

Appendix A
Task 1 Technical Memorandum:
CIP Development Process in the BMC Region

June 21, 2021

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## HEALTHY CIP

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## INTRODUCTION

### PURPOSE OF STUDY

Local governments in the Baltimore region are responsible for managing much of the infrastructure the public relies on every day, from streets and sidewalks to public transportation, water, sewer, and schools. Capital Improvement Programs (CIPs) determine how limited capital funds are allocated for the maintenance and expansion of this infrastructure. While BMC's member jurisdictions each have their own approaches to developing CIPs, capital improvement plans at their most basic fulfill four functions:

1. Inventory: What are the capital needs?
2. Prioritization: Which projects take precedence?
3. Funding: What fiscal resources are available to support capital investments?
4. Programming: How are funds being distributed among capital needs? Which capital needs are being met and which ones remain unfunded?

These functions may be accomplished through formal or informal processes. There are a wide range of factors that impact CIPs, from laws and budgets, to citizen input and policies. This project is an opportunity to facilitate knowledge sharing among BMC jurisdictions and further the state of practice in CIP development.

### OVERVIEW OF TECHNICAL MEMORANDUM

This technical memorandum, the first of two, focuses on documenting the state-of-practice in transportation-related CIPs across the region. To understand the state-of-practice, staff from counties in the BMC region as well as Baltimore City and the City of Annapolis were approached for interviews. The second technical memorandum will be comprised of a literature review to identify best practices in CIP development.

### METHODOLOGY

In total, the research team conducted 13 semi-structured telephone interviews with staff from various departments in Baltimore City, the City of Annapolis, and Anne Arundel, Baltimore, Carroll, Harford, Queen Anne and Howard Counties in Spring 2021. The participants were selected based on guidance from the project's steering committee and encompass jurisdiction staff with hands-on experience with their community's CIP process. Interviewees were asked the same set of open-ended questions, which was pre-populated prior to the interviews with available public-facing information. Detailed information about interviews is included in **Table 1**.

This technical memorandum summarizes the findings of these interviews regarding the capital improvement planning process, including the schedule; methods for identifying and prioritizing needs; and funding and programming considerations. The memo also examines similarities and differences in processes and identifies opportunities for improvements.

Table 1: Interview Dates, Participants, and Jurisdictions

Date	Interviewees	Jurisdiction	Department
3/25	Kristen Ahearn, Robert O'Brien, and Graham Young	Baltimore City	DOT and Planning
3/29	Glen Hebel	Harford County	Public Works
3/30	Samuel Snead	Baltimore County	Public Works
4/1	Amy Gowan and Kristin O'Connor	Howard County	Planning and Zoning
4/5	Heidi Pepin	Carroll County	Budget
4/6	Paul Magness	Harford County	Parks and Recreation
4/8	Gary Blazinsky and Jodi Glock	Harford County	Harford Transit
4/13	Alex Rawls and Joel Gallihue	Harford County	Planning and Zoning
4/16	Eric Leshinsky and Sally Nash	City of Annapolis	Planning
4/27	David Cookson, Bruce Gartner, and Rebecca Kidwell	Howard County	Transportation and Public Works
4/29	Brian Ulrich and David Braun	Anne Arundel County	Engineering and Transportation
5/3	Sam Brice and Marcia Patrick	City of Annapolis	Public Works
5/19	Steve Cohoon	Queen Anne County	Public Works

## OVERVIEW OF CIP DEVELOPMENT PROCESS

The jurisdiction interviews found that the BMC region lacks a standard process for developing CIPs at the jurisdiction level. Even though each CIP process differs in its details, jurisdictions all have some similarities in how they develop their CIPs. Every jurisdiction's CIP process includes:

- Budget office, committees, or commission/council provide departments with budget guidance at the start of the annual budget process.
- Process to identify capital needs. Most often, capital projects originate at the departmental level. Many jurisdictions mentioned the role that existing plans play in helping identify needs.
- Some process for prioritizing projects, although not every jurisdiction had a formalized quantitative process for prioritizing needs.
- Involvement of local leadership, including elected officials, in helping set budget priorities and the overall direction of the capital program. The degree and timing of this engagement varied considerably by jurisdiction.
- Development of multi-year CIPs, typically extending 5 to 6 years into the future.

Broadly, elements of the CIP development process fall into two general planning approaches: a "top-down" approach where funding priorities and capital allocation decisions are driven by the jurisdiction's administrative or elected leadership; and a bottom-up approach where individual departments have greater autonomy to identify and prioritize their capital needs. In practice, most jurisdictions utilize a mix of top-down and bottom-up planning in developing their capital budgets.

**“TOP-DOWN” APPROACH**

In a “Top-Down” planning approach, capital investment decisions flow down from jurisdictional leadership, including from elected officials, county managers, or the budget office. To some degree, all jurisdictions follow a top-down approach as, ultimately, elected officials help drive spending decisions and priorities. A common example is that several jurisdictions rely on leadership to make final decisions on funding based on department recommendations. For example, as part of the budget process in Baltimore County, department heads submit to the County Executives their Tier 1 and Tier 2 capital requests. The County Executive and County Council have ultimate authority in deciding which projects get funded. Similarly, Howard County relies on its Planning Board to rank new capital projects and their recommendations are submitted to the County Executive.

Another example of “top-down” planning is the role jurisdiction budget offices play in guiding capital requests. Nearly every jurisdiction the study team spoke to relies on their local budget office to provide departments a sense of overall spending limits in the upcoming capital budget. In Baltimore City, the Department of Finance develops budget projections that give each department a sense of their overall spending capacity before they prepare their capital requests.

State and federal regulations also help drive capital spending. A commonly cited example in interviews was how federal and state regulations generally guide State of Good Repair investments in bridges. There are existing federal standards for bridge inspection and condition rating that help drive the allocation of capital funds for bridge repair and rehabilitation. The same level of scrutiny is not required nor applied to assets such as local streets or trails.

Finally, the “top-down” approach can be exhibited in how certain jurisdictions create a formalized process for project identification and prioritization. Several jurisdictions rely on their comprehensive plan or transportation plans to identify new capital needs. Some of these plans go as far as outlining how departments should evaluate potential investments. For example, Anne Arundel County has a Transportation Functional Master Plan which lays out performance measures used to create a project scoring system.

**“BOTTOM-UP” APPROACH**

The “bottom-up” approach to capital planning describes instances when individual departments are afforded autonomy in identifying capital needs and defining spending priorities. In several jurisdictions interviewed, there was limited project-level prioritization across departments; instead, departments were responsible for identifying and prioritizing capital needs. Queen Anne’s exemplifies this “bottom-up” approach as the County budget office provides capital budget instructions to each department in the Fall, with departments responsible for identifying capital needs.

In many of the jurisdictions, the prioritization process for projects is set at the departmental level. Departments responsible for a large portfolio of capital assets such as departments of public works, tended to have more formalized systems in place to identify capital projects compared to departments, such as planning, which may oversee few or no capital assets directly. For example, in Carroll County, the Department of Public Works (DPW) utilizes an asset management system, AgileAssets, to identify and prioritize capital investments.

## HEALTHY CIP

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### ORGANIZATION OF DETAILED FINDINGS

The interview questions and the findings of this report are organized into four broad topics:

- **Schedule:** Overview of the schedule of the annual budget process.
- **Capital Needs Identification:** Details on how jurisdictions identify capital needs.
- **Prioritization:** How jurisdictions determine their capital priorities.
- **Funding and Programming:** How jurisdictions determine available capital funding. Details on the steps taken to create a fiscally constrained capital budget.

### COMPARISON OF CIP APPROACHES

#### SCHEDULE

##### TIMING FOR DEVELOPING CIPS

Each jurisdiction follows their own timelines for finalizing their capital budgets each year; however, all jurisdictions follow a similar calendar. The fiscal year for all the jurisdictions in the region begins July 1, so budgets and CIPs must be finalized prior to that date. Most jurisdictions begin developing their capital budget for the upcoming fiscal year in the early fall, allowing several months of development, review, and revisions over the winter and early spring. Budgets are then approved in late spring or early summer. **presents** the key milestones for capital budget and CIP development for each jurisdiction by month.

##### PLANNING HORIZON

Each jurisdiction can define a planning horizon for their CIP, and most CIPs in the region have a five- or six-year outlook. Including future years in the CIP allows jurisdictions to better capture the future year impacts of capital investments and the sustainability of current year actions. The CIPs for the City of Annapolis and Harford County cover a five-year planning horizon, so the CIP covers the current fiscal year's capital budget plus four additional years. The CIPs for the City of Baltimore, Anne Arundel, Baltimore, Carroll, and Harford Counties all have six-year planning horizons, so the CIP covers the current fiscal year's capital budget, plus five additional years. The CIP for Howard County includes six years of detailed capital planning, plus a 10-year outlook. Queen Anne's covers six years.

##### INTERACTION BETWEEN CAPITAL AND OPERATING BUDGET PROCESSES

For most jurisdictions capital and operating budget development occurs in parallel, during similar timeframes, but direct interaction between the two budgets is limited. While the development of the two are separate processes, capital investments will ultimately impact operations, and jurisdictions do account for this when developing their CIPs. In Carroll County, for example, no capital project request is considered without an estimated operating impact, which is integrated into an operating plan once refined by the Department of Management and Budget. Similarly, in Howard County, operational costs are considered as part of the evaluation criteria for each capital project, and in Harford County, departments provide information each year on the capital impact of the operating budget.

Table 2 presents the key milestones for capital budget and CIP development for each jurisdiction by month.

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# HEALTHY CIP

Table 2: CIP Development Key Milestones by Month

	Annapolis	Anne Arundel County	Baltimore City <sup>1</sup>	Baltimore County <sup>2</sup>	Carroll County <sup>3</sup>	Harford County	Howard County <sup>4</sup>	Queen Anne's County
July	Start of fiscal year	Start of fiscal year	Start of fiscal year	Start of fiscal year	Start of fiscal year Directions for preparation are sent out to departments	Start of fiscal year	Start of fiscal year	Start of Fiscal Year
August						Annual capital planning begins		
September		Budget sends guidance to departments			Requests submitted to the Budget Office			
October	Senior staff review	Deadline for user agencies to submit project requests to Department of Public Works (DPW)	Planning Department provides agencies with target ranges for each fund source and instructions for submitting CIP requests	Public meeting for citizens to express opinions on specific capital projects and needs	Department of Management and Budget prepares preliminary recommended capital budget			Spending affordability committee holds meetings. Commissioners approve budget guidelines for next fiscal year.

