multipriculator.com

ARM CITY

JOHNS

ROUTE



Baltimore Metropolitan Council

Annual Report 2016



A Message from the 2016 Chairman

Our world becomes more connected with each passing day. Our lives are interwoven around an ever-evolving regional economy and infrastructure network, whether home is in Bel Air, Annapolis, Ellicott City, Westminster, Towson or Baltimore. To keep up, the Baltimore region works together to improve the quality of life and address challenges for our residents and businesses alike. The Baltimore Metropolitan Council (BMC) is at the helm of many of these planning efforts, and helps to get our region to work through enhanced job training, more reliable and safe transportation options, and access to housing.

As chairman of BMC's Board of Directors, it is my pleasure to share a few of the many accomplishments that continue to strengthen our region. BMC worked especially hard throughout the last year and a half, through the leadership of Executive Director Michael B. Kelly, to complete the Opportunity Collaborative's Baltimore Regional Plan for Sustainable Development (RPSD); establish new housing opportunities for all of our region's families; save millions in taxpayer dollars through cooperative purchasing; and continue to meet federal guidelines for our region's longrange transportation plan.

The RPSD, which the Collaborative released in June 2015, was the culmination of a \$3.5 million, threeyear planning grant from the U.S. Department of Housing and Urban Development (HUD) that brought together more than 25 key stakeholders, including local government, universities, and nonprofits in the Baltimore region. The RPSD represents the first regional effort to leverage resources toward our shared goals to improve housing, workforce development and transportation planning.

The Regional Project-Based Voucher (PBV) program is among the most significant initiatives to grow out of the RPSD. The PBV program, which is modeled from a successful Chicago initiative and supported by HUD, brings together public housing agencies, the **Baltimore Regional Housing Partnership** (BRHP) and the Maryland Department of Housing and Community Development (DHCD) to encourage affordable housing development in high opportunity areas around our region. The program will leverage state tax credits and a pool of local housing vouchers to incentivize the creation of new affordable housing units by private developers.

Like the private sector, local government has overhead costs that affect its bottom line. BMC's Baltimore Regional Cooperative Purchasing Committee (BRCPC) saved more than \$117 million in energy costs since its inception six years ago by coordinating the collective buying power of the region's jurisdictions and public school districts. This includes \$22.1 million in energy savings in Fiscal Year (FY) 2015 alone. The BRCPC continues to explore opportunities to enhance these cooperative purchasing opportunities to save taxpayer dollars for its members.

Finally, through the Baltimore Regional Transportation Board (BRTB), BMC completed *Maximize2040: A Performance-Based Transportation Plan*, the region's long-range transportation roadmap. The plan includes \$54.4 billion for area transportation projects and



programs, approximately \$42 billion of which will support operations and maintenance of roads and transit during the next 25 years. These projects promote transportation safety, improve accessibility and mobility, encourage investments in our communities and help to maintain and improve air and water quality. The intensive planning embodied by *Maximize 2040* will help to deliver a better connected future for our region's residents and businesses.

I am proud to be a part of BMC's efforts to support collaborative and innovative initiatives that address shared challenges and plan for our increasingly connected future. Together, we will continue to ensure a bright future for all those that choose to call our region home.

Sincerely,

Barry Glassman Harford County Executive Chair, Baltimore Metropolitan Council



The Baltimore Metropolitan Council

BMC works collaboratively with the chief elected officials in the region to create initiatives to improve the quality of life and economic vitality. BMC, as the Baltimore region's council of governments (COG), hosts the BRTB, which is the federal metropolitan planning organization (MPO), and supports local government by coordinating efforts in a range of policy areas including emergency preparedness, housing, cooperative purchasing, environmental planning and workforce development.

BMC's Board of Directors includes the executives of Anne Arundel, Baltimore, Harford and Howard counties, the mayor of the City of Baltimore, a member of the Carroll County Board of Commissioners, a member of the Maryland State Senate, a member of the Maryland House of Delegates, and a gubernatorial appointee from the private sector.

BMC has a rich history as a resource for the Baltimore region. In 1965, the Maryland Department of Planning created the Baltimore Regional Planning Council (RPC). Two years later, the RPC emerged as a separate state agency. Then in 1989, the name of the organization changed to Baltimore Regional Council of Governments (BRCOG) to reflect the RPC's resolve to serve as the voice of local government. In 1992, the Maryland General Assembly dissolved BRCOG and created BMC as a private nonprofit organization of the region's elected executives, to meet the need for a smaller, more efficient organization. Finally, in 2014, the Maryland General Assembly revised BMC's charter to include additional regional coordination in housing and workforce development.

BMC is an invaluable link between federal funds and regulations, state and regional decision-makers, transportation planning entities, project and initiative stakeholders and the public. The forum and resources BMC provides allows for thoughtful and progressive regional planning efforts of short- and long-term projects.









Board of Directors

Barry Glassman, 2016 Chairman, Harford County Executive Allan H. Kittleman, Vice-Chair, Howard County Executive Steven R. Schuh, Anne Arundel County Executive Stephanie Rawlings-Blake, Baltimore City Mayor Kevin Kamenetz, Baltimore County Executive Doug Howard, Carroll County Commissioner William C. Ferguson, Maryland State Senator Stephen W. Lafferty, Maryland State Delegate J. Thomas Sadowski, Gubernatorial Appointee







Baltimore Metropolitan Council

Senior Staff

Michael B. Kelly, Executive Director Todd Lang, Director of Transportation Regina Aris, Assistant Director of Transportation Brian R. Shepter, Director of External Relations Laura Van Wert, Communications Officer Tamiko Knight, Office Manager







Regional Transportation Planning

Thoughtful and progressive transportation planning is a necessity in order to: move commuters and goods safely to their desired destinations; increase opportunities for communities and individuals alike; and proactively prepare for the needs of future generations. The BRTB, which serves as the federally designated MPO for transportation in the Baltimore region, facilitates such initiatives.

The BRTB is a 12-member board representing the cities of Annapolis and Baltimore, the counties of Anne Arundel, Baltimore, Carroll, Harford, Howard, and Queen Anne's and the Maryland Department of Transportation (MDOT), the Maryland Department of the Environment (MDE), the Maryland Department of Planning (MDP), and the Maryland Transit Administration (MTA).

