

BALTIMORE METROPOLITAN PLANNING ORGANIZATION

BALTIMORE REGIONAL TRANSPORTATION BOARD

RESOLUTION #23-13

**ENDORSE LOCAL, STATE, AND FEDERAL INPUTS TO THE FINANCIAL FORECAST FOR
*RESILIENCE 2050: ADAPTING TO THE CHALLENGES OF TOMORROW***

WHEREAS, the Baltimore Regional Transportation Board (BRTB) is the designated Metropolitan Planning Organization for the Baltimore region, encompassing the Baltimore Urbanized Area, and includes official representatives from the cities of Annapolis and Baltimore, the counties of Anne Arundel, Baltimore, Carroll, Harford, Howard, and Queen Anne's as well as representatives of the Maryland Department of Transportation, the Maryland Department of the Environment, the Maryland Department of Planning, the Maryland Transit Administration, and Annapolis Transit; and

WHEREAS, the Baltimore Regional Transportation Board adopted the current Baltimore Regional Transportation Plan on July 23, 2019; and

WHEREAS, the Baltimore Regional Transportation Board has developed a work scope and timeline to prepare the 2023 Baltimore regional transportation plan, termed *Resilience 2050: Adapting to the Challenges of Tomorrow*. A key task in developing the Baltimore regional transportation plan is the determination of estimated revenue available to fund future transportation projects. As required in the May 2016 Metropolitan Transportation Planning Regulations, existing and proposed revenues shall cover all forecasted capital, operating, and maintenance costs; and

WHEREAS, the Baltimore Regional Transportation Board has received a financial forecast of state and federal funds, with an updated methodology, from the Maryland Department of Transportation (see Attachment 1) and a financial forecast of local funds from a FY 2022 UPWP project (see Attachment 2) that extend to the horizon year of the plan (2050) and reflect future revenue using an inflation rate to reflect "year of expenditure dollars" and that is based on reasonable financial principles; and

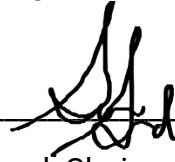
WHEREAS, this information has been reviewed cooperatively by the Baltimore Regional Transportation Board, the State, and public transportation operators as a basis for developing a financial plan for *Resilience 2050: Adapting to the Challenges of Tomorrow*; and

NOW, THEREFORE, BE IT RESOLVED that the Baltimore Regional Transportation Board, as the Metropolitan Planning Organization for the Baltimore region, endorses the financial forecast of local, state, and federal funds for use in developing *Resilience 2050: Adapting to the Challenges of Tomorrow*.

I HEREBY CERTIFY that the Baltimore Regional Transportation Board, as the Metropolitan Planning Organization for the Baltimore region, endorsed the aforementioned resolution at its January 24, 2023 meeting.

1-24-23

Date

A handwritten signature in black ink, appearing to read 'Snead', is written over a horizontal line.

Sam Snead, Chair
Baltimore Regional Transportation Board



MEMORANDUM

DATE: December 8, 2022

RE: Update to MDOT project categorization methodology in the financial forecast and a note regarding inclusion of the urbanized area of Queen Anne's County

MDOT shared an updated financial forecast for the Baltimore Metropolitan Area extending through 2050 for use in the upcoming Long-Range Transportation Plan for the Baltimore region, *Resilience 2050*. The forecast was updated in August 2022 and was shared with BMC staff in October 2022. BMC staff and MDOT staff subsequently met to discuss the methodology for creating the forecast. During this meeting, MDOT staff shared an update to the methodology for categorizing projects used to develop the financial forecast that was not detailed in the methodology accompanying the August 2022 financial forecast.

Prior financial forecasts were based on a different categorization of major capital projects. Candidate projects for the LRTP were previously "major capital" projects, which could include large-scale projects that don't expand roadway or transit capacity. Examples include major overhauls of transit vehicles or large roadway reconstruction or interchange projects that don't add lanes. For the August 2022 financial forecast update the major capital category is now considered to be exclusively expansion. This means that projects that MDOT had previously categorized as major capital that don't include additional capacity are now categorized as system preservation. This results in an increase in system preservation funds in the financial forecast.

The BRTB is including this memo with the financial forecast in the absence of an updated methodology from MDOT. In addition, the BRTB has identified numerous projects submitted for the LRTP that would now be classified as system preservation projects according to this methodology. These projects are considered to be part of the financially constrained LRTP, but are listed under the system preservation portion of funding.

The BRTB would also like to clarify the inclusion of Queen Anne's County in the MDOT financial forecast. The third bullet under Baltimore Area - Percentage of Capital Expansion does not mention the urbanized area of Queen Anne's County. This area would include all of Kent Island and the area up to Grasonville at the US 50/301 split. State highway facilities in this area were accounted for in the financial projections.