<sup>1</sup> Detailed information on the budget development process can be found here: <https://planning.baltimorecity.gov/capital-improvement-program-process>.

<sup>2</sup> Detailed information about the budget development process can be found here: <https://www.baltimorecountymd.gov/departments/planning/devrevandlanduse/cipdetails.html>.

<sup>3</sup> Detailed information about the budget development process is available here: <https://www.carrollcountymd.gov/media/6669/entire-document.pdf>.

<sup>4</sup> Detailed information about the budget development process is available here: <https://www.howardcountymd.gov/Departments/County-Administration/Budget/Budget-Process/Calendar>.



# HEALTHY CIP

	Annapolis	Anne Arundel County	Baltimore City <sup>1</sup>	Baltimore County <sup>2</sup>	Carroll County <sup>3</sup>	Harford County	Howard County <sup>4</sup>	Queen Anne's County
November				Director of Budget and Finance sets target limits for capital projects and each agency submits project requests.		Departmental capital budgets shared with PAB	Agencies submit budget requests	Budget guidance sent to departments
December		Deadline for DPW to enter cost estimate into Budget Office database	Agency CIP requests due to Planning Department. Planning Department begins detailed review of requests				County Executive public budget hearing	Capital budget requests due
January	Review by City Manager, Director of Planning and Zoning, Chair of the Planning Commission, and others	Budget office creates reports for CIP oversight committee	Select agencies present CIP priorities to the Planning Commission	Planning Department distributes CIP to the Planning Board, and requesting agencies present their capital project requests	Submit to the State for bond authorization. Recommended budget book complete		Spending Affordability Advisory Committee develops revenue and debt guidelines	
February		CIP oversight committee makes recommendations for the Planning Advisory Board (PAB)	Planning Commission approval of recommended CIP	Planning Board subcommittee reviews requests.			Planning Board ranks new projects and sends recommendations to the County Executive.	County administrator budget review meetings commence
March	Cutoff for sending information for bond rating	PAB makes recommendations.		Planning Board subcommittee presents recommendations	Department of Management and Budget presents		County Executive public budget hearing.	County administrator's budget sent to commissioners.

## HEALTHY CIP

	Annapolis	Anne Arundel County	Baltimore City <sup>1</sup>	Baltimore County <sup>2</sup>	Carroll County <sup>3</sup>	Harford County	Howard County <sup>4</sup>	Queen Anne's County
		Budget hearings with county executives		to full Planning Board.	recommended budget.			
April	Budget introduced			Director of Budget and Finance reviews recommendations and sends to County Executive.	County Commissioners announce proposed budget.	Capital budget sent to council for review and approval	County Executive presents proposed capital budget to County Council.	Proposed budget published
May		Legislature reviews and approves budget and CIP	Board of Finance review of recommended CIP	County Council reviews and finalizes CIP			Public hearings on budget. Legislative work session focused on various budget elements.	Public hearing process
June	CIP finalized and approved		City Council adopts Capital Budget	CIP finalized for Council approval (no later than June 1)	Public ordinance adopted by June 1	Budget must be approved by June 15.	County Council approves budget	Final adoption of budget

## CAPITAL NEEDS IDENTIFICATION AND INVENTORY

Each jurisdiction has their own way of identifying capital needs, scoring and/or prioritizing those needs, and ultimately developing a list of selected projects. In most jurisdictions, leading departments or agencies identify capital needs, however many other individuals and groups, both internal and external, contribute to the process of whittling a list of needs down into a finalized capital project list.

In Carroll County, capital needs are identified by the leading departments but can also come up through commissioner requests from the Board of Commissioners. In addition, County staff may also review projects from prior years that it may still have an interest in pursuing, although this can be heavily driven by the lead agency.

### Methods used to identify capital needs:

- Department feedback and running list
- Stakeholders
- Elected officials
- Asset condition surveys
- Asset inventories
- Existing plans

In Anne Arundel County, a scoring system is laid out in the Move Anne Arundel Transportation Functional Master Plan (TFMP), which lays out performance measures which they used to create a scoring system. Other methods for identifying potential capital projects include reviewing complaints, bridge or pavement conditions, and/or internal policies. The City of Annapolis will be rolling out a new capital improvement planning process that involves the use of a Project Implementation Form (PIF) to document a potential project for CIP inclusion. Then, public works engineers will scope the project and it will progress further towards inclusion in the CIP. The PIF will be used by multiple departments and will be used in the later scoring process after the project is scoped.

Howard County cited the County's General Plan and supporting master plans as helping guide the identification of new capital projects. The County also places a strong emphasis on community input to both identify and prioritize capital investments.

Maintenance needs can also inform capital planning. For departments that are responsible for road and bridge maintenance, pavement management systems can help with project identification and prioritization although they may not be well integrated into other, external systems. Carroll County DPW uses AgileAssets to recommend projects, particularly based on pavement condition. Harford County DPW has a list of capital program objectives and factors for a project's inclusion in capital program projects. The Highway Engineering Department at Harford County has a resurfacing list based on information from the pavement management system which helps determine the road resurfacing budget. Similarly, Howard County's Bureau of Highways tracks paved assets, including conditions through its enterprise asset management system; The County noted the system does not cover all types of transportation infrastructure overseen by the County, requiring some manual integration of state of good repair needs

Other methods include running, departmental lists. A few years ago, the Harford County Planning Department put together a master list of multimodal transportation projects as an internal document. The list combines state and local transportation capital projects, roadway, bicycle, pedestrian, and

transit projects as well as project ideas. These projects are sometimes included in the county's annual priority letter to the Maryland Department of Transportation (MDOT), but large projects may not be funded by the state and an attempt is made to reduce them into smaller components.

#### DEFINING CAPITAL PROJECTS AND CRITERIA FOR CIP INCLUSION

Some jurisdictions have clear definitions of what constitutes a capital project. In some instances, a jurisdiction may consider the project cost as the deciding factor on whether a project qualifies as an operating or capital expenditure, as some jurisdictions automatically classify project costs exceeding a certain threshold as capital costs. For example, only projects valued at over \$30,000 were eligible for inclusion in Queen Anne's County's FY 2022 Capital Budget.

The line between operating and capital expenditures is sometimes gray (e.g., classifying technology costs such as software as a service, rolling stock, small bus stop improvements). Costs may also be classified as either capital or operating based on their proposed funding sources. For example, in-house repaving in Baltimore City is funded through the operating budget, but repaving completed by contractors comes out of the capital budget. Similarly, Howard County funds its match on FTA-eligible transit expenses through the operating budget, even though these funds go toward capital assets like vehicles and bus stop infrastructure.

Another approach involves definitions and criteria. In Baltimore City, a policy from the Board of Estimates describes what a capital improvement is. In Annapolis, the Mayor defines capital projects. In Queen Anne's County, a Spending Affordability Committee submits recommendations to the County Commissioners regarding budget guidance for the next fiscal year's capital (and operating) budget.

After defining what constitutes a capital project, some jurisdictions have also developed clear criteria to determine whether a proposed project is eligible for inclusion in the CIP. Baltimore City has a list of criteria to assure that capital projects are necessary to protect public health and safety, that city funding will leverage other fund sources, that the project fulfills a state or federal mandate, etc.<sup>5</sup> Baltimore County has a formal list of project evaluation criteria, including whether a project fits within the guidelines of the Baltimore County Master Plan and its amendments, whether it fits within the guidelines of the State's Smart Growth initiative, etc.<sup>6</sup> In Harford County, a capital project "adds to, supports, or improves the physical infrastructure, capital assets, or productive capacity of County services," and also needs to meet additional criteria (e.g., it "will take place over two or more years, requiring continuing appropriations," or be funded with debt, etc.).<sup>7</sup>

Other factors figure into project inclusion. One consideration in Carroll County is how financially feasible a project is with respect to the entire capital budget. Harford Transit mentioned how transit is a tool for attracting business and economic development, which means the agency sometimes needs to respond quickly to implement service when new employers move to the area (e.g., for an Amazon distribution center Harford Transit had to implement services changes within 30-45 days).

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<sup>5</sup> A complete list of project criteria can be found at: <https://planning.baltimorecity.gov/capital-improvement-program-process>

<sup>6</sup> A complete list of criteria can be found at: [https://www.baltimorecountymd.gov/departments/planning/devrevandlanduse/cipdetails.html#cap\\_project\\_eval\\_criteria](https://www.baltimorecountymd.gov/departments/planning/devrevandlanduse/cipdetails.html#cap_project_eval_criteria)

<sup>7</sup> Additional criteria information: <https://www.harfordcountymd.gov/ArchiveCenter/ViewFile/Item/1418>, page 12

COST ESTIMATES

Developing accurate capital cost estimates and future-year costs can be challenging, and methods for developing them vary. In most jurisdictions, there is not a standardized process. In developing the budget, departments may be providing estimated costs for projects 12 months before they are designed, and 18-24 months before construction starts, which means costs can fluctuate from the time a project is included in a CIP to when construction begins.

One cost estimating method involves spreadsheets. Anne Arundel County starts with a project construction cost estimate that they develop either in-house or by a consultant. Then, they utilize a spreadsheet to apply other costs such as escalations, county overhead charges (as staff time is billed to a specific capital project). This spreadsheet is updated annually. Harford County Parks and Recreation

Methods used to estimate costs:

- Spreadsheets
- Cost manuals
- Historic information
- Market research

have a standardized cost estimation sheet that they try to update every 3-4 years to keep up with construction cost and timelines (what do you mean by “times”?). Typically, the list is a combination of CPI in the area but is adjusted accordingly if there has been a significant change in the costs or components of projects (e.g., asphalt costs).

