to industry best practices and standards mentioned earlier in this report. Facilities were then prioritized using an objective set of criteria to identify which have the most need. These criteria are further discussed elsewhere in this report.

Step 5: Prepare Report

Summary findings from this assessment and the result of the prioritization were then prepared.

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FACILITY PRIORITIZATION CRITERIA

Introduction

The overall definition and scoring logic of each criterion used in the prioritization model are described herein. Application of industry standards specific to each facility type can be found in the scoring / prioritization model itself, and associated operational / functional narratives.

Major criteria for the prioritization process and associated EXCEL based scoring tool include:

- **Utility** - A measure for how many people the facility currently serves within the County. 10 points – maximum, 2 points – minimum.
- **County Priority** – Indicates priorities within various facility types in relation to the County’s stated goals and objectives. 10 points – maximum, 2 points – minimum.
- **Space shortfall** – Indicates how short the facility is on space to carry out its mission. 10 points – maximum, 0 points – minimum.
- **Operational deficiency** – Indicates inefficient functional space adjacencies and any deficiencies with tools/equipment at a facility. 10 points – maximum, 2 points – minimum.
- **Facility Condition Index (FCI)** – General indicator of a building physical condition. 10 points – maximum, 0 points – minimum.
- **Life Safety** – Indicates risks to life safety within a facility. 10 points – maximum, 2 points – minimum.
- **Energy Inefficiency** – Indicates the level of energy inefficiency at a facility. 5 points – maximum, 0 points – minimum.
- **Real Estate** – Indicates property ownership. 5 points – maximum, 0 points – minimum.
- **Demographics** – Indicates population growth at a facility location or in its service area. 5 points – maximum, 0 points – minimum.
- **Fundability** – A measure of how likely a facility will receive funds. 5 points – maximum, 0 points – minimum.

Utility

This criterion compares within each facility type, whether a facility provides more utility to people than others. A facility with high utility receives a higher prioritization score.

Utility of a facility is measured by the size of the County overall population the facility serves and by its importance to the local community. A facility is considered providing high utility when a large

proportion of the County's population may be affected and/or the community it serves actively uses the facility. This concept translates into two metrics by which the facilities are rated.

A: Percent Harford County population served by the facility

Rated as High, Medium, Low depending on the population served

B: Other considerations, are defined per facility type as follows:

- Library: Percent people with a library card for a particular facility within the service area. It will be rated as High, Medium, Low.
- Community Center: Attendance rate to community center events
- Office: Space that directly serves the public is rated High; Space with no direct interaction with public is rated Low.
- Schools: Providing community services is rated High.
- The two metrics are combined into a single rating for utility that feeds into the overall scoring system. If B is not applicable, the rating is based on A only. This is illustrated in Table 3.

Table 3: Utility Rating System

		A. Percent Harford County population served by the facility		
		High	Med	Low
B. Other	High	High	High	Med
	Med	High	Med	Low
	Low	Med	Low	Low

County Priority

This criterion compares the priorities of different facility types in relation to the County's goals and objectives. A facility with high county priority receives a higher prioritization score.

The County goals as identified in the Approved Budget In-Brief (FY 2014) include Public Safety, Education, Efficient County Government, Economic Opportunity, Environmental Stewardship, and Quality of Life. These goals translate into the following priorities:

- Law enforcement, fire stations, and EOC are rated High, for supporting Public Safety
- Schools and community college are rated Medium, for being part of Education
- Other facilities are rated Low

Space Shortfall

This criterion measures how much space is lacking at an existing facility based on the current staffing and industry standards. A facility with a large space shortfall or surplus gets a higher prioritization score.

The space shortfall is calculated using the results from the functional assessment. The formula for the calculation is: $[1 - (\text{Space available} / \text{Requirement})]$.

All space measurements are in usable square foot (USF) or Gross Square Foot (GSF), as applicable to each facility type. A negative number indicates a space surplus by convention.

Operational Deficiency

This criterion captures any existing operational deficiency in terms of missing functional adjacencies or tools/equipment based on industry standards. A facility with a high level of operational deficiency receives a higher prioritization score.

This concept is translated into the following two measures.

A: Level of missing functional adjacencies at an existing facility

- To be rated as
 - High (current layout greatly impacts operational efficiency)
 - Low (minor adjacency issues)
 - None

B: Level of missing equipment and tools at an existing facility.

This is applicable to College, Emergency Operations, Health Department, Schools and Sheriff's Office, and rated as High, Low, None

The two metrics are combined into a single rating for operational deficiency that feeds into the overall scoring system. If B is not applicable, the rating is based on A only. This is illustrated in Table 4.

Table 4: Operational Deficiency Rating System

		A. Missing Functional Adjacencies		
		High	Low	None
B. Missing Equipment/tools	High	High	High	Low
	Low	High	Low	Low
	None	Low	Low	None

Facility Condition (FCI)

This criterion measures the overall condition of an existing facility by using FCI which is a widely used indicator derived by dividing the total repair cost by the total replacement cost of a facility. A higher FCI score is associated with a poorer facility condition. A facility with poorer condition (i.e. higher FCI) receives a higher prioritization score. Any facility with a FCI larger than 65 percent is a candidate for replacement.

The results from the condition assessments as presented in MAPPS™ are used for scoring.

Risks to Life Safety

This criterion captures the potential degree of risks to life safety that exists within a facility. A facility with a high potential risk to life safety will get a higher prioritization score.

OHSa Codes that are used to assess this criterion are provided however, this list however is not necessarily comprehensive as Jacobs Project Scope specifically excluded detailed code review..

The results from the condition assessments as well as the data from the functional site visits will inform the analysis. The approach is captured in ratings as High, Medium or Low.

Energy Inefficiencies

This criterion captures the level of energy inefficiency at a facility. An inefficient facility will get a higher prioritization score.

The score is based on the results from the condition assessments. Any facilities that were identified as having the need for replacing HVAC system and windows are rated high level of energy inefficiency. Any facilities that are built within the last five years are assumed to have efficient systems, hence are rated low level of energy efficiencies. All other facilities are rated medium by default.

Real Estate

This criterion captures whether a facility is County or School owned property. Utilizing existing County properties is preferred by the County; hence, an existing County or School owned property will receive a higher prioritization score.

The score is strictly based on the ownership of a facility. County or school owned properties will get all the points under this criterion. Other facilities will get none.

Demographic Trend

This criterion measures the target population growth from year 2010 to 2020 within the service area of a facility. A facility located in an area with population growth will get a higher prioritization score.

Demographic trend is defined as follows:

- Growth: More than 0.92% annualized growth rate, which is the average of Harford County, based on the Harford County demographic trend report
- Status Quo: 0 to 0.92%
- Declining: Less than 0%

Fundability

This criterion captures whether a facility is more likely to be funded. A facility with higher fundability will get a higher prioritization score.

Fundability has been identified as associated with factors such as state funding eligibility, partnerships, etc. Those projects that have access to funding sources outside of the County including State, Federal, grants, or third parties will receive a higher score.

Data Flows

Figure 15 summarizes the general source of data utilized to populate the scoring and prioritization model.

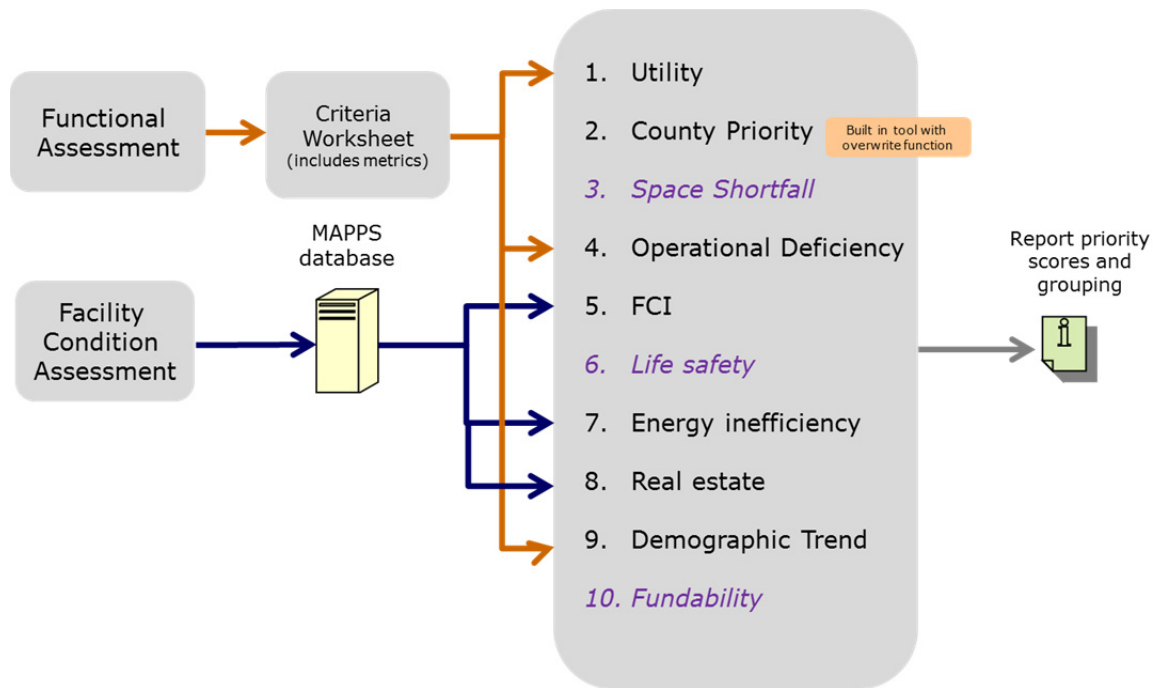


Figure 15: Data Utilized To Population the Scoring and Prioritization Model

HARFORD COUNTY DEMOGRAPHIC OVERVIEW

Harford County is the sixth largest county in the state with nearly 250,000 residents in 2013, 4.2 percent of Maryland's overall population. Figure 16, illustrates the population concentration within the County divided within one-mile increments. The population density is concentrated along the primary and secondary transportation corridors, as well as in the Bel Air area. Specifically, the majority of the County's residents live along Interstate 95 and MD Route 24 as highlighted by the orange hues within the map. The northern half of the County and eastern portion of the County north of Interstate 95 is rural and has the fewest residents.

Table 5: Harford Demographics 2010/13/18

Summary	Census		
	2010	2013	2018
Population	244,826	249,324	257,304
Households	90,218	92,024	95,237
Families	66,335	67,307	69,222
Average Household Size	2.68	2.68	2.67
Owner Occupied Housing Units	71,831	72,451	75,405
Renter Occupied Housing Units	18,387	19,573	19,832
Median Age	39.3	40.0	40.2

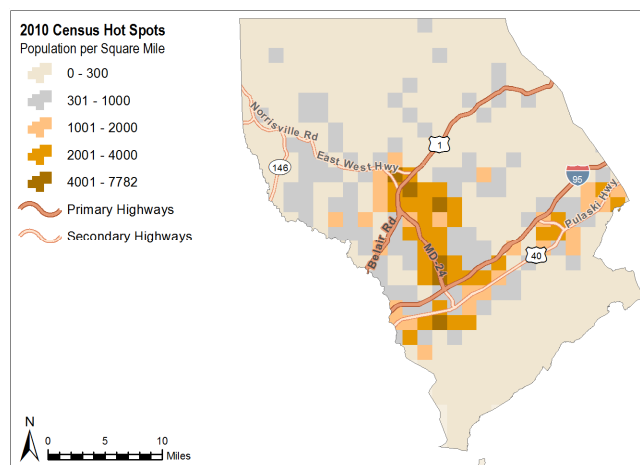


Figure 16: 2010 Population Hotspots

The majority of households are owned by families. The population living in households is slightly higher than the average in Maryland but less than the National average. This trend is the same regarding the population living in families.

The race and ethnicity of Harford County is predominantly white at 81.2 percent at the 2010 census. The current trend shows a slight decrease in the white population projected in the coming years with the slight increase in minority populations.

As shown in Table 6, the median household income is just over \$78,000, lower than the National average and lower than the Maryland average. By 2018, the median household income is projected to increase by about 15 percent.

Table 6: Harford County Income

	2013	2018
Median Household Income	\$78,058	\$89,952
Average Household Income	\$93,024	\$106,737
Per Capita Income	\$34,563	\$39,729

Figure 17 shows Census Tracts with a higher percentage of households with incomes below \$50,000. The majority of these areas, highlighted in orange and dark grey are in the southern half of the county.

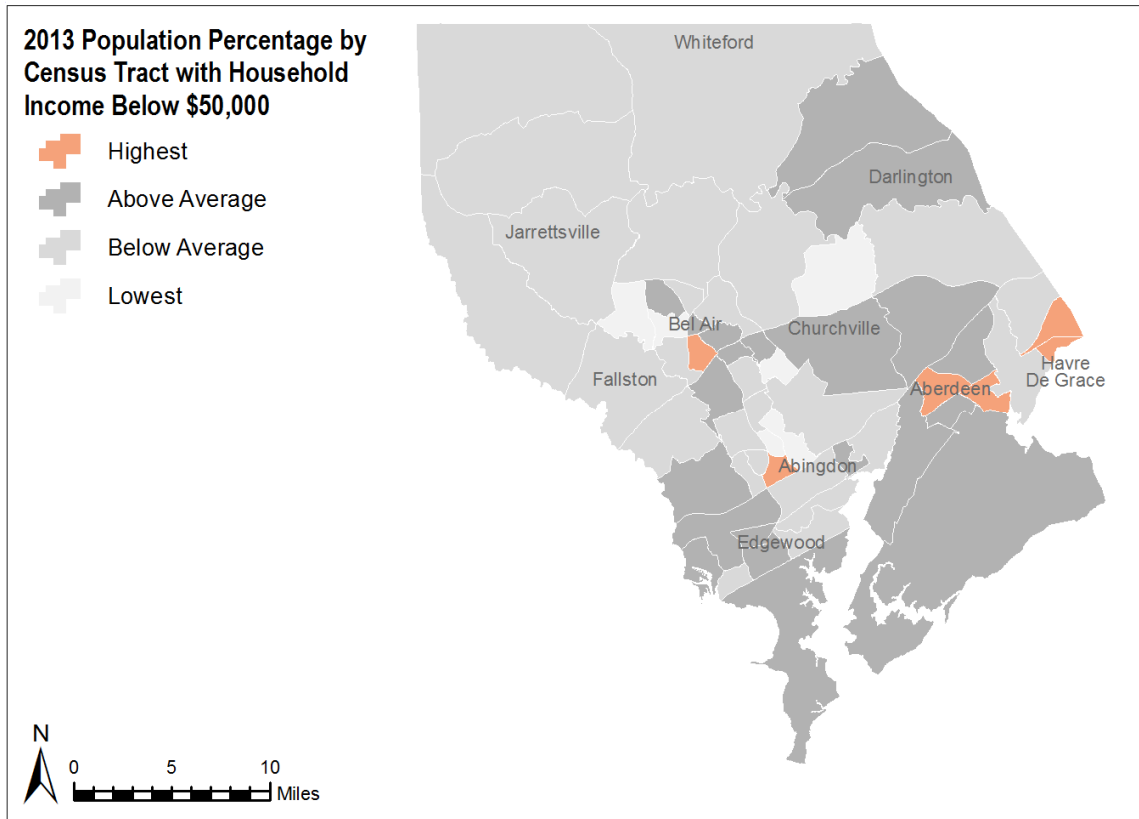


Figure 17: 2013 Percent Population with Household Income below \$50,000

Figure 18 shows Census Tracts with a high percentage of people 55 years old and. The majority of these areas, highlighted in blue and dark grey, are along the borders of the county.

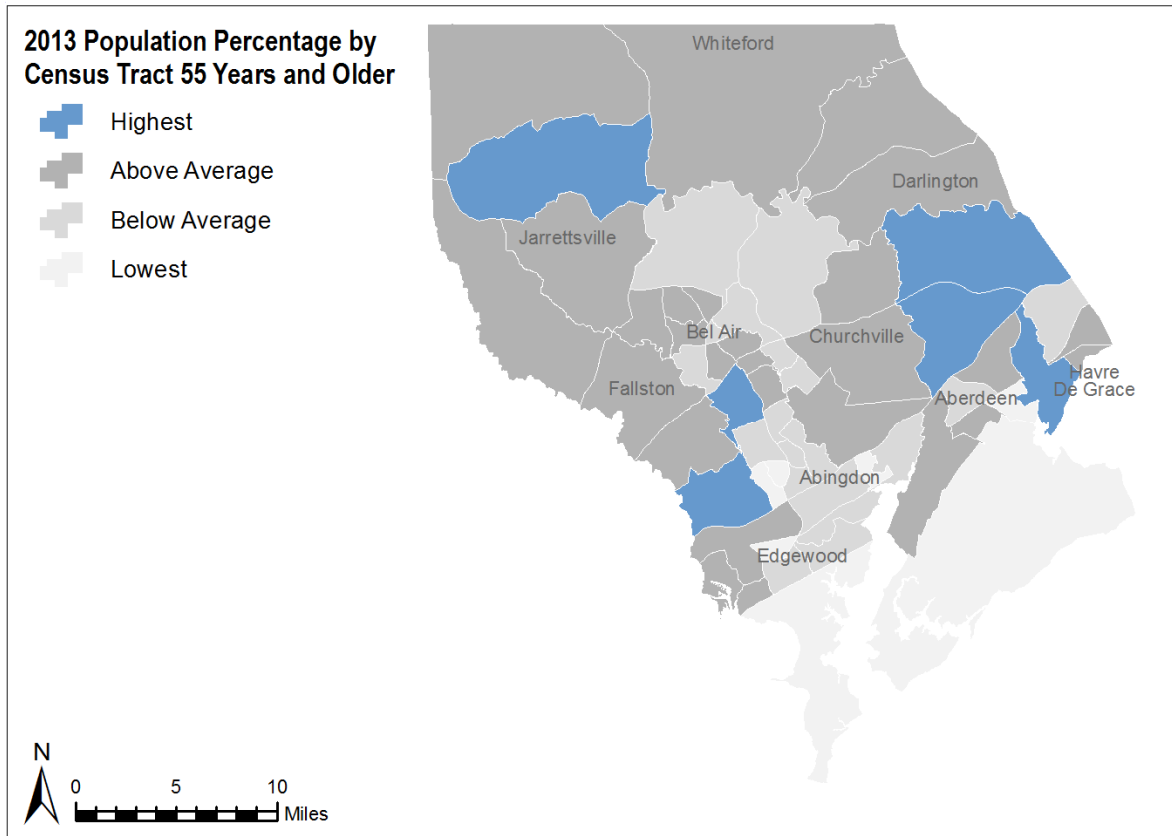


Figure 18: 2013 2013 Population by census tract 55 years and older

Census Tracts with a high percentage of people under 20 years old are shown in Figure 19. The majority of these areas, highlighted in green and dark grey, are in the southern and central areas county

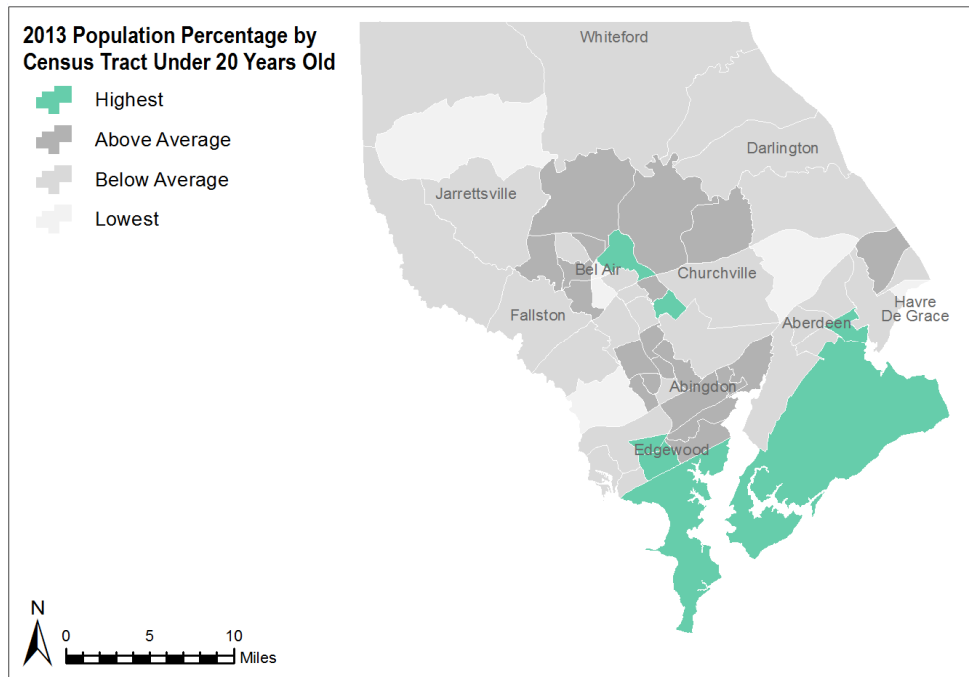


Figure 19: 2013 Population percentages by census tract under 20 years old

Population Growth Trends

The annual population growth rate in Harford County, at around 0.6 percent, is less than both the national and State average.

As shown in , population growth between 1990 and 2010 has been primarily been in the center of the County within and around the communities of Bel Air and Abingdon. Growth in the eastern portion of the County has also been substantial within the communities of Aberdeen and Havre de Grace. Within these communities, growth between 1990 and 2010 has been above 2.6 percent.

Population projections indicate that between 2010 and 2025, growth will be more dispersed throughout the County. The Bel Air area and the southern portion of the County along Interstate 95 will continue to see highest growth rate.

Between 2010 and 2025, the Interstate 95 corridor and Bel Air area will continue to increase in density. The northern third of the County and the north western and eastern regions will remain rural.

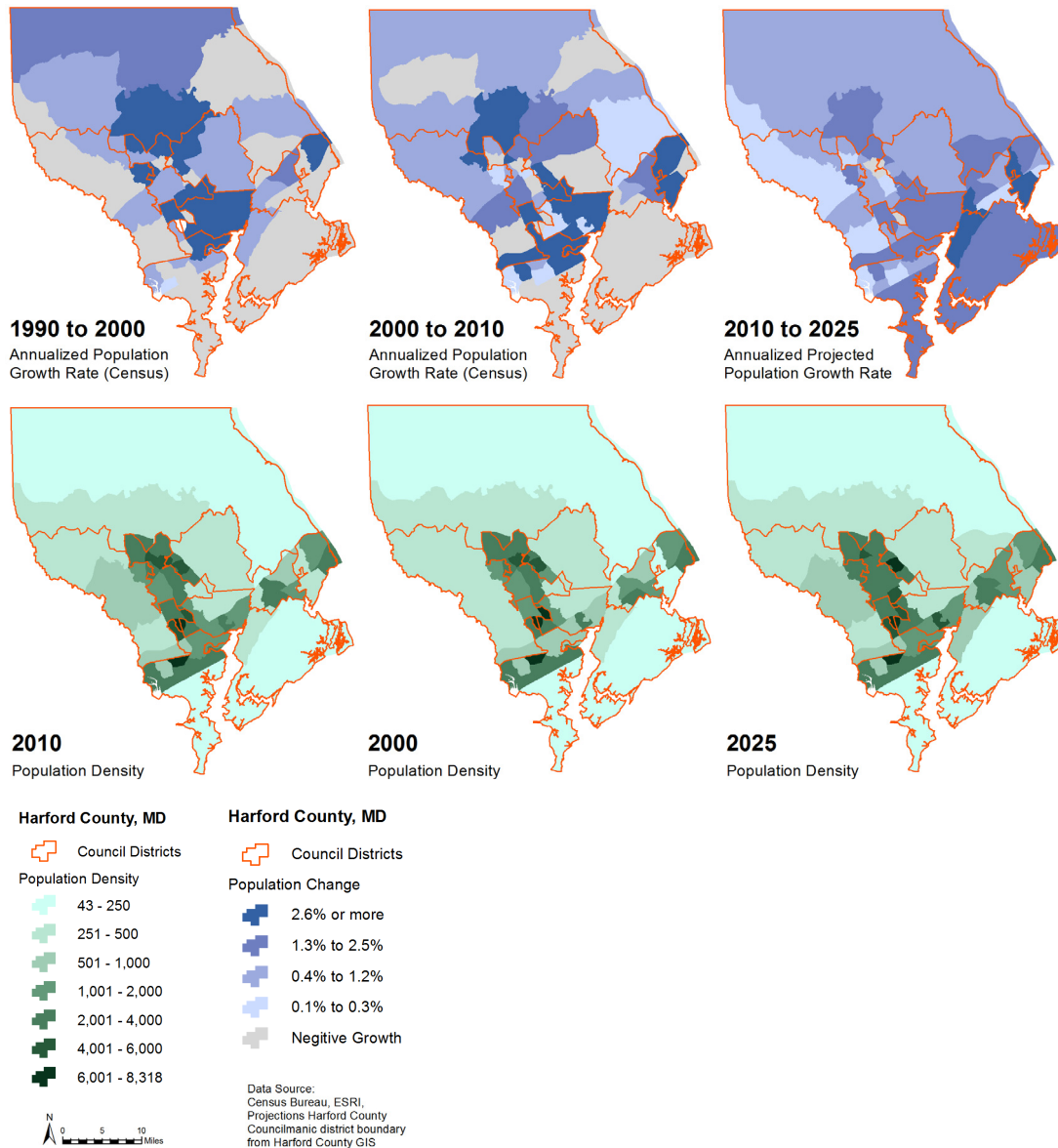


Figure 20: Population counts and future projections (1990-2025)

Note: Data source – ESRI, Census, State of Maryland, Harford County Planning Department

DEPARTMENTAL SUMMARY FUNCTIONAL AND OPERATIONAL ANALYSIS

The following appendix presents summary information for the different departments analyzed. The analysis is based on how the departmental functions and operations are supported and enabled by existing facilities and related infrastructure.

Departments discussed herein include:

- Offices
- Parks and Recreation
- DPW Fleet Maintenance
- DPW Harford Waste Disposal Center (HWDC) Facilities
- Sheriff's Office
- Judicial (Courts, State's Attorney, Clerk of the Circuit Court, and Register of Wills/Orphans Court)
- Public Schools
- Public Library
- Community College
- Health Department
- Volunteer Fire Companies

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SUMMARY FUNCTIONAL AND OPERATIONAL ANALYSIS – OFFICES

Introduction and Background Information

Introduction

The following appendix presents summary information regarding how office functions and operations are supported and enabled by existing facilities and related infrastructure.

Major sections in this appendix include:

- Introduction and Background Information
- Standards and Metrics
- Key Findings
- Recommendations

Additional supporting information can be found in the “State of the Facilities Report” which is a companion document to this summary report, MAPPS™ database, and project folder.

Summary Facilities

Harford County’s population is served by 14 office facilities spread throughout the county. This analysis only considers facilities that are purely office space and does not include office space within facilities with other primary uses, such as libraries and court offices. The office facilities considered in this analysis provide service to residents as well as provide operational support for many of county government functions and services. Office space is also provided to the Harford County Community Action Agency – a county-wide non-profit that offers food bank and social outreach services to Harford County residents in need.

Harford County is divided into two physiographic regions, Development Envelope and Non Development Envelope. The development envelope primarily runs along I-95 and Route 24 and is designed to concentrate future development. This area includes the three municipalities of Aberdeen, Bel Air and Havre De Grace. Area outside this development envelope is termed as Non Development Envelope where population density is low and is predominantly an agricultural land. Bel Air, Joppa, Abingdon, Aberdeen and Susquehanna service areas are considered to be within development envelope. The remaining service areas are in non-development envelope.

Standards and Metrics

The following section presents summary standards and metrics that are generally applicable to the office spaces.

Summary Standards

Standards and industry practices were identified from multiple sources including:

- Utilization Rates Analysis (cross-referencing Federal and Commercial clients/agencies – Jacobs 2014)
- GSA Workplace+ Calculating Space Utilization - 2013
- Benchmarking Trends 2012 – Jacobs/KlingStubbins
- GSA Office of Real Property Management Performance Measurement Division: Workspace Utilization and Allocation Benchmark - 2011
 - Benchmark #4 - Domestic Government Organization
 - Benchmark #2 - Telecommunication
 - For Corporate Real Estate (CRE) divisions focusing on facility and property management, floor space planning, building security and real estate budget administration
 - Where Do I Sit? A Lean Space Allocation Methodology to Uncover and Reduce Wasted Space in Real Estate Portfolios - Unilever/HDR 2011

The full list of agency benchmarks considered are as follows:

Table 7: Benchmarks Considered – Full Agency List

Agency	Utilization Rate	Notes
Federal Emergency Mgmt	170 USF	All-In
Health and Human Services	170 USF	Includes joint use
Department of Interior	180 USF	All-In
Department of Justice	100 / 130 / 200	Field Personnel / Office / All-In
Department of Commerce	170 USF	All-In
Corps of Engineers	130 USF / 162 USF	Office
Internal Revenue Service	100 / 170 USF	Sliding Scale based on facility size
Private/Corporate	180-225 USF	
Jacobs	165-185 USF	
Corporate Office 2013 Jacobs/KlingStubbins Benchmarking Trends	180-225 USF	

Several agencies were considered a closer match to Harford County requirements, the first of which included corporate office trends, as shown below:

Table 8: Benchmarks Considered – Corporate Office Trends

Agency	Overall UR	Workspace and Support Space Ratios
Corporate Office 2013 Benchmarking Trends	180-225 USF	Private Office: 120 USF
		Workstation: 48 USF
		Conference Seats per Staff: 1:1.5 to 1:3 trend is 1:2 to 1-2.5
		Huddle Rooms (100-120 USF) range 1:10 - 1:35, trend is 1:20-1.25
		Focus/Phone/Quiet Rooms (35 USF - 48 USF) 1:20-1:25 range
		Departmental Filing: 1 file drawer/staff seat

Additional details for more closely aligned agencies include the following:

Table 9: Benchmarks Considered– Federal Agency Standards

Benchmark	Position	Space Type	USF
GSA Benchmark #2: Telecommunications with Facility Management	Executive	Private Office	225
	Director	Private Office	150
	Manager	Workstation	90
	Supervisor	Workstation	64
	Technical	Workstation	64
	Support Staff	Workstation	64
GSA Benchmark #4: Domestic Government Organization	Executive	Private Office	400
	Director	Private Office	300
	Manager	Workstation	200
	Supervisor	Workstation	120
	Technical	Workstation	120
	Support Staff	Workstation	80
Internal Revenue Service (new universal standards)	Clerical	Workstation	48
	Director	Private Office	150
	Supervisor	Private Office/Workstation	96
	Technical/Clerical	Workstation	48

An in-depth analysis of comparable benchmarks and trends culminated in the development of a Harford County specific benchmark to be used for the Master Plan, as shown below:

Table 10: Benchmarks Used for Harford County Analysis

Overall UR	Space Type	USF
180 USF	Private Office	150
	Workstation	64
	Special Spaces	Unique to Agency
	Conference Rooms	Conference Seats per Staff: 1:2
	Huddle Rooms	120 USF; Range 1:25
	Department Filing	Unique to Agency
	Circulation Rate	1.45

Key Metrics

Key Metrics are summarized herein.

Personnel numbers are the driving metric for growth, and equate to 180 USF per person.

Key Findings

The following section presents summary findings for functional and operational aspects of facilities used by office spaces.

Summary Prioritization Ranking

Table 11 presents the summary prioritization scoring for facilities utilized by office facilities.

Findings for each category are further reviewed in this section.

Table 11: Office Facilities - Prioritization Ranking by Facility

Facility Name	Total Score	Facility Condition: FCI	Risks to Life Safety	Space Shortfall / Surplus	Operational Deficiency	Energy Inefficiency	Utility	Demographic Trend	County Priority	Real Estate	Fundability
1311 Abingdon Road	44	0.71	Low	1%	Low	Medium	High	Status Quo	Medium	County	Medium
11-15 South Main Street (Lease)	43	N/A	High	-2%	High	Medium	High	Status Quo	Low	Leased	Medium
220 South Main Street	39	0.07	High	-2%	Low	Medium	High	Status Quo	Low	County	Medium
611 Fountain Green Road	38	1.08	Low	-23%	None	Medium	High	Status Quo	Low	County	Medium
1010 Gateway Road	32	0.13	Low	16%	None	Medium	High	Status Quo	Low	County	Medium
212 S Bond Street	32	0.11	Low	-38%	None	Medium	High	Status Quo	Low	County	Medium
2335 Rock Spring Road (Lease)	28	N/A	Low	-27%	Low	Medium	High	Status Quo	Low	Leased	Medium
319 South Main Street (Lease)	25	N/A	Low	9%	Low	Medium	Low	Status Quo	Medium	Leased	Medium
145 North Hickory Avenue	24	0.06	Low	-20%	Low	Medium	Low	Status Quo	Medium	County	Medium
125 North Main Street (Lease)	23	N/A	Medium	-9%	Low	Medium	Low	Status Quo	Low	Leased	Medium
15 North Bond Street (Lease)	23	N/A	Medium	1%	Low	Medium	Low	Status Quo	Low	Leased	Medium
133 Industry Lane (Lease)	19	N/A	Low	0%	None	Medium	High	Status Quo	Low	Leased	Medium
112 Hays Street (Lease)	13	N/A	Low	-42%	None	Medium	Low	Status Quo	Low	Leased	Medium
19 Newport Drive (Lease)	9	N/A	Low	2%	None	Medium	Low	Status Quo	Low	Leased	Medium

Facility Condition Index

Many of the Harford County office facilities are leased and therefore were not scored for FCI, considering that they are not owned by the County and therefore cannot be directly improved by the county with additional investment. For the six owned facilities, FCIs range from 6% to 108%. Four of the six FCI ranked facilities rank below 20%, which indicates an FCI of good to average. The other two facilities, which house Transit and Facilities and Operations, rank 71% and 108% respectively, indicating major condition issues that need to be addressed.

Risks to Life Safety

Ten of the fourteen office facilities were found to have few major life safety issues. The two facilities that ranked medium in risks to life safety included the Department of Public Works' (DPW) Division of Construction Management (15 North Bond Street), as well as Risk Management (125

North Main Street) due to the confusing egress. The two facilities that ranked high in risks to life safety included the Housing Agency (11-15 South Main Street), as well as the County Building (220 South Main Street) due to dead end corridors, lack of sufficient means of egress and improper emergency signage.

Space Shortfall

Space shortfall range from zero to 16 percent. With the exception of 1010 Gateway Road, which is a County facility that is leased to the non-county Community Action Agency, these space shortfall scores indicate no significant space shortfalls within the various Harford County office facilities. However, this does not cover efficiency of space, and many of the older facilities that show negative scores, or surpluses, may not have the capacity for additional space gains or efficiencies.

Operational Deficiencies

Operational deficiency was then measured by comparing total office utilization for each facility against an aggregated master plan benchmark that was derived from a variety of comparable agency office utilization rate standards.

Utilization was based upon one of the two following criteria, depending on use:

All in utilization rate to measure the entire facility including circulation and specialized spaces:

$$\frac{\text{Total Usable Square Feet (USF)}}{\text{Total Personnel County}} = \text{All-In UR}$$

Figure 21: All-In UR Formula

Total office utilization rate to measure only applicable office space:

$$\frac{\text{Total Office Area - 22\%*}}{\text{Office Personnel County}} = \text{Office UR}$$

* assumption of 22% deducted for support and circulation

Figure 22: Office UR Formula

The majority of office facilities have no or a low operational deficiency. The one facility with a high operational deficiency is the Housing Agency. This is due to the high utility of the function combined with critical resources being separated by floors that are not accessible. Furthermore, the efficiency of the space layout was negatively impacted by the existing facility layout, as dictated by the structure, as well as a low density filing system that inefficiently used space.

Utility

Eight of the fourteen office facilities assessed had a utility score of high. The eight high utility facilities include multi-agency facilities such as 212 South Bond Street and 220 South Main Street, as well as facilities dedicated to accommodate Transit, Elections, The Housing Agency, Facilities and Operations, and the Community Action Agency. Each of these facilities includes significant public outreach and engagement elements as part of its physical operations. The remaining facilities that are ranked low in utility were used strictly for office functions and were not actively used to engage the public.