DOCUMENTATION OF STATE/FEDERAL ASSUMPTIONS

From: MDOT Office of Finance

Subject: Methodology and Assumptions used to derive the 2028 – 2050
Constrained Long-Range Plan (CLRP)

Total Program Revenues/Expenditures (operating and capital):

- FY 1981 to FY 2021 figures are actual expenditures from historical records. FY 2022 to FY 2027 are from the FY 2022-2027 Transportation Trust Fund (TTF) Financial Plan and the Final FY 2022-2027 Consolidated Transportation Plan (CTP).
- The federal funds received directly by the Washington Metropolitan Area Transit Authority (WMATA) are **not** included in this exercise.
- FY 2028 to FY 2050 projections of state funds use an historical annual average growth rate of 5.0%. Federal fund projections for the same period are based on an average growth rate of 3.0% for highway and 2.33% for transit program funds.

Operating Expenditures:

- FY 1981 to FY 2021 figures are actual expenditures from historical records. Expenditures for FY 2022 to FY 2027 are the operating budget projections contained in the FY 2022-2027 TTF Financial Plan. For the 2020 and prior CLRP updates, operating budget projections were taken from the financial plan published in January that supports the Final CTP. For the current 2022 CLRP update, operating budget projections were again based on the financial plan published in January that supports the Final CTP, with updates for actions taken during the legislative session.
- FY 2028 to FY 2050 projections are derived by inflating the previous year with an estimate for the percentage change in the Consumer Price Index for All Urban Consumers (CPI-U) plus 2%. CPI-U is a generally accepted measure of inflation. The projected annual change in index figures is based on information received from two economic forecasting firms. To account for the additional operating costs associated with new capital expansions, 2% is added to the forecasted rate.
- For the Purple Line Light Rail Transit project, the operating and maintenance portion of availability payments from the April 2022 project forecast were included as part of the operating budget projections.

Capital - System Preservation:

- Department records were used to determine the split between system preservation and expansion for FY 1981 to FY 2021. Amounts for FY 2022 to FY 2027 are from the Final FY 2022-2027 CTP.
- For the period FY 2028 – FY 2050, an annual growth rate of 2.5% is assumed for systems preservation projects, not to exceed 70% of the total program.
- For the period FY 2028 to FY 2050, it is assumed that the State's General Fund will fund Maryland's share of the new dedicated capital funding for WMATA (\$167 million annually).

Capital - Expansion:

- Expenditures for capital expansion were derived by subtracting both operating and system preservation expenditures from the total program expenditures for each year.

Baltimore Area – Percentage of Capital Expansion:

- Total capital figures from FY 1981 to present were split into surface and non-surface. Surface included highway (State Highway Administration (SHA)) and transit (Maryland Transit Administration (MTA) and WMATA) costs. Non-surface included expenses for the Maryland Port Administration, Maryland Aviation Administration, Motor Vehicle Administration and the Secretary's Office.
- The surface / non-surface data and the system preservation / expansion data were combined, analyzed, and evaluated to produce estimates of the percentage of Maryland expansion associated with surface transportation for the various time periods.
- Surface capital in the Baltimore region was derived by: adding location specific SHA and MTA project expenditures in the region (Anne Arundel, Baltimore, Carroll, Harford, and Howard County projects); one-half of the areawide MTA projects that service the DC/Baltimore region and approximately 35% (historical average) of SHA area-wide project expenditures.
- These Baltimore specific figures were used to derive estimates of Baltimore surface expansion. These figures, when used with the above-mentioned projections, produce the estimates shown for Baltimore as a percent of Total Surface Expansion and as a percent of Total Maryland Expansion.

MDOT Operating & Capital Expenditures - Statewide
History, Program & Forecast
(Millions of Dollars)