Other methods for determining costs incorporate historic information, cost manuals, and/or market research. In Baltimore City, each department is required to prepare their own costs. The City’s Department of Transportation (DOT) develops estimates at design milestones for construction. These early estimates utilize the MDOT State Highway Administration cost estimating manual. Baltimore County DOT defers to Purchasing or the Office of Budget for cost

estimates but may also develop an initial estimate through market research (e.g., speaking to several vendors through a demo non-commit process to get an idea of potential costs). For road projects in Baltimore County that involve on-call designers for bike lanes, consultants design the facilities and provide cost estimates that are then reviewed by County engineers, providing a check and balance for costs. In Carroll County, DPW uses historic information and conversations with the state to develop costs for road projects; the County’s escalation is typically around 5%, although fluctuates from year to year (e.g., 8% in year one, 5% in the next, etc.). Harford County Transit collects independent cost estimates (ICE) for all of their projects. They tend to use historic purchase data (especially if the cost is for an annual purchase) but also talk with other local transit providers.

STATE OF GOOD REPAIR

Maintaining the transportation network and transportation assets in a State of Good Repair requires a system for identifying and tracking maintenance needs. These include sidewalk condition, road pavement condition, transit asset conditions, as well as bridge condition. Most jurisdictions complete regular inspections and use the conditions to prioritize maintenance. County managed transit systems (e.g. Harford Transit, RTA) are federally required to have Transit Asset Management (TAM) plans in place and continually track the age, condition, and mileage of fleet and facility assets.

In most jurisdictions, roads and bridges are inspected every few years. In Baltimore City, bridges are required to be inspected every three years. Queen Anne’s County inspects bridges ever two years. In

Carroll County, bridges are inspected at least every four years and maintenance is planned six years out based on anticipated repairs; the County also has a long-range bridge plan with a 20–30-year outlook that anticipates future needs and pinpoints when the county will need to start pursuing state and federal funding. For Harford County DPW, poorly rated bridges are identified, and a plan of action is determined. For roads, Harford County also looks at roadways that may need capital improvements, such as intersections, capacity for roundabouts, and the number of crashes. If there are intersections with capacity and crash issues, then they may program a capital project for intersection improvement. There are other projects based on capacity where there is development in the area, which are identified in Planning and Zoning’s transportation plan. For their roads, Carroll County DPW uses a pavement management program and evaluates needs for the current and following year. This program also includes guardrails, pipes, culverts, and traffic control in addition to asphalt. Projects are planned 2-3 years out, but there is an annual plan as well. Finally, Howard County’s Bureau of Highways, as previously mentioned, utilizes EAM software to track paving assets/conditions.

Jurisdictions may also utilize technology to document asset conditions. In Carroll County, GIS staff have added pipe culverts and other assets for which they can track the conditions, either below the road or on the surface, into public-facing GIS maps based on commissioner districts. Harford Planning’s DPW centerline GIS data includes a pavement management field and includes codes for different surface materials and whether pavement has an edge line. Some jurisdictions, like Baltimore County, are pursuing project management software for the monitoring process which is currently done manually on paper. Anne Arundel County will be getting a new system (VueWorks) for asset management and already uses Ebuilder for project management.

Asset condition is commonly considered in capital spending prioritization.

Baltimore City has a database for vertical assets and the Planning Department recently hired an asset management analyst to help departments build out asset inventories. Baltimore City DOT is building out an asset inventory and submitted requests for a pavement condition survey and transportation asset management (TAM) system.

As discussed in the next section, many jurisdictions have spending and affordability committees that help guide the CIP process. These committees can support the identification of State of Good Repair Needs. For example, Howard County’s Spending Affordability Committee collects state of good repair needs from individual departments. Based on the available funding levels for a given year, they may make recommendations for focusing on SGR before spending on new capital investments.

**PRIORITIZATION**

Most jurisdictions sought a balance between building new infrastructure and maintaining the existing network. State of good repair and maintenance records help to prioritize projects, but in terms of maintenance backlogs, needs often outweigh funding. In general, capital budgets evolve into a constrained form after the project list is gradually whittled down to match available funding. The most frequently cited metric for prioritization was affordability, with many jurisdictions passing spending guidance down to departments, which in turn put together a capital budget that fits with spending constraints.

## SPENDING AND AFFORDABILITY COMMITTEES

In some instances, advisory committees may dictate the amount of total budget available at the onset of the process to help guide prioritization efforts. Howard County has a Spending Affordability Advisory Committee (SAAC)<sup>8</sup> that reviews projected revenues and expenditures for the coming fiscal year and the four subsequent years afterwards and makes additional recommendations in an annual report.<sup>9</sup>

Anne Arundel County has a Spending Affordability Committee that makes recommendations to the County Executive, County Council, and Office of Budget and also issues an annual report.<sup>10</sup> These committees and their reports influence the amount of funding and debt available over the five-to-six-year capital plan windows.

Similarly, before the annual budget process commences in Queen Anne's County's, the Spending Affordability Commission makes advisory recommendations to the County Commissioners on budget instructions and procedures. These instructions include guidelines for the capital budget such as recommended amounts of funding, fund sources, and use of the capital fund. Financial projections are completed for a four-year timeframe.

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<sup>8</sup> Howard County Spending Affordability Advisory Committee (SAAC): <https://www.howardcountymd.gov/Departments/County-Administration/Budget/Spending-Affordability-Advisory-Committee-SAAC>

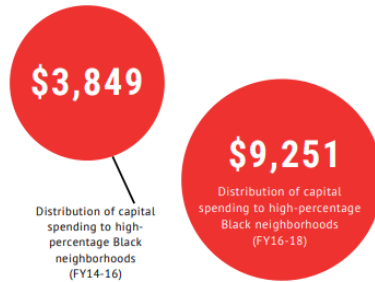
<sup>9</sup> Howard County Spending Affordability Advisory Committee Report, Fiscal Year 2022: <https://www.howardcountymd.gov/Portals/0/FINAL%20SAAC%20FY2022%20Report%20-%20March%201.pdf?ver=2021-03-01-083602-090>

<sup>10</sup> Anne Arundel County Spending Affordability Committee FY 2022 Report: [https://www.aacounty.org/departments/budget-office/forms-and-publications/SAC\\_FY22.pdf](https://www.aacounty.org/departments/budget-office/forms-and-publications/SAC_FY22.pdf)

Figure 1: Baltimore Capital Projects Equity Analysis Excerpt

**FINDINGS BY RACE**

Based on the 3-year average per capita CIP allocations from FY 14-16 and FY 15-17, per capita spending allocated to neighborhoods with the highest percentage of Black/AA residents (>92%) was only half of that allocated to areas with the lowest percentage Black/AA (\$3,849 versus \$7,167 per capita). In FY16-18, funding shifted **towards** the highest percentage Black/AA neighborhoods (\$9,251 versus \$8,770).



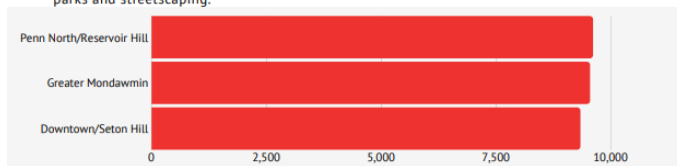
**FINDINGS BY INCOME**

The total per capita CIP allocation in communities with median household income between \$34,000 and \$39,999 consistently had the highest values across all time periods. Per capita spending in these communities was more than double the spending in both lowest and the highest median income.



**FINDINGS BY CSA**

From FY14 to FY20, the total per capita allocations for projects with locations was highest in Penn North/Reservoir Hill, Greater Mondawmin, and Downtown/Seton Hill. Much of the allocation attributed to Penn North/Reservoir Hill and Greater Mondawmin can be attributed to large-scale projects with citywide impact such as the Druid Lake Reservoir. By contrast, Harbor East/Little Italy had the highest per capita allocation of projects with a more neighborhood-based impact, such as small parks and streetscaping.



EQUITY AND CAPITAL IMPROVEMENT PLANS

Baltimore City established an Equity in Planning Committee in 2015 which helps to drive changes in the capital budgeting process and addresses racial inequity in the city. The committee has mapped and analyzed CIP investments in the city, developed recommendations on CIP development, and issued an annual report.<sup>11</sup> An excerpt from the two-page report summary is shown in **Figure 1: Baltimore Capital Projects Equity Analysis Excerpt**<sup>12</sup>

Howard County has started to use a system based on BMC’s Vulnerable Population Index (VPI) to track whether certain capital investments are being made in an equitable manner. The County’s Complete Streets Policy includes tracking the percentage of new roadway projects or roadway repairs in priority communities as identified by the VPI. The number of projects or repairs located in vulnerable census tracts are divided by the total number of projects and repairs completed countywide to produce a

percentage figure.

EXISTING PLANS

Jurisdictions had different approaches for prioritizing projects for CIP inclusion. One method involves utilizing existing plans. Projects may be sourced directly from existing plans or prioritized in the list when they are part of a plan. Baltimore County refers to the Transit Development Plan and Annual Transit Plan for transit and uses its Pedestrian and Bicycle Advisory Committee (PBAC) to prioritize bike and pedestrian projects. The county’s bike and pedestrian planner is the chair of the PBAC, which is made up of appointed representatives from different districts and two at-large members and a secretary.

PROJECT RANKING AND EVALUATION

After projects are identified, jurisdictions use a range of strategies to prioritize investments. Jurisdictions use asset condition to determine how to prioritize maintenance projects. For Baltimore City DOT,

<sup>11</sup> Baltimore City Department of Planning FY 2021 Capital Improvement Program Equity Analysis: <https://planning.baltimorecity.gov/sites/default/files/FY21%20CIP%20Equity%20Analysis%20.pdf>

<sup>12</sup> Baltimore Neighborhood Indicators Alliance (BNIA) Baltimore Capital Projects Equity Analysis Two-Page Overview: <https://planning.baltimorecity.gov/sites/default/files/Baltimore%20Capital%20projects%20Equity%20Analysis%20Two%20Page%20Overview.pdf>



anything that is not resurfacing, sidewalks, or bridges goes through the CIP process. In 2015, the city conducted a windshield survey to assess pavement condition and scored each street. A Bell curve analysis determined how the roads will deteriorate, and the city has identified priority streets based on that analysis. The city is focused on addressing its maintenance backlog because it is significant enough to cover the full six-year period. Harford DPW uses a pavement management system that prioritizes road resurfacing based on conditional ratings, and the same thing with bridges and bridge inspection reports (prioritized based on condition and daily traffic).