Demographics & County Priority

All office facilities ranked either status quo or not applicable, given that none of the major office functions indicated anticipation for major growth beyond the countywide status quo. Offices within Harford County are currently ideally located to provide the appropriate services and characteristics of services. Central county agencies and functions, such as those found in the two multi-agency facilities (220 South Main Street, and 212 South Bond Street), Risk Management (125 North Main Street), Human Resources (112 Hays Street), the Housing Agency (11-15 South Main Street), the Community Services Administration (319 South Main Street), and the Office of Aging (145 North Hickory Avenue), have all been located centrally in Bel Air. The remainder of the facilities have been located within the populations they serve or central in the County per the functions they serve.

Office functions in Harford are currently ranked by the County as either medium or low priority. This is due to the reality that less-than-ideal office arrangements or conditions do not immediately affect critical life-safety functions in the county. Facilities that scored medium priority include Transit, Office of Aging, and Community Services.

Recommendations

Generally, Harford County office facilities were larger than comparable benchmarking standards, with eight of the fourteen facilities coming in with surplus area and only one facility scoring a noticeable space shortfall. However, this is in much part due to the following points:

- Harford County office facilities have mostly been located in existing facilities originally designed for other uses. As a result, office functions have been placed as efficiently as possible within existing structural and wall configurations, but are spatially not able to achieve comparable levels of efficiency compared to spaces built specifically for office configurations.
- Several of the office facilities maintained space for special functions, such as the Department of Elections and the Housing Agency. In these cases, it was determined that spaces used for these special functions not be counted as office space and therefore not trigger space surpluses.
- Harford County office facilities are currently located ideally throughout the county. County services are located centrally in Bel Air while population and service specific facilities are located centrally to the populations and services served. Several of the agencies interviewed suggested additional consolidation and centralization of county service office facilities as a major opportunity and priority.

Based upon the above scores and prioritizations, certain facilities stood out as major opportunities.

The following are key findings for each of the facilities.

- 220 South Main Street:
 - Operationally inefficient
 - The existing building is at its maximum for build-outs, with no room for expansion. No new construction or reconfiguration can take place at this building due to life safety code issues identified by the Harford County Fire Marshall.
- 212 South Bond Street:
 - Operationally inefficient
 - Heating and cooling issues because of the exterior glass façade
 - Possible roof issues
 - Highly inefficient floor plan and 418 UR (USF per person) as highest calculation
 - Pedestrian traffic between this building and the 220 S, Main Street building requires crossing a highly congested street corner.
- 1311 Abingdon Road (Transit Center)

- The transit building requires major renovation due to a high score on the facility assessment report.
- The building is a converted fire house from the 1930's and 1950's, and the office was renovated in 2000
- Limited parking for visitors who do not have access to the secure back parking lot
- Dangerous ingress/egress to the parking spaces off Abingdon Road
- Not all of the buses fit into the lower back parking lot of this site. Buses are stored at the County owned Sand Hill site 0.5 miles away
- Building issues including roof leaks, HVAC, no fire suppression.
- Crowded spaces
- 611 N. Fountain Green Rd – Overall Building
 - The Facilities & Operations area within the main building and the adjacent Mechanical / Wood Shop are slightly oversized compared with benchmarking standards
 - The Animal Control area is undersized compared with benchmarking standards
 - Animal Control would like to get a storage shed (10'x12') located on the property to combine all required equipment: to combine items located at 611 N. Fountain Green Rd and Copenhaver Rd
 - Animal Control is directly tied to county demographics for what they do, not for their staffing projections

SUMMARY FUNCTIONAL AND OPERATIONAL ANALYSIS – PARKS AND RECREATION

Introduction and Background Information

Introduction

The following appendix presents summary information regarding how Parks and Recreation functions and operations are supported and enabled by existing facilities and related infrastructure.

Major sections in this appendix include:

- Introduction and Background Information
- Standards and Metrics
- Key Findings
- Recommendations
- Supplemental Information and Discussion

Additional supporting information can be found in the “State of the Facilities Report” which is a companion document to this summary report, MAPPS™ database, and project folder.

Mission and Responsibilities

The departmental mission of the Harford Parks and Recreation is to “enhance the lives of all Harford County citizens.” The Agency accomplishes this goal by providing a diverse menu of leisure opportunities and acquiring and protecting open space. The Agency is also responsible for operation and management of public recreation facilities.

The Agency has several departments. Below lists the departments along with the number of staff currently employed in each department. Managers of the different departments are counted under administration.

- Administration
 - Manager/Director/Admin: 8 staff
 - Budget and Purchasing: 4 staff
- Capital Planning and Development: 4 staff
- Facilities and Operations:
 - Ground Maintenance: 33 staff

- Building Maintenance Staff: 9 staff
- Landscaping: 4 staff

Summary Facilities

There is approximately 258,000 NSF of Parks and Recreation space in the County. It is divided among three facility types; these are administrative, activity centers, and special use.

The administrative space is divided amongst four facilities. These four facilities total approximately 14,824 net square feet. There is approximately 203,000 net square feet of activity center space divided among nine activity centers within the County. There are five facilities operated by the Park and Recreation department, which have special uses. These five facilities total nearly 40,000 net square feet.

Additional information regarding these facilities can be found in the Supplemental Information and Discussion section of this appendix.

Standards and Metrics

The following section presents summary standards and metrics that are generally applicable to the Parks and Recreation.

Summary Standards

Standards and industry practices were identified from multiple sources including:

- National Recreation and Park Association
- Websites for the following Counties: Arlington, Prince Georges, Montgomery County, Frederick County, Fairfax County
- Time Saver Standards

This information was reviewed and compared against Harford County to develop standards that are appropriate to Harford County's physical size, population size and service levels.

Key Metrics

Key Metrics are summarized herein. A more detailed discussion of these metrics can be found in the Supplemental Information and Discussion section of this appendix.

Key Findings

The following section presents summary findings for functional and operational aspects of facilities used by Parks and Recreation.

Summary Prioritization Ranking

Table 12 presents the summary prioritization scoring for facilities utilized by Parks and Recreation. Findings for each category are further reviewed in this section.

Table 12: Parks and Recreation - Prioritization Ranking by Facility

Facility Name	Total Score	Facility Condition: FCI	Risks to Life Safety	Space Shortfall / Surplus	Operational Deficiency	Energy Inefficiency	Utility	Demographic Trend	County Priority	Real Estate	Fundability
Aberdeen Community Service	44	0.11	Medium	26%	High	Medium	Medium	Growth	Low	County	Medium
Forest Hill / Hickory Activity Center	41	0.16	Low	36%	Low	Medium	High	Growth	Low	County	Medium
Edgeley Grove Farm	39	0.41	Low	-101%	High	Medium	Medium	Status Quo	Low	County	Medium
Parks & Recreation - Administration	37	0.18	Low	23%	High	Medium	Medium	Status Quo	Low	County	Medium
McFaul Community Center	35	0.03	Low	37%	None	Medium	High	Status Quo	Medium	County	Medium
Swan Harbor Farm	33	0.15	Low	0%	Low	Medium	High	Status Quo	Low	County	Medium
Edgewood Recreation Center	32	0.01	Low	34%	None	Medium	Medium	Growth	Low	County	Medium
Building	30	0.25	Low	12%	Low	Medium	Medium	Status Quo	Low	County	Medium
Liriodendron	30	0.33	Low	0%	None	Medium	High	Status Quo	Low	County	Medium
Anita C. Leight Estuary	29	0.09	Low	0%	None	Medium	High	Status Quo	Low	County	Medium
Eden Mill Park - Nature Center	29	0.10	Low	0%	None	Medium	High	Status Quo	Low	County	Medium
Recreation Center	28	0.09	Low	6%	Low	Medium	Medium	Growth	Low	County	Medium
Roni Chenoweth Activity Center	28	0.00	Low	-8%	None	Low	High	Growth	Medium	County	Medium
Churchville Recreation Complex	26	0.03	Low	-1%	Low	Medium	Medium	Growth	Low	County	Medium
Fallston Recreation Complex - Office Building	24	0.01	Low	5%	Low	Medium	Medium	Status Quo	Low	County	Medium
Mariner Point Park - Visitor Center	24	0.05	Low	0%	None	Medium	High	Status Quo	Low	County	Medium
Norrisville Activity Center / Public Library	16	0.03	Low	7%	None	Medium	Low	Status Quo	Low	County	Medium

Facility Condition Index

FCI ranges from zero to 41 percent. Zero being no facility physical condition issues versus forty-one percent being significant issues found with facility condition. Edgeley Grove Farm (41%) and Liriodendron (33%) suggesting these facilities have significant FCI issues. Fallston Recreation Complex - Maintenance Building (25%), Parks & Recreation – Administration (18%), Forest Hill / Hickory Activity Center (16%), and Swan Harbor Farm (15%) have moderate FCI issues, with the remaining facilities considered to be in good physical condition.

Risks to Life Safety

All facilities except Aberdeen Community Service have a low risk to life safety. It has a medium risk to life safety.

Space Shortfall

The space shortfall for the facilities range from a surplus of 101 percent to a shortage of 37 percent. McFaul Community Center (37%), Forest Hill / Hickory Activity Center (36%), and Edgewood Recreation Center (34%) have significant space shortfall issues. Parks & Recreation – Administration (23%) is next on the list with a high space shortfall. Edgeley Grove Farm (-101%) has a significant surplus of space, while the remaining facilities are within 15 percent of the space required. There is a wide range of space issues, with some facilities severely lacking and others a major surplus.

Operational Deficiencies

Majority of Parks & Recreation have no or a low operational deficiency. Parks & Recreation – Administration and Edgeley Grove Farm are high in operational deficiency, which stems from the division of staff between multiple locations.

Utility

Utility is split nearly evenly between ‘High’ and ‘Medium’, with only Norrisville Activity Center / Public Library having a ‘Low’ utilization. High utility is often a result of a facility serving multiple council districts in some capacity, or serving a council district that covers a significant portion of Harford County’s population. Registration rate is also a factor in determining the utility.

Demographics & County Priority

Churchville Recreation Complex, Edgewood Recreation Center, Emmorton Recreation & Tennis Center - Indoor Recreation Center, Forest Hill / Hickory Activity Center, and Roni Chenoweth Activity Center service areas are projected to grow more than the County annual population growth. Facilities in remainder of the service areas are expecting growth rates that are either equal or less than the County annual population growth and are considered status quo in this category. Parks and Recreation facilities are considered ‘Low’ on the County priority criteria.

Recommendations

Based on the data gathered, Countywide analysis, prioritization results, and facility benchmarking standards, there are no immediate Park and Recreation needs. However, the following

recommendations are critical to the long-term success of the Department and benefit to the community. At a County level, the recommendations by facility aim to address two key issues:

- 1) Improve work flow and operations of Park and Recreation Administration and Capital Planning functions
- 2) Increase the amount of Activity Space square footage, particularly in underserved areas, to move towards 1.1 square foot per capita.

Recommend actions include:

- **Tollgate Administration, Fallston Administration, and Edgeley Grove:** Consolidate Administration and Capital Planning functions. Currently these functions are split between the Tollgate Administration Facility, Fallston Administration Building, and Edgeley Grove facility. In order to improve operations, they should be collocated at a County government complex close to or in downtown Bel Air.
- **Aberdeen Community Services Building:** Build a new recreation facility within Aberdeen. Consider collaborating with the Office on Aging, Harford County Libraries and the health department to build a joint use multi-generational “wellness” facility within Aberdeen, as there is a need for improvements to these community services within Aberdeen.
- **McFaul Activity Center:** While additional square footage at the facility is needed to support the surrounding community, expansion at the current location cannot be accommodated. To augment the space that may be used for Park and Recreation programs, expand the amount of shared spaces within the facility by opening up designated Senior Center areas, Boys and Girls Club areas for all agencies to use. Additionally, consider demolition of the skate park, which is not heavily used, in order to construct an outdoor basketball court.
- **Forest Hill/Hickory:** Build new on a new site within one of the two Recreation Council Districts. This is a high use facility with serving a significantly sized population. The current facility does not meet the needs of the community.
- **Edgewood Activity Center:** Relocate Catholic Charities to the existing Edgewood Senior Center and move the Edgewood Senior Center functions into the space currently dedicated to Catholic Charities. Expand the Edgewood Facility to include Senior Center functions.
- **Havre De Grace Activity Center:** Expand the amount of shared spaces within the facility by opening up designated Senior Center areas and Boys and Girls Club areas for all agencies to use for programming needs.

- **Churchville Recreation Center:** Minimal renovation to existing facility to expand the lobby space in order to accommodate the large number of visitors that wait for their children in the lobby area during programs.
- **Joppatowne:** Build new Activity Center

All other Park and Recreation facilities may remain as is with regular maintenance and minor repairs.

In general, Park and Recreation facilities are adequately meeting the needs of Harford County residents. At a County level, with 0.7 square feet of recreation space per capita, Harford is just below the 0.8 to 1.1 square feet per capita benchmark to provide a high level of service. Some areas however, are better served than others are. The recommendations above are intended to support areas, which are underserved, and to help meet the benchmarking standard. Park and Recreation office space however, does not adequately support the staff. The majority of these positions, other than maintenance and landscaping related positions, must be consolidated into one facility to support efficient operations and communication.

Supplemental Information and Discussion

The following section provides additional detailed discussion and information for this functional and operational analysis.

Portfolio Summary

Administration, Capital Planning and Development, Facilities and Operations

The Administration, Capital Planning and Maintenance staff are divided amongst four facilities. Table 13 summarizes the net square feet of the four facilities as well as the staff by department.

These four facilities total approximately 14,824 net square feet. There are 63 staff members, 35

Table 13: Administration, Capital Planning and Development, Facilities and Operations Overview

	Edgeley Grove	Fallston Admin	Fallston Maintenance	Tollgate Admin
Net Square Feet	2111	3363	7105	2245
Staff	5	37	11	10
Director/Manager/Admin	1	2	1	4
Budget & Purchasing				4
Capital Planning	2	2		
Building Maintenance Staff			10	
Ground Maintenance Staff		33		
Landscaping Staff	2			
Other Staff (Admin/Rec)				2

requiring some type of office or desk space within a facility. On average, those employees requiring dedicated desk space have about 141 square feet of space, which includes staff support space. This is slightly lower than the recommended 180 square feet per person for staff and staff support space.

As shown within the table, Director/Manager/Admin staff and Capital Planning staff are divided amongst multiple buildings. The Director of Ground Maintenance, Building Maintenance and Landscaping are ideally located near their staff at the Fallston Admin facility, Fallston Maintenance facility and Edgeley Grove. The Tollgate Admin office is the primary office for key Park and Recreation personnel. The facility is too small however to accommodate all staff. The Director of Capital Planning is located at the Fallston Admin facility along with two other Capital Planning staff. The remaining two Capital Planning staff are located at Edgeley Grove. This results in a high level of operational deficiency as staff of these departments often travel between locations for meetings with other staff members. Ideally, all staff currently at the Tollgate Admin office as well as all Capital Planning staff would be within one office located in close proximity to County personnel.

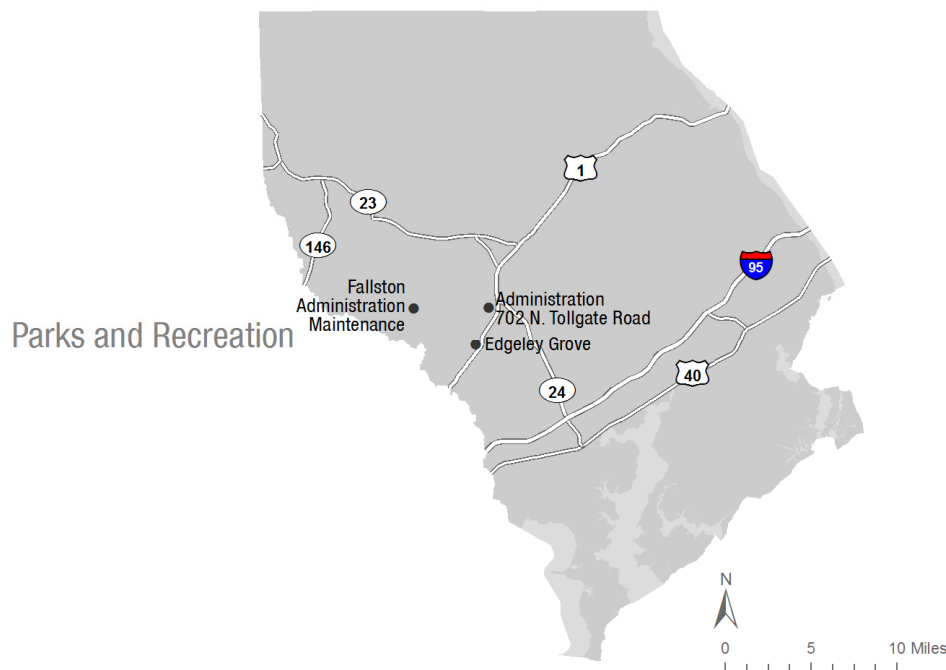


Figure 23: Administration, Capital Planning and Development, and Facilities Operations - Facility Locations

Activity Centers

Recreation programs in Harford County are provided through the 23 separate recreation councils and the County. Of those recreation council districts, sixteen are geographically defined, and ten have access to a County owned activity center. The recreation council districts are listed below; those with access to a County owned activity center are in **bold**:

- Belcamp
- Joppatowne
- **Norrisville**
- **Forest Hill - Hickory**
- North Harford
- Jarrettsville
- **Bel Air**
- **Fountain Green**
- **Edgewood**
- **Emmorton**
- **Havre De Grace**
- **Fallston**
- **Churchville**
- Dublin-Darlington
- **Aberdeen**

There is approximately 203,000 net square feet of Activity Center space divided among 9 activity centers within the County. Figure 24 illustrates the location of activity centers within the County. These facilities amount to approximately .83 square foot per capita, which is within the range, 0.8 to 1.1 square foot per capita, required to offer a high level of service. While within the range of offering a high level of service at the county level, there is a significant difference in the square foot per capita within the service areas, providing some areas with a much higher level of service than others do.

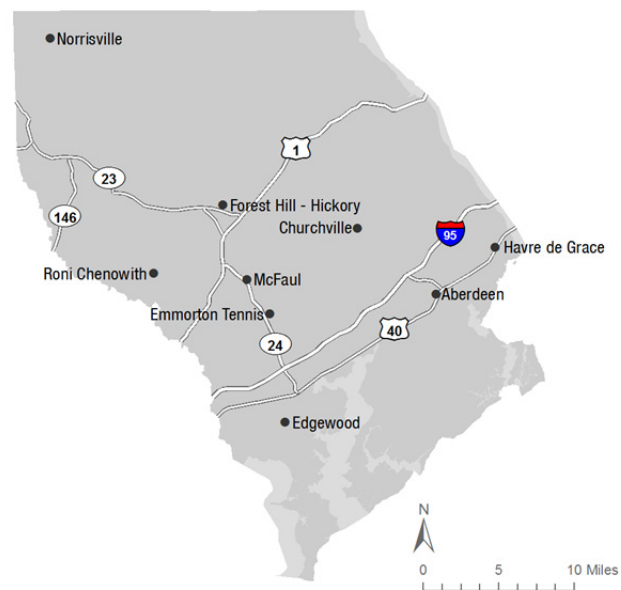


Figure 24: Activity Centers - Facility Locations

Table 14 below summarizes the net square feet, population statistics, and registration statistics for each activity center. Many of the Recreation Facilities are shared with other agencies. The square

footage for Park and Recreation indicated in the table below, include all spaces that are solely dedicated to Park and Recreation functions, plus the square footage of any public shared space where a Park and Recreation function may at any point in time occupy the entire space, plus the proportion of square footage of a shared space where Park and Recreation may only occupy an area of the room. For example, a gym may be used for Park and Recreation functions as well as Boys and Girls Club functions. In this instance, the entire square footage is included because a Park and Recreation event would use the entire square footage at some point during a typical day. A storage space however, which is shared between Park and Recreation and the Senior Center would be divided in two, as Park and Recreation may only ever utilize a portion of the space.

As shown in the table, the Churchville Center and Emmorton Center have the greatest square footage. This is due to the special programs that each center provides. The Churchville Recreation Centers serves the Churchville Recreation Council District as well as the ACPR Gymnastics Recreation Council District. Gymnastics programs typically require a significant amount of space; as the ACPR recreation council district provides gymnastic programs for the entire county, space needs are significant. The Emmorton Tennis Center is a revenue producing indoor tennis center. It is the only County-owned indoor tennis center; this activity requires a significant amount of space.

Table 14: Activity Centers Overview

	Aberdeen	Roni Chenoweth	Churchville	Edgewood	Emmorton	Forest Hill-Hickory	Havre De Grace	McFaul	Norrisville
Net Square Feet	7249	18973	46919	16509	54877	21207	13094	16504	7848
Population in Service Area	16983	17823	9288	31432	34116	40124	16505	28785	3181
SF per Population in Service Area	0.43	1.06	5.05	0.53	1.61	0.53	0.79	0.57	2.47
Registrants	2160	9908	8161	4641	5242	13035	5946	13503	1031
% of all Registrants	3.4%	15.6%	12.8%	7.3%	8.2%	20.5%	9.3%	21.2%	1.6%

Note: Square footage of Churchville includes area of the older and newer facility

Aberdeen, Edgewood, Forest Hill-Hickory and McFaul have only 0.43 to 0.57 square feet per capita within the service area, below the standard for providing a high level of service.

The Harford County Department of Parks and Recreation and the recreation councils offer programs for all ages and ability levels. Activities include programs that meet on a regular basis during a season/session, such as classes and team sports programs. Recreation council activities are offered to serve area residents, although all programs are open to all County residents even if they live outside of the recreation council district. The professional staff of the Harford County Department of Parks and Recreation operate other activities and events.

Most of the programs are run through the recreation councils, each of which is incorporated as a 501(c)(3) nonprofit corporation. Registration fees collected for the programs and other fundraisers cover program costs. In some instances, the recreation councils also supplement departmental maintenance activities and do small capital projects.

Gymnasiums/Basketball courts are used year-round. There is currently a joint use agreement between Harford County schools and Parks and Recreation, which provides park and recreation programs with access to school facilities. While access is provided, it must be coordinated with other events and programs that are run out of the school facilities. To that end, it can often be difficult for the Park and Recreation Programs to use the schools due to the high demand for that space. Table 15 summarizes the Park and Recreation annual usage of schools by recreation council district.

The Joppatowne Recreation Council District, which does not have access to an activity center, has the greatest uses of schools. Because of the high use of schools, Joppatowne is identified as a location in need of a new Activity Center.

Table 15: Park and Recreation Annual Usage of Schools by Recreation Council District

Recreation Council District	Total Schools within Council District	Number of School Uses by PR	Average Use per School
ABERDEEN	6	792	133
BEL AIR	5	2425	485
BELCAMP	1	894	894
CHURCHVILLE	4	1026	257
DUBLIN-DARLINGTON	2	265	133
EDGEWOOD	5	1837	367
EMMORTON	6	2071	345
FALLSTON	3	941	314
FOREST HILL	2	1132	566
HAVRE DE GRACE	5	1708	342
HICKORY-FOUNTAIN GREEN	3	1224	408
JARRETTSVILLE	2	1081	541
JOPPATOWNE	5	3425	685
NORRISVILLE	1	647	647
NORTH HARFORD	3	1641	547

Joint use agreements also exist between Senior Centers, Park and Recreation and the Boys and Girls Club. The McFaul Activity Center in Bel Air and Havre de Grace Activity Center are joint use centers

between all three agencies. The Roni Chenowith Activity Center is shared between Parks and Recreation and Senior Center activities. These facilities are joint use centers where some spaces are shared between the agencies and others are designated for one agency's use. Limiting the designated agency space and increasing the amount of shared-use space will increase the amount of space available for all agencies.

While not a shared facility, the Edgewood Activity Center has an agreement with the Edgewood Senior Center that permits seniors to use the facility during daytime hours.

Specialty Use Facilities

There are five facilities operated by the Park and Recreation department, which have special uses. Figure 25 illustrates the location of each facility.



Figure 25: Specialty Use Facility Locations

These five facilities total nearly 40,000 net square feet and 12 staff located at these facilities. Table 16, summarizes the net square footage and number of Park and Recreation employees working at each location.

Table 16: Specialty Use Facilities Overview

	Eden Mill	Anita C. Leight Estuary	Mariner Point	Liriodendron	Swan Harbor
Net Square Feet	5,401	5,037	1,303	9,407	18,464
Staff	1	4	1	1	5

The facilities have varying uses. Two of the facilities, Liriodendron and Swan Harbor, are used as event venues for weddings, corporate events and other types of gatherings. These facilities are revenue generating. The Eden Mill Center and Anita C. Leight Estuary are both nature centers providing educational services and space for events. Mariner Point is a welcome center used by visitors of the park. The park is very full on the weekends due to a public boat launch providing access to the Gun Powder for County residents. Due to the unique uses of these facilities, there are no standards that directly align with these facilities. However, during the facility walk through and through conversations, it was confirmed that the facilities are adequately sized to meet the needs of the users.

SUMMARY FUNCTIONAL AND OPERATIONAL ANALYSIS – DEPARTMENT OF PUBLIC WORKS (DPW) HIGHWAYS & FLEET MAINTENANCE

Introduction and Background Information

The following appendix presents summary information regarding how DPW & Fleet Maintenance functions and operations are supported and enabled by existing facilities and related infrastructure. These departments are examined together as their operations facilities are similar, in that they house vehicles, have specialized staff and resources.

Major sections in this appendix include:

- Introduction and Background Information
- Standards and Metrics
- Key Findings
- Recommendations

Additional supporting information can be found in the “State of the Facilities Report” which is a companion document to this summary report, MAPPS™ database, and project folder.

Mission and Responsibilities

The four Highway Maintenance District Shops provide road maintenance and snow removal service for approximately 1,048.62 miles of Harford County public roads. These Districts receive citizen requests for service directly from the Administrative Office dispatch on the Hickory II campus in Forest Hill. The requests are usually to report potholes and damaged road surfaces, debris or dead animals in County roadways, drainage problems along roadways or county right-of-ways, missing or damaged manhole covers, or overhanging trees & bushes along roadways and at intersections that cause sight distance problems.

The District Shops, which have geographic responsibilities, are staffed with an average of 17 employees who operate various trucks and road maintenance equipment to repair damaged road sections, fill potholes, replace or adjust storm drain covers, trim brush from roadsides, remove and sweep road debris and prepare roadway sections for resurfacing by wedging edges and leveling road surfaces. The Districts coordinate specific tasks with the Special Operations section, which is located at Hickory II. The Fleet Maintenance facility is also located at Hickory II.

The Fleet Maintenance Shop and Offices service a majority of the County's vehicles, including police but excluding the schools. These services are contracted through First Vehicle Services, but the County is responsible for the facilities.

Summary Facilities

The four Highway Maintenance District Shops are spread across the County.

Additional information regarding these facilities can be found in the Supplemental Information and Discussion section of this appendix.

Standards and Metrics

The following section presents summary standards and metrics that are generally applicable to the DPW & Fleet Maintenance.

Summary Standards

Harford County DPW and Fleet Maintenance facilities were evaluated based on typical standards used in the industry. For instance, standard 25'x40' vehicle repair bay sizes were used, and other specialized support spaces

were estimated by evaluating current facilities usage and compared to other similar facilities. For DPW Highways in particular, facilities have specialized spaces such as pole barns. All existing facility spaces were measured and needs were discussed with the staff and leadership of these departments.

Key Metrics

The primary metric to estimate current utilization and future growth at the Fleet Maintenance facility is the number of repairs and other services provided to the County's fleet. The Bay Projection section below provides further detail. The primary metric to estimate current utilization and future growth of DPW Highways district facilities is essentially their coverage area, and mileage of roads maintained. This type of quantification is useful for understanding facility needs, but



Figure 26: Highway Maintenance District Locations

granular issues such as repairs being delayed or impacts of traffic require estimation for this level of analysis.

Key Findings

The following section presents summary findings for functional and operational aspects of facilities used by DPW fleet maintenance.

Summary Prioritization Ranking

Table 17 presents the summary prioritization scoring for facilities utilized by DPW fleet maintenance. Findings for each category are further reviewed in this section.

Table 17: DPW Fleet Maintenance - Prioritization Ranking by Facility

Facility Name	Total Score	Facility Condition: FCI	Risks to Life Safety	Space Shortfall / Surplus	Operational Deficiency	Energy Inefficiency	Utility	Demographic Trend	County Priority	Real Estate	Fundability
Hickory II - Fleet Maintenance	60	1.00	High	42%	High	Medium	High	Status Quo	Low	County	Medium
Hickory II - Highways Administrative Office and Highway Maintenance 2nd District Shop	31	0.10	Low	6%	High	Medium	Medium	Status Quo	Low	County	Medium
Highway Maintenance 4th District Shop	24	0.06	Medium	0%	None	Medium	Medium	Status Quo	Low	County	Medium
Highway Maintenance 1st District Shop	23	0.13	Low	0%	None	Medium	Medium	Status Quo	Low	County	Medium
Highway Maintenance 3rd District Shop	23	0.11	Low	0%	None	Medium	Medium	Status Quo	Low	County	Medium

Facility Condition Index

FCI for DPW and Fleet Maintenance range from 0 to 100 percent. Zero percent being no facility physical condition issues versus 100 percent being significant issues found with facility condition. The Fleet Maintenance facility has major FCI issues including roof leaks, no floor drains, standing water, no oil water separator; therefore, the FCI rating is high (100%). The remaining facilities have low FCI scores and have minor FCI issues.

Risks to Life Safety

The majority of the facilities have low life safety risks. The Highway Maintenance 4th District Shop has a medium life safety risk due to standing water on the shop floor. The Hickory II - Fleet Maintenance facility has a high life safety risk with numerous safety issues, such as no floor drains (standing water in shop), poor ventilation, and old electrical wiring. It was reported there was at least one injury, a broken leg, last winter due to a fall.

Space Shortfall

Space shortfalls range from zero to forty-two percent. Zero percent being no space shortfall issues found versus forty-two percent being a significant space inadequacies. Hickory II – Fleet

Maintenance (42%) has significant space issues. Hickory II - Highways Administrative Office and Highway Maintenance 2nd District Shop has minor space issues, and the remaining facilities do not have space shortfall issues.

Operational Deficiencies

The majority of the District Maintenance shops have no operational deficiencies. The Fleet Maintenance facility lacks essential equipment and storage space.

Utility

The Fleet Maintenance facility services vehicles for the county and is highly utilized. The remaining facilities are medium utility.

Demographics & County Priority

Growth is tied to amount of vehicles contracted to maintain for the 50+ agencies served. The demographic trend is considered status quo for all facilities. The Department of Public Works facilities are a low county priority.

Recommendations

For the DPW Highway Department, growth is tied to amount of county roads that they maintain each year. On average, approximately 1.4 miles per year are added in each District. With this minimal amount of growth anticipated in the next 10 years, the DPW Administration does not anticipate any additional staff being added in the foreseeable future; therefore, few changes in their facilities are needed.

Although the majority of the facilities are adequate, there are minor FCI or life safety issues to address. In particular, the Fleet Maintenance facility has severe FCI issues, operational deficiencies, life safety issues, and a high space shortfall. Replacement of this facility should be considered.

A preliminary estimate of projecting future requirements of a combined maintenance facility is shown in Table 18, Bay Projection. This table lists the existing number of shop bays, mechanics and approximates the number of equipment/vehicles per mechanic. Using historical data on the annual equipment increase since 1999, the table projects the future equipment estimate in 10 years. Using the current ratio of pieces of equipment per mechanic for Fleet Maintenance (85), we can project the number of mechanics needed to support future requirements. Based on 1 bay per

mechanic for Fleet Maintenance and 30 Buses per Bay for Bus Maintenance, we project the need for 22 shop bays for a combined maintenance facility.

Table 18: Bay Projection

Combined Fleet Maintenance and Bus Maintenance Facility	Current Mechanics (both shifts)	Current # of Bays	Current Equipment Count	Current quantity of Equipment / Mechanic *	Projected Equipment Count in 10 Years**	10 Year Projection for # of Mechanics***	Bays per Mechanic	Busses per Bay	Projected Number of Bays
Hickory II Fleet Maintenance	14	10	1,196	85	1,460	17	1		17.1
School District Bus Maintenance		4	100		110			30	3.7
School District - Other equipment			100	85	110	1	1		1.3
									22.1

* Assumes current ratio of 85 pieces of equipment per mechanic is appropriate for the number of technicians needed to service the current composition of fleet

** Based on trend of 1999 to 2013 Equipment Data Set

*** Assumes 1 Shift

The following table, Facility Projection, estimates the space requirements to support a 22 bay shop. This is a macro-level program and a more detailed analysis would need to be conducted before determining the exact square footage requirements for this type of facility. Based on this analysis, a combined Fleet and Bus Maintenance Facility would need approximately 45,000 Gross Square Feet.

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SUMMARY FUNCTIONAL AND OPERATIONAL ANALYSIS – DPW HARFORD WASTE DISPOSAL CENTER (HWDC) FACILITIES

Introduction and Background Information

Introduction

The following appendix presents summary information regarding how Harford Waste Disposal Center (HWDC) functions and operations are supported and enabled by existing facilities and related infrastructure.

Major sections in this appendix include:

- Introduction and Background Information
- Standards and Metrics
- Key Findings
- Recommendations
- Supplemental Information and Discussion

Additional supporting information can be found in the “State of the Facilities Report” which is a companion document to this summary report, MAPPS™ database, and project folder.

Mission and Responsibilities

The HWDC serves a critical function to the community. It provides both solid waste and recycling management for the county. More specifically, it also includes landfill operations, yard waste processing into mulch, homeowner drop off, remediation of closed facilities, litter collection, automotive waste material recycling, and all of the support functions for the site and the Division of Environmental Services. Operations have evolved since the original construction of the facility and needs may be identified in accordance with the increase of HWDC’s responsibilities.

Of further note is the issue that the operations are in flux related to processing waste at other existing facilities, particularly the waste to energy plant. The new agreement with Baltimore County will address the issue of the closure of this plant beginning in 2016. Cooperative agreements have been established and these will alter processing in the coming years. Growth in the county, or further expansion of HWDC responsibilities, could create additional staff and space needs. Finally, state regulations can have a significant impact to facility needs and functions; planning for out years can be difficult. The updated Waste Management Plan is currently being developed; analysis

provided therein can point with detail that is more precise to future waste management needs in the county. This analysis provided here, however, applies a standard approach to all the facilities visited. Suggestions herein are based primarily on facility condition, space needs, and issues pertaining to current and near term functional deficiencies.

Summary Facilities

The HWDC facilities are consolidated into a single campus, but the team separated the analysis to review two main campuses and two buildings. The buildings reviewed for the 'north campus' are primarily for landfilling maintenance and operations as well as resident drop off. The buildings reviewed for the 'south campus' are primarily related to mulch and compost operations. The north campus and south campus designations were created for easy reference in this document, and are not part of the standard Department of Public Works Division of Environmental Services naming convention.

In addition to the two groups of facilities identified by campus, two individual buildings were pulled out for detailed analysis of administrative functionality: the White House and the Administrative offices. These locations were broken out for independent functional analysis at the client's request. This also allowed for separating M&O space needs from administrative space needs. Although the campuses themselves have numerous functions and buildings, consolidating was needed to align with the overall project's methodology.

Additional information regarding these facilities can be found in the Supplemental Information and Discussion section of this appendix.

Standards and Metrics

The following section presents summary standards and metrics that are generally applicable to the HWDC.

Summary Standards

Standards and industry practices were identified from multiple sources including:

- Administrative space located at the main administrative building and white house utilize the office space standards from throughout in the study.

- Modular units, the scale house and the mulch/compost office, utilized space standards from local case studies for this building type (<http://www.modulargenius.com/modular-scale-house-weight-station.html>).
- Maintenance and vehicle areas combined bay space requirements of fire stations (UFC 4-730-10) and standard vehicle bays as the maintenance serviced both vary large and standard size vehicles.

Key Metrics

Key Metrics related to landfilling, and other functional facilities related to the HWDC mission, address specific engineering needs and state-wide legislative priorities. As such, a detailed master plan is under development. The current Solid Waste Master Plan (<http://www.harfordcountymd.gov/dpw/envaffairs/index.cfm?ID=427>) sunsets in 2015, and the plan will provide additional information regarding long-term needs and priorities specific to construction addressing landfill or recycling requirements¹⁰.

Key Findings

The following section presents summary findings for functional and operational aspects of facilities used by HWDC.