The BRTB's areas of work include the creation of a long-range transportation plan, short-range transportation program, air quality, bicycle and pedestrian planning, traffic congestion management, management and operations, freight mobility planning, highway safety, transit planning, commuting options, development monitoring, cooperative forecasting, Geographic Information System (GIS), travel demand modeling, and public involvement.

BMC provides the BRTB with technical and staff support.

Transportation Planning Process

The BRTB produces three federally-mandated transportation planning documents for projects requesting federal funding:

- > Unified Planning Work Program (UPWP)—An annual budget and work program funding the transportation planning process within the region. The UPWP includes all transportation studies, outreach, analysis, modeling and other initiatives to be performed during each fiscal year, as well as costs and sources of funding. The UPWP is developed every two years.
- Transportation Improvement Program (TIP)—A prioritized list of regional transportation projects that includes proposed federal, state and local money

to be used for highway, transit, bicycle, and pedestrian projects during a fouryear period. The TIP is produced annually and updated on an ongoing basis, several times a year.

> Long-Range Transportation Plan (Maximize2040)—A policy and vision document developed through collaboration of regional and state partners, which anticipates and budgets for regional transportation needs during the next 25 years. The Baltimore region's plan is known as Maximize2040. The longrange plan is updated every four years.



UPWP Planning Process





Testing the statewide supply chain to better understand regional freight movement.





Out of 146 projects in the 2016–2019 TIP, 80 are highway preservation.

BRTB works through a 3-C Transportation Planning Process, which is:

- Continuing—Planning must be maintained as an ongoing activity and should address both short-term needs and the long-term vision for the region;
- Cooperative—The process must involve a wide variety of interested parties through a public participation process; and
- Comprehensive—The process must cover all transportation modes and be consistent with regional and local land-use and economic-development plans.



- Establishes the region's broad transportation goals and performance measures, which will guide the region in planning and completing projects.
- > Considers funding levels through 2040, and future trends and demographics.
- The projects: Promote transportation safety, Improve accessibility and mobility, Encourage investments in existing communities, and Maintain or improve air and water quality.
- \$54.4 billion for roadway and transit projects and programs.
- \$42 billion (an estimated 77 percent of this) will go toward operating and maintaining the region's roadway and transit systems.

www.**maximize2040**.com

@Maximize2040

🔰 @Maximize2040



Congestion Management & Operations

BRTB's Travel Analysis Group produces Congestion Analysis Reports that illustrate the top 10 worst traffic bottlenecks in the region. Using realtime regional traffic flow data, BMC works to understand why bottlenecks occur, and then develops strategies to alleviate congestion.

Bottlenecks, or what we commonly refer to as traffic jams, occur for a wide variety of reasons: construction zones, weather, crashes or high vehicle volume. Bottleneck conditions are determined by comparing the reported speed to the posted speed limit for each segment of road.

In the Baltimore region, reference speed is a maximum of 70 miles per hour for interstates and other highways. If the reported speed falls below 60 percent of the reference, the road segment is flagged as a potential bottleneck. Then, if the reported speed remains below the posted speed for more than five minutes, the segment is confirmed as a bottleneck location.

Traffic speed is determined from analysis of cellular phone signals from vehicle passengers—the same type of information employed by popular Smartphone map applications many of us use daily to navigate.

BMC monitors the locations, distance, duration and frequency of bottlenecks. Topping the most recent list of worst bottlenecks is the interchange at I-95 North and MD 100, with an average distance of nearly 8 miles of delays for two hours in 2015. Coming in second is the I-695 Inner Loop at MD 147. This bottleneck averages six miles of delays for two hours last year. Rounding out the top three bottlenecks is MD 295 South (the Baltimore-Washington Parkway) at MD 193 near the Capital Beltway. This bottleneck averages 12 miles of delays for approximately three hours.

BMC's bottleneck analysis is used by engineers and planners to help inform recommendations on strategies aimed at reducing roadway congestion. These strategies may include car/vanpooling incentives, alternative work schedules, or transit enhancements to reduce automobile volume at peak times; and, in some cases, lane additions to accommodate traffic.

Location	Average Duration (minutes)	Average Length (miles)	Occurrences	Impact Factor
I-95 Northbound at MD 100, Exit 43	127	8	657	623,688
I-695 Inner Loop at MD 147/Harford Rd, Exit 31	123	6	609	469,725
MD 295 Southbound at MD 193	177	12	199	434,418
I-695 Inner Loop at I-795, Exit 19	440	9	347	426,470
I-695 Outer Loop at Edmonson Ave, Exit 14	138	7	369	399,447
MD 295 Southbound at Powder Mill Rd	198	9	244	332,280
I-695 Outer Loop at U.S. 40, Exit 15	101	7	365	274,858
MD 295 Northbound at I-195	153	10	154	244,979
I-95 Southbound at MD 24, Exit 77	155	10	145	219,443
I-695 Inner Loop at I-83/MD 25, Exit 23	95	7	305	202,547

Regional Congestion Analysis

The Impact Factor is calculated by multiplying the number of bottleneck occurrences by the average duration of the bottleneck (in minutes), and the average length of the bottleneck (in miles).

Highway Safety

BRTB's Regional Safety Subcommittee played an active role in the development and implementation of the 2006–2010 and 2011–2015 Strategic Highway Safety Plans (SHSP), and the development of the 2016–2020 SHSP. BMC staff coordinates and participates on several SHSP emphasis area teams.

The 2016–2020 SHSP continues the legacy of previous safety action plans with a detailed framework for the next chapter of transportation safety in Maryland. The plan is developed around performance measures and effective strategies to achieve long-term goals. The 2016–2020 SHSP was designed to cut roadway fatalities in half by 2030, with a long-term goal of ending traffic fatalities and serious injuries on our roadways.

In 2014, Maryland reduced the number of traffic fatalities to 443, which is the lowest number since 1948. The Baltimore region accounts for 175–or 40 percent–of these fatalities, a number and percentage that has remained roughly the same during the past five years. In 2012, both the state and region saw a spike in overall highway fatalities (511 and 221, respectively).

Within the region, Baltimore County accounts for the largest number of fatalities on the highway network, followed by Anne Arundel County and Baltimore City.

The region also accounts for roughly 50 percent of statewide injuries from 2010–2014, with about 21,900 in 2014 (statewide about 44,100). Baltimore City accounts for the largest number of injuries followed by Baltimore and Anne Arundel counties. Carroll County, by comparison, has the lowest number of injuries in the region.