In Anne Arundel County, a scoring system is laid out in the TFMP, which lays out performance measures which they used to create a scoring system. The TFMP outlines criteria to assess projects by project type. For example, roadway and corridor projects are prioritized based on two factors, consistency with regional and state plans and requirements (35 percent of score), and achieving priority outcomes in five policy areas (65 percent of score). For assets like transit or bicycle infrastructure, a different scoring rubric is used to evaluate projects.

Other methods for prioritization include departmental input and commissioner review. In Harford County, each department prioritizes their own projects according to their internal process. The Planning Department keeps their own master list and tries to prioritize multimodal projects, but in terms of what ends up in the capital budget, the Budget Office allows departments to come up with their own priorities based on a standalone process within each department. In Howard County, projects are supposed to be vetted through the Administration before they are further evaluated for funding. In Carroll County, all proposed projects are collected in a recommended book that goes to Commissioners for review.

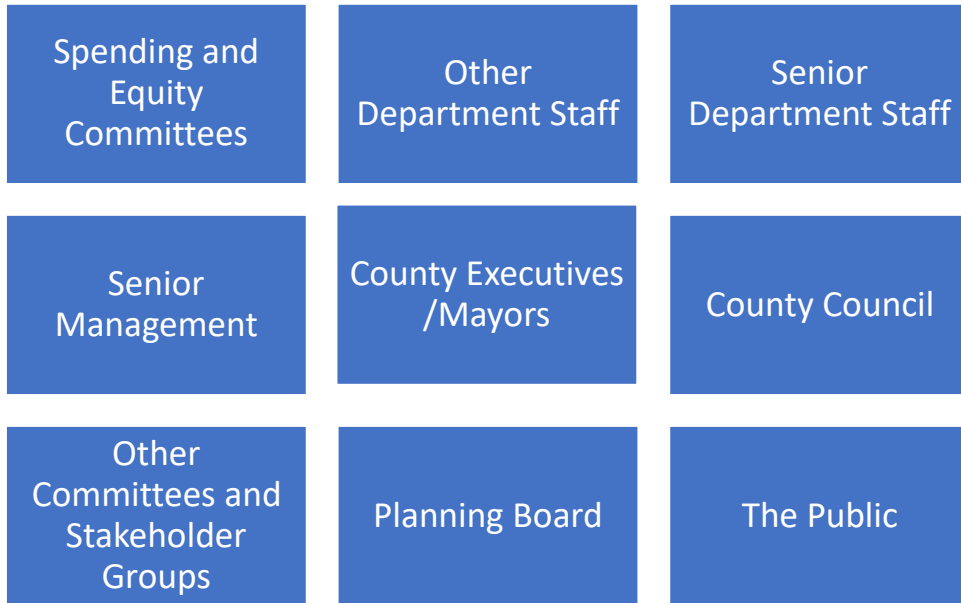
Overall, there appears to be limited prioritization for projects across different departments or asset classes. Many of the prioritization strategies listed by interviewees (e.g., project scoring, asset management database, condition assessment) do not help prioritize across different asset classes.

In many cases departments do not initiate their capital planning process with a true unconstrained list of needs but instead scope out capital needs based on their understanding of available funds. Needs that cannot be funded in the current fiscal year are placed in the out-years of the CIP.

## ACTORS

Many different actors are involved in the prioritization process and subsequent revisions to determine which projects are ultimately added to a CIP. An overview of involved parties is in **Figure 2: Actors in the Prioritization Process** Not all parties are involved in all processes across jurisdictions.

Figure 2: Actors in the Prioritization Process



In general, proposed projects for capital improvement plans are evaluated by different levels of government and across departments. This may involve review from staff in other departments, as well as review by all senior staff across all departments, up to senior staff at the County level. County Executives/Commissioners and County Council may express preferences for specific projects or initiatives and ultimately decide which projects make the final list. Carroll County actively approaches Commissioners a few times a year to discuss projects that are, or are not already, documented as capital needs. In addition, other committees and stakeholders may also weigh in (such as the Transportation Commission in Anne Arundel County or the Baltimore County PBAC). Project suggestions may have already been provided by the public, but all jurisdictions provide budget documents online for public viewing and hold numerous engagement meetings to introduce the projects and solicit feedback. In the City of Annapolis, the CIP goes to the Planning Commission as well for public hearing. The Planning Commission is the first opportunity for public comment on the CIP which then goes back to City Council for an official public hearing.

IMPACT OF APPLICABLE LAWS, REGULATIONS, AND PLANS

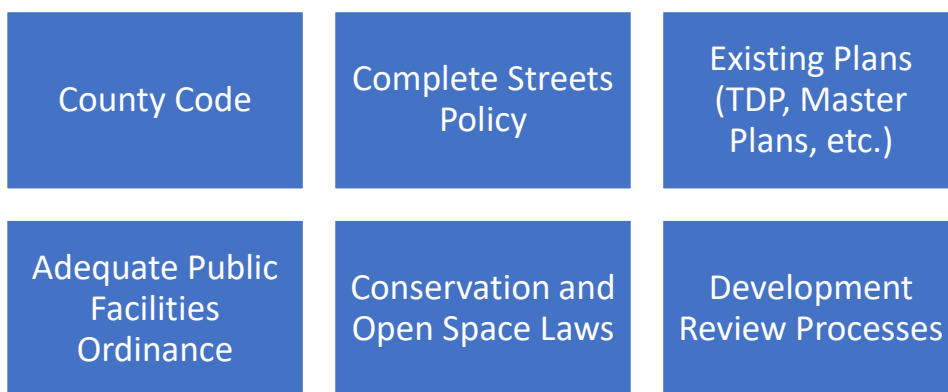
Laws, regulations, and other plans and policies impact the development of the capital improvement program. An overview of some of the guiding legal and policy documents are found in **Figure 3: Laws, Regulations, and Plans**.

Jurisdictions are required to follow certain laws and regulations, which impact sourcing, prioritizing, and/or funding proposed projects. These include applicable county codes, adequate public facilities ordinances, and/or road codes. Anne Arundel’s county code stipulates that the capital program has to be consistent with the general development plan; e.g., consistent with this plan and subplans (such as water and sewer) as well. Its budget office has also developed a new form and policy guidance for climate resiliency. Carroll County mentioned conservation and open space laws that include requirements for stormwater management and environmental regulations. Counties that provide transit

services may also need to follow Title VI requirements, and the Manual on Uniform Traffic Control Devices (MUTCD) governs traffic engineering.

Jurisdictions also rely on existing plans during the process of developing the capital improvement program. Baltimore County’s capital improvement plan utilizes its Annual Transit Plan (ATP) and the Consolidated Transportation Program (in an annual funding letter to the MDOT Secretary) to identify projects and ask for funding. Jurisdictions also mentioned bicycle and pedestrian plans as sources of projects and priorities. Once Baltimore County’s bike and pedestrian plan is updated, they will source potential projects from there as well. Aside from the MDOT priority letter, Harford County Planning also uses the Transit Development Plan (every five years) to develop the capital improvement project list. Howard County mentioned that their Complete Streets policy, Adequate Public Facilities Ordinance (APFO), and development review processes may also impact capital improvement planning.

Figure 3: Laws, Regulations, and Plans



### FUNDING AND PROGRAMMING

#### TYPES OF FUNDING

A number of different funding sources are available to jurisdictions in the region to fund projects included in their CIPs. Funding sources fall into three broad categories:

- **Revenue Funds**, which refers to funds available through the jurisdiction’s revenue collection. Revenue funds include general fund revenues from numerous sources such as property and sales taxes, MDOT Highway User Revenues, and utility funds. This source is sometimes called paygo/PAYGO.
- **Debt Funds**, which are generally bonds or loans borrowed against future revenue streams, such as general obligation (GO) bonds, which allow jurisdictions to borrow money for specific purposes and are approved by voters every two years and county transportation revenue bonds, which are issued by MDOT to be paid with future general fund Highway User Revenue.
- **Other Funds**, such as state and federal grants, private funds, and Local Impact Aid. Example funds include the federal Community Development Block Grant, federal transportation enhancement grants, local developer contribution fees, and the state open space program.

#### IDENTIFYING FUNDS

Identifying funds for projects is an iterative process. In general, the process begins with a call for projects, in which departments within a jurisdiction generate a list of capital projects. Projects are then

prioritized based on specified criteria, usually by a jurisdiction's budget or finance department. Once prioritized funds can be programmed; different funding sources may have different requirements which helps inform which projects are funded by which source. Recommended programming is reviewed by jurisdictional leadership and often opened up to public comment before being approved by the local legislature. In most jurisdictions, departments were responsible for acquiring external grant funding for capital projects, with revenue or debt funding in turn being allocated to match these grants.

Some jurisdictions use financial management software (e.g. Annapolis uses Munis) to help keep track of available funds, which can be helpful in identifying specific funds for each capital project prioritized in a jurisdiction's capital program. Carroll County uses a financial management system that all employees can access that tracks where projects are in terms of budgets. Harford and Anne Arundel Counties also use project management software that helps track budgets and funding availability.

### UNFUNDED NEEDS

In most years, jurisdictions have more capital needs than there is funding available. Jurisdictions in the region do not have a standard methodology for addressing unmet funding needs, however, most jurisdictions keep track of unfunded needs in some way, either formally or informally. In the City of Baltimore, for example, departments are told by the Department of Planning each year their expected capital budget, but departments are encouraged to submit all project requests to the Department of Planning so the City can get good sense of unmet needs. The City keeps a record of unfunded projects and in the CIP development process reviews previously unfunded projects as part of the annual capital planning process.

In Baltimore County, projects that go unfunded are added to a record for future reference and reprioritization since some may win a grant from the state, which in turn allows these projects to be prioritized. Capital budget requests in Anne Arundel and Carroll Counties are unconstrained, but during the prioritization process, the project lists are refined to only projects included with funding. Harford County informally maintains a list of unfunded capital needs, including a backlog of road/bridge maintenance projects.

### FORECASTING FUTURE REVENUE SOURCES

Forecasting revenue sources is important for jurisdictions to have a clear picture for how much money will be available to fund capital projects for the full planning horizon of the CIP. Jurisdictions in the region use a variety of funding sources; however, all jurisdictions rely heavily on their finance/budget departments for revenue forecasts. As part of its budgeting process in Howard County, the County Budget Office develops five-year general fund growth estimates. Similarly, in the City of Baltimore, every five years the Department of Finance develops a 10-year financial plan that sets debt levels, PAYGO, and grant funds. In Queen Anne's County, their aforementioned Spending Affordability Committee, prepares the budget projections used to determine paygo and bond revenue.