Year	Operating	System Preservation	Operating and System Preservation	Expansion	Statewide Total
1981	\$265	\$111	\$376	\$247	\$623
1982	\$287	\$136	\$423	\$236	\$659
1983	\$322	\$164	\$486	\$284	\$770
1984	\$352	\$167	\$519	\$246	\$765
1985	\$385	\$204	\$589	\$319	\$908
1986	\$428	\$234	\$662	\$403	\$1,065
1987	\$441	\$264	\$705	\$506	\$1,211
1988	\$478	\$260	\$738	\$615	\$1,353
1989	\$508	\$227	\$735	\$677	\$1,412
1990	\$551	\$270	\$821	\$760	\$1,581
1991	\$591	\$268	\$859	\$773	\$1,632
1992	\$577	\$187	\$764	\$542	\$1,306
1993	\$638	\$254	\$892	\$418	\$1,310
1994	\$689	\$279	\$968	\$393	\$1,361
1995	\$709	\$400	\$1,109	\$497	\$1,606
1996	\$784	\$391	\$1,175	\$465	\$1,640
1997	\$770	\$417	\$1,187	\$493	\$1,680
1998	\$808	\$451	\$1,259	\$411	\$1,670
1999	\$868	\$515	\$1,383	\$420	\$1,803
2000	\$913	\$476	\$1,389	\$455	\$1,844
2001	\$979	\$578	\$1,557	\$632	\$2,189
2002	\$1,045	\$612	\$1,657	\$772	\$2,429
2003	\$1,158	\$620	\$1,778	\$772	\$2,550
2004	\$1,178	\$619	\$1,797	\$762	\$2,559
2005	\$1,237	\$714	\$1,951	\$780	\$2,731
2006	\$1,303	\$729	\$2,032	\$793	\$2,825
2007	\$1,396	\$724	\$2,120	\$701	\$2,821
2008	\$1,488	\$766	\$2,254	\$680	\$2,934
2009	\$1,527	\$974	\$2,501	\$368	\$2,869
2010	\$1,583	\$957	\$2,540	\$275	\$2,815
2011	\$1,548	\$908	\$2,456	\$325	\$2,781
2012	\$1,572	\$1,096	\$2,668	\$366	\$3,034
2013	\$1,638	\$1,154	\$2,792	\$416	\$3,208
2014	\$1,843	\$1,324	\$3,167	\$477	\$3,644
2015	\$1,859	\$1,438	\$3,297	\$603	\$3,900
2016	\$1,917	\$1,389	\$3,306	\$806	\$4,112
2017	\$1,948	\$1,217	\$3,165	\$1,341	\$4,506
2018	\$2,048	\$1,147	\$3,195	\$1,264	\$4,459
2019	\$2,128	\$1,117	\$3,245	\$1,196	\$4,441
2020	\$2,173	\$1,593	\$3,766	\$1,200	\$4,966

Year	Operating	System Preservation	Operating and System Preservation	Expansion	Statewide Total
2021	\$2,179	\$1,389	\$3,568	\$985	\$4,553
2022	\$2,208	\$1,931	\$4,139	\$1,147	\$5,286
2023	\$2,396	\$2,045	\$4,441	\$631	\$5,072
2024	\$2,418	\$1,907	\$4,325	\$515	\$4,840
2025	\$2,469	\$1,775	\$4,244	\$447	\$4,691
2026	\$2,518	\$1,816	\$4,334	\$455	\$4,789
2027	\$2,609	\$1,887	\$4,496	\$465	\$4,961
2028	\$2,734	\$1,637	\$4,371	\$701	\$5,072
2029	\$2,849	\$1,715	\$4,564	\$735	\$5,299
2030	\$2,968	\$1,799	\$4,767	\$771	\$5,538
2031	\$3,091	\$1,890	\$4,981	\$810	\$5,791
2032	\$3,217	\$1,985	\$5,202	\$851	\$6,053
2033	\$3,350	\$2,084	\$5,434	\$893	\$6,327
2034	\$3,488	\$2,188	\$5,676	\$938	\$6,614
2035	\$3,633	\$2,297	\$5,930	\$985	\$6,915
2036	\$3,787	\$2,357	\$6,144	\$1,087	\$7,231
2037	\$3,946	\$2,416	\$6,362	\$1,200	\$7,562
2038	\$4,112	\$2,476	\$6,588	\$1,320	\$7,908
2039	\$4,286	\$2,538	\$6,824	\$1,446	\$8,270
2040	\$4,467	\$2,601	\$7,068	\$1,581	\$8,649
2041	\$4,656	\$2,666	\$7,322	\$1,725	\$9,047
2042	\$4,853	\$2,733	\$7,586	\$1,877	\$9,463
2043	\$5,060	\$2,801	\$7,861	\$2,039	\$9,900
2044	\$5,275	\$2,871	\$8,146	\$2,212	\$10,358
2045	\$5,500	\$2,943	\$8,443	\$2,392	\$10,835
2046	\$5,735	\$3,017	\$8,752	\$2,585	\$11,337
2047	\$5,981	\$3,092	\$9,073	\$2,789	\$11,862
2048	\$6,238	\$3,169	\$9,407	\$3,006	\$12,413
2049	\$6,504	\$3,249	\$9,753	\$3,237	\$12,990
2050	\$6,783	\$3,330	\$10,113	\$3,483	\$13,596
Total 1981 – 2050	\$162,242	\$95,955	\$258,197	\$66,997	\$325,194

Baltimore Metropolitan Area – Percentage of Capital Expansion
Forecast (2028-2050)
(Millions of Dollars)