Since 2009, BMC has partnered with the Maryland Highway Safety Office (MHSO) to bring the pedestrian and bicyclist safety campaign, Street Smart, to the Baltimore region. On average, the Baltimore region accounts for 47 percent of the statewide pedestrian fatalities (100 statewide in 2014, 48 in the

STREET

region) and 55 percent of the statewide pedestrian injuries (3,400 statewide in 2014, 1,920 in the region).

Achieving the goals outlined in the SHSP will require a sustained and steadfast commitment from state and local agencies and key safety partners. SHSP stakeholders are crucial to improving roadway safety in Maryland through implementation of the strategies and action steps related to the four Es of safety—engineering, enforcement, education and emergency medical services. In addition, developing new partnerships will be a vital part of our strategy to address emerging roadway safety issues, such as vehicle connective technologies and traffic safety culture.







Emergency Preparedness

BRTB works with local, state, and federal stakeholders to support emergency preparedness and traffic incident management initiatives. Two examples of regional coordination in these areas are the BRTB Traffic Incident Management for the Baltimore Region (TIMBR) Committee and the Coordinated Highways Action Response Team (CHART) traffic patrols.

The TIMBR Committee supports regional incident management by providing a forum for communication, cooperation and coordination between agencies, jurisdictions and other stakeholders.

Motorist assistance activities include changing tires, providing gas to get a vehicle to the nearest fueling station, and pushing a broken down vehicle off the road. At incidents, CHART patrols perform traffic and scene management, scene clean up, and assist other responders as needed.

In 2013, the General Assembly funded a significant expansion of CHART traffic patrols, which became fully operational in July 2014.

The patrol expansion is enabling the CHART program to assist more travelers, improving traveler safety by getting roads cleared more quickly, and reducing congestion and delay. In 2013 alone, incidents were cleared 30 percent faster with CHART patrols on-scene.

Today, roving traffic patrols operate around the clock in the most congested areas of Maryland, as opposed to limiting routes to peak periods. Patrols were also added to highways in western Maryland.







Prior to the expansion statewide, patrol drivers aided a motorist with a disabled vehicle every 14 minutes and assisted at an incident every 22 minutes. As a result of the expansion, CHART patrols provided 35 percent more motorist assists and 45 percent more incident assists in the Baltimore region in the second half of 2014. In 2014, CHART patrols provided motorist assistance to 11,607 disabled vehicles and provided assistance at 8,076 incidents in the Baltimore region. In 2015 in the Baltimore region, patrols provided motorist assistance to 9,761 disabled vehicles and assistance at 9,136 incidents.



BMC promotes a variety of commuting options to ease traffic congestion and improve air quality. These options aim to reduce single occupancy vehicle (SOV) trips, as well as decrease the length of those trips through several commuting option programs:

Rideshare

BMC hosts the Rideshare programs for Baltimore and Carroll counties, which promote work trip alternatives such as region-wide carpooling/vanpooling/ transit trip matching, the Guaranteed Ride Home program, employer outreach, and the park-&-ride lot interactive map.

All of these services are free and are available through Metrorideshare.com.



Teleworkbaltimore.com

BMC and MDOT provide a free online resource for employers in the Baltimore region who wish to start or expand a formal telework program. Employers should visit the website and register to gain access to free materials that can help them start a program. Registered employers can also get free assistance from a telework consultant to better tailor a program to their specific workplace. BMC also has an active Telework program.



Clean Commute Initiatives

Every spring and summer, BMC and its member jurisdictions go directly to the public to educate them about their personal commuting choices and how they affect air quality for all of us. BMC staff members take part in community festivals and fairs throughout the region, asking individuals to consider transportation options other than driving alone.

In addition to this grassroots outreach, BMC and the BRTB sponsor paid radio advertising promoting the Clean Commute messaging. In 2015 and 2016, BMC staff members promoted the Clean Commute Initiatives during Q&As on several iHeartRadio stations.

For more information, visit CleanCommute.com.



CLEAN AIR PARTNERS'

Bike to Work Day

One of the major components of the Clean Commute Initiatives is Bike to Work Day (B2WD.) Held on the third Friday of May, B2WD raises awareness of bicycling as a legitimate, viable and safe mode of transportation. BMC partners with its member jurisdictions, nonprofits, state and regional transportation agencies, businesses and the public to coordinate B2WD events throughout the region. There are more than 30 early morning rallies and organized rides held in each of BMC's member jurisdictions. Participation in this event has steadily increased throughout the years, with more than 1,500 registered riders participating in 2015 and more than 1,800 participating in 2016. B2WD will celebrate its 20th anniversary in the Baltimore region on Friday, May 19, 2017.

For more information, visit:

- Bike2WorkCentralMD.com
 - Bike to Work Central Maryland
 - @Bike2WorkCentMD





Bicycle and Pedestrian Coordination

As regional interest in increasing bicycle and pedestrian facilities grows, the competition for available funds follows suit.

In 2015, the BRTB approved more than \$3.3 million in federal funding through the Transportation Alternatives Program (TAP). TAP funds, which the State Highway Administration (SHA) administers in Maryland, can be used for projects such as bicycle and pedestrian facilities, safe routes for non-drivers, conversion of abandoned railway corridors to trails, preservation and rehabilitation of historic transportation facilities, and environmental mitigation.

In the Baltimore region, the BRTB works with SHA staff to evaluate applications and make funding recommendations based on the available funds. Criteria for evaluation include federal program eligibility and goals; state, regional, and local planning goals; health, environmental and community affect; and program effectiveness.

A wide variety of project sponsors across the region submitted applications for \$5.7 million in funding in 2015. The BRTB recommended the following projects for TAP funds:

Baltimore City

- Enhance Inner Harbor crosswalks and bicycle wayfinding with upgrades to 10 intersections.
- Better definition for the Jones Falls Trail along the Inner Harbor to identify the existing 11-foot-wide, two-

way concrete path from Calvert Street to Market Place exclusively for biking.

Construct a two-way, parking protected cycle track along South Potomac Street to provide a protected bicycle connection between Patterson Park and the Canton Waterfront.

Carroll County

- Construct Safe Routes to School Program infrastructure upgrades around Eldersburg Elementary School.
- Replace the Safe Routes to School Program sidewalk infrastructure around Sykesville Middle School.