Summary Prioritization Ranking

Table 19 presents the summary prioritization scoring for facilities utilized by HWDC. Findings for each category are further reviewed in this section.

¹⁰ General estimates related to the HWDC's growth were reviewed with HWDC staff, and it was determined that the forthcoming Solid Waste Management Plan would be a more precise indicator of future needs. It was determined that this report would focus specifically on facility-level functional and space needs.

Table 19: DPW Waste Disposal Centers - Prioritization Ranking by Facility

Facility Name	Total Score	Facility Condition: FCI	Risks to Life Safety	Space Shortfall / Surplus	Operational Deficiency	Energy Inefficiency	Utility	Demographic Trend	County Priority	Real Estate	Fundability
Harford Waste Disposal Center North Campus - White House	45	0.51	Medium	0%	High	Medium	High	Status Quo	Low	County	Medium
Harford Waste Disposal Center South Campus - Mulch & Compost Personnel Office	41	0.41	Low	38%	Low	Medium	High	Status Quo	Low	County	Medium
Harford Waste Disposal Center North Campus - Maintenance Shop	36	0.52	Low	31%	None	Medium	High	Status Quo	Low	County	Medium
Harford Waste Disposal Center South Campus - Mulch & Compost Pole Barn	35	0.01	Low	38%	Low	Medium	High	Status Quo	Low	County	Medium
Harford Waste Disposal Center North Campus - Scalehouse	34	0.30	Low	31%	None	Medium	High	Status Quo	Low	County	Medium
Harford Waste Disposal Center South Campus - Mulch & Compost Attendant Booth	32	0.03	Low	38%	Low	Low	High	Status Quo	Low	County	Medium
Harford Waste Disposal Center North Campus - Groundwater Treatment Plant	30	0.02	Low	31%	None	Medium	High	Status Quo	Low	County	Medium
Harford Waste Disposal Center North Campus - Leachate Hauling Attendant Booth	27	0.00	Low	31%	None	Low	High	Status Quo	Low	County	Medium
Harford Waste Disposal Center South Campus - Main Administrative Building	24	0.10	Low	-17%	None	Medium	High	Status Quo	Low	County	Medium

Facility Condition Index

The majority of the facilities have a good FCI. The exceptions are White House, Mulch & Compost Personnel Office, and Maintenance Shop, which have poor FCIs; and the Scalehouse, which has a medium FCI. More detailed FCI reports can be found in the MAPPS™ database.

Risks to Life Safety

Flooding in the White House was the only life safety issue identified during the surveys.

Space Shortfall

The majority of the spaces have a space shortfall greater than 30%. The Main Administrative Building has a space surplus of 17%.

Operational Deficiencies

White House is the only facility that operates with High deficiencies, all other facilities have low or no deficiencies.

Utility

The HWDC provides for critical functions related to waste, and serves the entire county. As such, all of the facilities have a high utility rating in our analysis.

Demographics & County Priority

Per the standard set by the analysis, since the entire county utilizes the HWDC functions this metric for demographic trend was identified as status quo.

The metric for county priority in our analysis was determined by the county. DPW facilities in general were ranked low for this part of the matrix.

Recommendations

Many of the existing facilities at the HWDC show a need for immediate expansion. The White House is inadequate, and there is an unmet need to maintain and protect expensive assets like vehicles. Further, an increase for staff related to collections, for example, could create a need for eight additional staff positions. As the responsibilities of these sites grow and change in accordance with state regulations or cooperative agreements, it becomes apparent that the HWDC has already outgrown many of its buildings.

A consolidated, expanded, and permanent administrative building addresses one need. Expanded vehicle maintenance and storage areas resolves another, however, concerns with traffic may require a more comprehensive approach to the waste disposal in the county. Our recommendations only address the immediate (within 1-5 years) and apparent facility needs, as a future reorganization of the HWDC would require a more detailed level of analysis. That need would be more appropriately addressed after the cooperative agreement is in full effect, the waste management plan has been finalized, and more clarity about future landfiling regulations is released by the state.

Based on the individual analysis of the functions for each of the primary buildings and building groups, the following key issues were identified:

- The White House is in the second Tier priority group, and has many needs that need to be addressed.
- The North Campus area has additional need for vehicle maintenance and storage.
- The Administrative Building has additional needs for space.
- Other concerns like traffic are an issue for the site, but large-scale alterations the facility layout and operations are prohibitively expensive.
- Growth and operational changes may be the result of state-level decision-making regarding waste disposal procedures; addressing these changes is essential and may require future alterations to facilities.

Recommend actions include:

- Vacating the White House, repurposing for other functions but only if needed, and moving the administrative and storage functions to the administration building
- Building a permanent facility for HWDC administration, with expanded space to accommodate future growth and the existing White House administration functions
- Expanding the north campus maintenance facility to accommodate additional vehicle maintenance, and providing a pole barn to protect vehicles from weather related conditions.

The first change is the result of major issues related to the White House, which is deteriorating and insufficient for administrative and storage functions. One of the primary causes of this suggestion is the life safety issue concerning flooding inside the building. Further, the FCI shows significant need and suggests major renovation for the space. Moving the functions to a main facility appears to be preferential to continued use of this building.

Despite the fact that the administration building is in the fourth tier of our analysis, new construction for this facility is suggested for various reasons. One primary reason is that the overall functions of waste management cannot be moved elsewhere in the county as the collocation allows for 'efficient communications and oversight'. The administration of the HWDC should be located on-site adjacent to the landfilling area, and permitting will not allow landfilling and other operations to be moved elsewhere. Another reason is that operations may increase by up to eight staff in the next 5-10 years, and that future need necessitates increased space. The current space is a modular unit, and was originally intended for the engineering function only. However, it houses all the administrative functions except for those at the White House. A more permanent facility corresponds with its increased utilization. Finally, this facility will address the serious need to replace the White House.

Our analysis also shows additional need for space in the north campus. Largely, and in agreement with the HWDC leadership, the protection of vehicles during the winter is not possible with the current facilities. Pole barn and vehicle storage space within the maintenance building could allow for extended life for vehicles and equipment.

Supplemental Information and Discussion

The following section provides additional detailed discussion and information for this functional and operational analysis.

Location

The Harford Waste Disposal Center (HWDC) is located in Street, Maryland. Although the facilities were consolidated into a single campus at the start of the study, the team has subsequently separated the analysis to review two main campuses and two buildings. The buildings reviewed for the 'north campus' at 3241 Scarboro Road are primarily for landfilling maintenance and operations as well as resident drop off. The buildings reviewed for the 'south campus' at 3135 Scarboro Road are primarily related to mulch



Figure 27: HWDC facility locations

and compost operations. It should be noted that the north campus and south campus designations were created for easy reference in this document, and are not part of the standard Department of Public Works Division of Environmental Services naming convention.

In addition to the two groups of facilities identified by campus, two individual buildings were pulled out for detailed analysis of administrative functionality: the White House and the Administrative offices. These locations were broken out for independent functional analysis at the client's request. This also allowed for separating M&O space needs from administrative space needs. Although the campuses themselves have numerous functions and buildings, consolidating was needed to align with the overall project's methodology.

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SUMMARY FUNCTIONAL AND OPERATIONAL ANALYSIS – SHERIFF’S OFFICE

Introduction and Background Information

Introduction

The following appendix presents summary information regarding how the Sheriff’s Office functions and operations are supported and enabled by existing facilities and related infrastructure.

Major sections in this appendix include:

- Introduction and Background Information
- Standards and Metrics
- Key Findings
- Recommendations
- Supplemental Information and Discussion

Additional supporting information can be found in the “State of the Facilities Report” which is a companion document to this summary report, MAPPS™ database, and project folder.

Mission and Responsibilities

The Sheriff’s Office in Harford County mission is that with courage, honor, and integrity they protect the rights and dignity of all citizens. In partnership with our communities, they strive to preserve the peace and provide for a safe environment for all. The Harford County Sheriff's Office is a progressive Maryland Law Enforcement agency, providing professional police, courts, and correctional services to the citizens of Harford County. Having as its motto, Courage, Honor, and Integrity in the Pursuit of Justice, the Sheriff's Office has become an integral working part of the community, providing for the safety, health and well-being of county residents.

Summary Facilities

The Office of the Sheriff is positioned in nine different facilities in various locations around the county.

Additional information regarding these facilities can be found in the Supplemental Information and Discussion section of this appendix.

Standards and Metrics

The following section presents summary standards and metrics that are generally applicable to the Sheriff's Office.

Summary Standards

Harford County Sheriff's facilities were evaluated based office standards used for other departments, and analysis based on data collected through functional surveys. Details on these standards can be found in the 'Summary Functional and Operational Analysis – Offices' section of the appendices.

Key Metrics

Key Metrics are summarized herein. A more detailed discussion of these metrics can be found in the Supplemental Information and Discussion section of this appendix.

The key metric used to determine future space needs is population. Based upon data by the US Department of Justice, an IACP (International Association of Chiefs of Police) study states there is a national average of 1.9 officers per 1,000 residents when a population of 250,000 or more is served. Using the forecasted Harford County population in 2025 of approximately 275,000 county residents, the number of officers based on this average would equate to 522. This total includes local municipality officers and county deputies.

Key Findings

The following section presents summary findings for functional and operational aspects of facilities used by the Sheriff's Office.

Summary Prioritization Ranking

Table 20 presents the summary prioritization scoring for facilities utilized by the Sheriff's Office. Findings for each category are further reviewed in this section.

Table 20: Sheriff's Office - Prioritization Ranking by Facility

Facility Name	Total Score	Facility Condition: FCI	Risks to Life Safety	Space Shortfall / Surplus	Operational Deficiency	Energy Inefficiency	Utility	Demographic Trend	County Priority	Real Estate	Fundability
Sheriff's Headquarters	57	0.25	Medium	30%	High	Medium	High	Status Quo	High	County	Medium
Detention Center	44	0.02	Medium	0%	Low	Medium	High	Status Quo	High	County	Medium
Northern Precinct	41	0.05	Low	12%	Low	Medium	High	Status Quo	High	County	Medium
CID / Property Management (Lease)	34		Low	5%	Low	Medium	High	Status Quo	High	Leased	Medium
Megan's Law (Lease)	33		Low	0%	None	Medium	High	Status Quo	High	Leased	Medium
Southern Precinct	31	0.01	Low	0%	None	Low	High	Status Quo	High	County	Medium
LE Records and Court Services (Lease)	28		Low	22%	None	Medium	Medium	Status Quo	High	Leased	Medium
Family Justice Center (Lease)	26		Low	0%	None	Medium	Medium	Status Quo	High	Leased	High
Office of Professional Services (Lease)	19		Low	0%	None	Medium	Low	Status Quo	High	Leased	Medium

Facility Condition Index

FCI for Sheriff's Office facilities range from one to twenty-five percent. Zero percent being no facility physical condition issues versus twenty-five percent being moderate issues found with facility condition. Lease facilities did not receive an FCI. The Sheriff's Headquarters has the highest FCI (25%), with the other facilities are in good condition with the maximum FCI being five percent.

Risks to Life Safety

The majority of the facilities have low life safety risks. The Sheriff's Headquarters and the Detention Center have a medium life safety risk. The ratings are due to egress issues in the Sheriff's Headquarters, and from security issues in the Detention.

Space Shortfall

Space shortfalls range from zero to thirty percent. Zero percent being no space shortfall issues found versus thirty percent being a significant space inadequacies. The Sheriff's Headquarters (32%) and the lease facility, LE Records and Court Services (22%) have significant space issue. The Northern Precinct (12%) has minor space issues, and the remaining facilities do not have space shortfall issues.

Operational Deficiencies

The majority of the Sheriff's Office facilities have no operational deficiencies. The Sheriff's Headquarters is the exception, and has major operational deficiencies.

Utility

The majority of the Sheriff's Office facilities are classified as high utility, the exception being two lease facilities, LE Records and Court Services facility and Family Justice Center, which are classified with medium utility.

Demographics & County Priority

The Sheriff's Office serves the entire county, and the demographic trend is considered status quo for all facilities. The Sheriff's Office facilities are a high county priority.

Recommendations

The current facilities adequately meet the needs of the Sheriff's Office, with only minor FCI and life safety issues that need addressing. Future growth will require additional space.

Recommend actions include:

- Consolidate the following Sheriff's locations into a new facility in downtown Bel Air:
 - Headquarters Building – 45 South Main, Bel Air
 - LE Records and Court Services – 101 South Main, Bel Air *
 - Family Justice Center – 23 North Main, Bel Air *
 - Megan's Law – 101 South Main, Bel Air *
 - CID / Property Management – 2201 Commerce St, Forest Hill *

* = lease space
- Consider locating a new consolidated Sheriff's Office facility with other County Government departments, such as Courts, to create a "Government Complex".
- Rather than expanding the Northern or Southern Precinct, create a new "Central Precinct" downtown and co-locate with the consolidated Sheriff's HQ facility.
 - Estimated 10-year projection square footage requirements for a new stand-alone consolidated Sheriff's HQ and Central Precinct is approximately 55,000 GSF
- Southern Precinct Building (existing facility)
 - Correct FCA issues
- Northern Precinct Building (existing facility)
 - Correct FCA issues
 - Minor interior renovations: Bunk Rooms, Showers, additional workstations for Patrol Deputies, Floor drain in Sally Port
- Detention Center (existing facility)
 - Correct FCA issues
 - Construct new receiving facility with a Mail Room
 - Construct a security gate near property entrance

Supplemental Information and Discussion

The following section provides additional detailed discussion and information for this functional and operational analysis.

Facility Locations

The Office of the Sheriff is positioned in nine different facilities in various locations around the county. Geographically, the County is divided into Northern and Southern precincts. Northern Precinct serves approximately 103,000 residents, or 41% of the county's population in a 252 square mile area. The Southern Precinct has a higher population of approximately 140,000 residents, or 57%, but covers a smaller geographically area (128 sq. miles).

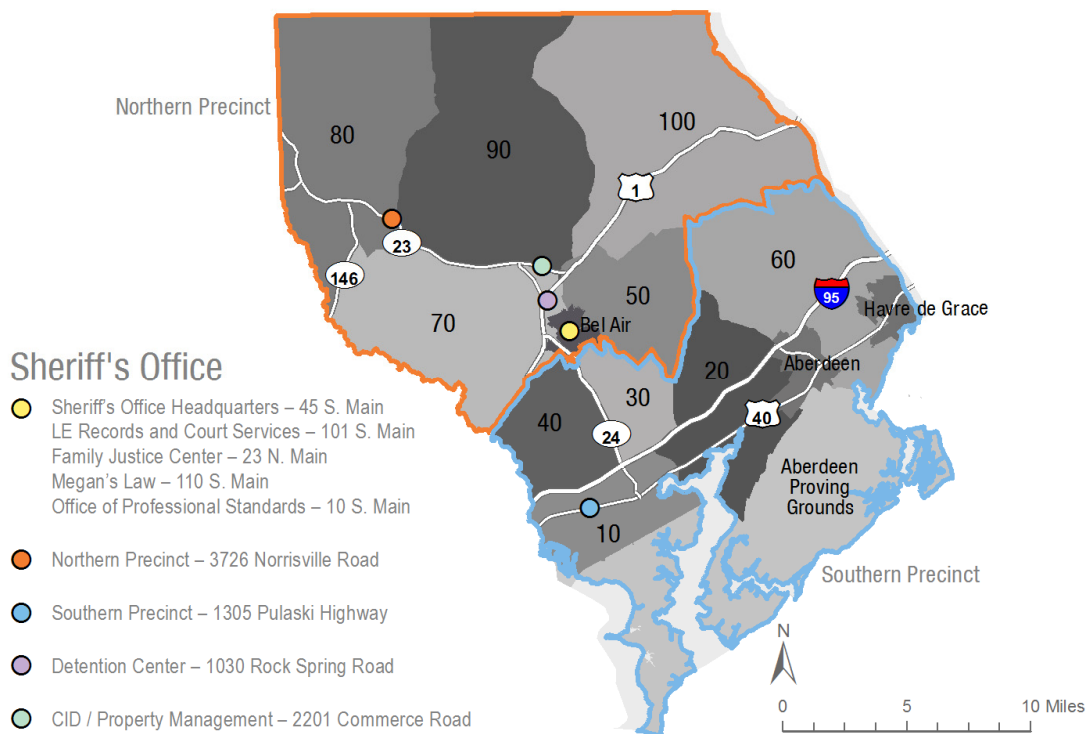


Figure 28: Sheriff's Office Locations

Table 21: Area and Projected Population by Precinct/Sector

										Compound Annual Growth Rate (CAGR) 2010 to 2020
Sector	Area Sq Mile	Census Data			Future Projected Census Data					% Population Growth from 2010 to 2035
		1990	2000	2010	2015	2020	2025	2030	2035	
NORTHERN PRECINCT										
50	20.92	14,046	21,575	26,014	26,717	28,396	30,029	31,558	32,555	25%
Bel Air (59)	2.89	9,033	8,542	8,743	8,843	8,833	8,822	8,791	8,743	0%
70	43.54	24,071	31,042	34,911	36,091	36,775	38,408	39,923	40,896	17%
80	53.91	7,269	7,787	8,089	8,285	8,505	8,717	8,910	9,022	12%
90	61.66	10,045	12,583	14,398	14,828	15,535	16,222	16,863	17,274	20%
100	68.81	9,541	10,273	10,742	11,293	11,625	11,948	12,239	12,412	16%
Sub Total:	252	73,995	91,802	102,897	105,057	109,669	114,146	118,284	120,892	17%
										0.71%
SOUTHERN PRECINCT										
10	17.82	33,833	34,777	39,369	41,190	42,439	43,644	44,733	45,383	15%
20	27.63	9,226	14,446	17,818	20,434	21,732	22,993	24,170	24,930	40%
30	12.31	16,056	23,556	26,078	26,957	27,172	28,349	29,437	30,124	20%
40	18.19	11,794	17,379	21,985	22,376	23,840	25,256	26,577	27,430	28%
60	42.20	7,104	7,332	9,099	10,690	10,755	10,917	11,050	11,115	22%
Aberdeen (68)	5.78	13,765	13,909	14,672	16,043	16,085	16,123	16,129	16,084	10%
Havre de Grace (69)	4.11	9,461	11,391	11,674	12,957	13,054	13,234	13,381	13,445	15%
Sub Total:	128	101,239	122,790	139,695	149,457	155,077	160,516	165,477	168,511	21%
										1.17%
APG (0)	59	6,879	3,980	2,216	2,486	2,586	2,637	3,151	3,196	44%
Harford County Total:	439	182,113	218,572	244,808	257,000	267,332	277,299	286,912	292,599	20%
										0.98%
										> 25% Growth
Precinct	% Area	% of Population								
NORTHERN PRECINCT	57%	41%	42%	42%	41%	41%	41%	41%	41%	
SOUTHERN PRECINCT	29%	56%	56%	57%	58%	58%	58%	58%	58%	
APG	14%	4%	2%	1%	1%	1%	1%	1%	1%	

Future Staffing Analysis

The following analysis projects the future staff and space needs for the Sheriff's Office in 10 years. Based upon data by the US Department of Justice, an IACP (International Association of Chiefs of Police) study states there is a national average of 1.9 officers per 1,000 residents when a population of 250,000 or more is served. Using the forecasted Harford County population in 2025 of approximately 275,000 county residents, the number of officers based on this average would equate to 522. This total includes local municipality officers and county deputies.

A study in 2012 by the Harford County Sheriff's Office shows that approximately two-thirds of the officers in the county are Sheriff's deputies. Assuming that ratio remains relatively constant for the next 10 years, then two-thirds of 522 officers in the county would equal approximately 345 Sheriff's deputies in 2025. This is an increase of 53 above the total headcount in 2012.

Current staff counts indicate that roughly 10% of Sheriff's staff is currently in locations other than the nine facilities covered in this report (undercover, training, etc.). Assuming that percentage remains relatively constant, then approximately five of the fifty-three deputies would be accommodated in "other" locations.

Table 22: Sheriff Staff by Location

Law Enforcement		Total (Actual + Vacant Authorized)													
Staff by Location	1/1/2014	Current	Headquarters	101 S. Main (LE Records and Court Services)	Northern Precinct	Southern Precinct	Family Justice Center	Megan's Law	Office of Professional Standards	CID / Property Management	Other Locations	Detention Center			
Uniformed Deputies			AUTH	ACT									AUTH		
Sheriff	1	1	1	1								0			
Chief Deputy	1	1	1	1								0			
Major	4	4	4	4								1			
Captain	9	9	9	2	1	1	2		1	2		3			
Lieutenant	12	12	12		1	3	5	1		1	1	8			
Sergeant	33	33	33		3	8	11	1	2	2	6	13			
Corporal	30	29	30		5	6	10	2	1	2	4	14			
Deputy First Class/Deputy/Recruit	197	193	208	1	19	48	94	6		19	21	101			
Total	287	282	298									140			
Civilian (Total)			75.5	74.5	74.5	20	27	1	3	1	0	7	14.5	26	
Contractual Employees (Total)			47	44	44	8	1	6	11	1	1	0	0	16	7
Total					416.5	37	57	73	136	12	2	3	32	64.5	173

Some are Shared or No Workstations

Excluding staff in “other” locations, current staffing numbers also indicate that approximately one-third of all Sheriff’s Office staff is contract or civilian staff. One-third of 48 deputies (53 minus 5) would equate to 16 additional contract or civilian staff. The resultant is a total new deputy, contact and civilian staff count by 2025 of 64 staff.

Currently approximately 38% of deputies share workstations (typically deputies on patrol duty). Using this percentage, then 18 of the total 48 new deputies would not require dedicated workstations. Therefore, 46 new workstations would be needed (64 minus 18) to accommodate staff increases by 2025. Since 2012, there has already been an increase of six deputies, so the total new offices or workstations needed in 2025 above the current count equals 40.

Given the average of 330 gross square feet per person for all of the Sheriff’s Office facilities, then approximately 13,045 Gross Square Feet of additional space would be needed in 2025.

Table 23: Staff and Space Projections

Sheriff's Office Manpower Study (March 6, 2012)		2015	2020	2025	2030	2035
Northern + Southern Precinct Population Total:		254,514	264,746	274,662	283,761	289,403
Ratio of 1.9 officer/deputy per 1,000 County Population:		484	503	522	539	550
Ratio of Sheriff Deputies to Total LE Officers:		319	332	345	356	363
2012 Sheriff's Deputies:		292	292	292	292	292
Increase from 2012:		27	40	53	64	71
Subtract 10% for "other" locations:		3	4	5	6	7
Sheriff's Deputies Needed:		24	36	48	58	64
Increase in Support Staff (33% of New Sheriff's Deputies):		8	12	16	19	21
Total New Staff (Deputies + Civilian + Contract):		32	48	64	77	85
Subtract Deputies not having desks (based on cur 38%):		9	13	18	22	24
Total new offices/workstations needed:		23	35	46	55	61
Delta: 2012 to Current Deputies Count:		6	6	6	6	6
New Offices/Workstations needed (incl Support Staff):		17	29	40	49	55
330	GSF/Person					
Total Projected Additional GSF Needed:		5,757	9,566	13,045	16,089	18,155

SUMMARY FUNCTIONAL AND OPERATIONAL ANALYSIS – JUDICIAL

Introduction and Background Information

Introduction

The following appendix presents summary information regarding how Judicial, prosecutorial, and related functions and operations are supported and enabled by existing facilities and related infrastructure.

Major sections in this appendix include:

- Introduction and Background Information
- Standards and Metrics
- Key Findings
- Recommendations
- Supplemental Information and Discussion

Additional supporting information can be found in the “State of the Facilities Report” which is a companion document to this summary report, MAPPS™ database, and project folder.

Mission and Responsibilities

Judicial, prosecutorial and related functions in Harford County are provided by separate, stand-alone entities. These include:

- Circuit Court of Harford County.
- District Court of Maryland for Harford County.
- Clerk of the Circuit Court.
- Orphans’ Court / Register of Wills.
- State’s Attorney.

While distinct on the one hand, these entities interact on a daily basis to provide due process and other rights and privileges as set forth constitutionally and by prevailing law. ***Although identified above for completeness, Judicial and Clerk operations associated with the District Court are specifically excluded from Jacobs’s project scope.***

Circuit Courts: Circuit courts are the trial courts of general jurisdiction in Maryland. These courts hear major civil cases, serious criminal matters, and all family matters including juvenile. Circuit court judges also decide appeals from the District Court and certain administrative agencies as well

as performing Civil marriages. Judicial Masters hear domestic and juvenile matters and make recommendations based on their findings to the judge¹¹.

Clerk of the Circuit Court: The Clerk of the Circuit court is an elected four-year position and serves as custodian of all official records related to court proceedings including those associated with specialty courts and ADR proceedings. The Office is responsible for civil, criminal and juvenile filings; recording of land records and plats; and licenses including those for marriage.

Orphan's Court / Register of Wills: The Orphans' Court supervises the handling of estates of people who have died (with or without a will) while owning property in their sole name. Orphans Court also has jurisdiction over guardianships of minors. The Register of Wills serves as clerk to the Orphans' Court. Elected by the voters, the Register serves a four-year term.

State's Attorney: The State's Attorney is a constitutionally chartered function that represents the State in all criminal actions^{12,13}.

Sheriff: The Sheriff provides court security as well as handling of persons who are in custody. Information provided herein is limited to this context. A detailed discussion of other public safety operations including law enforcement, detention, and related activities is presented elsewhere in this Summary report.

The State's Attorney and Judges immediate staff are County funded. Court Administration including Judges and Masters, Clerk of the Circuit Court, and Register of Wills are State funded.

Summary Facilities

The Circuit Court, Clerk of the Circuit Court, Orphan's Court, and State's Attorney collectively utilize 118,300 SF in two County owned and three County leased facilities for their daily operations¹⁴.

These facilities are located predominately in downtown Bel Air. Additional information regarding

¹¹ Data Source: <http://mdcourts.gov/publications/annualreport/reports/2013/fy2013statisticalabstract.pdf>, page CC-2.

¹² Article V, Section 7 of the State of Maryland Constitution.

¹³ Harford County Government Approved Annual Operating Budget, FY 2013-2014, Page 819.

¹⁴ Importantly, the Clerk of the Circuit Court has leased additional space on 7 West Courtland Street and 4 Office Street independent of the County. As these are not County administered facilities, they are specifically excluded from the Jacob's scope of work. 7 West Courtland houses swearing in ceremonies, licenses, marriage, and nontrial related client contact. 4 Office streets has a small meeting facility and is predominately used for records storage.

these facilities can be found in the Supplemental Information and Discussion section of this appendix.

Standards and Metrics

Introduction

The following section presents summary standards and metrics that are generally applicable to the Circuit Court, Clerk of the Circuit Court, and State's Attorney.

Summary Standards

Standards and industry practices were identified from multiple sources including:

- "The Courthouse: A Planning and Design Guide for Court Facilities" published by the National Center for State Courts.
- "California Trial Court Standards, April 2006," as amended published by the California Administrative Office of the Courts.
- Facility Programming Manual as published by the State of Maryland, Department of General Services and Department of Budget and Management.
- Catonsville District Court program as prepared by Maryland Department of General Services¹⁵.

Additional office standards were developed based on prevailing industry practices. Generally, this standard was 180 usable square feet per person as a high level-planning standard. This standard assumes that the predominate use is open office with some private offices. This standard also includes allocations for huddle space, conference rooms, general use, and circulation. This standard was initially used as a high level to begin any analysis of office or general use space for most County functions.

The Circuit Court building serves as the core upon which all other operations revolve. Most special use functions including but not limited to trial courts, daily Clerk operations, holding, and similar special functions were located in this facility.

¹⁵ This is most recent facility planned by MD DGS. Although District Courts are not jury trial, new District Court facilities are designed to have that capability. Similarly, new District Courts are designed to accommodate in custody, general public, and private staff circulations as provided for under prevailing best practices.

Facilities other than the Circuit Court were generally office use space with accommodations made for special uses such as secure entry, interview rooms, child play areas, and the like.

Table 24 and Table 25 present standards utilized for functional analysis.

Table 24: Office Space Benchmarks Used for Harford County Analysis

Overall UR	Space Type	USF
180 USF	Private Office	150
	Workstation	64
	Special Spaces	Unique to Agency
	Conference Rooms	Conference Seats per Staff: 1:2
	Huddle Rooms	120 USF; Range 1:25
	Department Filing	Unique to Agency
	Circulation Rate	1.45

Table 25: Court Space Benchmarks Used for Harford County Analysis

Space Type / Use	California AOC (NSF)	State Of Maryland (District Court)	National Center For State Courts
Court Set			
Multipurpose Courtroom	1600-1750	1700	2,109
Large / Ceremonial Courtroom	2100 - 2400	2000	2,440
Judges Chambers (with private bathroom)	400	275	300-550
Masters Office			250
Reception / Waiting	50-80	15 SF/Person up to 15 people. 10/person over 15	40-60
Copy / Work Room / Supply Area	100		
Court Reporters Work Station	64		
Research Attorney Work Area	80-150		120
Staff Toilet Rooms	60		50
Jury Deliberation Room	350	250	400-450
Jury Toilet Room	60	60	50
Attorney Interview Room	100	100	100
Entry Vestibule	64	80	
Law Enforcement Waiting Room	100	250	
Courtroom Exhibit / Evidence Storage Room	50		

Space Type / Use	California AOC (NSF)	State Of Maryland (District Court)	National Center For State Courts
Jury Assembly			
Entry Queuing Area	14 / Juror (25% of Jury call)		
Reception / Registration	0-300		80 SF/reception station
Jury Assembly Room	12-20 / Juror		15/juror
Forms Counter	5/juror (10% of jury call)		
Copy / Work Room / Supply Area	100		
Coffee / Snack area	115		
Mail Center	50-200		
Call Center	60		
Staff Toilet Room	60		
Jury Suite Toilet Room	60		
Court Administration / Clerks			
Public Counter Queuing	14/Person	10/person	12-15/person
Records Viewing	24/Person	150	
Training Facility- Medium	800		
IT Workroom and Storage	150-300		
Mail Center	150-300		
Staff Break Area	150-300	125	

Space Type / Use	California AOC (NSF)	State Of Maryland (District Court)	National Center For State Courts
Private Offices			
Executive / Director	240-300	300	250-350
Large	225	250	
Medium	150-175	150-175	120-180
Small	100-120	108-126	
Mediator	225		
Work Stations			
Large	100		
Medium	64-84		64
Small	48		
Counter Workstation	40-48		
Conference			
Large (18-20 Persons)	360	22/person	
Medium (8-12 Persons)	240	22/person	
Small (6 Persons)	150	22/person	
Family Law Center / Pro Se Center			
Waiting	14/Person		
Reception / Registration	40-60		
Workshop	375-400	150	
Mediation Room	250-400		
Child Waiting	120+15/child		
Security Station	50-80		
Equipment Storage	100		
ADR			
Reception/Waiting	150		
Mediation / Arbitration Rooms	200-400	250	
Caucus Room	100		
Mediation Room	250-400		

Space Type / Use	California AOC (NSF)	State Of Maryland (District Court)	National Center For State Courts
<i>Related Justice Agency</i>			
Grand Jury Room			600-800 or 35 SF/person
Grand Jury Room Vestibule			40-80
Grand Jury Witness Waiting Area			100-240
Grand Jury Reception Area			150
Grand Jury Toilet Rooms			50
Grand Jury Evidence Storage			
Attorney Convenience Center	150-300		200-1000
Law Enforcement Officers / Waiting / Workroom	150-300	250	200-400
Volunteer Workstation	100		
Volunteer Coordinator	100-120		
<i>In Custody / Secure</i>			
Vehicle Sally Port	1500-3000	500	800-1000 per van
Secure Vehicle Parking	350/vehicle	275/vehicle	
Pedestrian Sally Port	50-100		
Control Center	100-250		100 -400
Central Holding Cells	10/inmate	15/inmate	12-15/inmate
Attorney Interview Booth	60-80		60-80
Courtroom holding cell	40 (1 per court room)		40 minimum
Bail / Fine Payment Counter	48		
Storage Room	40-100		

Space Type / Use	California AOC (NSF)	State Of Maryland (District Court)	National Center For State Courts
Public Areas			
Public Queuing Area	14/Person	5/person	
Weapons Screening Station	250		
Information Kiosk	64		
Courtroom Public Waiting	220 per court room	5/person	200-400 per court cluster
Public toilet rooms	Per code		
Building Support Services			
Janitor Closets	40		
Loading Dock			
Trash and Recycling Area			
Media Area	150		200-400
Mail room	160		
Staff Toilet with Shower	80		
telecom equipment room	150		
Telecom room	90 per 120,000 SF served		
Security Control room	150-400		
Security Equipment Closet	100		
Interior Media Space	800		

Key Metrics

Key Metrics are summarized herein. A more detailed discussion of these metrics can be found in the Supplemental Information and Discussion section of this appendix.

Circuit Court, Clerk of the Circuit Court, States Attorney: Irrespective of the complexity of the activities of these functions, total filings and number of Judges are commonly used metrics to assess Court workload and activity.

Court caseload – Total Filings: In 2003, total caseload for all categories was 9,695 filings¹⁶. In 2013, total filings increased by about 23.7% to 11,988 that represents 4.2% of all filings Statewide.

Number of Judges: The Maryland AOC has submitted an analysis to the Maryland Legislature that identified a need for over seven judges currently and certified that by FY 2015, there is a real need for an additional 2.9 Judges in the Circuit Court¹⁷. In the short run, the Court has been addressing the current workload with retired judges using over 260 judge days in 2013. This is equivalent to more than one Judge.

Register of Wills / Orphans Court – Metrics

Key metrics for the Register of Wills include the number of residents in County who will die and Boomer and aging cohorts. Based on ESRI data, the over 55 population will increase from 27% in 2013 to 30% by 2018.

Key Findings

The following section presents summary findings for functional and operational aspects of facilities used by Judicial, prosecutorial, and related functions.

Summary Prioritization Ranking

Table 26 presents the summary prioritization scoring for facilities utilized by the Judicial and Prosecutorial functions. Findings for each category are further reviewed in this section.

¹⁶ Source data provided by Maryland Administrative Office of the Courts.

¹⁷ ANALYSIS OF NEED FOR ADDITIONAL JUDGESHIIPS IN THE JUDICIAL BRANCH, November 1st, 2013, page 9, Prepared by the Maryland AOC, and as submitted to the Maryland Legislature on November 1st, 2013.

Table 26: Judicial - Prioritization Ranking by Facility

Facility Name	Total Score	Facility Condition: FCI	Risks to Life Safety	Space Shortfall / Surplus	Operational Deficiency	Energy Inefficiency	Utility	Demographic Trend	County Priority	Real Estate	Fundability
Circuit Courthouse	61	0.19	High	36%	High	Medium	High	Status Quo	High	County	Low
Bar Association / Clerk of the Court	39	0.07	Medium	0%	None	Medium	High	Status Quo	High	County	Medium
LE Records and Court Services (Lease)	28	N/A	Low	22%	None	Medium	Medium	Status Quo	High	Leased	Medium
Family Justice Center (Lease)	26	N/A	Low	0%	None	Medium	Medium	Status Quo	High	Leased	High

Facility Condition Index

Facility Condition Indexes for facilities owned by the County are summarized herein. Facilities leased by the County were not evaluated in this category. Detailed information regarding the physical condition of each facility can be found in the “State of the Facilities Report” which is a companion document to this summary report, as well in the MAPPS™ database.

20 West Courtland Street Circuit Court Facility: The five-year Facility Condition Index rating for this facility is 19 percent indicating that it is in below average physical condition. Although this FCI indicates that the building is an asset worth retaining, at least \$ 7 million in significant repairs are necessary to address deficiencies captured in the five year FCI. Additionally the low FCI is also driven by the high replacement cost for a facility of equal capability.

18 Office Street: The five-year FCI for this facility is 7% indicating it is in good condition. Over the next five years, it will require approximately \$137,500 to address building deficiencies.

Risks to Life Safety:

With exception of the Circuit Court building, few safety issues were found in facilities used by the Judicial and Prosecutorial functions. In the Circuit Court, significant safety issues were identified in including blocked or narrowed emergency egress paths. Equally significant was the storage of excessive files leading to a potential fire hazard.