Beyond jurisdiction level finance departments, some jurisdictions rely on the state for revenue forecasts for certain funding sources. In Carroll County, highway user revenues come from the state, so each year, the state shares information on the funds the County should expect that year as well as anticipated funds for the upcoming year. In Harford County, Maryland's Department of Natural Resources provides the Parks and Recreation department forecasts for Program Open Space funds. In all counties, the State

Transportation Improvement Program (STIP) is a key document for predicting what and when capital projects receive funds through MDOT.

#### THE INFLUENCE OF GRANTS AND MATCHING FUNDS

Grants and matching funds can be a valuable source of revenue for funding capital programs, and in some jurisdictions grant funded projects are often prioritized over other projects. Jurisdictions have different methods for managing grants and match funds. In Baltimore County, for, example, each department is responsible for their own grant applications, but the County also has a grants manager who helps all departments with grant applications, including preparing commitment letters for local matches and letters of support from members of Congress or other elected officials. The grants manager also has expertise with grants.gov, taking pressure off county staff members trying to navigate the system.

While a useful funding source, grants can also be a challenge. Anne Arundel County noted that using grants is not always beneficial. Many grants require projects to be fully funded, so there is not always incentive to pursue the grant, and once a grant is obtained, grant requirements can lead to project delays. Similarly, Annapolis has struggled with projects that need a match (such as bicycle projects). The current administration has made matching a priority; however, the City does not have clear guidelines in place for managing match money. Another challenge in Annapolis is knowing which state grants the City will receive for match funds when the CIP is being developed. Many grants run off-cycle from Annapolis' budgeting process, and often means the City may need to find a source for any required matching funds after their budget is submitted when grants are awarded.

## CONCLUSION

### SIMILARITIES AND DIFFERENCES IN CIP PROCESSES

Overall, there was no standard practice for how jurisdictions developed their CIPs. Generally, larger jurisdictions such as Baltimore City utilized a more “bottom-up” approach, delegating responsibility for identifying and prioritizing capital needs to individual departments. More centralized development of CIPs is possible in smaller jurisdictions that manage smaller capital budgets.

Another similarity shared by jurisdictions was the typical timeline for a CIP (5 to 6 years) and schedule used to develop the annual capital budget. **All jurisdictions included opportunities for public input and consultation in their budgeting process.**

The overall process utilized by jurisdictions diverged widely in terms of how capital projects were identified, screened and prioritized. The development of the initial list of capital projects is supported by a variety of sources, from individual project requests from the public to asset databases and existing plans. Some jurisdictions rely on departmental leadership to guide the prioritization and development of a constrained capital plan. Other jurisdictions utilize a planning advisory board (PAB) to help guide the prioritization of investments. In all jurisdictions, elected leaders are engaged throughout the process and they have a say in ultimate direction and shape of the CIP.

### WEAKNESSES OF EXISTING CIP PROCESSES

The interviews identified a few weaknesses in the CIP process. Many jurisdictions did not have a process in place to evaluate or prioritize capital projects across departments. While local spending priorities

helped determine how funding was allocated by department, the lack of a standardized evaluation process meant most jurisdictions had no method to evaluate side by side projects originating in different departments.

Another weakness observed was the lack of a quantitative process in identifying and prioritizing capital needs. Only a few of the jurisdictions mentioned a well-defined system to score different capital projects. While certain asset classes like bridges and roads, may be tracked and rated through an existing asset management system, for many of the jurisdictions, these systems did not extend to all transportation infrastructure assets.

Several jurisdictions lacked a robust, fiscally unconstrained, capital plan. Many interviewees expressed that capital needs often greatly exceed available funding. Without active tracking of unconstrained needs, certain capital needs may go unfunded even if additional funding is made available. In many cases the list of initial capital requests effectively acts as an unconstrained capital plan. As the capital budgeting process often starts with an understanding of historical or target capital budgets, departments may “pre-screen” investments they think are unlikely to get funded even before they make it into the initial list of capital projects. No interviewee mentioned that their jurisdiction publishes a full unconstrained capital budget as part of their CIP; in some cases, unconstrained budgets exist at the department level or in plans.

## RESEARCH QUESTIONS

During the interviews, participants proposed several research questions which the next task of the study can help address and answer, including:

- What are the best practices for tracking implementation, including spend-down of funds?
- How do other jurisdictions handle transparency in the CIP process, including clear insight into how spending decisions were made and how projects evolved over time?
- How do other communities raise matching funds? Many grant programs require a local match but for competitive grants, a jurisdiction may not want to raise those funds ahead of a grant award.
- What types of projects are appropriate for pay-as-you-go (PAYGO) or bond funding?
- How do CIPs incorporate an objective evaluation and prioritization process? How do these processes incorporate harder-to-measure factors such as equity?
- What types of software solutions do other jurisdictions/asset owners use to manage capital assets and plan capital investments?
- How do other jurisdictions integrate bicycle and pedestrian projects into larger infrastructure efforts? For example, the match required for trail projects is greater than those required for many roadway projects. If a trail is built as part of a road, can it be incorporated into the broader project scope?
- How do jurisdictions successfully reduce their capital backlog?
- What are some best practices for tracking unconstrained system preservation needs? Do jurisdictions ever quantify the escalating cost of deferred maintenance?
- How do jurisdictions prioritize needs across departments or asset types?
- What is best practice for jurisdictions: relying on individual departments to handle spending and procurement or centralizing these functions within one department? Does the ideal approach depend on the size of the jurisdiction?



# Task 1 Technical Memorandum: Healthy Communities Planning in the BMC Region

June 21, 2021

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## INTRODUCTION

### PURPOSE OF STUDY

The transportation industry is broadening its planning focus from strictly commuter trips to all trips and from vehicular trips to trips made by all modes. These more inclusive planning practices focus on active transportation and how the built environment can impact health outcomes and improve overall well-being. To ensure that the Baltimore region is holistically considering the impact of infrastructure on physical and mental health, the Baltimore Metropolitan Council (BMC) is seeking to identify innovative initiatives and strategies at the local and regional level that can be incorporated into the overall planning process. This project is an opportunity to provide a roadmap to coordinating land use decisions, community design, and transportation planning in a way that supports active, healthy, and vibrant communities.

The Healthy Communities section of this project seeks to identify best practices for planning healthy communities and areas where improvements can be made to the built environment to allow for active lifestyles, promote connections to jobs and services, and encourage walking and biking on a regular



basis. The focus of this project is specifically on the nexus between the built environment and health, and how the transportation system can support healthier outcomes for all members of the community.

## OVERVIEW OF TECHNICAL MEMORANDUM

This technical memorandum, the first of two relating to healthy communities, focuses on documenting the state-of-practice in planning for and supporting healthy communities through the built environment across the region. To understand the state-of-practice, staff from jurisdictions in the BMC region as well as statewide representatives were approached for discussions about planning for healthy communities in their jurisdictions. The second technical memorandum will be comprised of a literature review to identify best practices in promoting healthy communities through infrastructure planning.

## METHODOLOGY

In the Spring of 2021, the project team conducted structured virtual interviews with planning and health staff from local jurisdictions and the Maryland Department of Transportation (MDOT) to discuss the current state of practice.

The project team crafted an Interview Guide with input from the BMC project management team and the Steering Committee and provided it to staff before the interviews. Interviews with each local jurisdiction were conducted to better understand ways in which *healthy communities* are planned for and prioritized in the BMC region. Each interview had the following objectives:

### OBJECTIVES:

- Learn what community health goals and priorities have been identified by the community
- Learn what healthy and transportation-related initiatives have been implemented
- Identify what is working well and what are the biggest barriers for achieving healthier outcomes for all members of society
- Identify how the community currently incorporates and measures the promotion of health in transportation planning processes and projects
- Learn how the jurisdiction collaborates with and includes a variety of stakeholders in planning processes

After the project team reviewed existing state and local planning and guidance documents, one-hour virtual interviews were conducted with each jurisdiction. Interviews were with a small group of representatives of multiple departments from each jurisdiction. The project's Steering Committee, which was comprised of representatives from the state and region's jurisdictions, were asked to identify appropriate participants for the interviews. Participants included representatives from the following departments:

- |                      |  |
|----------------------|--|
| • Transportation     | • Public Works                             |
| • Planning & Zoning  | • Community Resources and Citizen Services |
| • Public Health      | • Housing                                  |
| • Parks & Recreation |  |

Representatives were given the interview guide in advance of the interview which was used as a guide to ensure consistency in the questions across all interviews and also for tailoring the discussions based on the responses of the interviewees. In total, eight (8) interviews were conducted with 28 jurisdiction staff. The dates of each interview and a list of representatives are shown below:

**City of Annapolis - *April 7, 2021***

- Eric Leshinsky, Office of Planning and Zoning
- Sally Nash, Office of Planning and Zoning
- Erin Lee, Office of Community Resources

**Anne Arundel County - *April 8, 2020***

- Dr. Pamela Brown, Planners for Children and Families
- Tanya Asman, Office of Transportation
- Ramond Robinson, Office of Transportation
- Brian Ulrich, Office of Transportation

**City of Baltimore - *April 13, 2021***

- Graham Young, Office of Transportation - Complete Streets
- Kimberly Knox, Office of Planning and Revitalization
- Jamison Holtz, Office of Rec and Parks

**Carroll County - *April 20, 2021***

- Lynda Eisenberg, Department of Planning
- Jeff Degitz, Department of Rec and Parks
- Celene Steckel, Director of Citizen Services
- Danielle Yates, Bureau Chief of Housing

**Harford County - *April 2, 2021***

- Dr. David Bishai, Health Department
- Steven Walsh, Department of Public Works
- Bari Klein, Healthy Harford
- Joel Gallihue, Planning and Zoning Department

**Howard County - *May 5, 2021***

- Christopher Eatough, Office of Transportation
- Bruce Gartner, Office of Transportation
- Kelly Kesler, Bureau of Population Health

**MDOT and MDOT Maryland Transit Administration (MTA) - *April 6, 2021***

- Dan Janousek, MDOT Capital Programming
- Patrick McMahon, MDOT MTA Office of Planning
- Zachary Chissell, MDOT MTA Office of Planning
- Gladys Hurwitz, MDOT Transportation Planning
- Marty Baker, MDOT Transportation Planning

**MDOT State Highway Administration (SHA) - *March 30, 2021***

- Lisa Sirota, Regional Planner
- Kandese Holford, Statewide Bicycle/Pedestrian Coordinator

This technical memorandum provides a summary of the current practices and processes for planning to support healthy communities in the Baltimore region, including how jurisdictions define “healthy communities”, support active transportation, and conduct inclusive planning processes.