Surface % of Statewide Expansion Funds 1981-2021: 84.9%*

Baltimore % of Total Statewide Surface Expansion Available, 1981-2021: 36.1%*



Fiscal Year	Statewide Expansion Funds	Statewide Surface Percentage (84.9%)	Statewide Private Funds	Total Statewide Surface Available	Baltimore Region Expansion Funds (36.1%)
2028	\$701	\$595	\$24	\$619	\$224
2029	\$735	\$624	\$24	\$648	\$234
2030	\$771	\$655	\$24	\$679	\$245
2031	\$810	\$688	\$25	\$713	\$257
2032	\$851	\$722	\$25	\$747	\$270
2033	\$893	\$758	\$25	\$783	\$283
2034	\$938	\$796	\$25	\$821	\$297
2035	\$985	\$836	\$25	\$861	\$311
2036	\$1,087	\$923	\$25	\$948	\$342
2037	\$1,200	\$1,019	\$25	\$1,044	\$377
2038	\$1,320	\$1,121	\$25	\$1,146	\$414
2039	\$1,446	\$1,228	\$25	\$1,253	\$452
2040	\$1,581	\$1,342	\$25	\$1,367	\$494
2041	\$1,725	\$1,464	\$25	\$1,489	\$538
2042	\$1,877	\$1,593	\$25	\$1,618	\$585
2043	\$2,039	\$1,731	\$25	\$1,756	\$634
2044	\$2,212	\$1,878	\$25	\$1,903	\$687
2045	\$2,392	\$2,031	\$25	\$2,056	\$742
2046	\$2,585	\$2,194	\$25	\$2,219	\$802
2047	\$2,789	\$2,368	\$25	\$2,393	\$864
2048	\$3,006	\$2,552	\$25	\$2,577	\$931
2049	\$3,237	\$2,748	\$25	\$2,773	\$1,002
2050	\$3,483	\$2,957	\$25	\$2,982	\$1,077
Total 2028-2050	\$38,663	\$32,823	\$572	\$33,395	\$12,062

Forecasted \$12,062 million available for expansion projects in the Baltimore region.

**These percentages are applied to the 2028-2050 period to determine the forecast of revenues available for expansion projects. For example, Statewide Expansion Funds in 2028 are forecast to be \$701 million. The amount available for Statewide Surface is \$701 million x 84.9% = \$595 million. Adding Statewide Private Funds yields \$619 million in Total Statewide Surface Expansion Available. Total Baltimore Region Expansion Funds are \$619 million x 36.1% = \$224 million.*

LOCAL FINANCIAL FORECAST METHODOLOGY AND ASSUMPTIONS

In 2022, BMC staff worked with Kimley-Horn and local jurisdiction staff to develop a local funding projection tool for use in *Resilience 2050*. This local funding tool can also be adapted to generate local funding forecasts for future LRTPs. Baseline funding information for Fiscal Year 2022 was gathered through (1) the review of relevant local funding documentation for each jurisdiction, and (2) interviews held with relevant representatives of each jurisdiction. Development of the tool included the following steps:

- Reviewed CIPs and publicly available budgeting documents for baseline values of local funding for transportation in each jurisdiction
- Interviewed jurisdictional staff to determine how funds are used and projected moving forward
- Divided up funding by capital (system preservation versus expansion) and operating allocations
- Compiled this information into an Excel tool that can be updated as needed

The local funding projection tool was developed as an Excel spreadsheet that contains three sheets:

- **Baseline Summary:** This tab contains the baseline local funding breakdown for each jurisdiction, including the type and allocations of local funding. Local funding baseline information was determined by gathering and documenting the quantities and sources of local funding for each jurisdiction in the BMC region. Sources of local funding include Highway User Revenues (HUR), general funds, bonds, and other (e.g., usage fees). Local funding quantities were categorized under either Capital or Operating budgets based on the document review and interviews.
- **HUR:** This tab contains Highway User Revenue (HUR) projections from 2023 to 2027 provided by the Maryland Department of Transportation (MDOT) and HUR projections from 2028 to 2050 calculated using an estimated year-over-year increase.
- **2050 Projection:** This tab contains the local funding projected values for capital (made of system preservation and expansion categories) and operating budgets, projected out to 2050.

A summary of local funding projected to be available to the Baltimore Metropolitan Area from 2028 to 2050 is included on the next page. These totals were calculated by summing the individual county-by-county values for system preservation, expansion, and operating for each time period listed.

Baltimore Metropolitan Area
Forecast of Local Funding for Transportation: 2028-2050
(Millions of Dollars)

	2028-2032	2033-2037	2038-2042	2043-2047	2048-2050	Total 2028-2050
System Preservation	\$1,223	\$1,304	\$1,397	\$1,506	\$963	\$6,393
Expansion	\$185	\$199	\$215	\$233	\$150	\$982
Operating	\$2,829	\$3,193	\$3,614	\$4,104	\$2,731	\$16,471
Total	\$4,237	\$4,696	\$5,226	\$5,843	\$3,844	\$23,846