Space Shortfall

20 West Courtland Street-Circuit Court Facility

The Circuit Court as currently utilized is undersized to meet the requirements imposed on it. Based on current use, the facility is deficient by at least 36 percent¹⁸ of the required square footage based on applicable standards for major programmatic areas. Importantly, this does not take into

¹⁸ This shortfall is calculated by $[1 - (\text{Space available} / \text{Requirement})] \times 100\%$.

account additional building area necessary for records storage and secure parking for Court officers and others, which further exacerbates these shortfalls.

Table 27 summarizes these shortfalls. The total needed area is assumed to be the mean of the range of NSF identified as an industry best practice.

Table 27: Space Shortages for Selected Major Program Areas – Circuit Court Building 2013

Element	Industry Practice (NSF)	Existing Court House - Avg (NSF)	Total Actual (NSF)	Total Needed (NSF)	Shortfall (NSF)
Trial Court	1600 - 2100	1,071	6,423	11,100	(4,677)
Ceremonial Court	2100 - 2450	2,187	2,187	2,275	(88)
Public Waiting Space (Excludes elevator lobbies)	200-400 Per Court	220	1,542	2,100	(558)
Judges Chambers (Excludes Support Staff)	300-550	281	1,683	2,975	(1,292)
Attorney / Client Rooms	2 Per Court @ 100 SF Each	50	300	1,400	(1,100)
Security Station at Entry	250	65	65	250	(185)
Grand Jury Room	600-800	408	408	700	(292)
Grand Jury / Witness Waiting	100-240	150	150	175	(25)
Police / Attorney / Public Defender Waiting	150-300/each	0	0	675	(675)
Jury Area (Total for 120)	3,000	1,283	1,283	3,000	(1,717)
Court Administration Office	180	142	4,354	5,220	(866)
Clerks Office	180	118	4,828	7,380	(2,552)
State's Attorney Office	180	122	3,545	5,220	(1,675)
Register of Wills Office	180	155	927	1,080	(153)

Office Shortfalls - Circuit Court of Harford County

Table 28 presents a conceptual analysis of office use shortfalls for the Circuit Court.

Table 28: Space for Office Operations – Circuit Court 2013

	20 West Courtland	18 Office Street	101 South Main
Staff Assigned	29	2	31
Judges (Excludes Retired)	5	0	0
Masters	1	2	0
Office SF Allocated	6,037	1,000	4,525
SF Required (Excludes Major Program Spaces)	8,664	1,085	5,580

Office Shortfalls – Clerk of the Circuit Court

Table 29 presents a conceptual analysis of office use shortfalls for the Clerk of the Circuit Court.

Table 29: Space required for Office Operations – Clerk of the Circuit Court 2013

	20 West Courtland	18 Office Street
Staff Assigned	41	6
Office SF Allocated	4,828	1,000
SF Required (Excludes Major Program Spaces)	7,380	1,080

Note: This specifically excludes State leased facilities at 7 Courtland and 4 Office Street

Office Shortfalls – State’s Attorney

Table 30 presents a conceptual analysis of office use shortfalls for the State’s Attorney. Space requirements are based on utilizing 180 USF/FTE.

Table 30: Space required for Office Operations – State’s Attorney 2013

	20 West Courtland	109 N. Main	23 N. Main	101 South Main
Staff Assigned	29	24	29	12
Office SF Allocated	3,545	5,600	8,376	1,943
SF Required (Excludes Major Program Spaces)	5,220	4,320	5,220	2,160

Office Shortfalls – Register of Wills

Table 31 presents a conceptual analysis of office use shortfalls for the Register of wills. Again, these are based on utilizing 180 USF/FTE.

Table 31: Space required for Office Operations – Register of Wills 2013

	20 West Courtland	18 Office Street
Staff Assigned	6	0
Office SF Allocated	927	429
SF Required (Excludes Major Program Spaces)	1,080	0

Operational Deficiencies

Facilities were evaluated for three major categories of operational deficiencies. Space program / major required spaces focused on whether the element was included, it's size, and ability to be modified to meet best practice. Operations focused on the circulation paths necessary for a modern facility, again based on prevailing best practice. Interior adjacency addressed if the facility provided proper physical relationships again as evaluated against prevailing best practices. External adjacency addressed how Departments were grouped to facilitate operations.

Summary information is presented in Table 32.

Table 32: Summary Operational Deficiency by Facility

Category	Performance Attribute	Circuit Court House (Owned)	18 Office Street (Owned) Used by Register of Wills, Clerk, Court Administration	109 N. Main (Leased) Used by State's Attorney District Court Operations	101 S. Main Street (Leased) Used by Court Administration, State's Attorney, Sheriff	23 N. Main (Leased) Family Law Center - State's Attorney, Sheriff
Space Program / Major Required Spaces	Public Security Check Point	2	2	0	0	0
	Public Queuing Space	3	0	0	0	0
	Complete Court Set (Chambers, court room, jury room, clerk space, attorney client rooms)	3	0	0	0	0
	Court Administration Space	2	0	0	0	0
	Clerk Administration Space	2	0	0	0	0
	Public Clerk Spaces (Clerks, Counter Areas)	3	0	0	0	0
	Grand Jury Space (Waiting, hearing room)	3	0	0	0	0
	Police / Attorney / PD Waiting Area	3	0	0	0	0
	Security Operations (Control room, sallyport, day holding, court room holding)	2	0	0	0	0
	Jury Assembly (Queuing, Administration)	2	0	0	0	0
	Secure Parking for Court Officers	3	0	0	0	0
	State's Attorney	3	0	0	0	0
	Sheriff	0	0	0	0	0
	Register of Wills	1	0	0	0	0
	Records Storage Areas	3				
		0	0	0	0	0
Operations	Public Circulation	2	0	0	0	0
	Staff Circulation	3	0	0	0	0
	Separate Detainee / Incustody circulation	3	0	0	0	0
	Modern Facility Design	0	0	0	0	0
Interior Adjacency	Complete Court Sets	2	0	0	0	0
	Grand Jury Space (Waiting, hearing room)	2	0	0	0	0
	Clerk Operations	3	0	0	0	0
	Client Management (DV / Family Law / Clerks)	0	0	0	0	0
External Adjacency	Inter-department Adjacency	2	0	0	0	0
		0	0	0	0	0
Building Operational Deficiency Total Score		74	2	0	0	0
Prioritization Tool Rating		High	Low	Low	High	High

Operation Deficiency Scoring Criteria for Prioritization Tool		
Per Performance Attribute	0: Not Applicable	Prioritization Tool Rating
	1: Minor Issues	
	2: Medium Issues	
	3: Major Issues	
Building Operational Deficiency Total Score	0 to 5	None
	6 to 10	Low
	>10	High

With the exception of the Circuit Court facility located at 20 West Courtland Street, few materially significant operational deficiencies were found in facilities utilized by the Judicial / Prosecutorial functions. Of note, the hearing space in 18 Office Street did not have a robust security checkpoint

but this can be addressed with some modifications to the facility. The existing Circuit Court facility on the other hand presented serious issues throughout. Simply put, the facility does not meet operational and organizational adjacencies of a modern trial court building.

Modern trial courthouses are fundamentally based on maintaining separate paths for persons requiring different services. These typically include public, staff, and in custody^{19,20}. Good practice also specifically sets up a zone where these three circulations interface as well as a zone for facility support.

The existing Courthouse to some degree does start incorporating modern planning principals including the main transactional floor at the main level and a somewhat segregated secure path for in custody's. However, beyond that provided for MEP, communications, and building systems, the building has little functional space for storage, daily receiving, and similar activities.

In the historic Courthouse, zoning is very poor as in custody's must be brought into the Ceremonial court room by either circulating through the State's Attorney work area, or being brought in through a side door on Courtland Street to a secure elevator and to day holding adjacent to the courtroom.

The public needs access to the court house that provides for security, allows them easy access to court room and adjudication spaces, clerks areas, records/licenses, Jury pool areas, and other support space (i.e.: pro se). These are all very small including the main lobby, court floors, and waiting areas. There is a cross circulation between the criminal clerk area and land records.

Staff needs secure access to allow for safe ingress and egress separate from detainees, and particularly for court officers, secure paths away from the public and in custody's. Separate access, secure internal paths (other than for Judges and Masters), and secure parking do not exist.

In custody detainees and court security require separate ingress/egress paths to and from the facility through a secure sally port to day holding, and from day holding to cells adjacent to courtrooms, and from cells to the courtroom. Other than on the third floor of the new courthouse,

¹⁹ "Trial Court Planning Standards" as published by the State of California, Judicial Council dated April 2006 as amended.

²⁰ "The Court House – A Planning and Design Guide for Court Facilities, Second Edition" pages 27-28 as prepared by the National Center for State Courts.

in custody's have access to the corridors used by Judges and their staffs leading to the courtrooms. This presents a security risk.

Transactional activities such as working with clerks, obtaining licenses or records, should be located near main entry points to facilitate access. This principal is applied on the main level as Clerk and Court Administrative Spaces are located on the first level. However, these are compromised by the lack of queuing and waiting spaces. Court security is nearby and prevents issues from occurring.

Similarly, the pro se area is located on LEVEL A, and large numbers of people waiting during paternity/ daddy day often compromises access.

Due a lack of functionally adequate space, the Clerk has relocated licenses, marriage, and other functions to 7 West Courtland Street to reduce numbers flowing through court security and reduce demand on Court clerk areas.

Other than Judge Carr's chambers adjacent to the ceremonial courtroom in the old court building, all Chambers are located adjacent in a secure path to adjacent courtrooms..

Utility

The Circuit Court, Clerk of the Circuit Court, and Orphan's Court collectively form the third arm of government in Maryland as provided for under Article IV of the Maryland Constitution. Similarly, the State's Attorney and Register of Wills are also required functions as provided for under the Maryland Constitution. As all persons are afforded the right to avail themselves to these parts of Maryland government, these functions have an extremely high utility to the entire County

Demographics

As previously noted, Judicial and Prosecutorial functions serve the entire County and therefore are a high priority.

Recommendations

In summary, major issues collectively facing the Judicial and Prosecutorial functions include:

- As currently utilized, the existing 75,600 SF Circuit Court facility is undersized to meet the requirements imposed on it. It also does not meet operational and organizational adjacencies and circulations necessary for a modern trial court building. Of particular note, cross circulations exist between in custody detainees, chambers, and staff work areas. Significant

safety issues were identified including blocked or narrowed emergency egress paths. Storage of excessive numbers of files has created a potential fire hazard. Judges and other senior court leadership do not have access to secure parking creating a personal hazard. By 2018, the circuit court building will require at least \$7 million to address non-programmatic physical deficiencies.

- Operations are poorly organized due to a lack of space, which has caused Clerk, Circuit Court, and State's Attorney operations to be split apart creating materially significant operational inefficiencies.

Recommend actions include:

- Unless funds are available for a new modern 131,000 SF trial court facility²¹, the existing facility should be modernized and used as a pure trial court facility only. All functions not directly related to daily trial court activities would need to be relocated elsewhere. An additional 39,800 SF will be required for State's Attorney, Family Law, CASA, and related operations.
- It is recommended to prepare a detailed scope study to address the feasibility of adaptive reuse of the existing facility and an overall master plan including all Court, State's Attorney, Clerk, and Register of Wills operations.

Supplemental Information and Discussion

The following section provides additional detailed discussion and information for this functional and operational analysis.

Common Key Metrics - Circuit Court, Clerk of the Circuit Court, and State's Attorney

Several key metrics were identified that are generally applicable to the Circuit Court, Clerk of the Circuit Court, and State's Attorney. These include:

- Overall population.
- Court Caseload / filings.
- Filings /population by Judge.
- Number of Judges.

Overall Population: In 2013, the County had about 249,000 residents approximately 58,000 are under 18 years of age. By 2018, total County population is anticipated to grow 3.2% to about 257,000 persons. Over 97% of the approximately 8,100 new County residents over this five-year

²¹ A space program by function has been prepared and can be found in the project folder. Of note, this assumes space for seven courtsets as authorized by the Maryland AOC. Given that real demand may be closer to eight Judges, planning should consider this.

period will be over 18. Similarly, by 2025, total County population is anticipated to increase to about 277,000 persons, about an 11% growth over 2013 population. Figure 29 summarizes information from 2013 through 2018.

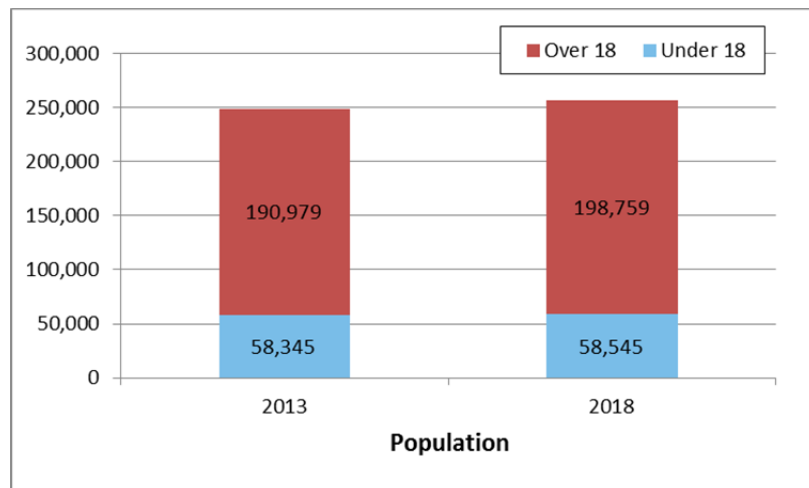


Figure 29: Population by Major Age Group

Source Data: MDP, ESRI

Court caseload – Total Filings: Figure 30 summarizes total filings by category from 2003 to 2013 including Civil, Civil – Family, Juvenile, and Criminal²².

In 2003, total caseload for all categories was 9,695 filings. Of this, Civil – Family predominated, totaling 4,420 filings, which represents 46% of all filings. In 2013, total filings increased by about 23.7% to 11,988 that represents 4.2% of all filings Statewide. Again, Civil – Family was the predominate filing category including 5,119 filings representing nearly 43%. However, criminal filings disproportionally increased 50.7% to 3,824 over this same period. Overall, criminal filings represented nearly 57% of the increase in the County from 2003 to 2013.

²² Data is provided in the Annual Report of the Maryland Judiciary.

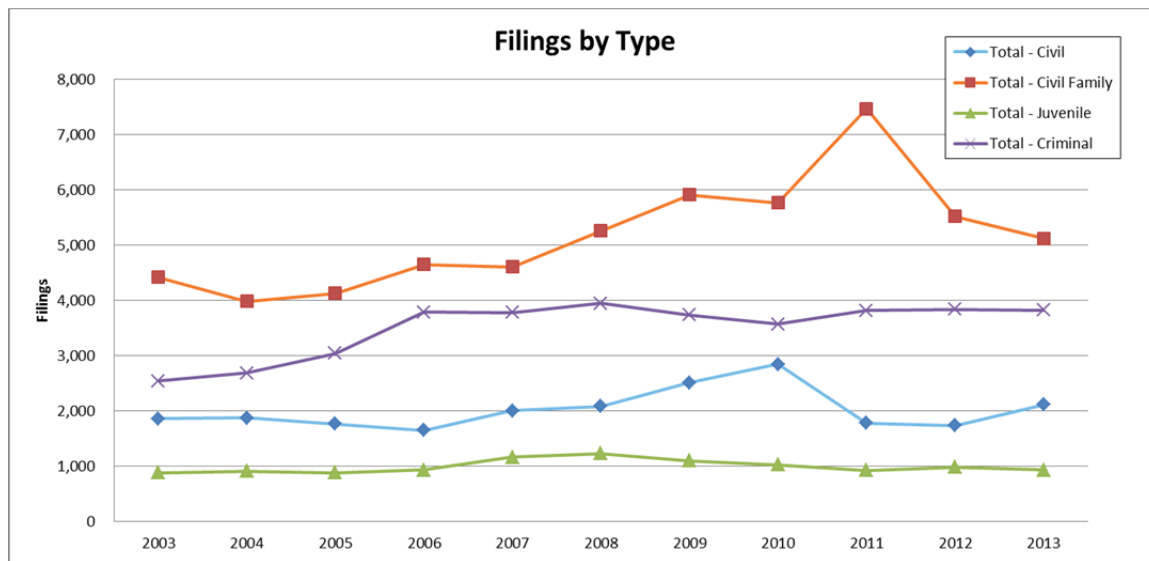


Figure 30: Filings by Type 2003 through 2013

19) Source Data: Maryland Administrative Office of the Courts

Court caseload – Total Filings by 1,000 Population: Filings by 1,000 total population provides an understanding as to how filings, and therefore judicial workload, is generated as a function of County population. Figure 31 summarizes this ratio between 2003 and 2013 for both Harford County as well as Statewide.

In 2003, the County had roughly 42 filings per 1,000 while the State average was about 51 filings per 1,000. In 2013, the County and State were respectively generating filings at 48 and 49 per 1,000. Put another way, in 2003, the County was generating filings at about 20% lower rate than the State average, while by 2013, it was generating filings at the about the same rate on average as the rest of the State.

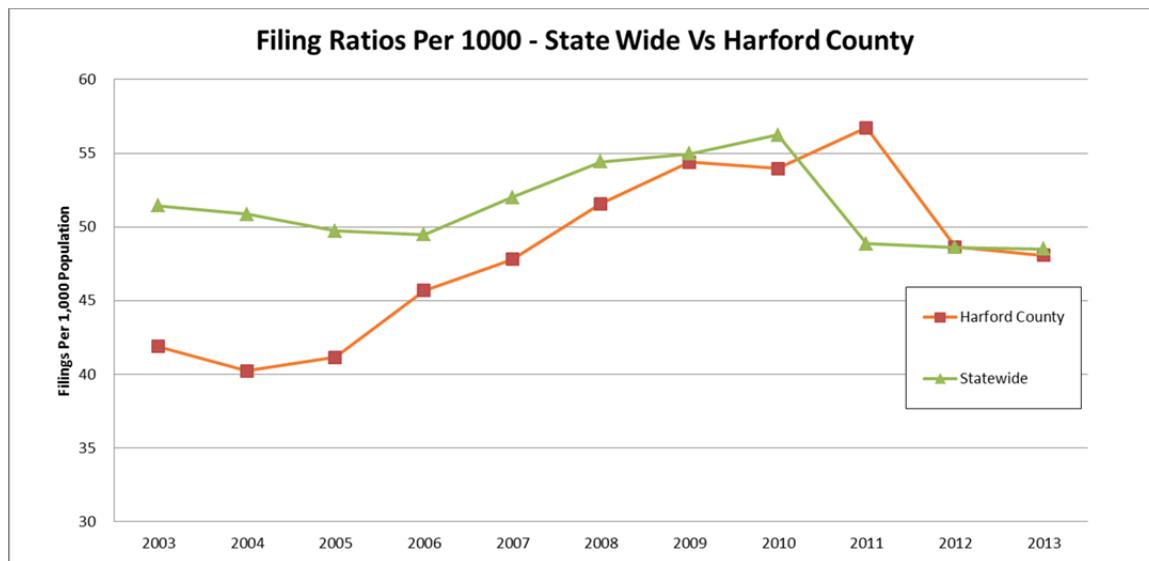


Figure 31: Filings Per 1,000 Population by Type 2003 through 2013
20) Source Data: Maryland Administrative Office of the Courts

Filings / Population by Judge: Filings and population by Judge are also critical metrics in assessing judicial workload of the Court and those functions that work with the Court. Figure 28 compares filings by Judge in 2013 between Harford County and the State average. In 2013, Harford County Judges were processing filings at a rate of about 1/3 faster than elsewhere in the State on average.

Figure 32 similarly compares 2013 population by Judge to the State average. Again, Harford County Judges are working with a caseload that is generated by nearly 49,900 persons per judge whereas the statewide average is about 37,300.

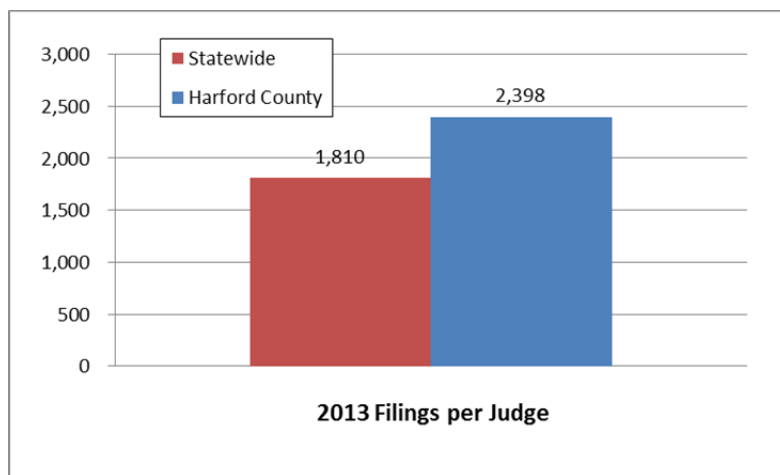


Figure 32: Filings by Judge for Harford County as Compared to State Averages in 2013
Source Data: Maryland Administrative Office of the Courts

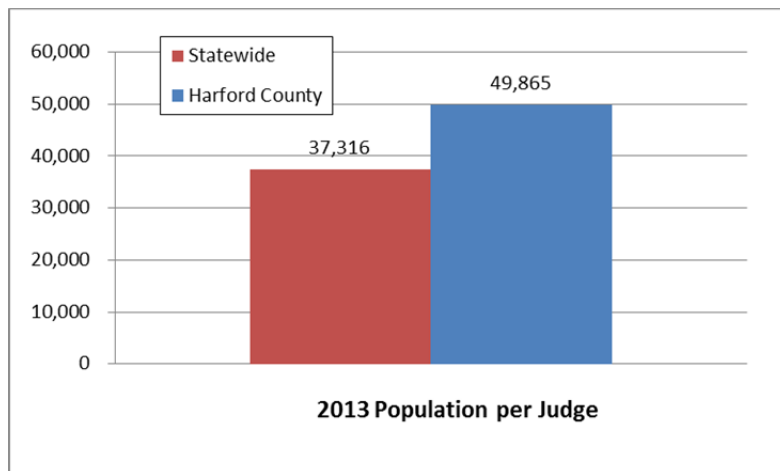


Figure 33: Population by Judge for Harford County as Compared to State Averages in 2013

Source Data: Maryland Administrative Office of the Courts

Number of Required Judges²³: The Maryland AOC submitted an analysis to the Maryland Legislature that identified a need for over seven judges currently and certified that by FY 2015, there is a real need for an additional 2.9 Judges in the Circuit Court²⁴. In preparing their analysis, the AOC rounded down the required number of future of additional Judges to seven, at least through 2015. Given that the AOC has demonstrated that there is sufficient workload for 7.9 judges at prevailing population levels, it is likely even with the marginal population growth currently anticipated; the County will eventually be generating sufficient workload for eight judges.

In the short run, the Court has been addressing the current workload with retired judges using over 260 judge days in 2013. This is equivalent to more than one Judge. Similarly, there has been an effort to use diversionary courts to ease judicial workload.

Common Major Drivers - Circuit Court, Clerk of the Circuit Court, and State's Attorney

Major forces and drivers that materially affect how the Court does its work include:

- **Overall Court Operations:** Caseload is becoming more complex so while filings may go up relatively slowly, the amount of work for each filing is increasing. For example, elder crime and computer crime is increasing and is a complex filing type.
- **Increasing Number of Pro Se's²⁵:** Pro Se's often are not prepared nor fully understand the process, how to proceed with a case and often require continuances until they are prepared to

²³ A detailed analysis of future demand for Judges is beyond Jacobs scope of work for this project.

²⁴ ANALYSIS OF NEED FOR ADDITIONAL JUDGESHIIPS IN THE JUDICIAL BRANCH, November 1st, 2013, page 9, Prepared by the Maryland AOC, and as submitted to the Maryland Legislature on November 1st, 2013.

²⁵ Pro Se defendants are those that choose to represent themselves without Counsel.

present a case. This creates a backlog that ripples through the entire system requiring additional time and resources for the Clerks, State's Attorney, as well Court Administration. The State's Attorney, Court Administration, and Clerk all indicated that pro se's use this as a tactic to delay their trial to avoid jail time. The number of Pro Se's may potentially double or triple in the next five years.

- **Juvenile Master Courts and Chambers:** Discussions with staff indicated there often is a pattern that begins when a family needs assistance to address domestic violence, divorce, or child support issues. These issues have a negative effect on children, which in turn engages the Juvenile elements of the Court system generating additional workload.
- **Staffing:** In general, caseload drives the number of Judges and Masters, which in turn drives staffing. This ripples down to all programs.
- **State of the Economy:** The general state of the economy seems to have an effect on Court workload as well which is why economic development is important. There seems to be a pattern that initiates when a family's breadwinner loses their employment. This subsequently puts stress on the family leading to domestic and juvenile issues. Foreclosures exacerbate this with a subsequent ripple effect on judicial system. Foreclosures also affect as well as development drive land records, recordings, and similar activities. Licenses are driven by overall economic conditions.
- **Diversionary Processes and Courts:** The use of diversionary courts including family court, juvenile drug court, and ADR tend to decrease judicial workload, tends to make cases move smoother because people are more civil, and tends to produce better outcomes. The outcome of the dispute resolution proceeding must be brought before the court and recorded by the Clerk.
- **Archives Not Taking Files:** The Clerk of the Circuit Court holds the official record of the Court, and until 2013, these records were regularly accepted by State Archives. Since 2013, Archives is no longer accepting these files and therefore they are accumulating in the Courthouse, four Office Street, and 18 Office Street.
- **Paternity and Child Support:** "Daddy's Day" is the heaviest day in the Courthouse with large groups queuing up on level A waiting for paternity and child support. This is typically the third Tuesday of each month.

Register of Wills / Orphans Court – Key Drivers

In addition to population factors another key driver of need for this function is that State Archives is not taking filings, as it does not have space. This is forces Register of Wills / Orphan's Court to hold files.

Portfolio Summary

As previously noted, Judicial / Prosecutorial functions including Circuit Court, Clerk of the Circuit Court, Orphan's Court, and State's Attorney collectively utilize 118,300 SF of County owned and leased facilities for their daily operations²⁶. Table 33 below summarizes the locations of these operations and associated activities while Table 34 summarizes total building area of each facility²⁷. Total personnel by facility are presented in Table 35.

Table 33: Judicial / Prosecutorial Function by Facility Location

Function	20 West Courtland	18 Office Street	109 N. Main (Leased)	23 N. Main (Leased)	101 South Main (Leased)	Notes
Circuit Court	Administration, Trial Court Operations, Judges	Hearing Rooms, Masters, Retired Judges			Community Services, CASA, Family Court Services	
Clerk of the Circuit Court	Administration, Trial Court Operations	Records Storage				
State's Attorney	Headquarters, Grand Jury, Felony / Juvenile Circuit Court		District Court (Misdemeanor / Traffic)	Family Justice Center (Domestic Violence / Child Abuse)	Child Support	
Register of Wills		All operations				Operations being consolidated at 18 Office Street.

Table 34: Total SF by Facility Used for Judicial / Prosecutorial Functions

	20 West Courtland	18 Office Street	109 N. Main (Leased)	23 N. Main (Leased)	101 South Main (Leased)
Total Facility SF	75,635	13,372	5,600	9,800	16,078

Note: Total SF for 101 South Main includes allocations for Sheriff Headquarters operations.

Table 35: Total Personnel by Facility Used for Judicial / Prosecutorial Functions

Personnel	20 West Courtland	18 Office Street	109 N. Main (Leased)	23 N. Main (Leased)	101 South Main (Leased)	Notes
Circuit Court	35	4			31	
Clerk of the Circuit Court	41				6	Excludes 3 staff at 7 West Courtland Street.
State's Attorney	29		24	29	12	
Register of Wills		6				Operations being consolidated at 18 Office Street.

Site and Community

Circuit Court: This facility is composed of the historic Courthouse and an addition. This facility is a central part of Bel Air's central business district and a definable icon in the City. The historic courthouse fronts onto South Main Street forming the southern western edge of a City square. The facility is also bounded by Office Street to the north west, West Courtland Street to the south east,

²⁶ Importantly, the Clerk of the Circuit Court has leased additional space on 7 West Courtland Street and 4 Office Street independent of the County. As these are not County administered facilities, they are specifically excluded from the Jacob's scope of work. 7 West Courtland houses swearing in ceremonies, licenses, marriage, and nontrial related client contact. 4 Office streets has a small meeting facility and is predominately used for records storage.

²⁷ 101 South Main is utilized by multiple Departments including Sheriff, Circuit Court, and State's Attorney. The Sherriff space is for headquarters operations unrelated to Judicial / Prosecutorial functions.

and South Bond Street to the southwest. Other than a small park fronting onto South Main, the block is fully built out and does not allow for expansion

Public access to the facility is through entries on both Office and Courtland Streets. These lead to a common lobby area where the County Sheriff provides security. Employees, attorneys, and law enforcement also use this access point but bypass the security checkpoint. All others need to pass through a scanner.

Persons in custody are brought into the facility through a sally port that feeds off Office Street. The sally port can accommodate one 15-person van at a time. Similarly, egress from the Sallyport is onto West Courtland Street. The driveways leading into and exiting from the Sally port are very steep. In custody's are then walked down a stairwell into day holding.

Parking at the site itself is very limited and can be found on both Office and Courtland Streets. Public parking is located about two blocks away to the north east at a County owned structure, as well as a pay lot across from the District Court south east of Bond Street. There is no secure parking for personnel.

18 Office Street: This three level facility located immediately across from the Historic Court house on Main Street. This facility was built in 1992 and has primary access from Office Street. This facility currently occupies the entire site and cannot be expanded. This facility does not have any dedicated or secure parking.

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SUMMARY FUNCTIONAL AND OPERATIONAL ANALYSIS – PUBLIC SCHOOLS

Introduction and Background Information

Introduction

The following appendix presents summary information regarding how Public School functions and operations are supported and enabled by existing facilities and related infrastructure.

Major sections in this appendix include:

- Introduction and Background Information
- Standards and Metrics
- Key Findings
- Recommendations

Additional supporting information can be found in the “State of the Facilities Report” which is a companion document to this summary report, MAPPS™ database, and project folder.

Mission and Responsibilities

The mission of the Harford County Public Schools is to promote excellence in instructional leadership and teaching and to provide facilities and instructional materials that support teaching and learning for the 21st century. The Harford County Board of Education will support this mission by fostering a climate for deliberate change and monitoring progress through measurable indicators.

Summary Facilities

A total of fifty-eight Schools and three administrative support facilities currently serve Harford County population. Public Schools (HCPS) account for three quarters of County real estate portfolio, services 37,800 students and provides after-hours use for parks and recreation programs and other community uses.

Harford County is divided into two physiographic regions, Development Envelope and Non Development Envelope. The development envelope primarily runs along I-95 and Route 24 and is designed to concentrate future development. This area includes the three municipalities of Aberdeen, Bel Air and Havre De Grace. Area outside this development envelope is termed as Non Development Envelope where population density is low and is predominantly an agricultural land.

Bel Air, Joppa, Abingdon, Aberdeen and Susquehanna service areas are considered to be within development envelope. The remaining service areas are in non-development envelope.

Standards and Metrics

The following section presents summary standards and metrics that are generally applicable to the Harford County Public Schools.

Summary Standards

Harford County Public School facilities were evaluated based on the most current site-specific educational

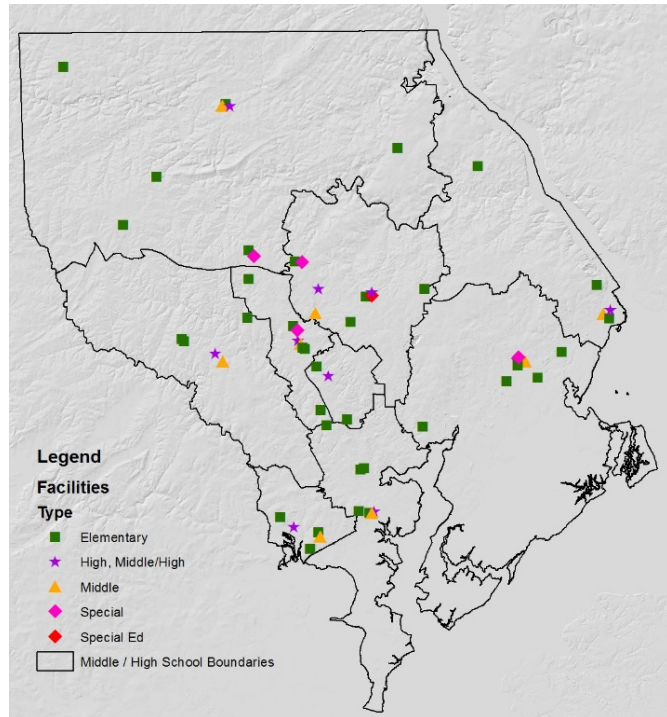


Figure 34: Public School locations

specifications developed by the district (Edgewood High School, Paterson Mill Middle / High School, and Red Pump Elementary School. Operational deficiencies used a point system based data collected from departmental interviews and functional assessments. Space Shortfall is calculated at the building level using square foot per student standards based on the educational specifications (Gross square footage divided by state rated facility capacity).

Key Metrics

Key Metrics are summarized herein. As mentioned above, space shortfall was calculated based on the square footage per student from the educational specifications. Square foot per student standards are outlined in Table 36.

Table 36: Public Schools – Square foot per student standards

Facility Type	Square Foot / Student	Source
Elementary	144	Red Pump Elementary Educational Specification
Middle School	150	Patterson Mill Educational Specification
High School	157	Bel Air High School Educational Specification
Alternative	180	Maryland DOE
Dedicated Special Education	180	Maryland DOE
Career / Technical	210	Maryland DOE

Functional adjacencies also functioned as a key metric in determining the overall operational efficiency of the facilities. Optimal adjacencies are based on the District’s educational specifications along with industry standard best practices.

Critical Adjacencies include:

- Isolation of “noisy” spaces (gymnasiums, cafeterias, and career and technical spaces) from “quiet” spaces (Classrooms, Media Centers)
- Delivery of the educational program within one building footprint. (e.g. program does not operate split campus, or in any permanent detached buildings. (An exception to this would be the agricultural facilities at North Harford High School)A more detailed discussion of these metrics can be found in the Supplemental Information and Discussion section of this appendix.

Key Findings

The following section presents summary findings for functional and operational aspects of facilities used by HCPS.

Summary Prioritization Ranking

Table 37 presents the summary prioritization scoring for facilities utilized by HCPS. Findings for each category are further reviewed in this section.