Howard County

Paving 1.3 miles of the existing Patuxent Branch Trail from Old Guilford Road to Vollmerhausen Road. Fifty percent of Maryland TAP funding is available statewide. As a result, any Baltimore region project not initially recommended for funding gets a second chance in the statewide competition. Two additional projects in the Baltimore region were funded as a result of this process. They include:

- Restore and place a historic caboose at the President Street Station, a key transportation, Civil War, and African-American heritage site in Baltimore City.
- Construct a wetland to provide water quality treatment in the Double Creek watershed in Carroll County.

The BRTB received five applications for 2016 TAP funding in the Baltimore region in May 2016.



A well-connected transportation system ensures businesses and consumers have what they need when they need it.

Freight Mobility Planning



The efficient movement of freight, both within and through a region, as well as between modes, is a vital element of every local economy. Many businesses maintain small inventories and rely on just-in-time deliveries of materials and goods.

Increasingly, consumers expect the convenience of rapid shipping, particularly when shopping online. A well-connected transportation system ensures businesses and consumers have what they need when they need it, which keeps the wheels of our marketplace in motion.

The BRTB's Freight Movement Task Force (FMTF) serves as an advisory committee to provide the public and the freight movement community a voice in the regional transportation planning process.

The Baltimore region is Maryland's leading goods movement center. Each year, more than 307 million tons of freight valued at nearly \$1 trillion move



over Baltimore's highway, rail, port, and airport facilities, serving domestic and international demand for a wide range of goods.

By 2030, freight on the region's transportation system is projected to nearly double, with significant percentage increases across the modes and the largest volume increase in truck tonnage. The growth in freight demand, combined with the predicted growth in private vehicle travel, commuter or intercity rail, and passenger air services, will stress the capacity of the region's transportation system.

Members of the FMTF include representatives from organizations with freight concerns from across the modes, including: railroad operators; port operators; trucking firms; airport operators; freight shippers and receivers; economic development organizations; and academics. The FMTF also includes staff from MDOT and local government representatives. It is a forum for Baltimore's regional freight stakeholders



to share information and discuss motor truck, rail, air and waterway concerns.

In 2015, the Helen Delich Bentley Port of Baltimore set records at its public marine terminals. A record 86,149 Twenty-Foot Equivalent Units (TEU) crossed through the port in August, surpassing the previous single-month record of 79,644 TEU containers, set just two months prior in June. Container shipping at the port was up by almost 13 percent last year, as compared to the previous year.

The Port of Baltimore's public marine terminals also had a record year in 2014. Overall, the port's public and private marine terminals saw 29.5 million tons of international cargo cross its docks at a value of almost \$53 billion. Baltimore is ranked No. 1 among all U.S. ports for handling autos and light trucks, farm and construction machinery, imported forest products, imported sugar and imported aluminum.

Port of Baltimore Cargo Facts





Transportation independence for older residents becomes increasingly more important to the BRTB's policies and programs as the Baby Boomer generation and their parents age.

The BRTB works to address transportation independence for older residents and those with disabilities through: updates to the Baltimore Region Coordinated Public Transit-Human Services Transportation Plan; grants for projects that will enhance mobility; developments to the Senior Ride Program; and workshops and training such as the Maryland Older Driver Safety Symposium (MODSS).

MTA and the BRTB worked together to update the Baltimore Region Coordinated Transportation Plan in October 2015. The coordinated plan identifies the transportation needs of older adults, individuals with disabilities, and people with low incomes; provides strategies for meeting those local needs; and, most importantly, prioritizes transportation services for funding and implementation, so that spending will be targeted and purposeful.

The Federal Section 5310 Capital Grant Program provides formula funding to states for assisting nonprofits in meeting the transportation needs of older adults and people with disabilities when the transportation service provided is unavailable, insufficient or inappropriate. The MTA administers the 5310 program, and consults with the BRTB on program implementation and project selection. Project examples include:



Buses and vans

securement devices

(())

Transit-related information technology systems, including scheduling/ routing/one-call systems



Mobility management programs



Acquisition of transportation services under a contract, lease or other arrangements In addition, BMC reviews applications for projects to receive grants through the Senior Ride Program. Since 2006, MTA has awarded grants to qualified applicants statewide to encourage and facilitate the development of volunteer transportation services for low- and moderate-income seniors. MTA offers about \$180,000 in state funds each year, of which local contributions match 25 percent. The projects must provide doorto-door transportation services, use primarily volunteer drivers, and have a dispatching system.

Finally, BRTB participates in the Maryland Vehicle Administration's (MVA) MODSS. The symposiums focus on the latest research regarding older driver safety for professionals in healthcare, community services, engineering and law enforcement. Lectures and discussions in the regional workshops focus on the physical and cognitive effects of aging and their relationship to driving, the MVA's process of referral and evaluation for one's medical fitness to drive, and how professionals can help with identifying medically at-risk drivers.



Development tracking is important to the transportation planning process, as it helps to determine the placement of household and employment growth, which in turn affect the demands on the region's transportation network. BMC prepares monthly, quarterly and annual building permit reports that summarize building permit data provided by each individual jurisdiction.

Permit activity for new residential units has varied substantially during the course of the past decade. The effects of the housing market crash in 2006 reflected in the region's residential building permit activity. The decline marked as the number of residential units permitted annually fell from 7,923 units in 2006 to 4,945 in 2009, a decrease of 37.6 percent. While the number of permitted residential units has not returned to the levels of the early to mid2000s, growth occurring during the last six years, as the annual number of units permitted increased 61.4 percent from 2009 to 2015.

From 2006 to 2015, Anne Arundel County and Howard County combined to account for more than half of all units permitted in the region, with 28 and 23.6 percent, respectively. Baltimore County and Baltimore City followed with 18.8 and 13.9 percent, respectively.

The Baltimore region averages approximately \$2.3 billion per year in permitted non-residential construction investment during the last 10 years. This figure is calculated by compiling the projected construction costs reported in permit applications for all new construction, as well as additions, alterations and repairs to existing buildings. Non-residential permit activity suffered a set-back shortly after the Recession hit in 2008, about two years after the beginning of the housing market crash. Permitted non-residential value decreased 43.3 percent from the high of \$3.2 billion in 2008 to \$1.8 billion in 2010. Non-residential permit activity stabilized, averaging slightly less than \$2 billion during the past five years.