## COMPARISON OF HEALTHY COMMUNITIES PLANNING APPROACHES

This report highlights the primary topic areas by which questions were grouped and shares key takeaways from the interviews.

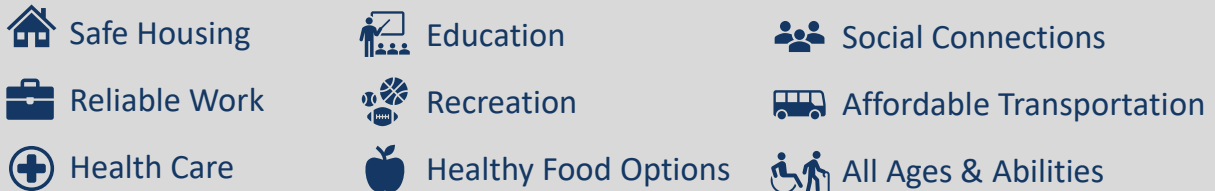
### PRIMARY TOPICS – OVERVIEW AND KEY TAKEAWAYS

#### DEFINITION OF HEALTHY COMMUNITIES

Key themes of jurisdictions’ definitions of healthy communities during the interviews centered around safety, connectivity, and access. Access to resources and opportunities was mentioned in every interview as one of the defining features of a healthy community. The importance of multimodal

connections was further stressed to ensure that *everyone* in the community has the means to access key resources.

### A Healthy Community Provides Access to:



The City of Baltimore added that non-auto modes must be safe, intuitive, equitably distributed, and dependable in a way that they do not just exist theoretically but are actively utilized by community members.

Active transportation modes and a robust multimodal network were a focus points of every jurisdiction. The integral nature of pedestrian and bike infrastructure to support physical activity was stressed as a part of both everyday travel as well as recreation. Harford County stated that the actual health of residents is directly correlated to the walkability of its environment. By changing the social norm of a community to be more physically active, you can decrease the rates of obesity and its related cardiovascular disease and diabetes.

The City of Annapolis referenced how in Richard J Jackson’s book *Designing Healthy Communities*, he illustrates how suburban design in America has contributed to poor health. Health should be at the forefront of planners’ minds. Someone from the City of Baltimore also referenced a quote from a Dutch lecturer that “you can tell the status of a society based on its roads”, alluding to how they are maintained and for which types of users they are designed.

Anne Arundel County highlighted key aspects of healthy communities that are broader than solely for transportation. A healthy community is a place where there are no environmental issues, people have access to every kind of healthcare, no food shortage, where historic racism is not the underpinnings of the community, and there is access to well-paying jobs and community services. There are places in the region where none of those things are true and there is an overwhelming need for transportation to level the playing field for the most vulnerable neighborhoods.

Carroll County stated that housing is healthcare: safe, affordable housing is a key factor for community health. A healthy community has opportunities to connect and contribute to their community.

#### IMPACT OF COVID

During the MDOT and MDOT MTA interview, “COVID-safe” design in transit, such as bus shelters that allow for social distancing, was discussed as something that might become a long-term aspect of planning for healthy communities. Howard County pointed to how the pandemic has raised awareness to discrepancies in communities’ access to essential services.

## GOALS, OBJECTIVES, AND STRATEGIES FOR PROMOTING HEALTHY COMMUNITIES

Jurisdictions have a wide variety of planning and guidance documents that encourage healthy lifestyles. The project team reviewed many of these documents in advance of the interviews. A full list of these documents will be included in the upcoming report on best practices research. Pedestrian and bicycle master plans are documents that can give jurisdictions a framework for encouraging physical activity and healthy lifestyles in their communities. Harford County's Harford Next is a master planning document from 2016 that has a dedicated section on planning for healthy communities. Many jurisdictions stressed that while there are goals targeted at improving infrastructure to support healthy communities in master plans, it is often difficult to implement projects that serve those goals. The path from a goal statement in a plan to a completed project requires coordination between many internal and external entities, allocation of funding, and project-specific planning and design. Often when there is competition for funding, pedestrian and bicycle projects are not prioritized or allocated specific funding streams.

### *PROJECT PRIORITIZATION AND GUIDANCE*

Vision Zero is an initiative throughout Maryland committed to improving traffic safety for all roadway users.<sup>1</sup> Anne Arundel County is in the process of putting together their Vision Zero Action Plan. Complete Streets initiatives were also frequently mentioned during the interviews as design measures to improve health.<sup>2</sup> The City of Baltimore just completed a Complete Streets Manual that included equity and safety as metrics.

Multimodal considerations are often a part of capital projects, but in many cases, are not the primary focus. Harford County includes pedestrian and bicycle considerations as a part of their development review process for capital projects. Additionally, when the county's department of public works resurfaces roadways, they bring sidewalks up to current ADA compliance. MDOT SHA includes a Purpose and Needs section at the beginning of its capital projects and specifically reviews accessibility.

One of the gaps identified in the process of going from goals to projects is the establishment of a project prioritization process for funding that allocates resources based on alignment with identified priorities. In many cases, there are longstanding pots of money that have certain allocations, often centered around roadway capital improvements. These projects are prioritized to reduce vehicular congestion, but they are not always correlated with improvements in active transportation, and funding for active transportation lacks its own mechanisms for implementation. Howard County noted a prioritization program they are developing to prioritize projects based on their alignment with Complete Streets principles and quantitatively measure equity.

### *GRANT FUNDING*

Grants are a fundamental way that many jurisdictions have been able to implement projects to promote healthy communities. MDOT SHA and MDOT MTA are helping local jurisdictions obtain funding. One grant program MDOT SHA helps locals obtain is the federal **Transportation Alternatives Program (TAP)**.

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<sup>1</sup> <https://zerodeathsmd.gov/about-us/commitment-to-vision-zero/>

<sup>2</sup> <https://www.transportation.gov/mission/health/complete-streets>

The program funds projects that create bicycle and pedestrian facilities, restore historic transportation buildings, convert abandoned railway corridors to pedestrian trails, and mitigate highway runoff.<sup>3</sup>

MDOT MTA leads the **Statewide Transit Integration Grant**<sup>4</sup>, which was modelled after the **Bikeways Network grant program**<sup>5</sup>. Harford County has utilized this state funding to expand their bike network. Howard County has utilized the **MDOT MTA Connect to Ride** grant program in downtown Columbia Transportation Demand Management (TDM) Development Areas. Anne Arundel County also mentioned success in obtaining grants to expand their network of shared use paths.

Caring Carroll, a nonprofit organization that provides services to adults that are homebound, obtained grant funding to implement a program similar to Howard County's Neighbor Ride program. The program is being implemented this year and will help provide transportation through a volunteer ride matching service. The program will generate revenue on a sliding scale fee and provide service outside of the County. Since the private volunteers use their personal vehicles, the accessible options are limited.

While grants were identified as a primary funding source, the difficulty and unreliability of grants was mentioned in several interviews as a barrier. The effort to research, apply, and administer grants consumes valuable staff time. For Anne Arundel County, grant funding running out and not having a longer-term funding commitment was cited as one component of a lack of trust and support from the community. During the City of Baltimore interview, interest in innovative funding structures to support healthy initiatives beyond just grant programs was expressed. Harford and Carroll counties have been successful in winning **Safe Routes to School** federal grants. Safe Routes to School grants, however, are reimbursement grants requiring the counties to first lay out the funds, and submit paperwork for reimbursement, not always a seamless process. In both counties, the process to obtain the funding has taken so long that the project cost has escalated beyond the initial estimate.

#### *COMMUNITY HEALTH ASSESSMENTS*

Some jurisdictions mentioned the importance of Community Health Needs Assessments<sup>6</sup> (CHNA) which give broad, comprehensive documentation of community health needs. Carroll County works with senior centers and the health department to create programming that targets areas of need. The recent focus has been on mental health, diabetes, obesity, heart health and cancer.

Howard County utilizes a health assessment survey to understand the frequency of physical activity among community members. The survey has a strong emphasis on prevention of disease.

The City of Annapolis partnered with the University of Maryland (UMD) through the UMD Partnership for Action Learning in Sustainability Program (PALS)<sup>7</sup> to review the city's comprehensive plan through the lens of public health. The program helped the City of Annapolis leverage resources and gather

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<sup>3</sup> <https://www.roads.maryland.gov/mdotsha/pages/Index.aspx?PagelD=144>

<sup>4</sup> <https://www.mta.maryland.gov/grants>

<sup>5</sup> <https://mdot.maryland.gov/tso/pages/Index.aspx?PagelD=28>

<sup>6</sup> A community health improvement plan (or CHIP) is a long-term, systematic effort to address public health problems based on the results of community health assessment activities and the community health improvement process. A plan is typically updated every three to five years.

<https://www.cdc.gov/publichealthgateway/cha/plan.html#one>

<sup>7</sup> <https://www.arch.umd.edu/news-events/umd-pals-program-partner-anne-arundel-county-city-annapolis>

information necessary to be successful when planning various initiatives including transportation, economic development, and historic preservation. The City also conducts a Community Health Assessment through the United States Centers for Disease Control and Prevention (CDC).

Anne Arundel County has a blended funding model for its CHNA. Additionally, the County produces a Poverty Amidst Plenty Report and prioritizes community collaborations in these efforts and beyond.



**Promoting Healthy Communities** takes collaborative, interdisciplinary effort. Utilizing Community Health Assessments in transportation planning and programming is one way integrate transportation and health.

#### LAND USE CONSIDERATIONS

As transportation planning is directly and inevitably linked to land use, MDOT SHA shared their Context-Driven<sup>8</sup> planning effort that was finalized last year. The program seeks to balance two priorities: access and mobility. In the densest urban areas with the highest concentration of trip origins and destinations, accessibility is the primary consideration. As density and local activity decrease, the priority shifts towards mobility as the primary transportation objective. These varying priorities exist within a realm that values safety as a primary design consideration throughout the transportation system.