Table 37: Public Schools - Prioritization Ranking by Facility

Facility Name	Total Score	Facility Condition: FCI	Risks to Life Safety	Space Shortfall / Surplus	Operational Deficiency	Energy Inefficiency	Utility	Demographic Trend	County Priority	Real Estate	Fundability
John Archer School/Infants and Toddlers	59	0.33	High	-67%	High	Medium	High	Status Quo	Medium	County	Medium
Wm Paca/Old Post Rd Elementary School - Old Post Rd ES	59	0.26	High	16%	High	Medium	High	Growth	Medium	County	Medium
Youth's Benefit Elementary School - Intermediate Building	59	0.39	High	23%	High	Medium	High	Status Quo	Medium	County	Medium
Youth's Benefit Elementary School - Primary Building	59	0.13	High	36%	High	Medium	High	Status Quo	Medium	County	Medium
Homestead/Wakefield Elementary School - Homestead Building	59	0.34	High	19%	High	Medium	High	Status Quo	Medium	County	Medium
Hickory Annex - Public School Facilities	56	0.36	High	25%	High	Medium	High	Status Quo	Medium	County	Low
Hickory Elementary School	54	0.13	High	17%	Low	Medium	High	Growth	Medium	County	Medium
Prospect Mill Elementary School	54	0.14	High	23%	High	Medium	Medium	Growth	Medium	County	Medium
Roye-Williams Elementary School	54	0.12	High	17%	High	Medium	Medium	Growth	Medium	County	Medium
Wm Paca/Old Post Rd Elementary School - Main Building (Wm Paca)	54	0.16	High	21%	Low	Medium	High	Growth	Medium	County	Medium
Center for Ed. Opportunity/Teen Diversion	53	0.27	High	0%	High	Medium	High	Status Quo	Medium	County	Medium
Wm S. James Elementary School	52	0.25	High	22%	High	Medium	Medium	Status Quo	Medium	County	Medium
Fallston High School	50	0.32	Medium	3%	High	Medium	High	Status Quo	Medium	County	Medium
Homestead/Wakefield Elementary School - Wakefield Building	49	0.08	High	4%	High	Medium	High	Status Quo	Medium	County	Medium
North Harford Elementary School	49	0.22	High	31%	High	Medium	Low	Status Quo	Medium	County	Medium
Riverside Elementary School	49	0.34	High	26%	High	Medium	Low	Status Quo	Medium	County	Medium
Jarrettsville Elementary School	48	0.09	High	22%	Low	Medium	High	Status Quo	Medium	County	Medium
Joppatowne High School	48	0.20	High	-4%	Low	Medium	High	Status Quo	Medium	County	Medium
Abingdon Elementary School	47	0.11	Medium	27%	Low	Medium	High	Status Quo	Medium	County	Medium
Bel Air Middle School	47	0.21	High	17%	None	Medium	High	Status Quo	Medium	County	Medium
Hall's Cross Roads Elementary School	47	0.12	High	22%	High	Medium	Low	Status Quo	Medium	County	Medium
Ring Factory Elementary School	47	0.13	High	25%	Low	Medium	Medium	Status Quo	Medium	County	Medium
Bel Air Elementary School	45	0.10	High	31%	Low	Medium	Medium	Status Quo	Medium	County	Medium
Churchville Elementary School	45	0.13	High	6%	High	Medium	Low	Status Quo	Medium	County	Medium
Magnolia Middle School	45	0.27	Low	7%	High	Medium	High	Status Quo	Medium	County	Medium
C. Milton Wright High School	44	0.19	Low	16%	Low	Medium	High	Growth	Medium	County	Medium
Church Creek Elementary School	44	0.11	Low	25%	Low	Medium	High	Growth	Medium	County	Medium
Edgewood Middle School	44	0.21	Medium	19%	None	Medium	High	Growth	Medium	County	Medium
Fountain Green Elementary School	44	0.25	Medium	27%	Low	Medium	Medium	Growth	Medium	County	Medium
Havre de Grace Middle School	44	0.41	Medium	12%	High	Medium	Low	Growth	Medium	County	Medium
Meadowvale Elementary School	44	0.12	Medium	16%	Low	Medium	Medium	Growth	Medium	County	Medium
Southampton Middle School	44	0.15	Medium	19%	None	Medium	High	Growth	Medium	County	Medium
Aberdeen Middle School	42	0.21	Medium	9%	None	Medium	High	Growth	Medium	County	Medium
George D. Lisby Elementary School	42	0.26	High	14%	Low	Medium	Low	Growth	Medium	County	Medium
Magnolia Elementary School	42	0.21	Low	20%	High	Medium	Medium	Status Quo	Medium	County	Medium
Havre de Grace High School	41	0.10	High	-13%	High	Medium	Low	Growth	Medium	County	Medium
Harford Technical High School	40	0.16	Low	-3%	Low	Medium	High	Growth	Medium	County	Medium
Havre de Grace Elementary School	40	0.05	High	16%	Low	Medium	Low	Growth	Medium	County	Medium
Aberdeen High School	38	0.01	Low	13%	Low	Medium	High	Growth	Medium	County	Medium
Norrisville Elementary School	38	0.11	Medium	-3%	High	Medium	Low	Status Quo	Medium	County	Medium
Bakerfield Elementary School	37	0.11	Medium	9%	Low	Medium	Low	Growth	Medium	County	Medium
Dublin Elementary School	35	0.14	High	-4%	None	Medium	Low	Growth	Medium	County	Medium
Emmorton Elementary School	35	0.06	Medium	20%	None	Medium	Medium	Growth	Medium	County	Medium
Forest Hill Annex - Food Services/LPC	35	0.11	Low	0%	Low	Medium	High	Status Quo	Medium	County	Low
Forest Hill Elementary School	35	0.01	Low	23%	Low	Medium	Medium	Growth	Medium	County	Medium
Fallston Middle School	33	0.04	Medium	21%	Low	Medium	Low	Status Quo	Medium	County	Medium
North Bend Elementary School	33	0.07	Medium	16%	Low	Medium	Low	Status Quo	Medium	County	Medium
Edgewood Elementary School	31	0.09	Medium	8%	Low	Medium	Low	Status Quo	Medium	County	Medium
Forest Lakes Elementary School	31	0.06	Low	12%	Low	Medium	Medium	Status Quo	Medium	County	Medium
North Harford Middle School	31	0.07	Low	7%	Low	Medium	Medium	Status Quo	Medium	County	Medium
Darlington Elementary School	30	0.22	Low	12%	Low	Medium	Low	Status Quo	Medium	County	Medium
Joppatowne Elementary School	29	0.00	Low	4%	Low	Medium	Medium	Status Quo	Medium	County	Medium
North Harford High School	29	0.00	Low	3%	None	Medium	High	Status Quo	Medium	County	Medium
Patterson Mill Middle High School	29	0.00	Low	0%	None	Medium	High	Status Quo	Medium	County	Medium
Edgewood High School	28	0.00	Low	2%	None	Low	High	Growth	Medium	County	Medium
Bel Air High School	26	0.00	Low	0%	None	Low	High	Status Quo	Medium	County	Medium
BOE Administrative Offices	26	0.02	Low	0%	None	Medium	High	Status Quo	Medium	County	Low
Red Pump Elementary School	26	0.00	Low	0%	None	Low	High	Status Quo	Medium	County	Medium
Deerfield Elementary School	23	0.00	Low	12%	None	Low	Medium	Status Quo	Medium	County	Medium

Facility Condition Index

FCI for public schools range from 0 to 41 percent. Zero percent being no facility physical condition issues versus 41 percent being significant issues found with facility condition. Havre de Grace Middle school has a 41 percent FCI and requires major renovations on interior as well as exterior. Other examples of facilities with 'High' FCI's include Youth's Benefit Elementary School – Intermediate Building, John Archer School, and Fallston High School. Nearly half (27/61) of the HCPS facilities have FCI's of under 12 percent.

Risks to Life Safety

The majority of the life safety issues are related to traffic safety and security within the facility during a lockdown situation. There are several elementary facilities that have a permanent



Figure 35: Roye-Williams elementary school with permanent out-building outlined in red

kindergarten building that is not directly attached to the main facility. This raises many concerns because students are exposed to the elements when they leave their building to go to the main facility for specials, as well as security concerns. In one case, the out-building is located across the parking lot from the school. Detached out buildings are located at Churchville, Hall's Cross Roads, Havre de Grace, Hickory, Meadowvale, Riverside, Wakefield, Roye-Williams, Old Post Road, and Youth's Benefit elementary schools.

Several sites are missing security vestibules, however every facility is has a security camera and pushbutton entry system, which provides adequate security into the facility. As facilities are replaced and renovated, the standard security vestibule with direct access into the main office are being retrofitted.

Space Shortfall

Space shortfall range from surpluses to 36 percent. Almost half of the HCPS sites (30 out of 61) rank in the 'High' category (greater than 15% space shortfall). The majority of those are elementary school facilities. Examples of facilities ranking 'High' include Youth's Benefit Elementary –Primary Building, North Harford Elementary School, Fallston Middle School, and Hickory Annex – Public School Facilities. Most of the middle school and high school facilities fall into the 'Medium' (5%-15%) and 'Low' (0%-5%) Categories.

Operational Deficiencies

The portfolio of public school facilities range from 'Low' to 'High' in operational deficiency. Operation deficiency evaluated functional adjacencies and overall lack of technology. Examples of deficient functional adjacencies are open cafeterias, open plan facilities, and split campuses. Examples of lack of technology are missing or deficient wireless internet and insufficient power infrastructure for technology within classroom.

There are three elementary sites and one high school site that are currently operating a split campus model, meaning that the program spans two separate building footprints on the same site. This contributes to major operational deficiencies. These facilities are: Youth's Benefit Elementary School (Primary & Intermediate buildings), William Paca/ Old Post Road Elementary School (Primary & Intermediate buildings), Homestead/ Wakefield Elementary School (Primary & Intermediate buildings), and Havre de Grace High School.

There are also several facilities that are open plan, meaning that there is no physical (walls or doors) separation between classroom spaces. This also contributes to major operational deficiencies. Open plan facilities include Prospect Mille, William S. James, Bel Air, Old Post Road, and Youth's Benefit (Intermediate Building) elementary schools.

The majority of the middle and high school facilities have adequate technology and supporting infrastructure. The district is the process of ensuring that all facilities have wireless internet connectivity. The majority of the facilities that do not have wireless internet are elementary schools.

Another requirement that contributes to operational deficiency is the presence of electrical outlets in teaching spaces. This is going to continue to be an issue in the future as the program moves

towards a digital one-to-one curriculum. Several facilities, especially those that are open plan have major operational deficiencies due to lack available outlets in the classroom.

Utility

Utility is calculated based on relative enrollment and after-hours community use. Magnolia middle school, Joppatown High School and Harford Tech. are examples of sites are top thirty-three percentile and are considered 'High' utility. Havre de Grace middle school and Darlington elementary are examples of school, which are in the bottom third, or thirty-three percentile are considered 'Low' in utility.

Demographics & County Priority

Abingdon, Susquehanna and Aberdeen service areas are projected to grow more than the County annual population growth. School facilities in remainder of the County are expecting a slight growth but are either equal or less than the County annual population growth and are considered status quo in this category.

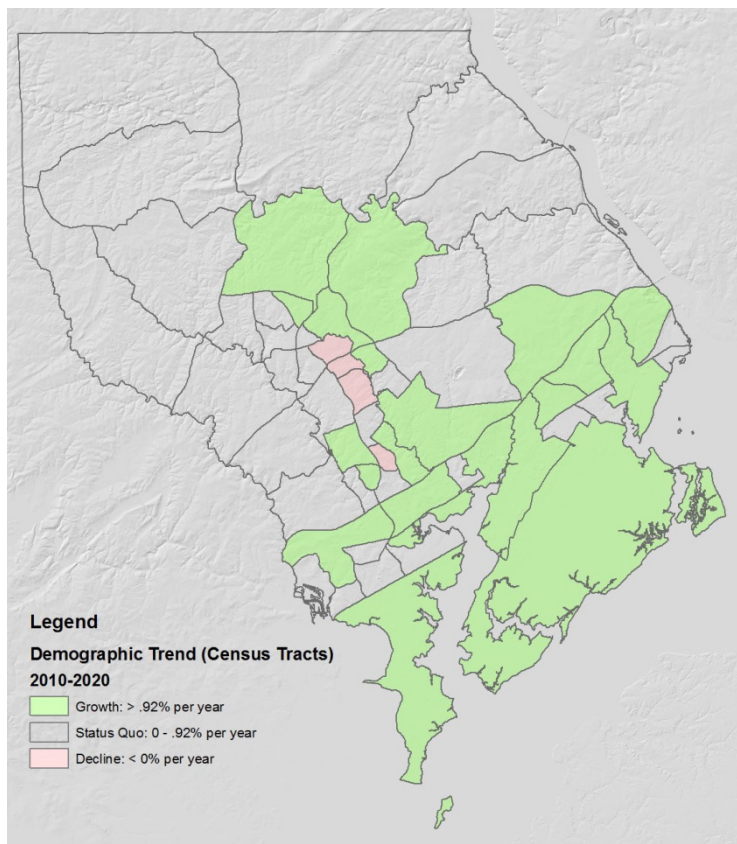


Figure 36: Demographic Trend Map

HCPS's primary function is to provide education. As such, all the HCPS school facilities are considered 'medium' in County priority criteria. All HCPS support sites are considered 'Low' in County priority criteria.

Recommendations

Due to the combination of all prioritization components used, the majority of the county facilities that fall into the top priority are public school facilities (13/18). The findings contained in this report correlate with many scope studies HCPS has already completed, but the projects have yet to be funded.

Addressing the split campus facilities removes five of the fourteen facilities from the top priority list. HCPS has completed scope studies to combine these split facilities on their existing sites with either full on-site replacements (William Paca/ Old Post Rd. Elementary, Youth's Benefit Elementary) or combinations of additions, renovations, and demolition (Homestead/ Wakefield elementary) It is also recommended that the district proceed with Havre de Grace middle / high school project that is currently in pre-design. Even though the existing Havre de Grace Middle and high school facilities are not in the top priority, this project efficiently eliminates a split campus at the high school, and remedies the highest FCI school (Havre de Grace middle).

John Archer School currently houses the medically fragile special needs program for HCPS, the existing facility was not intended for this purpose. These students require a facility that is more similar to a hospital setting than a traditional school. HCPS has completed a scope study to relocate this program to Bel Air Middle school. This action requires that the Homestead/ Wakefield project is complete and the existing Homestead facility is raised. The Bel Air Middle School facility would need to be expanded to accommodate the John Archer program as well as other after-hours community uses.

Hickory Annex –Public School Facilities is currently located on an undesirable site that has a 'High' functional deficiency as well as some life safety and security concerns. It is recommended that the functions that occur at this site (transportation fleet maintenance, facilities, and IT) be relocated to a new combined county services site (Location TBD, recommend detailed scope study) with the county fleet services located at Hickory II.

There are two open plan elementary facilities in the top priority, which have major operational deficiencies due to their inherent open design. These facilities are Prospect Mill Elementary and Williams S. James Elementary. It is recommended that these facilities be replaced either on their existing sites if possible, or on an adjacent site already owned by the county (Prospect Mill Elementary). Alternatively, an open plan conversion may suffice as long as adequate technology infrastructure is present in the renovation.

Two of the remaining schools on the facilities on the top priority have the permanent Kindergarten outbuildings that contribute to operational deficiencies and life safety issues. It is recommended that renovations occur at these facilities to bring the programs in the outbuildings into the main structure. The facilities' programs should also be reassessed to reduce capacity to remedy space shortfalls, this may also require attendance boundary changes to rebalance enrollment.

The Center for Educational Opportunity is one of the former Aberdeen High School buildings and currently houses three functions; Alternative Education Program, Professional Development, and Teen Diversion (County Health Department). Due to 'High' operational deficiencies and FCI, it is recommended that three functions of this facility be relocated. The alternative program could be placed in an addition to one of the upcoming high school projects (Fallston or Joppatowne). Professional development could move into a conference center space on HCC's campus pending renovation of that site or the vacated John Archer facility. Teen diversion would move with the Alternative Educational Program to its new location.

Fallston High School is the last facility on the top priority list. Fallston has the highest FCI of all the high school facilities and its converted open plan design contributes to 'High' operational deficiencies. It should be noted that since the condition assessment occurred, there has been a comprehensive HVAC upgrade approved which will impact the FCI. It is recommended that a scope study be completed to determine the best way to renovate this facility to address operational deficiencies, specifically classroom access to power due to modular walls associated with the open plan concept.

Joppatowne High School is not on the top priority list, however it is at the top of the priority two list and HCPS has already completed a scope study recommending a phased renovation to address the facilities issues.

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SUMMARY FUNCTIONAL AND OPERATIONAL ANALYSIS – PUBLIC LIBRARY

Introduction and Background Information

Introduction

The following appendix presents summary information regarding how the Public Library functions and operations are supported and enabled by existing facilities and related infrastructure.

Major sections in this appendix include:

- Introduction and Background Information
- Standards and Metrics
- Key Findings
- Recommendations
- Supplemental Information and Discussion

Additional supporting information can be found in the “State of the Facilities Report” which is a companion document to this summary report, MAPPS™ database, and project folder.

Mission and Responsibilities

The departmental mission of the Harford Public Library is “to provide responsive services to the community through equal access to library resources that enrich the quality of life and support and encourage life-long learning.”

Summary Facilities

In support of this mission, eleven library branches and one administrative office, totaling approximately 216,000 gross square feet of space, are dispersed around the county.

Additional information regarding these facilities can be found in the Supplemental Information and Discussion section of this appendix.

Standards and Metrics

The following section presents summary standards and metrics that are generally applicable to the public libraries.

Summary Standards

Standards and industry practices were identified from multiple sources including:

- *Public Library Space Needs: A Planning Outline* (Andres C. Dahlgren).
- Public Library Standards from Wisconsin, Colorado, Virginia, Illinois, Rhode Island, Florida, Oregon, Ohio and Iowa.
- 2012 Public Library Data Statistical Report: Characteristics and Trends.
- The Institute of Museum and Library Services (IMLS) Public Libraries Survey Results.
- The Institute of Museum and Library Services Libris Design Project.
- Harford County Public Library Website.
- Harford County Public Library Statistical Summary Report, FY13.

Key Metrics

Key Metrics are summarized herein. A more detailed discussion of these metrics can be found in the Supplemental Information and Discussion section of this appendix.

Population drives the amount of space required. Currently, the libraries have approximately 0.8 gross square feet, 0.7 net square feet, of space per capita, below the minimum State goal of one square foot of space per resident. While library square footage is lower than the State goal, Harford County has a high number of public libraries per capita in comparison to other counties in Maryland.

Key Findings

The following section presents summary findings for functional and operational aspects of facilities used by public libraries.

Summary Prioritization Ranking

Table 38 presents the summary prioritization scoring for facilities utilized by Public Libraries. Findings for each category are further reviewed in this section.

Table 38: Public Library - Prioritization Ranking by Facility

Facility Name	Total Score	Facility Condition: FCI	Risks to Life Safety	Space Shortfall / Surplus	Operational Deficiency	Energy Inefficiency	Utility	Demographic Trend	County Priority	Real Estate	Fundability
Darlington Public Library	52	0.41	Medium	77%	High	Medium	Low	Growth	Medium	County Proper	Medium
Aberdeen Public Library	41	0.11	Low	37%	None	Medium	High	Growth	Medium	County Proper	Medium
Havre de Grace Public Library	41	0.11	Low	40%	Low	Medium	Medium	Growth	Medium	County Proper	Medium
Edgewood Public Library	35	0.05	Low	23%	None	Medium	High	Growth	Medium	County Proper	Medium
Joppa Public Library	34	0.10	High	-1%	None	Medium	Medium	Status Quo	Medium	County	Medium
Riverside Building Complex - Public Library	34	0.03	High	-2%	None	Medium	Medium	Status Quo	Medium	County	Medium
Bel Air Public Library	33	0.05	Low	19%	None	Medium	High	Status Quo	Medium	County	Medium
Whiteford Public Library	30	0.01	Low	-73%	None	Medium	Medium	Growth	Medium	County Proper	Medium
Abingdon Public Library	28	0.06	Low	18%	None	Medium	Medium	Status Quo	Medium	County	Medium
Fallston Public Library	28	0.09	Low	-35%	None	Medium	Medium	Status Quo	Medium	County	Medium
Jarrettsville Public Library	24	0.02	Low	-1%	None	Medium	Medium	Status Quo	Medium	County	Medium
Norrisville Activity Center / Public Library	16	0.03	Low	7%	None	Medium	Low	Status Quo	Low	County	Medium

Facility Condition Index

FCI for Libraries range from 1 to 41 percent. One percent being minimal facility physical condition issues versus forty-one percent being significant issues found with facility condition. Darlington has 41 percent FCI, with the remaining facilities considered to be in good physical condition.

Risks to Life Safety

The majority of Libraries have low life safety issues. Joppa and Riverside Building Complex are rated 'High' in life safety with mold issues in Joppa being a concern. Darlington has a 'Medium' risk to life safety.

Space Shortfall

Space shortfall for the facilities range from a surplus of 73 percent to a shortage of 77 percent. Darling (77%), Havre de Grace (40%), Aberdeen (37%) have significant space shortfall issues. Edgewood (23%), Bel Air (19%), and Abingdon (18%) are next three on the list with a high space shortfall. Norrisville has the least space shortfall, and the remaining facilities have a space surplus. There is a wide range of space issues, with some facilities severely lacking and others a major surplus.

Operational Deficiencies

The majority of Libraries have no or a low operational deficiency. Darlington is high in operational deficiency.

Utility

Aberdeen, Bel Air, and Edgewood serve a high population within their respective service areas and are considered highly utilized. Whereas Darlington and Norrisville serve a small percentage of the population within their service areas and are considered low utility. All other facilities have a medium utilization.

Demographics & County Priority

Aberdeen, Darlington, Edgewood, Havre de Grace, and Whiteford service areas are projected to grow more than the County annual population growth. Libraries in the remainder of the service areas are expecting growth rates that are either equal or less than the County annual population growth and are considered status quo in this category. Libraries are considered 'Medium' in County priority criteria.

Recommendations

Based on the results of the drive-time analysis and comparison of Harford County Library system to other counties in Maryland, expansion of facilities is required to achieve the statewide goal of 1 square foot of library space per capita. While expansion is necessary, there may be an opportunity to consolidate facilities; however, any consolidation is dependent on expansion at another branch.

Further details on the proposed considerations can be founded in the Supplemental Information and Discussion section of this appendix.

Supplemental Information and Discussion

The following section provides additional detailed discussion and information for this functional and operational analysis.

Portfolio Summary

Libraries

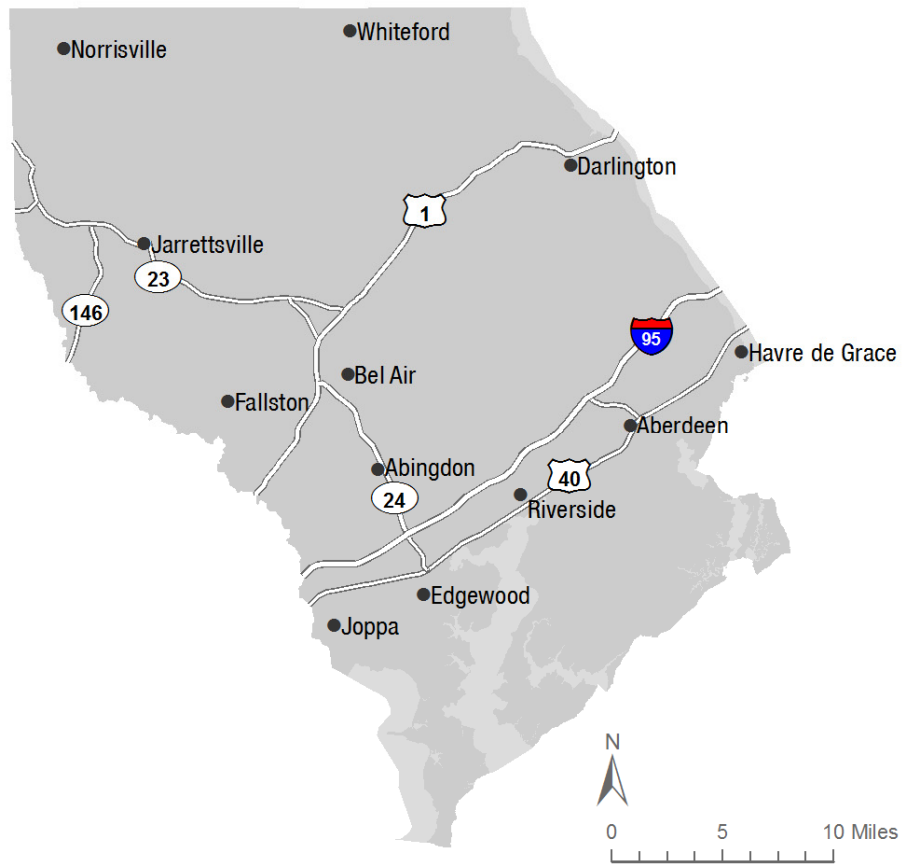


Figure 37: Library Locations

There are 11 libraries dispersed throughout the County and one office, Riverside, for Harford County Library administrative and operational staff. Table 39 summarizes the staff, square footage, population and usage statistics by branch.

Table 39: Library Comparison by Branch

	Aberdeen	Abingdon	Bel Air	Darlington	Edgewood	Fallston	Havre de Grace	Jarrettsville	Joppa	Norrisville	Whiteford	Riverside (Admin)
Staff	14.58	25.68	48.31	2.35	17.02	13.24	10.39	11.28	10.64	7.26	11.51	68.22
Gross Square Feet	14,200	37,000	53,964	1,480	15,400	13,500	8,420 (19,846 new bldg)	14,000	14,200	6,900	13,500	23,700
Net Square Feet	11833	32876	47454	1140	14296	13056	8165	13355	12685	6245	12809	21722
Population in Service Area	21,721	51,817	73,432	4,942	21,743	10,303	16,714	13,022	14,502	8,090	7,432	n/a
Percent of Population Registered	93.0%	62.0%	71.0%	29.0%	97.0%	136.0%	78.0%	74.0%	71.0%	27.0%	106.0%	n/a
Number of Annual Walk-Ins	303615	280804	434766	21367	164712	116676	152980	117279	146183	47149	106895	n/a
of all Annual Walk-Ins	16.0%	14.8%	23.0%	1.1%	8.7%	6.2%	8.1%	6.2%	7.7%	2.5%	5.6%	n/a

As shown, the majority of libraries have a high registration rates, above 60 percent. Only two libraries, Darlington and Norrisville, which are in very rural areas of the County, have registration rates below 30 percent. The Fallston and Whiteford branches have greater than 100 percent registration indicating that they pull a significant amount of people to their branch from outside of their service area. An estimated 74 percent of Harford County's population is registered at one of the branches.

Service areas for each library are defined by Harford County Public Library staff. Based on these service areas, Bel Air serves the largest population with 73,432 people living within the service area where as Darlington serves the smallest community with 4,932. The number of walk-ins at each branch generally aligns with the size of the population within the service area.

Based on the registration and population statistics, three library facilities have high utility scores. Considering the projected population growth within the boundaries of each library's service area, six libraries are in communities that have a higher growth rate than Harford County as a whole.

Darlington Library is the smallest library with less than 2,000 net square feet of library space. Bel Air and Abingdon are the largest branches with over 47,000 net square feet and nearly 33,000 square feet per capita. In comparison to the population within each service area, there are three libraries that have a space shortfall greater than 20 percent. These facilities include Darlington, Aberdeen and Havre De Grace. Facilities with a 20 percent surplus include Fallston and Whiteford.

In general, the facilities had few or no operational deficiencies. As the majority of libraries have flexible layouts and do not share space with other facilities, there are few adjacency issues.

Darlington however, has a high level of operational deficiency as functions may be split between two buildings on site. Due to the condition of the older building and the separation between buildings, only one building is now used for library purposes. The older building is only used for the Friends of the Library functions and as County storage. The primary building at Darlington is very small with limited opportunity to rearrange space as necessary.

County Comparison

Many states do not have facility standards due to the unique needs of communities served and the rapidly evolving uses of public libraries. Between states that do have standards there are some significant differences depending level of service desired. Maryland Planning Guidelines indicate the following square footage per capita goal for libraries:

- Essential = 1 SF per Capita
- Enhanced = 1.1 SF per Capita
- Exemplary = 1.2 SF per Capita

Currently, Maryland public library systems across the state are far below this goal at approximately 0.5 SF per capita. Considering Harford County's current library portfolio and services offered, a high level of service is being provided; however, the portfolio is below the Statewide goal for square footage. Currently, Harford County only offers 0.86 gross square foot per population when including the administrative spaces. As the population continues to grow, the total library square footage per capita will continue to shrink unless action is taken.

Despite a space deficiency when considering the entire Harford County Public Library portfolio, the county has more libraries when compared against other Maryland Counties with a similar population size. Table 40 compares Harford County against all Maryland arranged by the size of the population within the legal service area.

The data included within the table was collected from the Compare Public Libraries tool, which is based off data from the Fiscal Year 2012 Public Libraries Survey conducted by the Institute of Museum and Library Services.

Table 40: Library Comparison by County

Library System Name	Number of Libraries (Central & Branch)	Square Miles	Population Of Legal Service Area	Average Population per Library	Average Population per Library Amongst Libraries with Similar Population Size
KENT COUNTY PUBLIC LIBRARY, MD	3	414	20,247	6,749	12,549
SOMERSET COUNTY LIBRARY, MD	3	611	25,959	8,653	
GARRETT COUNTY	5	656	29,555	5,911	
DORCHESTER COUNTY PUBLIC LIBRARY, MD	2	540	32,043	16,022	
CAROLINE COUNTY PUBLIC LIBRARY, MD	3	326	33,367	11,122	
TALBOT COUNTY FREE LIBRARY, MD	2	477	36,262	18,131	
QUEEN ANNE'S COUNTY FREE LIBRARY, MD	2	510	47,958	23,979	
WORCESTER COUNTY LIBRARY, MD	5	695	49,122	9,824	22,978
ALLEGANY COUNTY LIBRARY SYSTEM, MD	6	430	74,692	12,449	
CALVERT LIBRARY, MD	4	345	89,212	22,303	
WICOMICO PUBLIC LIBRARY, MD	4	400	94,222	31,407	
CECIL COUNTY PUBLIC LIBRARY, MD	7	418	100,796	14,399	

Summary Report - Final

Library System Name	Number of Libraries (Central & Branch)	Square Miles	Population Of Legal Service Area	Average Population per Library	Average Population per Library Amongst Libraries with Similar Population Size
ST. MARY'S COUNTY LIBRARY, MD	3	611	102,999	34,333	
CHARLES COUNTY PUBLIC LIBRARY, MD	4	643	142,226	35,557	
WASHINGTON COUNTY FREE LIBRARY, MD	8	468	145,910	18,239	26,898
CARROLL COUNTY PUBLIC LIBRARY, MD	6	452	170,089	28,348	
FREDERICK COUNTY PUBLIC LIBRARIES, MD	8	667	227,980	28,498	
HARFORD COUNTY PUBLIC LIBRARY, MD	11	437	242,514	22,047	34,609
HOWARD COUNTY LIBRARY, MD	6	254	281,884	46,981	(excludes Harford)
ANNE ARUNDEL COUNTY PUBLIC LIBRARY, MD	15	588	521,209	34,747	
BALTIMORE COUNTY PUBLIC LIBRARY, MD	20	682	789,814	39,491	
PRINCE GEORGE'S COUNTY, MD	19	498	834,560	43,924	
MONTGOMERY COUNTY PUBLIC LIBRARIES, MD	21	507	971,600	46,267	41,107

As the size of a county's population increases, there tends to be a greater population per library. In comparison to library systems of a similar population size, Carroll, Frederick and Howard, Harford has the most libraries per capita resulting in the lowest average population per library. Within these counties there are on average, 34,609 people per library. Within Harford there are

approximately 22,000 people per library. Howard County Public Library and Frederick County Public Library, which have a similar population size to Harford, have six and eight libraries respectively.

Currently, counties in Maryland are pursuing plans to expand libraries in an effort to meet the State square footage per capita goals. Specifically, Howard County, recently built the Miller Branch, an approximately 63,000, located in Ellicott City. In addition, the Anne Arundel County's Facility Master Plan calls for the expansion of the library system in pursuit of meeting the State goal.

Drive Time Analysis

In order to examine "equal access" to libraries across the county; a drive time analysis was conducted on all Harford County Libraries. Across national and state guidelines, there is a significant range in the size (measured by drive time) of public library service areas. For those states that define service area requirements by drive time, typical service areas range between the majority of patrons being able to reach a library within the following drive times:

- Standard Level of Service: 15 minutes' travel time , for urban areas, or 30 minutes in rural and suburban areas
- Enhanced Level of Service: 10 minutes' travel time , for urban areas, or 15 minutes in rural and suburban areas

The enhanced level of service guidelines were used to examine the location of libraries across the state. All areas of the state with populations over 5,000 per square mile were within 5 to 7 minutes of a public library. Populations over 2,000 persons per square mile are typically within 10 to 12 minutes of a public library. Populations with over 750 persons per square mile are within 15 minutes of a public library. Populations with less than 500 persons per square mile start to fall outside of the 15-minute drive time area.

The enhanced level of service guidelines above were used to examine the location of existing Harford County Public Libraries. Those libraries in urban areas include Bel Air, Abingdon, Edgewood, Joppa, Aberdeen and Havre De Grace. Libraries in rural areas include Darlington, Whiteford, Norrisville, Jarrettsville and Fallston.

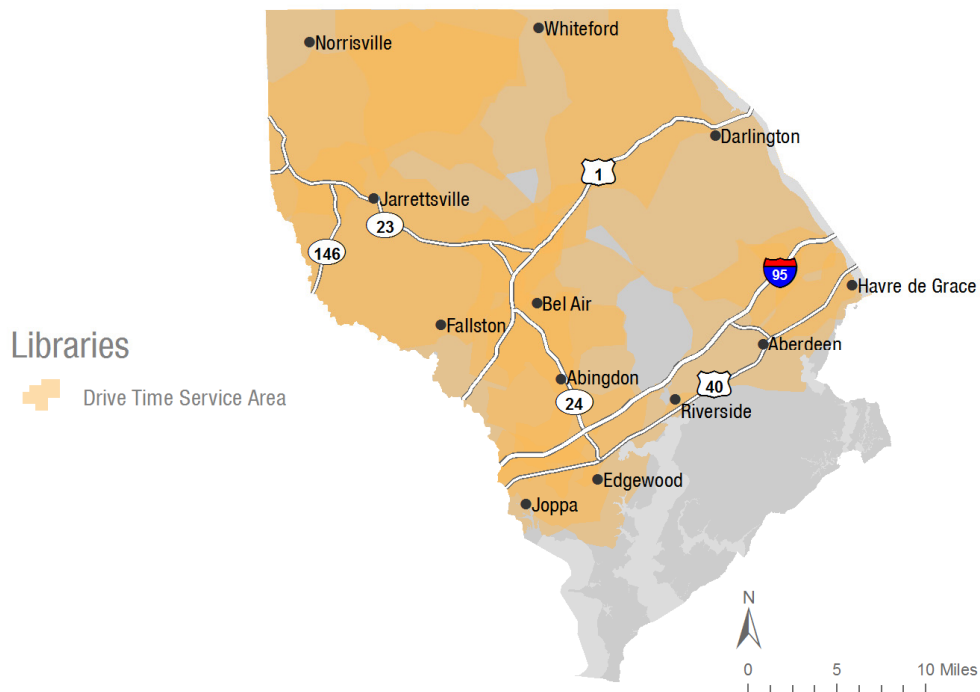


Figure 38: Current Drive Time Service Area

Figure 38 shows the 10 or 15-minute area surrounding each library. The brightest orange areas represent areas of the county where drive time areas overlap. At these locations, patrons are 10-15 minute drive to two or more libraries. Areas shown in light gray areas are outside of the 10-15 minute drive area to any library.

Currently, 97 percent of county residents live within 10 to 15 minutes from a public library and approximately 73 percent of residents live 10 to 15 minutes to two or more libraries.

Based on the significant overlap of drive time areas and Harford County Library System's comparison against other State library systems, there may be an opportunity to reduce the number of libraries within Harford County; however, significant expansion of the remaining libraries would be required to achieve the State square footage goal.

Considerations

Based on the results of the drive-time analysis and comparison of Harford County Library system to other counties in Maryland, expansion of facilities is required to achieve the statewide goal of 1 square foot of library space per capita. While expansion is necessary, there may be an opportunity to consolidate facilities; however, any consolidation is dependent on expansion at another branch.

Based on analysis, below is the list of considerations by facility.

Consider a new library in Edgewood. The existing branch is highly utilized and is undersized at only 15,400 square feet of space for population of 21,743. The Edgewood community projected to grow at a higher rate than the County and expansion is required to provide an adequate level of service.

Consider consolidation of the Joppa Branch following construction of a new branch in Edgewood. The Edgewood and Joppa Branches are located within 10 minutes from each other resulting in a duplication of service for residents located between the libraries. A new library, sized to meet the needs of the Edgewood and Joppa community, could adequately serve both communities. While a new facility in either location would still achieve an Enhanced Level of service, Edgewood is the preferred location for the following reasons:

- The Edgewood Branch is more centrally located within Harford County. As a result a 10-minute drive time area within Edgewood covers a greater proportion of Harford County residents than in Joppa.
- Edgewood serves a population of 21,743, nearly 9 percent of Harford County Residents. Joppa has a smaller population with 14,502 residents, nearly 6 percent of all Harford County residents.
- Statistics show more library use within the Edgewood community. Approximately 97 percent of the Edgewood community is registered for a library card compared to 71 percent within Joppa. Additionally, Edgewood has more walk-ins, 164,712, in comparison to Joppa, 146,183.