Baltimore City accounted for the largest single share of non-residential permitted value with 35.4 percent of the regional total, followed by Baltimore County (19.2 percent), Anne Arundel County (18.1 percent), and Howard County (17.1 percent), during the 10-year period.











Much of BRTB's work is accomplished through the use of a travel demand forecasting model that simulates traffic volumes on the region's transportation network. The model can be used to perform analyses that help to inform transportation infrastructure investment throughout the region.

The Cooperative Forecasting Group (CFG) develops a set of population, household, and employment control totals and small area forecasts for BRTB to use for transportation planning. The data set is utilized internally as an input to the travel demand model and for air quality conformity testing, and is available to federal, state and local government agencies, as well as the general public.

Created in 1978, the CFG membership includes representatives from the BRTB's jurisdictions and MDP. The local planning agencies in the CFG develop their own estimates and forecasts of population, households and employment based upon local comprehensive plans, adopted zoning maps and regulations, and an inventory of residential holding capacity. The allocation of employment to the small area and its distribution across industry sectors is based largely upon an inventory of employers across the region. The forecasts developed by the local jurisdictions are submitted to BMC staff members for review for quality control and consistency, and ultimately go to the BRTB for its endorsement as the official regional forecasts.

New forecast rounds are developed on an as-needed basis, but are generally triggered by the update of major planning documents by the local jurisdictions, significant unforeseen demographic shifts, and the availability of small area data. The CFG can update the cooperative forecasts annually to account for unexpected changes when a complete new round of forecasts is not warranted.

The CFG meets bi-monthly to review changes in local land use patterns, to discuss socio-economic trends, newly released U.S. Census Bureau figures and other indicators, and to make adjustments to existing forecasts to reflect new development, changing market conditions, and changes in local policy.

BRTB endorsed the latest forecast, Round 8A, which includes population, households and employment forecasts for the 2010–2040 time period in June 2014. The data set is available at the regional and jurisdictional levels, as well as small geographies including 94 regional planning districts and 1,387 transportation analysis zones.



Travel Model Framework







From home to work and back again, BMC staff members conduct travel demand modeling to understand how best to support regional transportation plans. That is, BRTB uses software to determine regional household travel such as daily commutes to work, running errands and transporting children, as well as freight movement.

BMC staff members completed the Energy and Emissions Reduction Policy Analysis Tool (EERPAT) as part of a Federal Highway Administration (FHWA) pilot. EERPAT analyzes the effects of various greenhouse gas reduction policy scenarios in combination with the General Transit Feed Specification, which analyzes transit accessibility. It simulates the travel choices residents will make in response to horizon year policy investment scenarios. Projections incorporate such factors as household and employment growth, available transit modes, number of highway lanes, access to goods and services, and employment. EERPAT helps the policy board make investment decisions in the development of transportation plans.

BMC staff members are creating a household travel modeling system, the Initiative to Simulate Individual Travel Events (InSITE), which will consider various activities an individual performs and focuses on coordinating individual activity sequences during the 24 hours in a day. For example, activity sequences would include staying at home, working, shopping and running errands. It also will allow coordinating travel needs of household members to plan daily travel schedules. InSITE will be used for transportation planning, including the development of the long-range transportation plan, and the TIP, the short-range transportation program.

According to the FHWA, freight volumes are expected to double by the year 2035. BMC and SHA received a Strategic Highway Research Program 2 grant of \$350,000 to develop a freight supply-chain and urban commercial vehicle model. The project will provide simulations on the components of freight movement, such as the locations of cargo transfers, types of commodities, and patterns of long-distance freight routing and local delivery. The grant will also help improve the SHA's and BMC's existing freight travel tools. The freight model will provide insight into suppliers' and distributors' choices of transportation mode and shipment size. The commercial vehicle model will simulate local delivery of goods and services to area households. BMC's freight travel tools ensure that transportation decision making is responsive to policies, trends, and performance measures.

InSITE Activity-Based Model





Improving public safety and emergency data sharing through regional Geographic Information System (GIS) coordination has been a priority for BMC during the last year. The federal Next Generation 911 initiative is one of many ways that geospatial technology is being used to improve emergency response in the region.

In March 2016, BMC hosted the Public Safety GIS Panel discussion, featuring experts on the U.S. National Grid and GIS blizzard response. The event drew represenatives from across Maryland, and included police, fire, search and rescue personnel, as well as GIS staff from the local, state and private sector.

The U.S. National Grid, an emergency location system, serves as an important supporting layer to Next Generation 911 systems for many state and federal GIS emergency responders. Panel discussions also included FirstNet, evaluating federal data, data sharing, and the continued importance of paper maps in emergency response.

BMC coordinates with the Maryland Emergency Management Agency (MEMA) and the Maryland Department of Information Technology (DoIT) as the state begins the planning stages of implementing Next Generation 911. BMC, as it does with many GIS initiatives, will act as a liaison between the state and local jurisdictions to help ensure the state the data it needs to enhance emergency operations, while working with the jurisdictions to provide feedback on their respective needs. Earlier this year, BMC spearheaded MEMA efforts to promote GIS emergency data sharing on a single online platform. After exploring several data sharing technologies, the Baltimore Regional Geographic Information System Committee (BRGISC) decided to adopt MEMA's Maryland Geo Share. BMC promoted the platform, helped the local jurisdictions register, and participated in GIS emergency response drills.

BMC also continues to support other regional GIS emergency management projects, spearheading the creation of a regional address point and centerline layer for use in local 911 dispatch systems, as well as for general planning purposes. Seamless cross-jurisdictional address points and centerlines are a key element of Next Generation 911 dispatch systems.







The Baltimore region has been designated a "nonattainment" area by the U.S. Environmental Protection Agency (EPA), meaning that ground-level ozone exceeds a healthy threshold, as measured by the National Ambient Air Quality Standards (NAAQS).

As a result, the BRTB's Interagency Consultation Group (ICG), which supports environmental planning for the Baltimore region, is responsible for demonstrating that vehicle emissions resulting from transportation plans, programs, and federally-funded projects do not exceed certain limits. As the region's MPO, BRTB aids in improving air quality by ensuring planned transportation improvements do not hinder the region's ability to meet EPA air quality standards. This evaluation, referred to as "conformity," will continue to occur until our region achieves EPA standards. Research links ground-level ozone pollution to cardiovascular problems, including heart attacks, and aggravation of respiratory problems such as asthma.