The City of Annapolis has prioritized its urban tree canopy as an opportunity to remove heat islands.

One common theme was the varying needs of serving different types of land uses with pedestrian and bicycle infrastructure. For example, a more densely populated area is much more conducive to having sidewalks and a walkable community that encourage physical activity and allow access to healthy food, healthcare, and other critical needs. In more rural communities, however, a connected sidewalk network or cycling infrastructure may not be feasible, thus limiting access to key necessities. Those who cannot or choose not to drive must rely on publicly subsidized services such as bussing, on-demand transit service, or volunteer drivers.

#### ENCOURAGING ACTIVE TRANSPORTATION, SUSTAINABILITY & HEALTHIER LIFESTYLES

When rating the existing conditions of communities as it relates to healthy lifestyles, many of the interview participants expressed a desire for improved access to bicycle and pedestrian facilities for people of all ages and abilities.

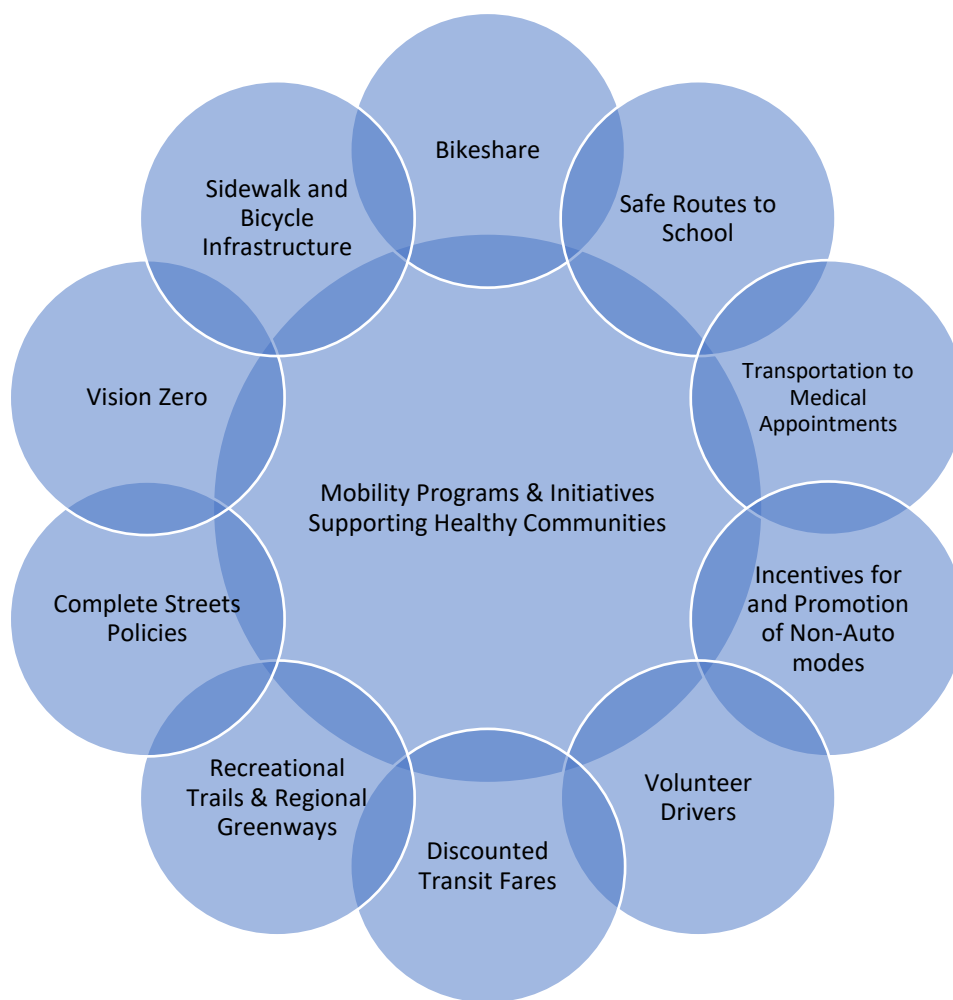
The City of Baltimore mentioned the prominent differences between urban, suburban, and rural areas. Urban spaces tend to have more multimodal connectivity than rural areas but sometimes lack access to recreational facilities. Harford County discussed the prioritization challenge of these differences. Is it better to focus on areas that already have some multimodal connections and infrastructure (like developed areas in downtown Bel Air), and make them even better, or do we try to bring the community at-large up to a certain standard? Multiple jurisdictions noted the presence of parks and

<sup>8</sup> <https://www.roads.maryland.gov/contextdriven>

trails for recreation in their jurisdiction but also commented that there was limited access to these locations for those who cannot drive.

The push for active transportation and healthier lifestyles comes from both internal and external forces. Internally, when county executives, local leaders, or other high-ranking officials express interest in healthy communities and promoting active transportation, more gets accomplished. Externally, some jurisdictions noted the key role many bike advocacy and environmental groups play in making bike lanes a priority and expanding the trail network priorities. For example, in Harford County, the Lower Susquehanna Heritage Greenway maintains and improves trail conditions on the eastern end of the county.

The jurisdictions noted a variety of types of mobility programs that their respective jurisdictions offered that support healthy communities. These ranged from infrastructure investments to targeted outreach aimed at specific populations. The main types of programs are highlighted in the graphic below.



### *EQUITY*

Equity was an area of key importance in discussions around multimodal connectivity and access. Most jurisdictions cited there being a fundamental tie between planning for healthy communities and equitable planning. Historically, many of the communities that have been underserved by public investment, are the same ones that lack safe and connected pedestrian networks, and have less desirable rates of life expectancy, poverty, and disease.

To specifically focus on and address some of these concerns, many jurisdictions have taken actionable steps. For example, Howard County has hired a Chief Equity Manager to ensure there is alignment in projects. Baltimore City is completing a Transit Equity Gap Study to compare different communities commute time to work.

When affordable transportation is not available, the City of Baltimore described an informal rideshare system called hacking that takes place instead, in which a person makes a signal on the side of the road to indicate they need a ride somewhere. Although illegal and unregulated, this system provides a cheaper alternative to formal transit and fills a gap for those not served by the formal transportation system.

Access to healthy food options is an important aspect of equitable planning. The City of Baltimore's Department of Planning works with the Health Department for food distribution. There are also local community members called *Arrabbers* who distribute fresh vegetables to neighborhoods in the city on horse wagons. The City made a distinction between the urban farming community (which produces food for sale) and community gardens (food for free to the community). Urban farming communities tend to be in the "L section" of the city – which is still largely segregated.

Equity is beginning to be used as a metric in planning documents and programs. At MDOT SHA, equity is a specific factor considered in the Pedestrian Safety Action Plan. MDOT and MDOT MTA mentioned how BMC has been a positive push towards environmental justice and equity. Maryland Department of Natural Resources (DNR) has a park equity mapping tool for access to parks.<sup>9</sup> Howard County has incorporated equity into their project evaluation process under their complete streets program.

### *BARRIERS TO USE*

Physical barriers to the use of non-vehicular transportation included right-of-way limitations on roadway projects to build new facilities, existing speed limits, lack of lighting or other ped/bike infrastructure that makes users feel unsafe, and a lack of awareness of existing services. The lack of pedestrian connections to transit is a barrier to making transit service more appealing and accessible. Especially in rural areas, transit service may be very infrequent, or in some cases non-existent.

There are also the decision factors of time and cost which can become barriers. Often, multimodal alternatives are slower than driving and can appear more costly to the user. Many jurisdictions face the challenge of obtaining adequate funding to do more than simply maintain existing multimodal infrastructure. There is often competition between transit, bike, and pedestrian project dollars. Anne

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<sup>9</sup> <https://dnr.maryland.gov/pages/parkequity.aspx>



Arundel County has had success in reserving small funding pools for dedicated purposes and were able created a new bus service line.

Accessibility to parks, especially using non-vehicular modes, was mentioned in a few interviews, including those with Harford County, Carroll County, MTA, and the City of Baltimore. Carroll County has made it a priority to incorporate convenient pedestrian entrances in the design of new parks and has completed several projects adding new pedestrian-only entrances to community parks adjacent to residential neighborhoods that did not previously have access. Given the area's rural development pattern, providing facilities that are within walking distance for everyone is unrealistic and presents a challenge to equitably locate facilities and amenities. Utilizing on-demand public transportation to parks in Carroll County is a struggle, especially for return trips, because the wait times can be prohibitive at 60-90 minutes.

#### MEASURES OF COMMUNITY HEALTH RELATED TO THE BUILT ENVIRONMENT

Representatives were asked about the methods implemented for measuring the impact of existing health-focused programs and if community health and quality of life measures are considered during transportation planning efforts. As previously mentioned, there are specific health metrics that are monitored to measure the community's overall health. These include life expectancy and lower rates of infant mortality, diabetes, obesity, cardiovascular disease, suicide, and depression.

Similar to the previous section, existing problems and barriers were discussed as it related to effectively measuring impacts. The BMC provides a variety of resources that local jurisdictions have utilized for transportation planning. Vulnerable Population Index (VPI) was included in Howard County's Complete Streets development.<sup>10</sup> Howard County also has an online platform called HoCoDASH<sup>11</sup> which showcases performance objectives that are tied to the County's policy priorities. Some of the priorities include "clean and sustainable environment, thriving and healthy residents, and reliable and accessible infrastructure". Some relevant specific metrics include: Number of bus stops with sidewalk access and tracking build out of the bike and pedestrian sidewalk network.

Harford County mentioned working with BMC to use mobility data through AIRSAGE<sup>12</sup>. The city of Annapolis is the pilot city for the BMC Pedestrian Infrastructure Assessment tool which highlights pedestrian needs throughout the city; there is a goal to have all residents be ¼ mile within a mini park and then have distributed access to playfields and larger parks. The other pilot program using the BMC tool is in Carroll County which has a more suburban and rural focus.