Consider a building new mixed-use community center within Aberdeen. The Aberdeen community is in need of a new Senior Center, Activity Center and health services center. By combining these uses with new library space, there is an opportunity to share amenities and resources. New construction of the library specifically should be considered for the following reasons:

- The Aberdeen Branch is undersized at only 14,200 sf for a population of 21,721.
- Statistics show the Aberdeen Branch is a highly utilized facility. Approximately 93 percent of the Aberdeen community is registered for a library card. Additionally, despite a smaller population than many other branches within the County, the Aberdeen Branch has the second highest number of walk-ins, second to Bel Air.
- The population of Aberdeen is projected to grow much faster than other areas of the County.
- Consider consolidation of the Darlington Branch. Based on the prioritization results, this facility has a Priority one rating. This facility is located in a rural area and has a low utilization rate. The

facility serves a small population, under 5,000 residents, accounting for approximately 2 percent of all Harford County residents. Of residents within the service area, less than 30 percent of the population is registered at the facility. The low utilization rate of this facility in comparison to others may be partly explained by the restricted hours of operation. The facility is in poor condition and is significantly undersized. The Darlington Service area may be absorbed by the Whiteford Branch to the north and the Aberdeen Branch to the south. Consolidation of Darlington will increase the square footage requirements of a new Aberdeen Branch.

- Consider consolidation of the Fallston Branch. The Fallston Branch is approximately 11 minutes from the Bel Air Branch and Jarrettsville Branch. Therefore, residents living between these three branches have triplicate service. The Fallston Branch is the oldest facility of all three libraries and has the worst facility condition score. The Bel Air and Jarrettsville Branch can accommodate the additional users; however, the Bel Air Branch will need to be expanded prior to the closure of Fallston.
- Renovate the Riverside facility to improve operations. The facility may be reorganized into an open plan layout, which will encourage greater interaction between the different departments. Additionally, renovation should include adding a restroom near the conference room and increasing the amount of storage.

All other library facilities may remain as is with regular maintenance and repairs. While the proposed end state shows a reduction in the number of libraries from 11 to 8, new facilities/expansion at Aberdeen, Edgewood and Bel Air should be sized to meet the 1 sf per capita State goal. The image shows the 10 or 15-minute area surrounding each library. The brightest orange areas represent areas of the county where drive time areas overlap. At these locations, patrons are 10-15 minute drive to two or more libraries. Areas shown in light gray areas are outside of the 10-15 minute drive area to any library. In comparison to the current library portfolio, the duplication of service is significantly reduced across the county. Densely populated areas within the County however remain in close proximity to multiple libraries as seen across the state. Despite a reduction of libraries, approximately 92 percent of residents live within 10 to 15 minutes of a library branch.

While the Harford County Public Library system can continue operating and providing a high level of service to the residents of Harford County, consolidating facilities where duplicate service is provided will help concentrate resources into specific facilities. Without the consolidation and expansion of facilities, the limited library funds will continue to be spread amongst the 11 facilities.

A significant amount of money will continue to go to the repair and upkeep of 11 facilities instead of expanding facilities, programs, and services.

While there are some advantages to the consolidation of facilities, closure of any library branch will have political, social and economic implications. The specific challenges that should be considered based on the suggested closures listed above include the following:

- Joppa: The Joppa Branch is a community with limited public amenities. The library within this community offers one of the few public amenities available to residents and helps define the character of the community. Closure of the Joppa Branch will further reduce community resources available to Joppa residents.
- Fallston: Closure of the Fallston Branch is anticipated to face strong community opposition. In 2009, closure of the Fallston Branch was considered by the Harford County Public Library Board of Trustees due to budget cuts. The Fallston community strongly opposed the closure, which ultimately resulted in the library remaining open to date.
- Darlington: The Darlington Branch is located in a rural community with few public amenities. Closure of the Darlington Branch will further reduce the number of amenities readily available to residents of Darlington and will likely face community opposition.

SUMMARY FUNCTIONAL AND OPERATIONAL ANALYSIS – COMMUNITY COLLEGE

Introduction and Background Information

Introduction

The following appendix presents summary information regarding how the Community College functions and operations are supported and enabled by existing facilities and related infrastructure.

Major sections in this appendix include:

- Introduction and Background Information
- Standards and Metrics
- Key Findings
- Recommendations
- Supplemental Information and Discussion

Additional supporting information can be found in the “State of the Facilities Report” which is a companion document to this summary report, MAPPS™ database, and project folder.

Mission and Responsibilities

The mission of Harford Community College (HCC) is to provide accessible, innovative, learner-centered educational opportunities. HCC is an open-access institution; HCC promotes graduation, transfer, individual goal attainment, and career and workforce development. HCC fosters lifelong learning, global awareness, and social and cultural enrichment. HCC offers over 80 degree and certificate programs, and a wide variety of continuing education courses.

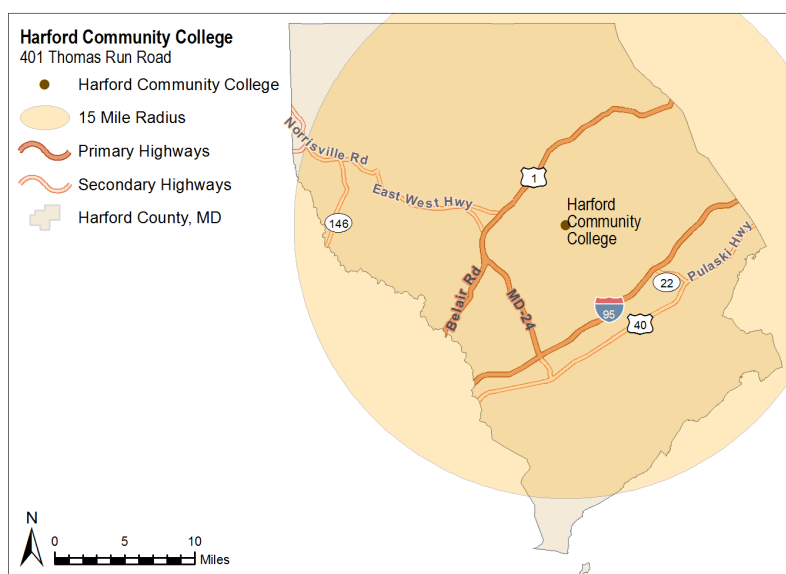


Figure 39: HCC Location

Summary Facilities

Harford Community College currently has a total facilities portfolio of 368,962 net assignable square feet (NASF). The main campus contains 326,086 NASF of space. The main campus is geographically located near the center of the County at 401 Thomas Run Road. In 2013, approximately 99 percent of Harford's population lives within a 15-mile radius of the community college. Additional information regarding these facilities can be found in the Supplemental Information and Discussion section of this appendix.

Standards and Metrics

The following section presents summary standards and metrics that are generally applicable to Harford Community College.

Summary Standards

Standards and industry practices were identified from multiple sources including:

- The Maryland Higher Education Commission (MHEC) computation of space needs
- Operational deficiency used a point system based on data collected through functional surveys, and comparison to typical space layout (especially laboratory and classroom space) of other higher education institutions:
 - *Idaho State University - Space Planning Guidelines – 2009*
 - *University of Michigan - Considerations For Planning New General Purpose Classrooms - 2012*
 - *Texas State University - Academic Building Interior Space Square Footage Standards- 2013*
 - The University of Texas System – Space Standards

Key Metrics

Key Metrics are summarized herein. A more detailed discussion of these metrics can be found in the Supplemental Information and Discussion section of this appendix.

Enrollment during normal contact hours (8:00am – 5:00pm) is the key metric to trigger growth for HCC. MHEC calculates space needs by multiplying each full-time day equivalent credit (FTDE-C) student enrollment by a predetermined factor for each space type. Utilizing this computation, each FTDE-C student equates to approximately 94 NASF of growth. This use of FTDE-C students does for computation of space needs does not take into account non-credit or part-time students that are enrolled during normal contact hours.

The Maryland Higher Education Commission (MHEC) data show HCC's fall 2012 full-time day equivalent (FTDE) student enrollment was 3,303 students. This does not include continuing education or evening students. According to HCC data, approximately 9,756 total full and part-time credit enrollment students attended fall 2012, with an additional 12,412 continuing education students.

Key Findings

Table 41 presents the summary prioritization scoring for facilities utilized by HCC. Findings for each category are further reviewed in this section.

Table 41: HCC - Prioritization Ranking by Facility

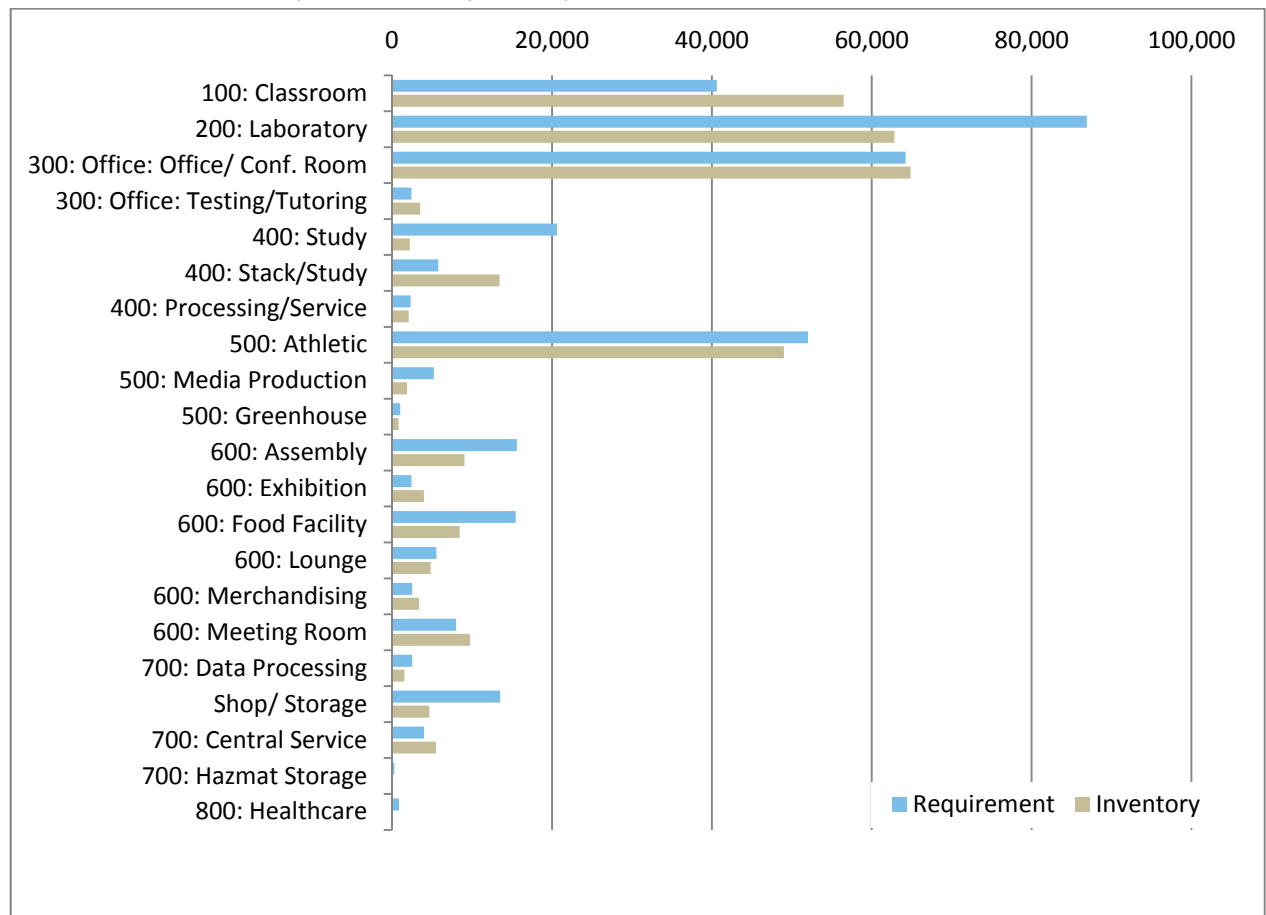
Facility Name	Total Score	Facility Condition: FCI	Risks to Life Safety	Space Shortfall / Surplus	Operational Deficiency	Energy Inefficiency	Utility	Demographic Trend	County Priority	Real Estate	Fundability
Harford Community College - Chesapeake Center	40	0.03	Low	20%	High	Medium	Medium	Status Quo	Medium	County	High
Harford Community College - Edgewood Hall	40	0.17	Low	2%	High	Medium	Medium	Status Quo	Medium	County	High
Harford Community College - Fallston Hall	40	0.07	Low	-26%	High	Medium	Medium	Status Quo	Medium	County	High
Harford Community College - Forest Hill Building	40	0.15	Medium	0%	Low	Medium	Medium	Status Quo	Medium	County	High
Harford Community College - Joppa Hall	40	0.01	Low	17%	High	Medium	Medium	Status Quo	Medium	County	High
Harford Community College - Bel Air Hall	36	0.01	Low	-18%	High	Medium	Medium	Status Quo	Medium	County	High
Harford Community College - HECC East	35	0.13	Low	0%	Low	Medium	Medium	Status Quo	Medium	County	High
Harford Community College - Library	35	0.00	Low	26%	Low	Medium	Medium	Status Quo	Medium	County	High
Harford Community College - Aberdeen Hall	33	0.01	Low	13%	Low	Medium	Medium	Status Quo	Medium	County	High
Harford Community College - Student Center	33	0.05	Low	10%	Low	Medium	Medium	Status Quo	Medium	County	High
Harford Community College - HECC West	31	0.04	Low	0%	Low	Medium	Medium	Status Quo	Medium	County	High
Harford Community College - Belcamp Building	30	0.04	Low	18%	None	Medium	Medium	Status Quo	Medium	County	High
Harford Community College - Joppa Utility Buildings	30	0.00	Low	28%	Low	Medium	Low	Status Quo	Medium	County	High
Harford Community College - Conowingo Building	28	0.01	Low	7%	None	Medium	Medium	Status Quo	Medium	County	High
Harford Community College - Maryland Hall	28	0.06	Low	13%	None	Medium	Medium	Status Quo	Medium	County	High
Harford Community College - Susquehanna Center	28	0.01	Low	8%	None	Medium	Medium	Status Quo	Medium	County	High
Harford Community College - Havre de Grace Hall	26	0.03	Low	0%	None	Medium	Medium	Status Quo	Medium	County	High
Harford Community College - Sports Complex Building	23	0.02	Low	1%	None	Low	Medium	Status Quo	Medium	County	High
Harford Community College - Hays-Heighe House	21	0.01	Low	0%	None	Medium	Low	Status Quo	Medium	County	High
Harford Community College - Observatory	21	0.04	Low	0%	None	Medium	Low	Status Quo	Medium	County	High
Harford Community College - Pump Station	21	0.05	Low	0%	None	Medium	Low	Status Quo	Medium	County	High

Facility Condition / FCI: HCC maintains the campus well, which is evident with the average FCI score of .05, the campus buildings are in good condition, despite their age.

Risk to Life Safety: The Forest Hill Building is the only facility with life safety issues noted.

Space Shortfall: HCC has an overall space shortfall of 12 percent (43,477NASF), with major deficits in laboratory (23,963 NASF), study space (18,438 NASF), assembly (6,559 NASF), food facility (7,012 NASF), and special use (6,546 NASF). These are offset by overages in office space (3,383 NASF), stack (7,675 NASF), and classroom space (15,882 NASF). MHEC utilizes 12 NASF per student station for classrooms, which correlates to higher-education space planning standards for classrooms with fixed tablet seating. HCC utilizes movable table and chair type seating, which would range between 20-25 NASF per student station, depending on the classroom capacity. MHEC utilizes 26 NASF per student station for computation of space needs, which is below comparable higher-education space planning standards for laboratory, which range from 30-70 NASF per student station, depending on the laboratory type and capacity. MHEC utilizes approximately 166 NASF per full-time faculty, full-time staff, and full-time equivalent staff, for office and office support space; the average on campus is 205 NASF per full-time faculty, full-time staff, and full-time equivalent staff. Note that one full-time equivalent staff equates to a quarter of one full-time staff.

Table 42: HCC Current Space, Inventory vs. Requirement



Operational Deficiency: As a campus, the major operational deficiencies are the lack of adjacencies for degree programs and departments, with six of the seven academic programs spread across multiple buildings. There is also an issue with pedestrian and vehicle conflicts, since the bulk of the campus's main access road divides the campus parking and the campus buildings. Additionally, the lack of sewer service requires HCC to utilize large amounts of land and incur additional operation and maintenance costs for wastewater treatment. HCC's ability to grow is greatly affected by the lack of, and aging existing infrastructure. Individual building deficiencies are addressed in separate sections. Many of the facilities have inefficient use of space, but the layout and structure of the buildings do not provide the opportunity to reconfigure the space to gain efficiencies.

Utility: Calculated using the number of total students relative to the total population in the County, the Community College educates approximately 5.1 percent of the County. Additionally, the college provides services open to all County residents, such as use of recreational and meeting facilities, access to the library utilizing a public library card, and events at the APGFCU Arena.

Demographics & County Priority: The campus is near a high population area of the target population of residents between 18 and 25 years old. The community college serves the entire county, which has a total population growth rate of .92 percent annually.

According to the HCC website, of those students currently enrolled in credit courses, approximately 92 percent reside in Harford County. The median age of the student population is 22. In 2012, there were approximately 27,300 residents in the County

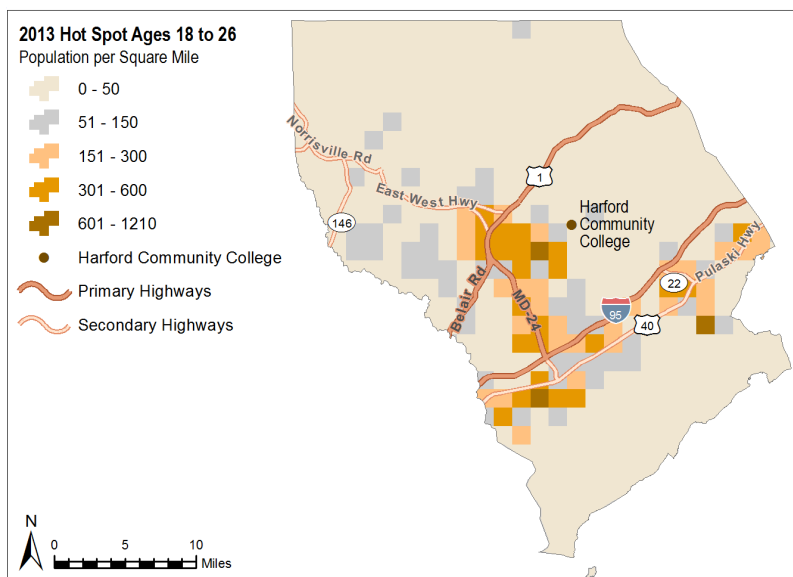


Figure 40: 2013 Hot Spot Ages 18 to 26

between the ages 18 and 26. Considering the maximum number of in-county students enrolled in credit courses, 6,900 students, at most or about 25 percent of the target population is directly served by HCC.

As shown in Figure 40, the majority of the population between the ages of 18 and 26 live along MD Route 24 and Interstate 95. HCC is located within proximity to the northern concentration of people between 18 and 26.

Because population growth among younger age group is slow, enrollment growth with the County residents will likely not increase significantly; instead, the community college must attract college age students through degree programs offered at the college. Additionally, the affordability of classes at the community college versus a four-year college will continue to attract students.

Recommendations

In summary, major issues collectively facing HCC include:

- Space shortfall of approximately 12% campus wide
 - shortages in laboratory, study space, special use spaces (athletic, media production), assembly, and food facility
 - Overages in office (mainly due to lack of flexibility of arrangement), classroom, and stack
- Degree programs and departments are spread across multiple facilities on campus
- Class and Lab spaces not optimal size or layout
 - Class 33% deficient
 - Laboratory 67% deficient
- Office space in many buildings is deficient in size, but overages caused by inefficient and inflexible layouts in other buildings bring the campus to an overage
 - Lack adjunct space
- Minimal student study and collaboration space

Recommend actions include:

- Edgewood Hall - Expand existing building for CET, sheriff's training academy, and public safety and address FCI issues
- Chesapeake Center – address current space deficiency in administrative areas. Consider moving non-essential staff to a different location on campus.
- Joppa Hall – Expand the building on the east side of the existing building, adding black box support areas and incorporating Joppa Utility Buildings

- Library - Relocate CTS to new Hickory building; renovate interior space for additional quiet study space. Consider converting overages in stack space to collaborative and quiet study space.
- Consider a campus master plan with an academic focus in addition to facilities (general recommendation, not facility)
- Infrastructure (sewer & water) should be supplied to the campus (again general recommendation, not facility specific)

Supplemental Information and Discussion

The following section provides additional detailed discussion and information for this functional and operational analysis.

Site Access

The site is bounded on the north by Medical Hall Road, the west by Thomas Run Road, the south by MD Route 22 (Churchville Road), and the east by a loop road that connects MD Route 22 to Thomas Run Road at Entrance three. Access to the college is primarily from MD Route 22 (Churchville Road) onto Thomas Run Road.



Figure 41: Community College Vicinity

Once on Thomas Run Road there are five entrances that access the campus – with the primary access highlighted by a roundabout at Entrance 3 that serves the majority of the main campus.

Congestion on Thomas Run Road and MD Route 22 is high during arrival/dismissal times at Harford Technical High School. The further development of the Towson Building and West Campus as a whole may aggravate an already stressed situation.

While improvements were made to enhance traffic flow, further development of the campus and/or adjacent land uses may require the widening of Thomas Run Road.

Site Layout

The campus currently consists of 19 on-campus buildings with 525,622 GSF (326,086 NASF) and additional off-campus buildings (AMOSS Center; HEAT Center East and West) bring the total facilities portfolio to 577,339 GSF (365,356 NASF). Additionally, the new Nursing and Allied Health building, Darlington Hall, will open fall 2014, which add approximately 30,000 NASF to the campus portfolio.

The campus does not have a clear functional zoning in place. The academic core currently runs along the main access road from entrance three, down to the main quad, with the exception of the Student Center on the quad, Joppa Hall between entrances four and five, and the new development on the west campus. Administrative functions are spread across campus, located in the Chesapeake Center, the Student Center, the Conowingo Building, and the Susquehanna Center. The recreational function is the one area that has a clear zone, and is located on the southern portion of the campus.

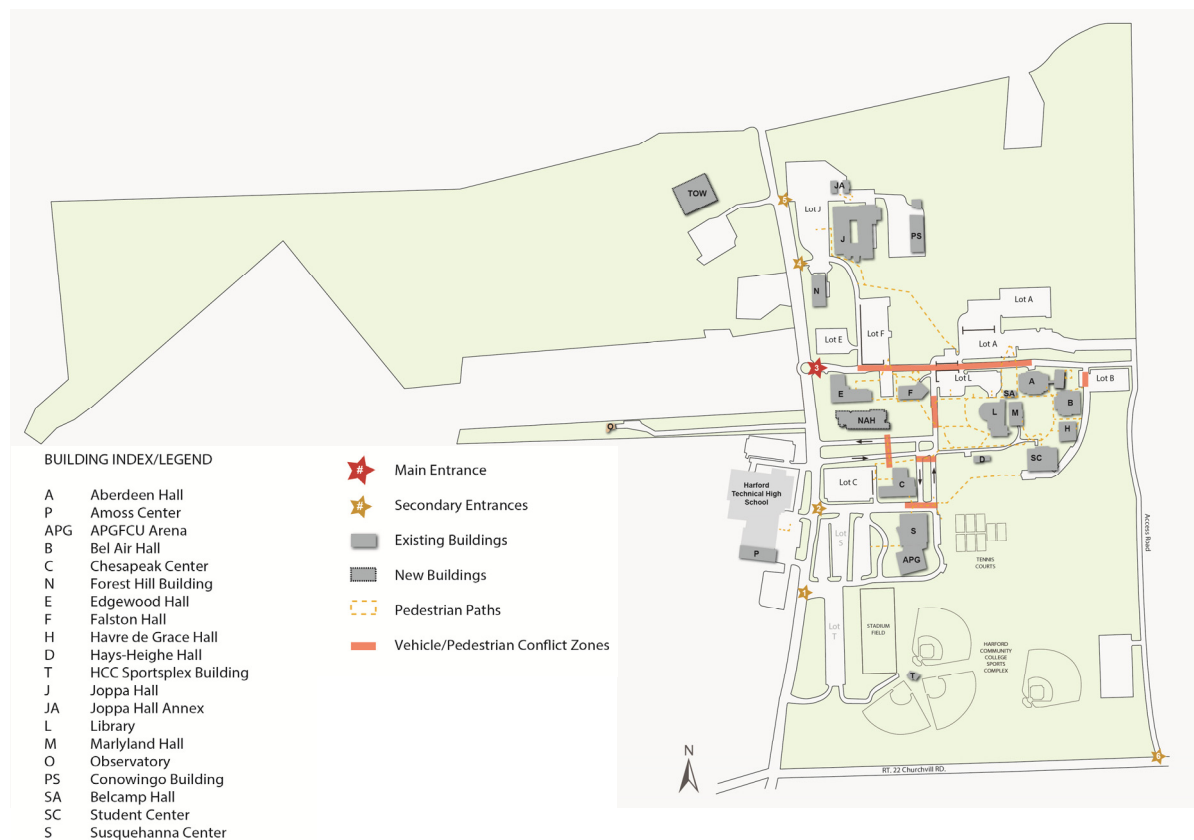


Figure 42: Existing Campus Map

Since the campus buildings are spread across campus, the parking is spread as well. The bulk of the campus parking is located along the main access road from entrance three, in lots A, B, E, F, and L. The current campus parking inventory and need is outlined in the following table.

Table 43: Campus Parking Inventory (per HCC FY2013 CIP)

PARKING CATEGORY	FACTOR	Need Current	Inventory Current	Surplus/ (Deficit)
FTDE-T	0.75	2,477	2,414	(63)
FT-Fac and FT-Staff	0.75	232	224	(8)
SUBTOTAL		2,709	2,638	(71)
Visitors	0.02	54	45	(9)
REGULAR SPACES		2,763	2,683	(80)
Reserved Accessible*		48	99	51
ALL SPACES		2,811	2,782	(29)

Site Expansion

There are some opportunities for expansion on the site. Ultimately, expansion is limited since HCC is not serviced by the county sewer. Large amounts of land are currently used for wastewater treatment, and additional buildings will require not only site for the building footprint, but wastewater treatment as well. In addition, areas with steep topographic changes make expansion unfeasible in these areas.

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SUMMARY FUNCTIONAL AND OPERATIONAL ANALYSIS – HEALTH DEPARTMENT

Introduction and Background Information

Introduction

The following appendix presents summary information regarding how the Health Department functions and operations are supported and enabled by existing facilities and related infrastructure.

Major sections in this appendix include:

- Introduction and Background Information
- Standards and Metrics
- Key Findings
- Recommendations
- Supplemental Information and Discussion

Additional supporting information can be found in the “State of the Facilities Report” which is a companion document to this summary report, MAPPS™ database, and project folder.

Mission and Responsibilities

The Harford County Department of Health (DoH) is a unit of the Maryland State government, and follows the Maryland Department of Health and Mental Hygiene for HR, salary, policies, program direction and receives most of its funding from the State. The County provides space for DoH. DoH’s goal is to protect and promote the health, safety and environment of the citizens of Harford County by bringing together the numerous components of prevention, such as education, inspection, surveillance, monitoring, assessment and policy. Locally, DoH reports to the Board of Health, an elected body of seven members, which also serves as the County Council of Harford County.

DoH provides essentially two types of services for its residents: essential population services (e.g., Food and Environment Regulation, Emergency Preparedness, Public Health Education) and Safety Net Clinical Services for the uninsured and indigent population (e.g., clinical services in areas such as Women’s Wellness, Mental Health, Communicable Diseases). DoH has programs targeted to the County’s most vulnerable populations, including an HIV/AIDS Clinic, services for the homeless, family planning services on a sliding fee scale, dental care for children receiving Medicaid,

immunizations, school based health centers, insurance coverage of income-eligible breast and cervical cancer patients, and addiction services for adolescents and adults. DoH also works with partners, including the Office of Drug Policy Control in Harford County's Department of Community Services (DCS) and the Harford County Public Schools, to ensure that healthcare is provided to those in need.

While the goal of the Affordable Care Act is to provide everyone with healthcare insurance, eventually reducing the need for Safety Net providers, there will still be a shortage of Safety Net providers in Harford County for its size, with DoH essentially being the main provider for these services. According to the Maryland Health Benefits Exchange, there were 19,526 uninsured residents in Harford County in 2013. This figure is not expected to drop significantly given that the response rate for registering for the Health Insurance Exchange had been lower than expected. As such, DoH is expected to maintain the level of Safety Net clinical services for its residents over the next decade. Moreover, DoH is expecting to enter the private insurance market and contracting with private insurance providers such as Blue Cross Blue Shield. This strategy is expected to increase patient volumes and demand for higher standards of clinical care and environment going forward.

While the department aims to provide quality care for its residents, the level and types of clinical services provided under DoH is currently limited by the availability of government or non-profit grants. Based on an interview with Dr. Russell Moy, Chief Medical Officer for DoH, the funding for the Safety Net Programs will shift to a more revenue-driven model, requiring a higher standard of care and diversity of programs.

Summary Facilities

DoH has nine building locations across Harford County of various sizes. Table 44 provides a summary of the locations and programs.

Table 44: Summary of Harford County Health Department Facilities and Programs

Building Name	Location	Services	Size (SF)	Current FTEs
Health Services	1 North Main St., Bel Air, Maryland 21014	HIV Case Management and Homeless Service Coordination	3,440	16 (includes 7 DoH Staff, 7 Additional Volunteers, and 2 interns)
Hays Street Bel Air Office	120 South Hays St., Bel Air, Maryland 21014	Administrative Services, Addiction Services, Emergency Preparedness, Environmental Health, Maryland Children's Health Program (MCHP), Medical Assistance (MA) Transportation, and Vital Records	26,878	117
Infant and Toddlers (John Archer School)	100 Thomas Run Road, Bel Air, MD 21014	Care Coordination for Children	1,600	8 (7 DoH Staff + 1 School District Staff)
Teen Diversion (Center for Educational Opportunity)	253 Paradise Rd., Aberdeen, Maryland 21001	Group, Family and Individual Therapy, Medication and Case Management and Day Treatment for Adolescents, Psychiatric Rehabilitation	4,500	7
Aberdeen Community Center	34 North Philadelphia Blvd, Aberdeen, Maryland 21001	Administrative Care Coordination and Child & Family Services, Adult Evaluation Review Services, Medical Assistance Personal Care, Hospital Discharge Program, Senior and Disability Services and Women, Infants and Children (WIC)	10,547	28
Dental Clinic	2204 Hanson Rd, Edgewood, Maryland 21040	Dental Care for Children and Pregnant Women on the MCHP Program	2,250	9
Woodbridge Station	1321 Woodbridge Station Way, Edgewood, Maryland 21040	Cancer Prevention, Communicable Disease, Women's Wellness and Colposcopy Services, Immunization, Public Health Education, Sexually Transmitted Diseases (STD) Testing, Tobacco Cessation and Women, Infants, & Children (WIC)	11,980	20
Storage Unit #1	423 North Main St., Bel Air	Storage for Emergency Preparedness + IT	900	N/A
Storage Unit #2	1007 Edgewood Rd, Edgewood	Additional Storage for Emergency Preparedness	900	N/A

Additional information regarding these facilities can be found in the Supplemental Information and Discussion section of this appendix.

Standards and Metrics

Using demographically driven metrics is an objective approach for projecting County staffing and growth. As DoH shifts to a more market-driven healthcare economy by taking up privately insured patients, staffing projections need to be based on demographically driven parameters in order for the operational overhead costs to be justifiable. However, due to the current uncertainties of the impact of healthcare reform and existing grant-oriented funding mechanisms, 2023 headcount projections for staffing of existing programs were obtained from each DoH unit from interviews instead of using demographic metrics. Another assumption made was that exact space requirements for new DoH programs conceptualized between 2014 to 2023 will not be factored in this Master Plan, although a recommendation has been made to offer satellite and potentially new services in Bel Air (more immediate location) and Aberdeen (longer term future location).

Summary Standards

Healthcare space planning and design guidelines (Hayward, 2006; AIA, 2014) were used to benchmark DoH's facilities against industry best practices. In evaluating the operational deficiency of DoH's facilities, room sizes and layouts, interior design, ADA accessibility and furniture and equipment were compared with industry standards to determine the Space Shortfall, Operational Deficiency and User Experience ratings, which were then used to prioritize the facilities in the Prioritization Tool.

Key Metrics

Key Metrics are summarized herein. A more detailed discussion of these metrics can be found in the Supplemental Information and Discussion section of this appendix.

Key Findings

The prioritization process aggregates the operational, demographic factors with facility condition data (for the leased facilities, a Facility Condition Rating was provided based on observation) and County-driven parameters (such as mission-critical buildings, ownership status and funding source). As the DoH facilities are leased, observation and feedback during the site tour were used to determine the general condition of the facility and if there were any significant life safety issues. The prioritization results listed in Table 45 below indicate that the facilities needing the most attention are the Infants and Toddlers (John Archer School), Aberdeen Community Service Building

in Aberdeen and the Health Services Building in Bel-Air. Conversely, the Woodbridge Station Way building and Dental Clinic with the lowest scores have the least need for repair or improvement.

Summary Prioritization Ranking

Table 45 presents the summary prioritization scoring for facilities utilized by DoH. Findings for each category are further reviewed in this section.

Table 45: Health Department - Prioritization Ranking by Facility

Facility Name	Total Score	Facility Condition: FCI	Risks to Life Safety	Space Shortfall / Surplus	Operational Deficiency	Energy Inefficiency	Utility	Demographic Trend	County Priority	Real Estate	Fundability
Health Services Building (Lease)	44	N/A	Medium	41%	High	Medium	High	Status Quo	Low	Leased	Medium
Storage Unit #1 (Lease)	33	N/A	Low	20%	High	Medium	High	Status Quo	Low	Leased	Medium
Storage Unit #2 (Lease)	32	N/A	Low	20%	Low	Medium	High	Status Quo	Low	Leased	Medium
Hays Street Bel Air Office (Lease)	31	N/A	Medium	11%	Low	Medium	High	Status Quo	Low	Leased	Medium
Woodbridge Station (Lease)	29	N/A	Medium	5%	Low	Medium	High	Status Quo	Low	Leased	Medium
Dental Clinic (Lease)	16	N/A	Low	1%	None	Medium	High	Status Quo	Low	Leased	Medium

Facility Condition Index

The FCI is not applicable to DoH facilities since they are in leased spaces.

Risks to Life Safety

Risk to life safety is at medium in the Health Services Building, Hays Street Bel Air Office, and Woodbridge Station. All other facilities have a low risk to life safety.

Space Shortfall

The total estimated size of all of DoH facilities is 62,853 gross SF. The overall space deficiency for DoH is a shortfall of 7,651 SF or 12 % of its existing size. This is based on existing programs and staffing projections for 2018 and 2023 and adjustments in space requirements due to functional deficiencies and comparison to best practice standards for sizes. Table 46 below provides a breakdown of the space shortfall by building (from most deficient in terms of area to the least deficient).

Table 46: Space Shortfall by Facility

Rank	Name of Facility	Current SF	Required SF	Space Shortfall (SF)	Space deficiency
1	Hays Street Bel Air Office	26,878	32,103	5,225	19%
2	Health Services Building	2,786	3,920	1,134	41%
3	Woodbridge Station	11,980	12,624	644	5%
4	Aberdeen Community Service	11,059	11,596	537	5%
5	Dental Clinic	2,250	2,470	220	10%
6	Storage Unit #1	900	1,080	180	20%
7	Storage Unit #2	900	1,080	180	20%
8	Infants and Toddlers	1,600	1,607	7	0%
9	Teen Diversion	4,500	4,025	(475)	-11%
Total		62,853	70,504	7,651	12%

Operational Deficiencies

Based on observations during the site visits conducted and staff interviews, operational challenges due to the physical layout, functional adjacencies, furniture and equipment were documented and analyzed to provide an operational deficiency rating for each of the buildings. The results of this assessment are illustrated in Table 47.