Ground-level ozone pollution is created when nitrogen oxides (NOx) and volatile organic compounds (VOCs) combine in the presence of heat and sunlight in the atmosphere. The volume of these gases can be attributed primarily to vehicle exhaust and power plants. For example, on-road mobile sources were responsible for approximately 40 percent of daily NOx emissions in 2012.

In 1997, the EPA set the standard for ground-level ozone at 0.08 parts per million (ppm). In 2008, the standard was strengthened to 0.075 ppm. Last year, it was tightened again to 0.070 ppm. The Baltimore region has experienced a significant reduction in ozone levels during the last 10 years. The number of unhealthy days for ground-level ozone between 2005 and 2015 was reduced by more than 80 percent. In June 2015, the EPA determined that the Baltimore region achieved the NAAQS adopted in 2008.

However, the region will need to continue to work to address the newest 2015 ozone standard and to reduce ozone-forming emissions. By supporting smart, environmentally responsible transportation planning, BRTB continues to help ensure that air pollution emissions from the transportation network do not affect the region's ability to meet these important standards.

Total Number of Unhealthy Ozone Days by Region 2013–2015



Total Number of Unhealthy Ozone Days in the Baltimore Region 2004–2015 (optional)





PREORMANCE-BASED TRANSPORTATION PLAN 2040 for a greater Baltimore Region

Transportation affects each of us on a daily basis, but not in the same way. The BRTB continues to work to ensure that through public involvement and outreach, all people have the chance to voice their opinions regarding important decisions in transportation planning in the Baltimore region. Such initiatives serve to both educate and engage the public on transportation issues and plans.

■ The BRTB developed Maximize2040 with local, state, and federal agency transportation professionals, area business leaders, community advocates, and many other interested individuals and organizations in 2014 and 2015 with a focus on public involvement.

The BRTB solicited about 1,150 project ideas from individuals and organizations through an extensive outreach process in the fall of 2014. The level of participation overall in the regional planning process shows that people care about the future of transportation in our region. As the public comments demonstrate, the Baltimore region has a diverse set of needs and expectations-including more reliable commuting, more effective freight movement, and more choices in transportation alternatives for everyone in the region.

The final version of Maximize2040 considered these public ideas as well as additional comments from the BRTB's Public Advisory Committee (PAC).



B'more Involved promotes civic engagement in transportation, planning, environmental justice and equity through social media, events, surveys, infographics and digital communication. This important information is a great way for the public to learn more, stay up-to-date on important events, news, and, of course, let the Baltimore region know how its residents can B'More Involved!



On April 25, 2016, BRTB hosted a meeting with FHWA and the Federal Transit Administration (FTA) to receive public comments about the regional transportation planning process as part of BRTB's federal MPO certification review. BRTB received more than 70 public comments throughout the 30-day public comment period leading up to the meeting. In July 2016, U.S. DOT certified BRTB's regional planning process.



■ The BRTB worked directly with the PAC to provide more clarity to its involvement and outreach process. The PAC is a diverse group of 30 community leaders, residents and nonprofit representatives from each jurisdiction, who bring a wealth of knowledge and essential feedback on projects, plans and BRTB initiatives.



At the request of the Board of Directors, BMC developed the Baltimore Regional Transit Needs Assessment in the fall of 2015. This document, intended as a resource for BMC's members, is a comprehensive assessment of the Baltimore region's multimodal transit network and makes recommendations for a transit system that reflects local priorities and supports economic growth.

The Baltimore area has a complex regional transit system providing services across multiple modes. Peer comparisons are a useful way to get a sense of where a system's performance stacks up relative to similar agencies. However, each system is built around the unique geographic, cultural, economic and demographic factors present in the region. As such, comparisons are always approximate.

Peer agencies were identified by reviewing similarly ranked systems

within the 2014 American Public Transit Association (APTA) Fact Book, a generally accepted publication of reference within the industry. Relative to the MTA, BMC selected the next highest and next lowest ranked transit agency by mode. Staff members identified agencies that experience a similar volume of vehicles operated during peak hours and number of unique passenger trips aboard public transit.

BMC also sought out comparable regions demographically, which include Cleveland, Denver-Aurora, Minneapolis– St. Paul, Pittsburgh, and St. Louis. It should be noted that transit agencies serving these urbanized areas don't provide service across all of the modes.

BMC will continue to serve as a resource to its board and MTA as each considers ways to support and improve the transit system for the Baltimore region.



A Snapshot of MTA Peer Comparison by the Numbers









As a council of governments, regional community planning is a major part of BMC's work, specifically implementing housing and workforce development initiatives, maintaining a building permit database, and housing the Regional Information Center (RIC).

Long-time BMC initiatives include: maintaining a building permit database, which helps to predict and plan for population growth as well as movement to and from residential and job centers; and housing the RIC, a branch of the Enoch Pratt Public Library which serves as a repository of planning publications spanning more than a century. Newer ventures include BMC's housing and workforce development initiatives throughout the region.

Much of BMC's community planning initiatives stem from its involvement with the Opportunity Collaborative, a three-year, \$3.5 million HUD Sustainable Communities grant. The Collaborative, of which BMC provided technical and staff support, served as a consortium of local governments, state agencies, universities and nonprofit organizations in the Baltimore region to create the Baltimore Regional Plan for Sustainable Development (RPSD). The RPSD, which the Collaborative released in June 2015 to local and national accolades, ties together transportation, housing and workforce development.

In 2014, several years into the Collaborative's work, the Maryland General Assembly updated BMC's charter to include housing and workforce development planning. BMC's housing policy coordinator facilitates regional collaboration among housing agencies and advocates around fair housing. This group also oversees the implementation of a project-based voucher program, which will pool local housing vouchers to create new affordable housing units in areas of high opportunity throughout the region.

In addition, BMC facilitates workforce development efforts throughout the region, conducting research and analysis of family-supporting careers in existing and emerging industries. This analysis is used by employers, advocates and workforce investment agencies to inform strategies to train and connect Baltimore area workers to good jobs.

Through its community planning work, BMC seeks to encourage sustainable growth that connects Baltimore region families to affordable, accessible homes and quality employment opportunities.