Harford County's approach for their bike/ped plan was to focus on bike/ped level of traffic stress, which measures the comfort of cycling on a particular roadway segment, and model connectivity between pedestrian activity generators. The state of Maryland is doing similar work to help prioritize which projects to implement. The biking community in Harford County logs their routes in an app to help with data. The same could be applied to walking. The hospital has hired researchers to focus on COVID-19 vaccinations; however, once the crisis ends, they could focus on more chronic health concerns of the

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<sup>10</sup> <https://www.baltometro.org/transportation/data-maps/vulnerable-populations-index>

<sup>11</sup> <https://dash.howardcountymd.gov/>

<sup>12</sup> <https://www.airsage.com/>

community. The County Health Office mentioned that existing stats show that the adult obesity rate is 32%, signaling ample opportunity to help residents adopt healthier lifestyle choices.

In general, many jurisdictions stated that it can be difficult to obtain reliable multimodal data. An additional barrier is the frequency at which master plans are updated. Though technology is constantly changing, and new data sources and methods are frequent, plans only change every 10 years and so projects often are not utilizing the state-of-the-practice analysis. Carroll County expressed an additional challenge that national standards are not always applicable to rural areas.



**One barrier to measuring community health as it relates to the built environment is the difficulty jurisdictions face obtaining reliable multimodal data.**

### COORDINATED & INCLUSIVE PLANNING PROCESS

The final segment of the interview focused on community engagement and details into the jurisdiction's planning process. Regarding public engagement, representatives shared how their jurisdiction engages with the community to get input regarding mobility and health needs. On the planning process level, the kind of dedicated staffing available for active transportation and the capacity of that staff to achieve goals was discussed as well as how collaboration occurs across departments.

#### *PUBLIC ENGAGEMENT*

Community engagement was a key component of the planning process for each jurisdiction. The City of Baltimore stressed the importance of *asking* a community what they want before prescribing a development or improvements. The saying, “the squeaky wheel gets the grease” was brought up in multiple interviews to describe the phenomenon of certain areas having more vocal advocates than others, which can lead to lopsided planning efforts. There is concern that the people with the most need are not speaking up because they do not have the capacity to advocate or engage. During the COVID-19 pandemic, many jurisdictions have transferred to online/virtual engagement, which may not be accessible to some of the most vulnerable residents, including communities that lack internet access.

Howard County is trying to be more deliberate in moving away from the squeaky wheel mentality by asking how the County is engaging populations with known risks. For example, there has been success with vaccination pop-up sites that are set up in priority neighborhoods rather than requiring people to travel to a mass vaccination site.

Advisory committees and groups are a common way for jurisdictions to learn priorities and interests or challenges facing specific user groups. The City of Baltimore has a Bicycle Advisory Commission that was established by the Mayor and is comprised of a variety of stakeholders from the public and city departments. Howard County has a Bicycle Advisory Group that is well established and meets five times a year. Harford County has a bike and pedestrian committee that is led by the school system. Anne Arundel and Baltimore counties also have similar committees.

### *JURISDICTION STAFFING*

Regarding staffing, while it is common for jurisdictions to have designated staff to focus on bike and ped planning, there is often a constraint on the amount that can be accomplished. Many expressed a desire for increased capacity.

Carroll County, which contains the most municipalities in the region, works closely with its member jurisdictions on the provision of services and opportunities not available in the balance of the County. The limited staffing at the municipality-level can be challenging to take on new initiatives and expand beyond providing basic services given the limited bandwidth. Additionally, as an agricultural county with a relatively small full-time staff, there is limited capacity compared with larger counties that have hundreds of staff.

Harford County has one staff member dedicated to transit and one bike/ped coordinator. Howard County has two full-time staff focused on bike/ped in the Office of Transportation, and others within the Department of Public Works that work on active transportation as well. MDOT SHA has a bike/ped leader, transportation alternative program manager and liaison, and staff in the recreational trails program.

Often staffing constraints were brought up as a challenge to do more to promote pedestrian and bicycle planning and implementation. Often, especially in smaller jurisdictions, there is not dedicated staff for active transportation initiatives and that aspect of someone's job responsibilities can be dominated by other duties.

### *COLLABORATION*

There are examples of successful collaboration across jurisdictional departments, but there is room for improvement. Most jurisdictions noted positive working relationship between public works, transportation and recreation and parks departments. Examples of collaboration between planning and public works departments include working together to update the Complete Streets design manual, on the CIP process, and restriping bike lanes. In some instances, there was a desire for engineers to have more interaction and collaboration with planners to make sure goals and priorities in planning documents make it to the project level.

In the City of Baltimore, there is an initiative to include DOT in meetings with each investment impact area. When there is a meeting, all the planners within the respective departments are notified. Carroll County has a Transportation Advisory Council that consists of people from multiple agencies and departments and meets on a quarterly basis. The TAC identifies transportation needs across the County and focuses not only on government-sponsored transit, but any type of transportation available. While the limited staffing at the County and jurisdictional level was noted as a constraint, representatives from Carroll County also mentioned that staff across departments tend to work well together, partly out of necessity, since there is only so much you can accomplish within your team.

A barrier to cross-departmental collaboration that was identified was the competition for funding, which can result in project managers working in silos. Additionally, different departments have different priorities and performance metrics. For example, traffic engineers may be focused on level of service and the Manual on Uniform Traffic Control Devices, while planners are focused on mode split.

Collaboration with other levels of government can be more difficult because of the increased distance and decreased interaction time. To combat this at the state level, there is a Bike and Pedestrian Committee that has more than 20 members from local jurisdictions and state agencies, which provides an opportunity for greater interaction and relationship building between levels of government. MDOT SHA employees also sit on advisory councils and commissions to help be more connected at the community-level and learn about primary barriers to the use of non-vehicular transportation modes.

Grants are another primary way that local jurisdictions interact with higher levels of government in order to utilize state and federal funding. As mentioned previously, MDOT MTA provides support to jurisdictions to help access grants.

## CONCLUSION

While there are many ways to define healthy communities, all of the interview discussions emphasized a multi-faceted definition that centered on the ability for people of all ages and abilities to have equitable and safe access to services and activities that promote a healthy, full life. These include employment, education, healthcare, recreation, social activities, and healthy food options. Healthier outcomes were identified as more physically active lifestyles and lower rates of depression, mortality, homicide, suicide, and disease. Some of the other common themes heard in the interviews included mentions of funding challenges, desire for increased staffing capacity, and the role of specific user groups for learning community priorities and concerns.

Key differences heard during the interviews were especially related to the discrepancy between approaches, needs, and issues that arise in urban, suburban, and rural communities. The opportunity to use active transportation and traditional public transit for commuting, accessing services or recreational facilities is more limited in less densely developed communities. Additionally, the staffing resources of large jurisdictions have the capacity to take on more (although it should be noted even the larger communities desire more capacity) versus smaller jurisdictions with a few or less people on staff. It is clear that there is no one-size-fits-all strategy for promoting and achieving healthier outcomes in a community, even when there is agreement on what those desired outcomes ultimately are.

## KEY TAKEAWAYS

- Promoting healthy communities is more than expanding bike and pedestrian infrastructure. Designing an efficient transportation system with equitable access to a broad range of services that promote healthier outcomes, ranging from medical and mental health to recreational and employment, is key.
- How densely developed a community is directly influences how healthier outcomes may be promoted; strategies that are appropriate for urban and suburban communities often do not apply in more rural settings.
- Availability of funding for new multimodal projects is often a barrier. While grants are an essential funding source for health-promoting projects, several jurisdictions mentioned that they are an unpredictable source of revenue and the process is often arduous.
- Measuring changes in community health and incorporating it into the planning process is challenging, especially the collection of comprehensive data in real time and the timeframe in which planning documents are periodically updated.

- There are many governmental departments whose work is directly related to improving community health, but do not often have the opportunity to meaningfully inform each other's work. There is value in transportation planners engaging with healthcare professionals to ensure their perspective on specific health outcomes (such as lower rates of mortality, obesity, and cardiovascular disease) is incorporated in the project planning and prioritization process.

 <b>Strengths</b>	<b>Improvement Opportunities</b>
<ul style="list-style-type: none"> <li>• Advisory Committees highlight specific user group needs and priorities</li> <li>• The growing push for healthy communities at the executive level accelerates implementation</li> <li>• Incorporation in major guiding planning documents</li> <li>• Collaborating with health and parks/rec departments</li> </ul>	<ul style="list-style-type: none"> <li>• The lack of dedicated funding sources or prioritization for multimodal projects</li> <li>• Challenges of grant proposals and reporting</li> <li>• Limited multimodal data to measure baselines and benefits</li> <li>• Projects or programs are often centered in areas of greater wealth or politically active communities</li> </ul>

## RESEARCH QUESTIONS

During the interviews, jurisdictions were interested in learning more about:

- Multimodal data sources other communities are utilizing
- Best practices for public engagement, especially when there are tensions between active transportation infrastructure and gentrification, NIMBY-ism, or other concerns
- Other communities' walk/bike-ability with similar demographics to BMC area

Regarding staffing, the City of Annapolis was curious about communities incorporating public health into city planning roles. Howard County was interested in learning more about how other communities are breaking down silos within their jurisdiction to find balance and common ground between different jurisdictional priorities.

Based on the areas of interest and concern identified during the interviews, the project team will explore the following questions as part of the best practices and peer case study research.

- What are best practices for evaluating planning efforts and documents through the lens of public health?
- Do communities with higher levels of transit ridership and active transportation have healthier outcomes than car-centric communities?

- What are the most effective methods for collecting quantitative data to measure community health and progress towards healthier lifestyles and incorporating the findings into planning and project prioritization?
- What are some examples of innovative funding strategies that do not rely on grant funding to supplement limited budgets for creative, new projects that promote healthy lifestyles?
- What are some examples of effective solutions to improve access to services that promote healthier outcomes in rural areas with low density?
- What are best practices for collaboration across governmental departments, especially in a competitive funding environment that encourages working in silos?
- For jurisdictions with small staffs, what are best practices for prioritizing initiatives that promote better health outcomes given the limited staffing resources and competing priorities?
- How to ensure equitable distribution of projects that promote healthier lifestyles given that often the “squeaky wheel gets the grease”? In areas where there have been recent improvements, is it better to continue targeting investment there to build momentum, or to other areas that may be lagging?
- How do other jurisdictions address the challenge of new bike trails and improved walkability potentially resulting in gentrification? Are there best practices in addressing concerns of the community?