Table 47: Operational Deficiency Rating for DoH Facilities

Rank	Name of Facility	Rating	Key Operational Issues
1	Health Services Building	High	- Sub-optimal layout for patient flow, inconvenient access to restrooms and lab. - Outdated furniture and equipment. - Lack of dedicated vitals area - Lack of storage
2	Teen Diversion	High	- Spaces not configured for mental health services - Significant deficiencies in equipment and furniture
3	Aberdeen Community Service	High	- Adjacency between units are deficient - Outdated furniture and equipment
4	Storage Unit #2	Medium	- Insufficient storage spaces - Not climate-controlled; flood risk - Far from 120 Hays Street Building
5	Woodbridge Station	Low	- Adjacency requirement between Public Health Education and Administration not met - Shortage of storage for Public Health Education
6	Storage Unit #1	Low	- Insufficient storage spaces - Power outage risk
7	Hays Street Bel Air Office	Low	- Some units are not suitably located: MCHP, IT, MA Transportation - Workflow issues with MCHP - Minor layout issues with Addiction Services: restrooms, lab - Additional security needed for Addiction Services due to 3rd floor location
8	Infants and Toddlers	Low	- Furniture is dated - Adjacency to conference rooms
9	Dental Clinic	None	May need additional office space.

The three main facilities with significant operational issues include the Health Services Building, Teen Diversion and the Aberdeen Community Service Building, which may warrant relocation, replacement or significant renovation work to bring them up to standard requirements. The planned relocation of services in these buildings to the Southern Resource Center building will resolve the challenges of operating services in those locations.

Utility

All facilities are highly utilized.

Demographics & County Priority

The demographic profiles of each of DoH's building locations (except for the Storage Units) were analyzed to determine if the geographical locations of the facilities were effective for the delivery of County health services to its various communities. Population density (more than 1,000 people per square mile), convenience for patients/visitors (measured by percentage of total target County population living within a 10-minute drive), annualized growth rates of target population within a 10-minute drive, location within a Health Professional Shortage Area (HPSA) were selected as the primary demographic metrics for the analysis. Other considerations including epidemiological trends and Department of Health strategies were also considered in the analysis. The results of the analysis are illustrated in Table 48.

Overall, the existing DoH leased locations appear to be well located in either dense population centers or areas with high population growth for its target population. In addition to being located close to densely populated communities, some of locations such as the Hays Street Bel Air Office, Dental Clinic and Hays Street Bel Air Office are also extremely close to their target population where a high percentage of clients live within a 10-minute drive. The analyses suggest that while the Southern Resource Center building would consolidate DoH's units in one location, satellite locations in Bel Air and Aberdeen may be necessary to provide continued access and adequate delivery of services to residents living closer to those locations.

Table 48: Demographic Factors for DoH Facilities

Name of Facility	Target Demographic	Close to Dense Population Center (>1,000 people per Sq. Mile) ?	Percentage of Target Population living within 10-minute drive (>20% is considered good)	Annualized Growth Rate of Surrounding Target Population until 2018	Within Heath Professional Shortage Area (HPSA)?	Other Considerations?
Health Services Building	Sexually Active Adults (Aged 15 and over)	Yes (1,794)	25%	0.58%	No	High HIV Infection Rates in MD
Hays Street Bel Air Office	Addiction Patients; All County Residents	Yes (1,930)	35%	0.58%	No	Expansion of Mental Health Services
Infants and Toddlers	Ages 0-5	No (915)	N/A	0.42%	No	-
Teen Diversion	Teens (Ages 13-17)	No (735)	12%	1.25%	Yes	Expansion of Mental Health Services
Aberdeen Community Service	All County Residents	Yes (1,069)	16%	1.09%	Yes	-
	Women & Infants					
Dental Clinic	Ages 0-19	Yes (1,888)	28%	0.50%	Yes	-
	Mothers on MA					
Woodbridge Station	All County Residents	Yes (1,680)	21%	0.63%	Yes	-

Recommendations

In summary, major issues collectively facing the health department functions include:

- Access to services will become more limited with the planned relocation of DoH's units to the Southern Resource Center building, located in the southwestern part of the County. Access may be improved by locating satellite services in Bel Air (initially) and Aberdeen (in the future).
- Adjacencies between some units within the Department of Health were also not optimized. For example, the Public Health Education and Public Health Officer are not located in the same town even though their work requires closer proximity.
- Three facilities (Health Services Building, Teen Diversion and the Aberdeen Community Center) have deficient layouts, contributing to significant operational deficiencies.
- The same three facilities also do not meet the current standards for patient experience and will not likely do well in patient satisfaction surveys due to the building age, inefficient layout, dated furniture and equipment.

- From a space utilization standpoint, some departments such as MCHP, IT, MA Transportation are taking up “prime” first floor areas that would be better utilized as clinical spaces.²⁸

Recommended actions include:

- Consolidate and relocate all DoH units to Southern Resource Center building, with exception of Environmental Health, Teen Diversion, Infants and Toddlers, and WIC (from the Aberdeen Community Center).
- Develop DoH space (satellite clinics and office space) at proposed new Centralized Administrative Government Complex in Bel Air for Environmental Health, HIV and Healthcare for the Homeless, WIC and Addiction Services.
- Relocate Teen Diversion with Alternative Program/HCPs elsewhere. Joppatowne or Fallstown Schools are possible locations but will require building additions.
- Relocate Infants and Toddlers program with Speech and Hearing Center to Bel Air Middle School.

Supplemental Information and Discussion

The following section provides additional detailed discussion and information for this functional and operational analysis.

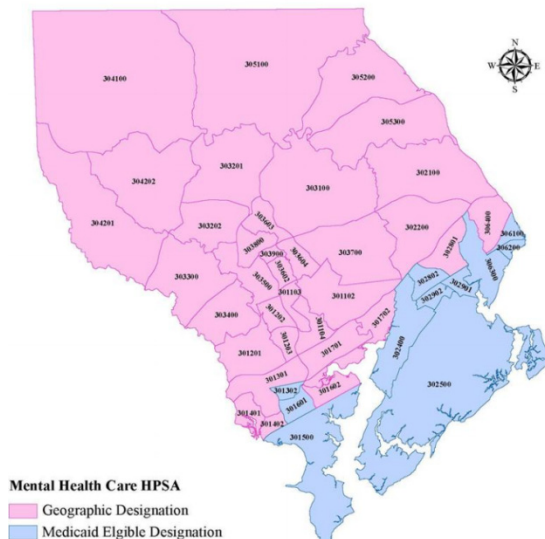
Community Health Assessment

The Community Health Assessment Report (2010) indicated that high smoking rates, alcohol consumption, narcotic use, mental health, lack of cancer screenings and immunizations, obesity were key areas of concern. There is a significant shortage of mental health providers in the County compared to the State of Maryland (1 mental health professional to every 44,354 residents compared to 1 in 12,253 statewide), and is concentrated in the southern precincts. Although provider ratios in Harford County are similar to statewide levels, the assessment found that there is a shortage of primary care and dental providers in the southern census tracts, which have been designated as Medicaid eligible Health Professional Shortage Areas (HPSA) shown in Figure 43.²⁹

²⁸ Due to the ease of way finding and ADA accessibility, the first floor of a building is typically considered “prime” space for clinics or other services that requires public encounter as opposed to other floors in a building.

²⁹ The area has now received the federal designation of Governor’s Medically Underserved Population, so it is now eligible to establish a Federally Qualified Healthcare Clinic (FQHC) or to become a satellite clinic for an FQHC, increasing access to health care providers for area residents and providing more affordable care, on a sliding scale, to residents who are underinsured or uninsured. While no FQHC has been established in the

**Harford County Health Professional Shortage Area (HPSA)
Designation for Mental Health Care as of 3/26/2012**



**Harford County Health Professional Shortage Area (HPSA)
Designation for Primary Care as of 3/26/2012**



Figure 43: HPSA Designation for Mental Health Care and Primary Care

The report noted that the HSPA areas had unusual local conditions that prevented access to personal health services for the population.

User Experience

User Experience is becoming an increasingly important measure for functional performance for a healthcare facility due to its impact on staff efficiency and productivity, patient satisfaction and overall health and wellbeing (Center for Health Design, 2014). Federal health insurance is now using patient satisfaction survey scores as a factor in calculating the amounts of insurance reimbursement to healthcare facilities, of which two measures relate to the built environment. Moreover, increased market competition, a better educated and more well informed consumers, and shortage of healthcare workers has accelerated the need for healthcare facilities to offer a pleasant environment for patients and staff. Through site observations and staff interviews, key issues with the user experiences such as privacy concerns, way finding, branding/image to the public were documented and analyzed to provide a rating for each of the buildings (except for the Storage Units). The results of the analysis are shown in Table 49.

area, health services are available on a sliding scale through the Upper Chesapeake HealthLink Primary Care Clinic (Harford County Health Department, 2010).

Table 49: User Experience Rating for DoH Facilities

Rank	Name of Facility	User Experience Rating	Patient Experience Issues
1	Teen Diversion	Poor	- Way finding - Lack of privacy - Space not conducive for mental health treatments
2	Aberdeen Community Service	Poor	- Way finding - Lack of privacy
3	Health Services Building	Poor	- Signage - Lack of privacy - Single restroom
4	Infants and Toddlers	Average	- Small waiting area - Way finding
5	Hays Street Bel Air Office	Average/Good	Single restroom shared with drug-testing function
6	Dental Clinic	Excellent	None
7	Woodbridge Station	Excellent	None

Similar to the results for operational deficiencies, the three main facilities with significant user experience issues are Teen Diversion, Aberdeen Community Service and Health Services Building, suggesting a strong need for relocation, replacement or significant renovation to improve DoH services in those facilities.

Key Strengths

The planned 73,426 SF Southern Resource Center building will consolidate most of DoH's units into a single location, improving intra-departmental adjacencies and collaboration across units.

Furthermore, the building has been designed to optimize clinical and administrative operations.

With the relocation of DoH's units to the County-owned Southern Resource Center building, substantial operational cost savings resulting from the relocation of units from the leased buildings could be achieved.

The DoH clinic locations in Harford County are currently geographically well suited for residents in Harford County. These locations are in either dense urban communities or high population growth areas based on the demographic profiles of the communities within a 10-minute drive time.

Furthermore, four of the facilities are located in HPSA areas, offering better accessibility of services for low-income families due to their dependence on public transportation. Considering the strategic

direction from DoH to maintain accessibility of services for residents with the relocation and consolidation of services at the Southern Resource Center building, developing satellite services in Bel Air (first) and Aberdeen (in the near future) would allow Harford County residents to maintain their access for services.

There are also two facilities that were provided in-kind from the School Districts (Center for Educational Opportunity and John Archer), which contribute to a lower operating cost for rendering Teen Diversion and Infant and Toddler services. These facilities have been recommended for relocation to other County-owned buildings, as mentioned in the Schools section of the report, due to their facility conditions.

The Dental Clinic and Woodbridge Station Way facility are modern and functional, and patient-centered environments. They meet or exceed current standards for patient experience and will likely do well in patient satisfaction surveys (e.g., Press Ganey). The Addiction Services facility in Bel Air also performs well for User Experience.

Strategic Growth Plans

Since 2006, the County Government and DoH had been planning for a new mixed-use (administration and clinical) building in Edgewood. Called the Southern Resource Center building, the facility is a 73,426 SF four-story that will likely be completed in 2016/2017 if the County decides to continue proceeding with its development. The site is shared with the Sheriff's Southern Precinct for a total approximately 8 acres. It is currently pending approval for full funding from the County in 2015 before construction can proceed.³⁰ The Health Department is planning to consolidate most of its administrative and clinical functions at this location with the exception of Environmental Health due to their adjacency required with other County agencies in Bel Air. In addition, the Teen Diversion and Infants and Toddlers programs will also relocate with their respective partner agencies due to the facility issues with the existing buildings.

Although the new Health Annex building's location in Edgewood is located within the southern census tracts that has been included in a HPSA, we recommend augmenting the Southern Resource Center building with satellite services in Bel Air and Aberdeen to provide better access to residents living in the northern and eastern locations in the County.

³⁰ As required by law, full funding is required before any construction can proceed in the State of Maryland.

Hubs and Spokes Strategy

The geography and distribution of communities in Harford County lend themselves to what is known as a “hub” and “spoke” models of service delivery. This means that a range of services can be provided from a central location over a defined geographical area to people within the surrounding community, with satellite services located in other dense locations. It can also help to link smaller less cost effective schemes to a larger network of resource making them more sustainable, both in terms of shared costs, but also in providing a full range of services. For service providers, they can offer a working base not previously available and a network to allied agencies, working at a local level and with local knowledge.

Southern Resource Center and Satellite Locations

While we concur with the County’s strategy to consolidate and relocate most of DoH’s units to a centralized “hub,” the Southern Resource Center building’s location in the southwestern edge of the County may limit access to residents living in the northern and eastern parts of the County. However, as the County has already acquired land and partial funding for the construction of the Southern Resource Center, we recommend for the County to proceed with the development of the building while providing satellite services in Bel Air and Aberdeen to optimize the reach to Harford County’s residents. The candidate satellite services in Bel Air include Addiction Services, HIV Testing and Healthcare for the Homeless, and Women, Infant and Children (WIC). In addition, due to other County agencies such as Planning and Zoning in Bel Air, it is recommended for Environmental Health to remain in Bel Air. The planned Consolidated Government Administration Complex could be designed to house these services and satisfy the operational requirements of those services (e.g., different operating hours, patient access, etc.). Aberdeen is a longer-term future location that the County should consider offering DoH satellite services due to the dense and rapidly growing population in the area.

Infants & Toddlers

The Infants & Toddlers program at the John Archer School is a joint program between the DoH and the Department of Education, with staff hired by both departments. The John Archer School building has a poor facility condition score and user experience rating. Furthermore, the John Archer School will also be vacating its existing premises and is being planned for relocation to the Bel Air Middle School. We recommend for the Infants & Toddlers program to relocate with the John

Archer School to its new location in Bel Air in order to maintain its adjacency requirement with the Speech and Hearing Testing Center, operated by the Department of Education. The total assignable area to be relocated is 1,607 SF and would require administrative spaces in the new space.

Teen Diversion

As a highly specialized and unique program, The Teen Diversion Program is currently in a highly operationally deficient building and is not accessible to most of its clients due to its location in a low-density area at the Southeast corner of Harford County. We recommend for Teen Diversion to relocate with the Alternative Program /HCPS by developing an addition to Joppatown or Fallston. . The Teen Diversion program will require 4,050 SF at the new location and require a major renovation to the vacated administrative spaces.

Storage Units #1 and #2

The storage units #1 and #2 are currently in leased storage units, with only Storage Unit #1 in close proximity to the Emergency Preparedness Unit at its present location at the Hays Street Bel Air Office. The storage units will be relocated to the Southern Resource Center, and will require about 2,160 SF in total.

HIV Testing/Case Management and Healthcare for the Homeless

The Health Services Building that houses the HIV Testing/Case Management and Healthcare for the Homeless programs is currently leased, highly operationally deficient and has a significant space shortfall of 41%. Although it is in an excellent location due to its proximity to a densely populated area, the facility's layout and design does not adequately meet the needs of the program to carry out its mission. We recommend relocating the HIV Testing/Case Management and Healthcare for the Homeless programs to the Southern Resource Center, as it will benefit from its adjacency with the Communicable Disease program, while maintaining a satellite program in Bel Air.

120 South Hays Street

The 120 South Hays Street Bel Air office is an excellent location for community access as it is close to DSS, Courts, and public transportation. The building is in a good condition and has already a relatively new and functional space for the Addiction Services program. However, the building is leased from a private developer and has limited space for growth. We recommend for the relocation of select units in the building Administration-Fiscal/Executive, IT, Vital Records, MA

Transportation, Emergency Preparedness and Health Policy) to the Southern Resource Center. However, we also recommend for maintaining a satellite office in Bel Air for Addiction Services, Environmental Health and other programs (from other facilities), which would require 17,980 SF.

1321 Woodbridge Station Way

The Woodbridge Station Way facility is a relatively new-leased facility with a good facility condition. The building layout is however not optimal for clinical services. We recommend for the relocation of all DoH's units at this location (WIC, Communicable Disease, Health Education and Cancer Prevention) amounting to 12,624 SF to the Southern Resource building.

Aberdeen Community Service Building

The Aberdeen Community Service Building is highly operationally deficient and has a poor facility condition. We recommend for the building to be vacated and disposed. All DoH's units (Administrative Care Coordination and Child & Family Services, Health Department Administration, Adult Evaluation Review Services/Hospital Outreach/Support Services, MAPC and MCHP) with the exception of WIC is recommended for relocation to the Southern Resource Center. The WIC program at this location can be relocated to a satellite office in Bel Air, and would require 4,384 SF.

Dental Health Services/2204 Hanson Road

The Dental Health Services program is housed in a leased building located at 2204 Hanson Road in Edgewood. The building is in excellent condition, operationally very efficient, and is able to provide a very pleasant user experience. If the County proceeds with developing the Southern Resource Center, the Dental Clinic could be relocated to the building (requiring 2,470 SF), reducing the operating costs for DoH as it would no longer need to lease 2204 Hanson Road.

Top Recommendations

The following table summarizes the top recommendations and associated existing location and square footage, as well as proposed location and square footage required.

Table 50: Summary of Scenario Planning Recommendations for Existing Buildings

Facility Name	Recommendation	Exist SF	Rqd SF	Remaining at existing Facility (SF)	Move to Govt Complex (SF)	Relocate to other Facility (SF)	Relocate to Southern Resource Center SF
1 North Main Street (Lease)	Vacate and relocate clinic to Southern Resource Center Building. Provide additional satellite service in Government Complex (proposed new satellite location)	2,786	3,920	-	3,920 (new) ³¹	-	3,920
1007 Edgewood Road (Lease)	Vacate and repurpose. Consolidate storage into the new annex bldg.	900	1,080	-	-	-	1,080
120 South Hays Street (Lease)	Relocate Environmental Health and Addiction Services to Government Complex (proposed Bel Air satellite location). Relocate other services to Southern Resource Center.	26,878	32,103	-	14,123	-	17,980
1321 Woodbridge Station Way (Lease) - Health Dept	Relocate all units to Southern Resource Center building.	11,980	12,624	-	-	-	12,624
2204 Hanson Road (Lease)	Relocate to Southern Resource Center building.	2,250	2,470	2,470	-	-	2,470
423 North Main Street (Lease)	Relocate to Southern Resource Center building.	900	1,080	-	-	-	1,080
Aberdeen Community Service Building	Relocate all units except WIC to Southern Resource Center building. Relocate WIC to government complex in Bel Air.	11,059	11,596	-	4,384	-	7,212
Center for Ed. Opportunity	Vacate and repurpose. Relocate Teen Diversion program with Alternative Program/HCPs (Schools) elsewhere;	4,500	4,025	-	-	4,025	-

³¹ Although the HIV Testing/Healthcare for the Homeless may be smaller in the satellite Bel Air location, the same area required for the program in the Southern Resource Center is assumed for planning purposes to allow for growth and other new DoH programs.

Facility Name	Recommendation	Exist SF	Rqd SF	Remaining at existing Facility (SF)	Move to Govt Complex (SF)	Relocate to other Facility (SF)	Relocate to Southern Resource Center SF
(Teen Diversion)	Joppatowne or Fallston Schools are possibilities.						
John Archer School (Infants & Toddlers)	Vacate and repurpose. Relocate program and make an addition at Bel Air middle school	1,600	1,607	-	-	1,607	-

Consolidated County Government Complex

This Master Plan is recommending consideration of development of a new County Government complex in Bel Air. While most of DoH units will be relocated to the Southern Resource Center, Environmental Health and satellite clinical services are recommended to be located in Bel Air to optimize adjacencies with other County agencies, proximity to the County Courthouse, public transportation and proximity to residents living in the central and northern parts of the County. In designing the government complex, the clinics should be located on the first floor as much as possible, with separate entrances for the public to allow for operating hours that may be different from other County agencies in the building.

SUMMARY FUNCTIONAL AND OPERATIONAL ANALYSIS – VOLUNTEER FIRE COMPANIES

Introduction and Background Information

Introduction

The following appendix presents summary information regarding how volunteer fire company functions and operations are supported and enabled by existing facilities and related infrastructure.

Major sections in this appendix include:

- Introduction and Background Information
- Standards and Metrics
- Key Findings
- Recommendations
- Supplemental Information and Discussion

Additional supporting information can be found in the “State of the Facilities Report” which is a companion document to this summary report, MAPPS™ database, and project folder.

Mission and Responsibilities

Below describes Harford County VFCs mission.

- Encourage the development of better and more efficient fire and EMS departments
- Encourage public awareness of fire hazards and prevention
- Encourage development of better and more efficient medical services for the County, and to practice best emergency medical training possible.

Summary Facilities

Harford County population is currently served by total 28 Volunteer Fire Companies (VFC) spread out in 11 service areas. VFC’s currently utilize 334,200 SF to meet their mission requirements.

Additional information regarding these facilities can be found in the Supplemental Information and Discussion section of this appendix.

Standards and Metrics

The following section presents summary standards and metrics that are generally applicable to the volunteer fire companies.

Summary Standards

Standards and industry practices were identified from multiple sources including:

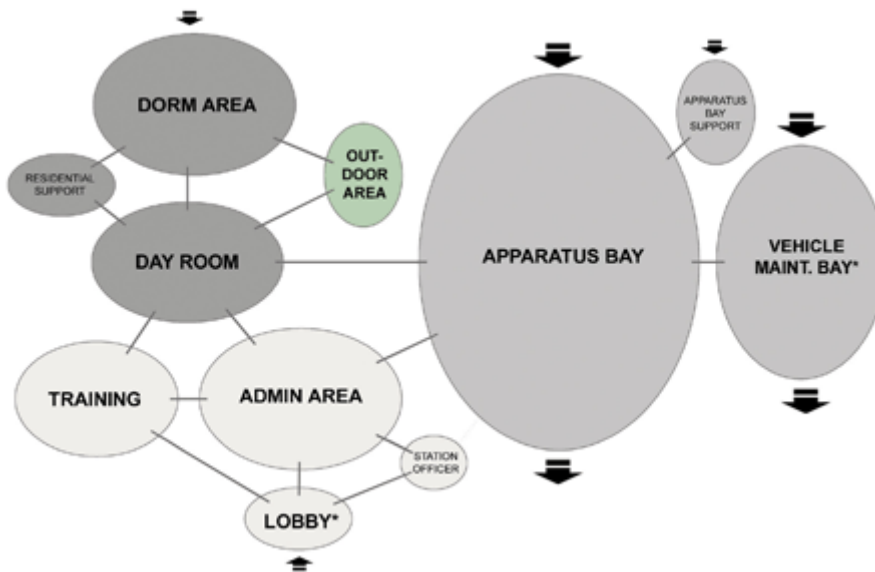
- Unified Facilities Criteria (UFC 4-730-10) was used to evaluate Harford County VFCs space.

Space specifications are presented in below table.

Table 51: Space standards used to compare Harford County VFCs' space

Functional space components		Standards		
1 Apparatus bays		Single bay	Double bay	Three or more bays
Large		1320	1170	1020
Medium/Small		1056	936	816
2 Apparatus bay support				
Storage	968			Gear storage - 10 SF per person
Electrical Room	120			
Mechanical	120			
Decon/Scrub area (inc washer/d	175			SF (150-200) -DECON
Vehicle maintenance	1350			1200 sf per station + 150 sf for vehicle maintenance office
Other (General storage, special needs, etc)				
3 Administrative space				
Fire Chief's Office	345			sf per office, fire chief's office, president
Dept. Fire Chief's Office	120			asst chief, deputies
Open plan work station	48			per workstation
Dispatch room (small/med/lar)	192			
Public Toilet	60			
IT Room	20			SF per room
Coat Room/Hanger space	50 40-60			SF per 50 coats
4 Training space				
Training Room	28			SF per person
Training Room Storage	80			per training room
5 Residential area (dorm rooms, day room/kitchen, fitness, bathrooms)				
	one bed	two beds		
Dorms - Male (bunk rooms)	108	140		
Dorms - Female				
Day/Training Room	648			Kitchen+dinning/training+lounge
Bathrooms	250			
- Male toilets	180 sf for 3 stalls			
- Male Showers	100 sf for 4 showers			
- Female toilets				
- Female Showers				
Recreation space	360			Per station, one or two gaming units
- Exercise facilities	437			SF per station, Station to accommodate 4 working out at one time
Support spaces (inc lockers, etc)	320			equipment repair/storage/housekeeping

- Whole building design guide (WBDG) was used to evaluate space adjacencies.



- Operational deficiency used a point system based on data collected through functional surveys.
- NFPA 1710 Response time standards and Harford County Fire and EMS Master Plan 2009 were used for drive time/coverage comparison. 4 minutes' drive time was used to evaluate VFCs coverage within the development envelope and an 8 minutes' drive time was used to evaluate coverage in all other areas.

Key Metrics

Four-minute drive times within the development envelop and an eight-minute drive time outside the development envelope are the key metrics that were used to evaluate Harford County VFCs coverage. Drive time is the time it takes volunteers to show up at the incident site from the time he boards the fire engine. Ninety percent population coverage within these drive times is ideal and targeted.

Key Findings

The following section presents summary findings for functional and operational aspects of facilities used by volunteer fire companies.

Summary Prioritization Ranking

Table 52 presents the summary prioritization scoring for facilities utilized by the volunteer fire companies. Findings for each category are further reviewed in this section.

Table 52: VFC - Prioritization Ranking by Facility

Facility Name	Total Score	Facility Condition: FCI	Risks to Life Safety	Space Shortfall / Surplus	Operational Deficiency	Energy Inefficiency	Utility	Demographic Trend	County Priority	Real Estate	Fundability
Aberdeen Volunteer Fire Company 2	57	0.49	Low	136%	High	Medium	High	Growth	High	Other	Medium
Abingdon Volunteer Fire Company 2	46	0.01	Low	78%	Low	Medium	High	Growth	High	Other	Medium
Aberdeen Volunteer Fire Company 4	44	0.12	Low	23%	Low	Medium	High	Growth	High	Other	Medium
Joppa Volunteer Fire Company 3	40	0.09	Low	37%	Low	Medium	High	Status Quo	High	Other	Medium
Abingdon Volunteer Fire Company 3	38	0.01	Low	9%	Low	Medium	High	Growth	High	Other	Medium
Whiteford Volunteer Fire Company	38	0.04	High	19%	Low	Medium	Low	Status Quo	High	Other	Medium
Aberdeen Volunteer Fire Company 1	37	0.11	Low	7%	None	Medium	High	Growth	High	Other	Medium
Susquehanna Volunteer Fire Company 1	37	0.13	Low	14%	Low	Medium	Medium	Growth	High	Other	Medium
Abingdon Volunteer Fire Company 1	36	0.05	Low	3%	Low	Medium	High	Growth	High	Other	Medium
Joppa Volunteer Fire Company 1	36	0.10	Low	12%	Low	Medium	High	Status Quo	High	Other	Medium
HDG Ambulance Volunteer Fire Company	35	0.03	Low	17%	Low	Medium	Medium	Growth	High	Other	Medium
Joppa Volunteer Fire Company 2	35	0.11	Low	12%	None	Medium	High	Status Quo	High	Other	Medium
Susquehanna Volunteer Fire Company 2	35	0.00	Low	17%	Low	Medium	Medium	Growth	High	Other	Medium
Bel Air Volunteer Fire Company 2	34	0.00	Low	0%	Low	Medium	High	Status Quo	High	Other	Medium
Aberdeen Volunteer Fire Company 3	33	0.01	Low	5%	Low	Low	High	Growth	High	Other	Medium
Fallston Volunteer Fire Company 2	33	0.06	Low	19%	Low	Medium	Medium	Status Quo	High	Other	Medium
Jarrettsville Volunteer Fire Company 2	33	0.10	Low	29%	Low	Medium	Medium	Status Quo	High	Other	Medium
Level Volunteer Fire Company	33	0.11	Low	3%	High	Medium	Low	Status Quo	High	Other	Medium
Susquehanna Volunteer Fire Company 3	33	0.04	Low	8%	Low	Medium	Medium	Growth	High	Other	Medium
Susquehanna Volunteer Fire Company 4	33	0.08	Low	8%	Low	Medium	Medium	Growth	High	Other	Medium
Susquehanna Volunteer Fire Company 5	33	0.01	Low	6%	Low	Medium	Medium	Growth	High	Other	Medium
Jarrettsville Volunteer Fire Company 1	31	0.03	Low	13%	Low	Medium	Medium	Status Quo	High	Other	Medium
Norrisville Volunteer Fire Company	31	0.07	Low	7%	High	Medium	Low	Status Quo	High	Other	Medium
Bel Air Volunteer Fire Company 1	29	0.00	Low	0%	None	Medium	High	Status Quo	High	Other	Medium
Fallston Volunteer Fire Company 1	29	0.09	Low	3%	Low	Medium	Medium	Status Quo	High	Other	Medium
Bel Air Volunteer Fire Company 3	26	0.00	Low	0%	None	Low	High	Status Quo	High	Other	Medium
Darlington Volunteer Fire Company 1	24	0.08	Low	3%	Low	Medium	Low	Status Quo	High	Other	Medium
Darlington Volunteer Fire Company 2	21	0.01	Low	0%	Low	Low	Low	Status Quo	High	Other	Medium

Facility Condition Index

FCI for VFCs range from 0 to 49 percent. Zero percent being no facility physical condition issues versus 49 percent being significant issues found with facility condition. Aberdeen VFC 2 has 49 percent FCI and requires a new roof, major renovations on interior as well as exterior. Susquehanna VFC 1 is second on the list with 13 percent FCI, considered to be in good physical condition.

Risks to Life Safety

The majority of VFCs have low life safety issues. Whiteford VFC is rated 'High' in life safety given the fact that the fire exits are blocked by beds in bunk space. This issue can't be resolved by reconfiguring the furniture and will require an interior space renovation.

Space Shortfall

Space shortfall range from 0 to 136 percent. Zero percent being no space shortfall issues found versus 136 percent being a significant space inadequacies. Aberdeen VFC 2 (136%) and Abingdon VFC 2 (78%) have significant space shortfall issues. Joppa VFC 3, Jarrettsville VFC 2 and Aberdeen

VFC 2 are next three on the list with a high space shortfall. Bel Air VFCs, Darlington have the least space shortfall. Overall, majority of VFCs are low in space shortfall. Lack of adequate bunk space, administrative/office space and support space are common across VFCs with space shortfall. Volunteers are residing and working in space designed to accommodate less number of people than currently served. Majority of VFCs are found to have adequate bay space.

Operational Deficiencies

The majority of VFCs have no or a low operational deficiency. Norrisville and Level VFCs are high in operational deficiency. Norrisville VFC, which has a significant footprint, has a very poor layout. Bunk space/dormitories and administrative space are too far from the bay space, which can result in increased dispatch time. Level has a similar issue where the bunk space and admin spaces are too far from bay area.

The majority of VFCs lack a dedicated decontamination area, which is an essential component for the safety of volunteers.

Utility

Utility is a measure of number of people serviced within the VFC service area. The higher the number of people serviced within a service area, the higher the utility; the lower the number of people serviced within a service area lower the utility. Bel Air, Abingdon, Joppa and Aberdeen VFCs are considered 'High' utility. Norrisville, Whiteford and Darlington are considered 'Low' in utility. Remainders of VFCs are considered 'Medium' in utility.

Demographics & County Priority

Abingdon, Susquehanna and Aberdeen service areas are projected to grow more than the County annual population growth. VFCs in the remainder of the service areas are expecting a slight growth but are either equal or less than the County annual population growth and are considered status quo in this category. None of the service areas are projected to have negative growth. VFCs primary function is to provide emergency related services. As such, all the VFCs are considered 'High' in County priority criteria.

Recommendations

In summary, major issues collectively facing the volunteer fire companies' functions and associated recommended actions include:

Issues that are common across majority of Harford County VFCs are lack of adequate bunk space, administrative and support spaces; not able to attract volunteers to spend more time at facility and not able to attract new recruits. Besides these facility level challenges, coverage is found to be a strategic issue that need to be addressed before major facility level investments are made.

Bel Air service area currently has 68 percent population outside a 4 min drive time. This service area will require at least two VFCs to address the coverage gap. Adding an additional VFC around Fountain Green area will reduce uncovered population to 49 percent would be significant improvement on existing coverage.

Abingdon service area has 35 percent population outside a 4 min drive time. By adding a VFC around Abingdon Elementary school area this can be reduced to 17% which is within the range of acceptable coverage level.

Joppa service area has 23 percent population outside a 4 min drive time. By adding a VFC around Riverside area, this can be reduced to 5 percent, an acceptable standard.

A detailed location analysis on each of these areas is required in order to locate new VFCs to provide the best coverage.

Supplemental Information and Discussion

The following section provides additional detailed discussion and information for this functional and operational analysis.

General/Overview

Harford County population is currently served by total 28 Volunteer Fire Companies (VFC) spread out in 11 service areas. Volunteer Fire Companies (VFC) account for one eighth of County real estate portfolio, service 254,132 residents (based on 2015) as well as provide emergency operations support for all the commercial, industrial areas. VFCs also respond to calls outside the County and state boundaries.

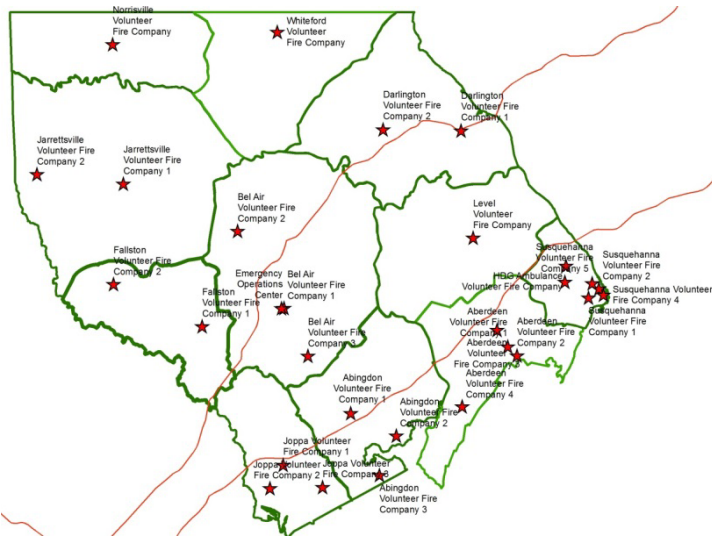


Figure 44: VFC locations and service areas

Harford County is divided into two physiographic regions, Development Envelope and Non Development Envelope. The development envelope primarily runs along I-95 and Route 24 and is designed to concentrate future development. This area includes the three municipalities of Aberdeen, Bel Air and Havre De Grace. Area outside this development envelope is termed

as Non Development Envelope where population density is low and is predominantly an agricultural land. Bel Air, Joppa, Abingdon, Aberdeen and Susquehanna service areas are considered to be within development envelope. The remaining service areas are in the non-development envelope.

Coverage

Harford County VFCs' coverage is evaluated based on two metrics, an 8 minutes response time, also referred as drive time, and a 4-minute drive time. The time measurement begins when units are en route to the emergency incident and ends when units arrive on the scene is defined as response time. A 4 minutes' drive time is applied within the development envelope while an 8-minute drive time is applied in non-development envelope. Ninety percent population coverage within these two metrics is a benchmark and an industry wide standard.

Twenty percent of Harford County population is outside the coverage area determined by an 8-minute drive time on existing VFCs (include areas in both development and non-development areas). The coverage is even worse when a 4 minutes' drive time is applied on VFCs within the development envelope. Fifty percent of population within the development envelope is outside this coverage area. Bel Air has the most number of people outside the coverage area with 68 percent. Abingdon has 35 percent and Joppa has 23 percent of population outside their respective coverage areas.