Housing

BMC staffs two committees focused on regional housing issues. The Baltimore Regional Fair Housing Group, comprised of local housing staff, develops and implements cooperative government strategies to address fair housing needs. BMC's Housing Committee is a broader forum that provides government and nonprofit stakeholders with updates on housing policy and a venue to discuss regional housing issues.

In 2014, the region released Strong Communities, Strong Region: The Baltimore Regional Housing Plan and Fair Housing & Equity Assessment (FHEA). Strong Communities, Strong Region was a data driven analysis of the region's housing market, supply and challenges. Central to this analysis is an understanding the region's residents' housing needs.

More than 70,000 renter households in the Baltimore metropolitan area spend more than 50 percent of their income on housing, making them severely cost burdened, meaning the resources they have for food, transportation and other basic costs of living are highly constrained. The federal standard for cost burden has long been 30 percent of household income, so the higher 50 percent threshold indicates acute stress on household finances.

This burden is especially focused at the lowest income levels. For example: families surviving on disability benefits or supported by a service worker, such as a food prep worker or retail salesperson. Of the roughly 90,000 renting households in the region at that income level, more than half are severely cost burdened.

However, not all of the region's cost burdened households fall into the lowest income brackets. Depending on the local rental market, some families at relatively high incomes are severely cost burdened as well. Many of these households are supported by essential public service professions. As the housing market continues to rebound from the Recession, the region will need to monitor its rental market so that teachers, first responders and other government employees are able to live in the jurisdictions in which they work.



Through its committees, BMC aims to support all of the stakeholders working to ensure a robust stock of quality, affordable rental housing across the Baltimore region.

Workforce Development

The completion of the RPSD in June 2015 served to bring together workforce development stakeholders and provide data to comprehensively look at vital factors that influence the prosperity and quality of life in the Baltimore region.

BMC's Workforce Development Committee is comprised of the region's workforce investment agencies, which focus on employment and educational issues throughout the metropolitan area. BMC's work includes labor market analysis, project implementation and workforce development planning. BMC is focused on implementing recommendations from the RPSD.

A critical component of the regional labor market research is the identification and analysis of emerging career opportunities. Central to this analysis are middle-skill jobs; positions whose entry points require some level of education beyond a high school diploma, but less than a four-year college degree.

Middle-skill jobs are important to our region for two key reasons. First, these positions pay an average hourly wage of \$20.32—roughly a family supporting wage for a single parent with one child in Baltimore City. Second, while the job titles have changed, these positions represent the segment of the labor market that has traditionally been the backbone of the middle class.

Through market analysis, BMC has identified six employment sectors that are likely to make the most middle-skill hires in the coming years: healthcare; construction; IT/cyber security; transportation/logistics; business services; and manufacturing. Preparing current and future workers to fill these positions will require planning and cooperation between the state, local governments, adult educators and employers in the region.

Through the Workforce Development Committee, BMC aims to play a central role in strengthening the pipeline of qualified workers and securing the region's share of the middle-skill labor market.



www.opportunitycollaborative.org



There will be over **35,800 new job** hires between 2012 and 2020 in the Baltimore region in **39 mid-skilled occupations**.

The Opportunity Collaborative offers strategies to connect job seekers with these family-supporting jobs:

SIX KEY SECTORS:

Healthcare Manufacturing Construction Transportation/Logistics/ Warehousing IT/Cyber Security Business Services

> Drivers in the Baltimore region average 50 hours of delays each year.

One-fourth of job seekers in the Baltimore region do not have access to public transit. #TransportationChoices



The Baltimore Regional Cooperative Purchasing Committee



Since 2009, BRCPC and the Metropolitan Washington Council of Governments (MWCOG) have worked together through the Mid-Atlantic Purchasing Team (MAPT) to achieve even more savings on goods and services used regularly by local governments.

The Procurement Process

Identify Need-BRCPC members identify regional and multi-regional procurement opportunities based on current and emerging needs. A lead jurisdiction conducts the bid and contract award on behalf of membership.

• Develop Specs-Specifications for a cooperative procurement are developed between the lead buyer and other regional buyers with expertise in that

area. This can also include consultation with operational and industry experts.

Award Contract—The contract award is carried out in accordance with the lead jurisdiction's laws and procedures. Jurisdictions that ride this contract award enter into their own contract with the awardee under the same terms.

Purchase-Individual purchases can now be made based on the needs of membership. These contracts can draw nationwide use by public and nonprofit entities whose legislation and procedures allow them to do so.

Mid-Atlantic BRCPC Subcommittees Purchasing Energy Board • Education contracts **BRCPC Facts** Team contracts Technology • Public Works **Energy Board** \$117 million+ **Planning Ahead** saved since program inception 80-85 Percent of expected energy **municipalities** usage purchased at fixed rate S22.1 millio participating 15-20 Percent purchased on FY 2015 savings spot market benefit compared to BGE PoLR fixed-rate alternative

Combined Spending Power: \$106.1 million electricity • \$13 million natural gas cost for FY 2015. excludes BGE distribution costs.

Contracts

Furniture

Led by Howard County Government, this procurement has the farthest reach with participants in CA, TX, UT, MO, NC, and all over the Mid-Atlantic region. It accounts for \$10 million in total spending a year.

Office Supplies

Led by Anne Arundel County Public Schools, this procurement started with an estimated volume of \$4.5 million and within 2.5 years is valued at more than \$11 million. Savings per municipality up to 14 percent of total (participant) purchases or more than \$1.5 million annually.

Bid Day Savings

44% Large & Specialty Lamps	Anne Arundel Co.	
37% Painting Services	Baltimore County Gov.	
31% Ice Melter	Metro. Washington COG	\$
20% Sign Blanks	Anne Arundel County Gov.	L C
19% Snow Plow Blades	Carroll County Gov.	$\nabla \Psi$
8% Art/Classroom Supplies	Wicomico Co. Schools	2~~
3-41% Generator Maintenance	Harford Co. Gov.	

Spotlight On ...



The Loch Raven, Prettyboy and Liberty reservoirs provide drinking water to approximately 1.8 million people in the Baltimore region. The areas from which waters that feed each reservoir originate—also known as watersheds are located within Baltimore, Carroll and Harford counties. The majority of the watershed lies in Baltimore and Carroll counties, with smaller parts of the Loch Raven and Prettyboy watersheds touching Harford County and York County, Pennsylvania.