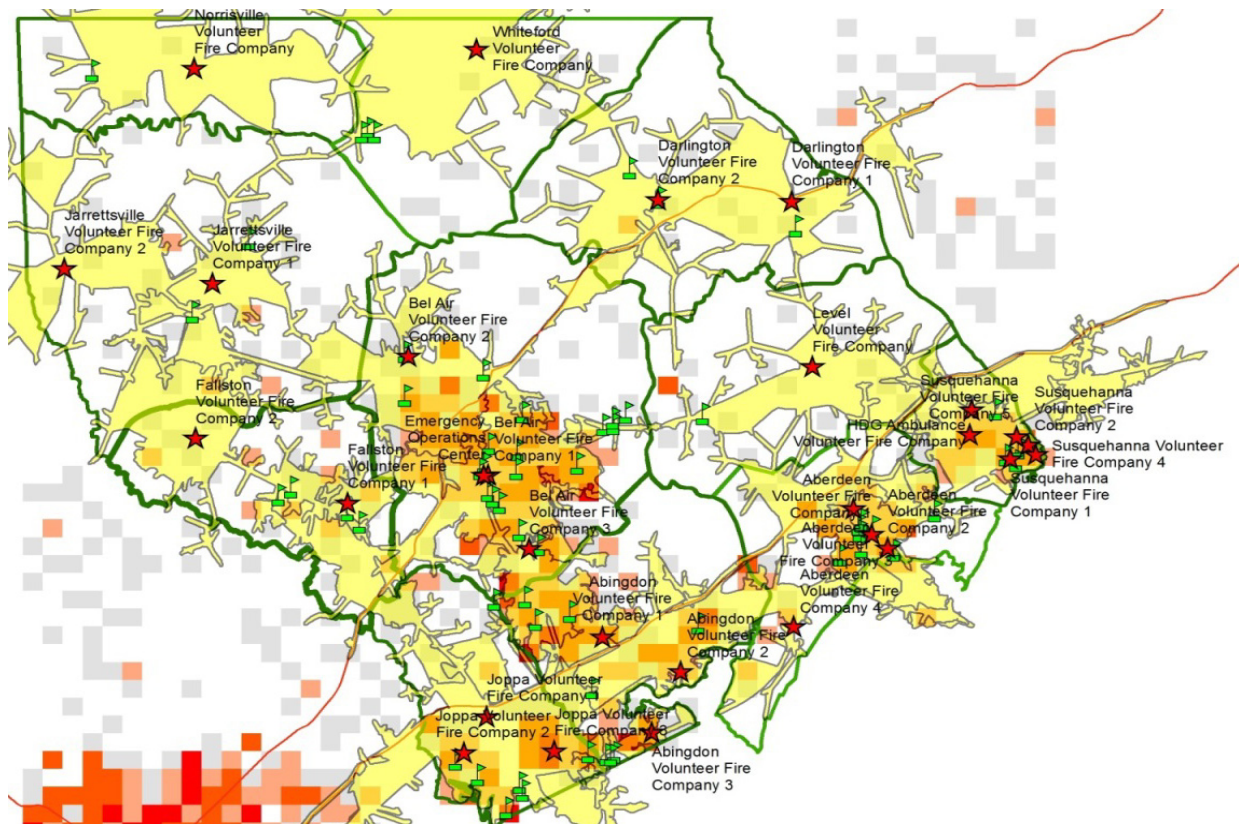


Figure 45: Eight min drive time on existing VFCs

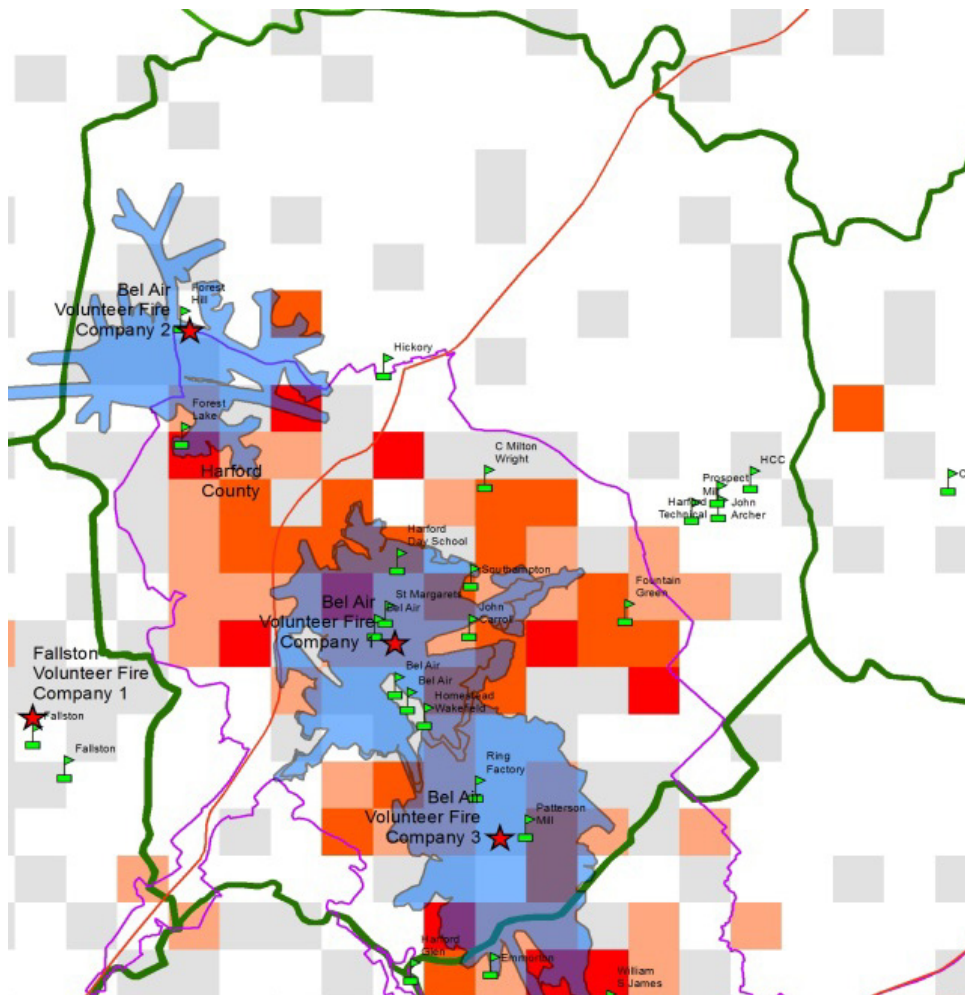


Figure 46: Four min drive time coverage on Bel Air VFCs

Service Area Demographics and Characteristics

Bel Air, Abingdon and Joppa are the top three service areas with population. Norrisville, Whiteford and Darlington service areas are the bottom three-service areas with population. Abingdon, Susquehanna and Aberdeen service areas have a higher annual population growth compared to County annual growth. These areas are projected to grow through 2020.

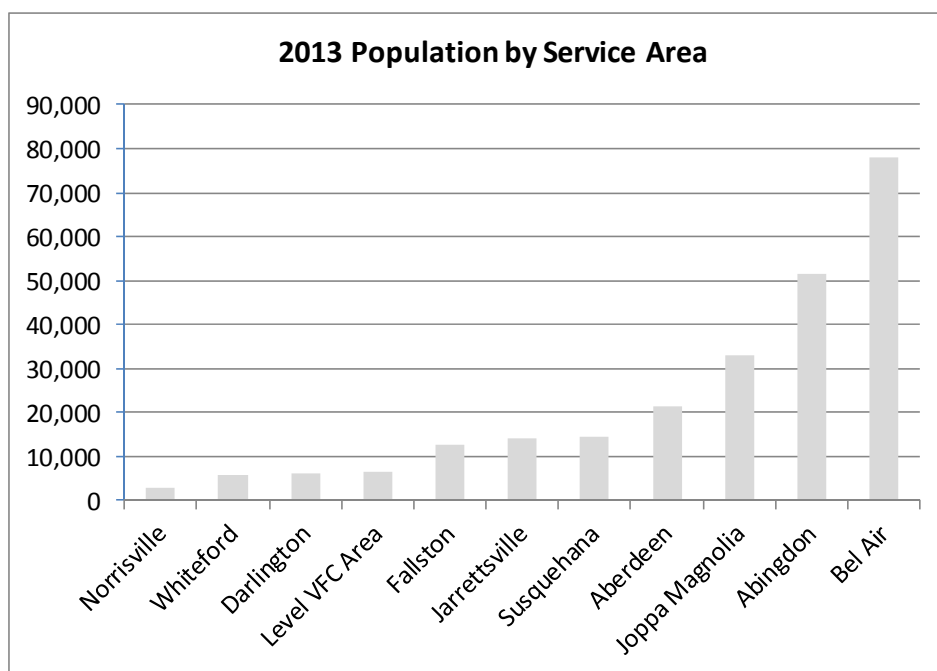


Figure 47: 2013 Population by each VFC service area

Bel Air, Abingdon and Joppa service areas have fewer number of VFCs per population served compared to Susquehanna, Darlington and Norrisville service areas.

Table 53: Service area and number of VFCs within the service area

Service Area	Total Bldg SF	No. of VFCs
Norrisville	6,707	1
Whiteford	13,700	1
Darlington	26,895	2
Level VFC Area	26,792	1
Fallston	27,500	2
Jarrettsville	32,100	2
Susquehanna	47,508	6
Aberdeen	37,383	4
Joppa Magnolia	33,100	3
Abingdon	37,008	3
Bel Air	45,507	3

Bel Air, Abingdon and Joppa VFCs are serving a higher number of people with fewer number of VFCs compared to Norrisville, Whiteford and Darlington. Bel Air has one VFC serving every 25,000 people; Abingdon has one VFC for every 17,000 people. Norrisville, Whiteford and Darlington though serving fewer people serve a larger area.

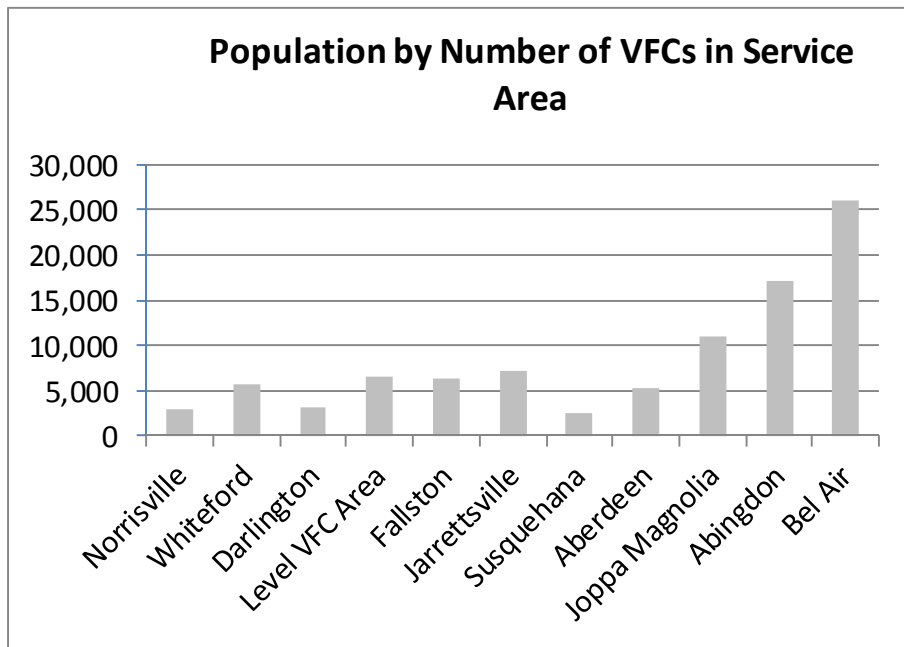


Figure 48: Ratio of Population to number of VFCs

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PROJECT PRIORITIZATION – SUMMARY RESULTS

The following table is a ranked prioritization list, broken down by priority group, with the final rank determined by sorting using Total Score, Risks to Life Safety, FCI, and Space Shortfall / Surplus scores in sequential order and from high to low. Below is a summary of these elements:

- **Total Score** – the total number of points received, with a maximum possible score of 80. A higher score would equate to a higher rank.
- **Risk to Life Safety** – the potential degree of risks to life safety that exists within a facility. A facility with a high potential risk to life safety gets a higher prioritization score.
- **Facility Condition Index (FCI)** - captures the overall condition of an existing facility. A higher FCI score is associated with a poorer facility condition. A facility with poorer condition (i.e. higher FCI) gets a higher prioritization score. Any facility with an FCI larger than 65 percent is a replacement candidate.
- **Space Shortfall/Surplus** - indicates how much space shortfall or surplus exists at a facility based on the current staffing and industry standards. A facility with a large space shortfall or surplus gets a higher prioritization score.

Table 54: Summary Project Prioritization – Priority Group 1

Facility Name	Department	Total Score	Rank	Risks to Life Safety	FCI	Space Shortfall / Surplus	Final Rank	Priority Group
Circuit Courthouse	Judicial	61	1	High	0.1923	36%	1	1
Hickory II - Fleet Maintenance	Dept of Public Works	60	2	High	0.9976	42%	2	1
Youth's Benefit Elementary School - Intermediate Building	Schools	59	3	High	0.3876	23%	3	1
Homestead/Wakefield Elementary School - Homestead Building	Schools	59	3	High	0.3412	19%	4	1
John Archer School/Infants and Toddlers	Multi-Use	59	3	High	0.3261	-67%	5	1
Wm Paca/Old Post Rd Elementary School - Old Post Rd ES	Schools	59	3	High	0.2572	16%	6	1
Youth's Benefit Elementary School - Primary Building	Schools	59	3	High	0.1251	36%	7	1
Sheriff's Headquarters	Sheriff's Office	57	8	Medium	0.2523	30%	8	1
Aberdeen Volunteer Fire Company 2	Emergency Operations	57	8	Low	0.4868	136%	9	1
Hickory Annex - Public School Facilities	Schools	56	10	High	0.3597	25%	10	1
Wm Paca/Old Post Rd Elementary School - Main Building (Wm Paca)	Schools	54	11	High	0.1585	21%	11	1
Prospect Mill Elementary School	Schools	54	11	High	0.1429	23%	12	1
Hickory Elementary School	Schools	54	11	High	0.1309	17%	13	1
Roye-Williams Elementary School	Schools	54	11	High	0.1151	17%	14	1
Center for Ed. Opportunity/Teen Diversion	Multi-Use	53	15	High	0.2656	0%	15	1
Wm S. James Elementary School	Schools	52	16	High	0.2456	22%	16	1
Darlington Public Library	Library	52	16	Medium	0.4091	77%	17	1
Fallston High School	Schools	50	18	Medium	0.3176	3%	18	1

Table 55: Summary Project Prioritization – Priority Group 2

Facility Name	Department	Total Score	Rank	Risks to Life Safety	FCI	Space Shortfall / Surplus	Final Rank	Priority Group
Riverside Elementary School	Schools	49	19	High	0.3447	26%	19	2
North Harford Elementary School	Schools	49	19	High	0.2184	31%	20	2
Homestead/Wakefield Elementary School - Wakefield Building	Schools	49	19	High	0.0822	4%	21	2
Joppatowne High School	Schools	48	22	High	0.1971	-4%	22	2
Jarrettsville Elementary School	Schools	48	22	High	0.0869	22%	23	2
Bel Air Middle School	Schools	47	24	High	0.2092	17%	24	2
Ring Factory Elementary School	Schools	47	24	High	0.1252	25%	25	2
Hall's Cross Roads Elementary School	Schools	47	24	High	0.1170	22%	26	2
Abingdon Elementary School	Schools	47	24	Medium	0.1082	27%	27	2
Abingdon Volunteer Fire Company 2	Emergency Operations	46	28	Low	0.0142	78%	28	2
Churchville Elementary School	Schools	45	29	High	0.1292	6%	29	2
Bel Air Elementary School	Schools	45	29	High	0.0959	31%	30	2
Harford Waste Disposal Center North Campus - White House	Dept of Public Works	45	29	Medium	0.5092	0%	31	2
Magnolia Middle School	Schools	45	29	Low	0.2673	7%	32	2
Havre de Grace Middle School	Schools	44	33	Medium	0.4111	12%	33	2
Fountain Green Elementary School	Schools	44	33	Medium	0.2519	27%	34	2
Edgewood Middle School	Schools	44	33	Medium	0.2118	19%	35	2
Southampton Middle School	Schools	44	33	Medium	0.1473	19%	36	2
Meadowvale Elementary School	Schools	44	33	Medium	0.1240	16%	37	2
Health Services Building (Lease)	Health Dept	44	33	Medium	ge/Below Ave	41%	38	2
Aberdeen Community Service	Multi-Use	44	33	Medium	0.1061	26%	39	2
Detention Center	Sheriff's Office	44	33	Medium	0.0183	0%	40	2
1311 Abingdon Road	Community Services	44	33	Low	0.7110	1%	41	2
C. Milton Wright High School	Schools	44	33	Low	0.1871	16%	42	2
Aberdeen Volunteer Fire Company 4	Emergency Operations	44	33	Low	0.1151	23%	43	2
Church Creek Elementary School	Schools	44	33	Low	0.1149	25%	44	2
11-15 South Main Street (Lease)	Facilities & Operations	43	45	High	ge/Below Ave	-2%	45	2
George D. Lisby Elementary School	Schools	42	46	High	0.2604	14%	46	2
Aberdeen Middle School	Schools	42	46	Medium	0.2055	9%	47	2
Magnolia Elementary School	Schools	42	46	Low	0.2073	20%	48	2
Havre de Grace High School	Schools	41	49	High	0.1017	-13%	49	2
Harford Waste Disposal Center South Campus - Mulch & Compost Personnel Office	Dept of Public Works	41	49	Low	0.4108	38%	50	2
Forest Hill / Hickory Activity Center	Parks & Recreation	41	49	Low	0.1554	36%	51	2
Havre de Grace Public Library	Library	41	49	Low	0.1061	40%	52	2
Aberdeen Public Library	Library	41	49	Low	0.1056	37%	53	2
Northern Precinct	Sheriff's Office	41	49	Low	0.0530	12%	54	2
Havre de Grace Elementary School	Schools	40	55	High	0.0482	16%	55	2
Harford Community College - Forest Hill Building	College	40	55	Medium	0.1503	0%	56	2
Harford Community College - Edgewood Hall	Multi-Use	40	55	Low	0.1654	2%	57	2
Harford Technical High School	Schools	40	55	Low	0.1595	-3%	58	2
Joppa Volunteer Fire Company 3	Emergency Operations	40	55	Low	0.0936	37%	59	2
Harford Community College - Fallston Hall	College	40	55	Low	0.0703	-26%	60	2
Harford Community College - Chesapeake Center	College	40	55	Low	0.0327	20%	61	2
Harford Community College - Joppa Hall	College	40	55	Low	0.0062	17%	62	2

Table 56: Summary Project Prioritization – Priority Group 3

Facility Name	Department	Total Score	Rank	Risks to Life Safety	FCI	Space Shortfall / Surplus	Final Rank	Priority Group
220 South Main Street	Facilities & Operations	39	63	High	0.0695	-2%	63	3
Harford Glen Environmental Center	Schools	39	63	High	0.0646	0%	64	3
Bar Association / Clerk of the Court	Judicial	39	63	Medium	0.0685	0%	65	3
Edgeley Grove Farm	Parks & Recreation	39	63	Low	0.4102	-101%	66	3
Highland Community Center	Community Services	39	63	Low	0.1967	-115%	67	3
Whiteford Volunteer Fire Company	Emergency Operations	38	68	High	0.0388	19%	68	3
Norrisville Elementary School	Schools	38	68	Medium	0.1098	-3%	69	3
611 Fountain Green Road	Facilities & Operations	38	68	Low	1.0832	-23%	70	3
Harford Center	Community Services	38	68	Low	0.1027	30%	71	3
Abingdon Volunteer Fire Company 3	Emergency Operations	38	68	Low	0.0139	9%	72	3
Aberdeen High School	Schools	38	68	Low	0.0087	13%	73	3
Bakerfield Elementary School	Schools	37	74	Medium	0.1083	9%	74	3
Parks & Recreation - Administration	Parks & Recreation	37	74	Low	0.1822	23%	75	3
Susquehanna Volunteer Fire Company 1	Emergency Operations	37	74	Low	0.1280	14%	76	3
Aberdeen Volunteer Fire Company 1	Emergency Operations	37	74	Low	0.1081	7%	77	3
Harford Waste Disposal Center North Campus - Maintenance Shop	Dept of Public Works	36	78	Low	0.5201	31%	78	3
Joppa Volunteer Fire Company 1	Emergency Operations	36	78	Low	0.0997	12%	79	3
Abingdon Volunteer Fire Company 1	Emergency Operations	36	78	Low	0.0454	3%	80	3
Harford Community College - Bel Air Hall	College	36	78	Low	0.0145	-18%	81	3
Dublin Elementary School	Schools	35	82	High	0.1386	-4%	82	3
Emmorton Elementary School	Schools	35	82	Medium	0.0562	20%	83	3
Harford Community College - HECC East	College	35	82	Low	0.1287	0%	84	3
Joppa Volunteer Fire Company 2	Emergency Operations	35	82	Low	0.1080	12%	85	3
Forest Hill Annex - Food Services/LPC	Schools	35	82	Low	0.1057	0%	86	3
Edgewood Public Library	Library	35	82	Low	0.0475	23%	87	3
McFaul Community Center	Multi-Use	35	82	Low	0.0320	37%	88	3
HDG Ambulance Volunteer Fire Company	Emergency Operations	35	82	Low	0.0316	17%	89	3
Forest Hill Elementary School	Schools	35	82	Low	0.0110	23%	90	3
Harford Waste Disposal Center South Campus - Mulch & Compost Pole Barn	Dept of Public Works	35	82	Low	0.0060	38%	91	3
Susquehanna Volunteer Fire Company 2	Emergency Operations	35	82	Low	0.0021	17%	92	3
Harford Community College - Library	College	35	82	Low	0.0007	26%	93	3
Joppa Public Library	Library	34	94	High	0.0998	-1%	94	3
Riverside Building Complex - Public Library	Library	34	94	High	0.0297	-2%	95	3
Harford Waste Disposal Center North Campus - Scalehouse	Dept of Public Works	34	94	Low	0.2953	31%	96	3
Bel Air Volunteer Fire Company 2	Emergency Operations	34	94	Low	0.0000	0%	97	3
CID / Property Management (Lease)	Sheriff's Office	34	94	Low	Best/ Good	5%	97	3
North Bend Elementary School	Schools	33	99	Medium	0.0722	16%	99	3
Fallston Middle School	Schools	33	99	Medium	0.0445	21%	100	3
Swan Harbor Farm	Parks & Recreation	33	99	Low	0.1535	0%	101	3
Megan's Law (Lease)	Sheriff's Office	33	99	Low	ge/Below Av	0%	102	3
Level Volunteer Fire Company	Emergency Operations	33	99	Low	0.1089	3%	103	3
Jarrettsville Volunteer Fire Company 2	Emergency Operations	33	99	Low	0.1009	29%	104	3
Susquehanna Volunteer Fire Company 4	Emergency Operations	33	99	Low	0.0821	8%	105	3
Fallston Volunteer Fire Company 2	Emergency Operations	33	99	Low	0.0585	19%	106	3
Harford Community College - Student Center	College	33	99	Low	0.0497	10%	107	3
Bel Air Public Library	Library	33	99	Low	0.0467	19%	108	3
Susquehanna Volunteer Fire Company 3	Emergency Operations	33	99	Low	0.0445	8%	109	3
Susquehanna Volunteer Fire Company 5	Emergency Operations	33	99	Low	0.0139	6%	110	3
Aberdeen Volunteer Fire Company 3	Emergency Operations	33	99	Low	0.0135	5%	111	3
Harford Community College - Aberdeen Hall	College	33	99	Low	0.0087	13%	112	3
Havre de Grace Activity Center	Multi-Use	33	99	Low	0.0013	12%	113	3
Storage Unit #1 (Lease)	Health Dept	33	99	Low	Best/ Good	20%	114	3
1010 Gateway Road	Other	32	115	Low	0.1294	16%	115	3
212 S Bond Street	Dept of Public Works	32	115	Low	0.1142	-38%	116	3
Storage Unit #2 (Lease)	Health Dept	32	115	Low	ge/Below Av	20%	117	3
Harford Waste Disposal Center South Campus - Mulch & Compost Attendant Booth	Dept of Public Works	32	115	Low	0.0340	38%	118	3
Edgewood Recreation Center	Parks & Recreation	32	115	Low	0.0144	34%	119	3
Edgewood Elementary School	Schools	31	120	Medium	0.0935	8%	120	3
Hays Street Bel Air Office (Lease)	Health Dept	31	120	Medium	Best/ Good	11%	121	3

Summary Report - Final

Facility Name	Department	Total Score	Rank	Risks to Life Safety	FCI	Space Shortfall / Surplus	Final Rank	Priority Group
Hickory II - Highways Administrative Office and Highway Maintenance 2nd District Shop	Dept of Public Works	31	120	Low	0.1046	6%	122	3
Norrisville Volunteer Fire Company	Emergency Operations	31	120	Low	0.0743	7%	123	3
North Harford Middle School	Schools	31	120	Low	0.0659	7%	124	3
Forest Lakes Elementary School	Schools	31	120	Low	0.0569	12%	125	3
Harford Community College - HECC West	College	31	120	Low	0.0390	0%	126	3
Jarrettsville Volunteer Fire Company 1	Emergency Operations	31	120	Low	0.0252	13%	127	3
Southern Precinct	Sheriff's Office	31	120	Low	0.0051	0%	128	3
Liriodendron	Parks & Recreation	30	129	Low	0.3336	0%	129	3
Fallston Recreation Complex - Maintenance Building	Parks & Recreation	30	129	Low	0.2496	12%	130	3
Darlington Elementary School	Schools	30	129	Low	0.2210	12%	131	3
Harford Community College - Belcamp Building	College	30	129	Low	0.0360	18%	132	3
Harford Waste Disposal Center North Campus - Groundwater Treatment Plant	Dept of Public Works	30	129	Low	0.0170	31%	133	3
Whiteford Public Library	Library	30	129	Low	0.0112	-73%	134	3
Harford Community College - Joppa Utility Buildings	College	30	129	Low	0.0000	28%	135	3

Table 57: Summary Project Prioritization – Priority Group 4

Facility Name	Department	Total Score	Rank	Risks to Life Safety	FCI	Space Shortfall / Surplus	Final Rank	Priority Group
Woodbridge Station (Lease)	Health Dept	29	136	Medium	Best/ Good	5%	136	4
Eden Mill Park - Nature Center	Parks & Recreation	29	136	Low	0.1000	0%	137	4
Fallston Volunteer Fire Company 1	Emergency Operations	29	136	Low	0.0949	3%	138	4
Anita C. Leight Estuary	Parks & Recreation	29	136	Low	0.0853	0%	139	4
Patterson Mill Middle High School	Schools	29	136	Low	0.0044	0%	140	4
North Harford High School	Schools	29	136	Low	0.0042	3%	141	4
Bel Air Volunteer Fire Company 1	Emergency Operations	29	136	Low	0.0022	0%	142	4
Joppatowne Elementary School	Schools	29	136	Low	0.0003	4%	143	4
5 North Main Street (Lease)	Community Services	29	136	Low	Best/ Good	-1%	144	4
109E and 115D North Main Street (Lease)	State's Attorney	29	136	Low	Best/ Good	0%	144	4
Emmorton Recreation & Tennis Center - Indoor Recreation Center	Parks & Recreation	28	146	Low	0.0887	6%	146	4
Fallston Public Library	Library	28	146	Low	0.0877	-35%	147	4
Abingdon Public Library	Library	28	146	Low	0.0645	18%	148	4
Harford Community College - Maryland Hall	College	28	146	Low	0.0588	13%	149	4
Harford Community College - Conowingo Building	College	28	146	Low	0.0140	7%	150	4
Harford Community College - Susquehanna Center	College	28	146	Low	0.0106	8%	151	4
Edgewood High School	Schools	28	146	Low	0.0006	2%	152	4
2335 Rock Spring Road (Lease)	Facilities & Operations	28	146	Low	Best/ Good	-27%	153	4
LE Records and Court Services (Lease)	Judicial	28	146	Low	Best/ Good	22%	153	4
Roni Chenowith Activity Center	Multi-Use	28	146	Low	0.0000	-8%	155	4
Harford Waste Disposal Center North Campus - Leachate Hauling Attendant Booth	Dept of Public Works	27	156	Low	0.0000	31%	156	4
Churchville Recreation Complex	Parks & Recreation	26	157	Low	0.0317	-1%	157	4
Harford Community College - Havre de Grace Hall	College	26	157	Low	0.0260	0%	158	4
BOE Administrative Offices	Schools	26	157	Low	0.0202	0%	159	4
Red Pump Elementary School	Schools	26	157	Low	0.0027	0%	160	4
Bel Air Volunteer Fire Company 3	Emergency Operations	26	157	Low	0.0012	0%	161	4
Bel Air High School	Schools	26	157	Low	0.0002	0%	162	4
Comm Action Agency / Food Bank (Lease)	Facilities & Operations	26	157	Low	Best/ Good	12%	163	4
Aberdeen Senior Center	Community Services	26	157	Low	0.0000	0%	164	4
Family Justice Center (Lease)	Judicial	26	157	Low	Best/ Good	0%	164	4
319 South Main Street (Lease)	Community Services	25	166	Low	ge/Below Av	9%	166	4
Highway Maintenance 4th District Shop	Dept of Public Works	24	167	Medium	0.0562	0%	167	4
Harford Waste Disposal Center South Campus - Main Administrative Building	Dept of Public Works	24	167	Low	0.0984	-17%	168	4
Darlington Volunteer Fire Company 1	Emergency Operations	24	167	Low	0.0849	3%	169	4
145 North Hickory Avenue	Community Services	24	167	Low	0.0609	-20%	170	4
Mariner Point Park - Visitor Center	Parks & Recreation	24	167	Low	0.0549	0%	171	4
Jarrettsville Public Library	Library	24	167	Low	0.0203	-1%	172	4
Fallston Recreation Complex - Office Building	Parks & Recreation	24	167	Low	0.0100	5%	173	4
15 North Bond Street (Lease)	Dept of Public Works	23	174	Medium	ge/Below Av	1%	174	4
125 North Main Street (Lease)	Facilities & Operations	23	174	Medium	ge/Below Av	-9%	174	4
Highway Maintenance 1st District Shop	Dept of Public Works	23	174	Low	0.1308	0%	176	4
Highway Maintenance 3rd District Shop	Dept of Public Works	23	174	Low	0.1146	0%	177	4
Edgewood Senior Center	Community Services	23	174	Low	0.0235	11%	178	4
Harford Community College - Sports Complex Building	College	23	174	Low	0.0222	1%	179	4
Deerfield Elementary School	Schools	23	174	Low	0.0008	12%	180	4
Harford Community College - Pump Station	College	21	181	Low	0.0484	0%	181	4
Harford Community College - Observatory	College	21	181	Low	0.0427	0%	182	4
Harford Community College - Hays-Heighe House	College	21	181	Low	0.0136	0%	183	4
Darlington Volunteer Fire Company 2	Emergency Operations	21	181	Low	0.0086	0%	184	4

Table 58: Summary Project Prioritization – Priority Group 5

Facility Name	Department	Total Score	Rank	Risks to Life Safety	FCI	Space Shortfall / Surplus	Final Rank	Priority Group
133 Industry Lane (Lease)	Elections	19	185	Low	Best/ Good	0%	185	5
Office of Professional Services (Lease)	Sheriff's Office	19	185	Low	Best/ Good	0%	185	5
Norrisville Activity Center / Public Library	Multi-Use	16	187	Low	0.0277	7%	187	5
Dental Clinic (Lease)	Health Dept	16	187	Low	Best/ Good	1%	188	5
112 Hays Street (Lease)	Facilities & Operations	13	189	Low	Best/ Good	-42%	189	5
19 Newport Drive (Lease)	Dept of Public Works	9	190	Low	Best/ Good	2%	190	5

SUMMARY IMPLEMENTATION PLAN

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Facilities by Priority			Harford County CIP								1 of 3					20-Jan-15										JACOBS®			
Activity ID	Activity Name	Budgeted Total Cost	15	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036					
Total																													
Total																													
Priority 1																													
Circuit Courthouse																													
Hickory II - Fleet Maintenance																													
Youth's Benefit Elementary School - Intermediate Building																													
Homestead/Wakefield Elementary School - Homestead Elementary School																													
Wm Paca/Old Post Rd Elementary School - Old Post Rd Elementary School																													
Youth's Benefit Elementary School - Primary Building																													
Sheriff's Headquarters - 45 South Main Building																													
Aberdeen Volunteer Fire Company 2																													
Wm Paca/Old Post Rd Elementary School - Main Building																													
Prospect Mill Elementary School																													
Hickory Elementary School																													
Roye-Williams Elementary School																													
Wm S. James Elementary School																													
Fallston High School																													
Priority 2																													
Riverside Elementary School																													
North Harford Elementary School																													
Homestead/Wakefield Elementary School - Wakefield Building																													
Joppatowne High School																													
Jarrettsville Elementary School																													
Bel Air Middle School																													
Ring Factory Elementary School																													
Hall's Cross Roads Elementary School																													
Abingdon Elementary School																													
Abingdon Volunteer Fire Company 2																													
Churchville Elementary School																													
Bel Air Elementary School																													
Magnolia Middle School																													
Havre de Grace Middle School																													
Fountain Green Elementary School																													
Edgewood Middle School																													
Southampton Middle School																													
Meadowvale Elementary School																													
Detention Center																													
1311 Abingdon Road																													
C. Milton Wright High School																													
Aberdeen Volunteer Fire Company 4																													
Church Creek Elementary School																													
Geoge D. Lisby Elementary School																													
Aberdeen Middle School																													
Magnolia Elementary School																													
Havre de Grace High School																													
Forest Hill / Hickory Activity Center																													
Northern Precinct																													
Havre de Grace Elementary School																													
Harford Community College - Forest Hill Building																													
Harford Community College - Edgewood Hall																													
Design Procurement Construction			Harford County Capital Improvement Master Plan															Facilities by Priority											

Facilities by Priority			Harford County CIP							2 of 3							20-Jan-15										JACOBS®			
Activity ID	Activity Name	Budgeted Total Cost	15	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036						
Harford Technical High School			\$2,645,065																											
Joppa Volunteer Fire Company 3			\$271,846																											
Harford Community College - Fallston Hall			\$649,861																											
Harford Community College - Chesapeake Center			\$312,817																											
Harford Community College - Joppa Hall			\$2,991,680																											
Priority 3			\$48,414,473																											
220 South Main Street			\$4,770,441																											
Harford Glen Environmental Center			\$694,457																											
Bar Association / Clerk of the Court			\$289,834																											
Edgeley Grove Farm			\$59,400																											
Whiteford Volunteer Fire Company			\$177,594																											
Norrisville Elementary School			\$374,170																											
611 Fountain Green Road			\$798,669																											
Harford Center			\$815,853																											
Abingdon Volunteer Fire Company 3			\$38,309																											
Aberdeen High School			\$668,537																											
Bakerfield Elementary School			\$2,380,861																											
Susquehanna Volunteer Fire Company 1			\$256,509																											
Aberdeen Volunteer Fire Company 1			\$871,420																											
Harford Waste Disposal Center North Campus - Mainten			\$236,809																											
Joppa Volunteer Fire Company 1			\$437,989																											
Abingdon Volunteer Fire Company 1			\$380,915																											
Harford Community College - Bel Air Hall			\$166,329																											
Emmorton Elementary School			\$16,029																											
Harford Community College - HECC East			\$684,284																											
Joppa Volunteer Fire Company 2			\$277,587																											
Forest Hill Annex - Food Services/LPC			\$109,381																											
Edgewood Public Library			\$11,819,501																											
McFaul Community Center			\$326,235																											
HDG Ambulance Volunteer Fire Company			\$140,661																											
Forest Hill Elementary School			\$55,171																											
Harford Waste Disposal Center South Campus - Mulch &			\$122,206																											
Susquehanna Volunteer Fire Company 2			\$1,942																											
Harford Community College - Library			\$3,898																											
Riverside Building Complex - Public Library			\$48,665																											
Fallston Middle School			\$83,533																											
Swan Harbor Farm			\$644,622																											
Level Volunteer Fire Company			\$973,816																											
Jarrettsville Volunteer Fire Company 2			\$171,795																											
Susquehanna Volunteer Fire Company 4			\$267,418																											
Fallston Volunteer Fire Company 2			\$29,307																											
Harford Community College - Student Center			\$946,559																											
Bel Air Public Library			\$247,262																											
Susquehanna Volunteer Fire Company 3			\$113,511																											
Susquehanna Volunteer Fire Company 5			\$36,534																											
Aberdeen Volunteer Fire Company 3			\$27,012																											
Harford Community College - Aberdeen Hall			\$139,190																											
Havre de Grace Activity Center			\$13,035																											
1010 Gateway Road			\$195,860																											
212 S Bond Street			\$2,427,254																											
Edgewood Recreation Center			\$50,013																											
Edgewood Elementary School			\$325,395																											