BMC convenes and provides staff support to the Reservoir Watershed Protection Committee (WPC) and Reservoir Technical Group (RTG), which promotes water quality for the three reservoirs that serve the Baltimore regional water supply. These committees advise member jurisdictions on land use and land management strategies within the watershed areas, which aim to ensure a sustainable supply of healthy water for years to come.

Adopted in 1979 in response to deteriorating water quality, the Reservoir Watershed Management Agreement was and remains a voluntary compact of Baltimore and Carroll counties, Baltimore City, Baltimore County Soil Conservation District, Carroll Soil Conservation District, the Maryland Departments of Agriculture and the Environment, and BMC. This agreement established the Baltimore Reservoir Watershed Management Program, a cooperative effort to combat negative water-quality trends and protect the future of the reservoir system. Updated in 2005, the agreement charges the WPC and the RTG with implementing certain action strategies around watershed protection. The RTG and WPC also include representatives from Anne Arundel, Howard and Harford counties, whose residents rely on water from the reservoir.

The RTG meets regularly to evaluate challenges and proposed actions in the watershed, including reviewing land-use plans, rezoning proposals and revisions to water and sewerage plans. The RTG often provides technical advice with regard to deforestation and impervious surface development, such as parking lots; as well as agricultural management practices, like manure management. The WPC provides program oversight and guidance, reviewing and commenting upon proposed actions and draft publications of the RTG. Among the action strategies, the RTG and WPC are responsible for is improved monitoring of the reservoirs and the watershed. The RTG is developing a Watershed Monitoring Plan. The plan will outline where and how each participating jurisdiction will conduct soil and water sampling and share their results. The goal is to establish comparable data sets across jurisdictions in order to better understand the state of the watershed.

Once the plan is complete, the project will move to the second phase, which includes implementation of a unified monitoring program supported by a watershed management consultant. By working together, these efforts will ensure a more transparent and effective approach to delivering healthy drinking water to the next generation.



Government Relations

BMC pursued its legislative agenda during the Maryland General Assembly's 2016 legislative session. BMC's focus aimed to enhance the quality of life and economic vitality of the Baltimore region by improving connections between residents and the workplace.

BMC's legislative accomplishments include HB 1012–Income Tax Credit–Commuter Benefits–Eligibility and Credit Amount. This bill, passed by the General Assembly and signed by Gov. Larry Hogan, doubles an existing tax credit for employers that offer commuter benefits to employees. These benefits include alternatives to driving, such as vanpools, Guaranteed Ride Home, cash payment in lieu of parking, or MTA fare cards.

BMC worked with a bi-partisan coalition in support of this legislation, including bill sponsor Del. Cory McCray (D-Baltimore



City), the Central Maryland Transportation Alliance (CMTA), BWI Business Partnership, 1,000 Friends of Maryland, and MDOT.

With the support of the House leadership, BMC also secured a commitment for a \$250,000 appropriation in the state's FY 2018 budget for "planning and programmatic efforts that facilitate coordination and collaboration among local jurisdictions and organizations in the Baltimore region to foster economic growth and development." This language was included in HB 684– Baltimore Regional Neighborhood Initiative Program–Codified, which became law on April 8, 2016.

BMC will use the next year to develop a comprehensive plan for this anticipated funding, which will build upon the recommendations of the Opportunity Collaborative as well as corridor-oriented and cross-jurisdictional community development strategies.

Communications



From the redevelopment of Columbia in Howard County, to interviews with daily bike commuters, BMC seeks to tell the stories of the people affected by its regional initiatives.

In 2014, BMC launched a strategic plan to strengthen communication initiatives and create solid brand development. The plan has since been updated to meet specific communication benchmarks to better share BMC's initiatives with the public.

A major part of reinvigorating BMC's brand through communication is to continue to

enhance its social media presence. Staff members use social media-particularly Twitter, Facebook, Infogr.am, Constant Contact, LinkedIn and YouTube-to create messaging about BMC initiatives in digestible and engaging ways. The public engages with BMC more than ever through social media. BMC increased total followers from more than 13,000 in 2014 to approximately 16,000 by the end of FY 2016.

Staff members also worked with members of the press, broadcast and radio news organizations throughout the region to highlight BMC educational campaigns, promote its studies, and provide expertise for newsworthy stories that pertained to the Baltimore region. *The Baltimore Sun, Annapolis Capital Gazette, Baltimore Business Journal,* WYPR, Baltimore's National Public Radio station, iHeart Radio, CBS Radio, and television news stations WBAL and Fox 45 all featured BMC's initiatives.

The biggest communication initiative that BMC executed within the last year was to revamp its publications. *COG Quarterly*, BMC's digital magazine, launched in August 2015 as a +20-page spread that features shortand long-form stories, infographics, Q&As, photos, maps, calendars and hyperlinks to more information about the organization's work. *COG Quarterly* replaces several niche e-newsletters to provide the public with a more complete idea of the many hats that BMC wears and numerous partners. This content feeds into BMC's two major publications, the Annual Report, and the Metropolitan Report.

Follow us on social media:



@Baltimore Metropolitan Council
@B'More Involved
@Bike to Work Central Maryland
@Maximize2040

@BaltoMetroCo@Bike2WorkCentMD@Bmoreinvolved@Maximize2040

BMC Board of Directors 2016



Barry Glassman, 2016 Chairman Harford County Executive



Allan H. Kittleman, Vice-Chair Howard County Executive



Steven R. Schuh Anne Arundel County Executive



Stephanie Rawlings-Blake Baltimore City Mayor



Kevin Kamenetz Baltimore County Executive



Doug Howard Carroll County Commissioner



William C. Ferguson Maryland State Senator



Stephen W. Lafferty Maryland State Delegate



J. Thomas Sadowski Gubernatorial Appointee

Financials



Fiscal Year 2015



- Consulting services \$479,470
- Depreciation \$30,901



*Reflects funding for the Opportunity Collaborative through a HUD Sustainable Communities grant. *FY 2016 numbers are pre-audit.



Baltimore Metropolitan Council

Offices @ McHenry Row 1500 Whetstone Way, Suite 300 Baltimore, MD 21230 410-732-0500 www.baltometro.org

Resource for the Region