

# BALTIMORE REGION TRANSPORTATION IMPROVEMENT PROGRAM 2011-2014

**DEVELOPED BY THE BALTIMORE METROPOLITAN PLANNING ORGANIZATION**

CITY OF ANNAPOLIS ♦ ANNE ARUNDEL COUNTY ♦ BALTIMORE CITY ♦ BALTIMORE COUNTY ♦ CARROLL COUNTY ♦ HARFORD COUNTY ♦ HOWARD COUNTY

MARYLAND DEPARTMENT OF TRANSPORTATION ♦ MARYLAND DEPARTMENT OF THE ENVIRONMENT ♦ MARYLAND DEPARTMENT OF PLANNING

**July 27, 2010  
Final**

 **BALTIMORE REGIONAL TRANSPORTATION BOARD**

**The preparation of this document has been financed through funds provided by the Maryland Department of Transportation and the Baltimore Metropolitan Council as matching shares for funds from the Federal Highway Administration and the Federal Transit Administration of the United States Department of Transportation.**

**Electronic copies are available from the:**

**Baltimore Metropolitan Council's web site  
[http://www.baltometro.org/TIP/TIP2011\\_14Final.pdf](http://www.baltometro.org/TIP/TIP2011_14Final.pdf)**

**Print copies are available from the:**

**Baltimore Metropolitan Council  
Regional Information Center  
2700 Lighthouse Point East, Suite 310  
Baltimore, MD 21224**

**Phone: 410-732-9570**

**Fax: 410-732-9488**

**E-mail: [mlogan@baltometro.org](mailto:mlogan@baltometro.org)**

## TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION .....	1
A. Summary .....	1
B. Metropolitan Planning Organization Self-Certification .....	2
C. Consistency with Transportation Outlook 2035.....	3
II. FEDERAL REQUIREMENTS AND REGIONAL REVIEW FUNCTION.....	5
A. Requirements of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users .....	5
B. Environmental Justice .....	7
C. Using Management and Operations Initiatives to Improve Transportation Network Performance.....	12
D. Coordinating Human Service Transportation .....	14
E. Additional Programs for Seniors and Persons with Disabilities .....	15
F. Regionally Significant Transportation Improvements.....	16
G. Status of Projects from the 2010-2013 TIP.....	22
H. Conformance with Air Quality Planning .....	30
III. PROGRAM DEVELOPMENT .....	32
A. Integration with Federal, State and Local Programs.....	32
B. Federal Fund Sources for Surface Transportation Projects.....	32
C. Amending the Transportation Improvement Program .....	33
D. Emergency Projects.....	34
IV. EXPLANATION OF TERMS AND SYMBOLS .....	36
V. THE FINANCIAL PLAN .....	43
A. Revenue Projections.....	44
B. Federal Aid Assumptions .....	47
C. Where The Money Comes From.....	48
D. Where The Money Goes .....	49
E. Documentation of Financial Capacity for Transit Activities .....	49
F. FY 2011 Federal-Aid Annual Element Listing and Summary .....	50
VI. JURISDICTIONAL MAPS .....	67

VII. TABULAR PROJECT LISTINGS .....	80
Baltimore City.....	83
Anne Arundel County .....	103
Baltimore County.....	111
Carroll County .....	139
Harford County .....	151
Howard County.....	167
MTA - Commuter Rail.....	170
MTA - Commuter Rail.....	171
MTA - Transit.....	177
State Highway Administration.....	202
State Highway Administration.....	203
Baltimore Metropolitan Council .....	255
APPENDIX A: Committee and Staff Roster .....	A
APPENDIX B: Documentation of Project Prioritization, Financial Reasonableness and Flexible Funding .....	B
APPENDIX C: Self Certification .....	C
APPENDIX D: Areawide Projects .....	D
APPENDIX E: Projects Between Funding Stages .....	E
APPENDIX F: FY2010-2013 TIP Amendment Log.....	F
APPENDIX G: Public Participation Component .....	G
APPENDIX H: Glossary of Terms .....	H

## LIST OF TABLES

	<u>Page</u>
II-1 Regionally Significant Projects.....	18
II-2 Status of Projects in the 2008-2012 TIP .....	23
V-1 FY 2010 Annual Element .....	52
V-2 Summary of FY 2011, 2012, 2013, and 2014 Federal-Aid Annual Element for the Baltimore Region .....	58

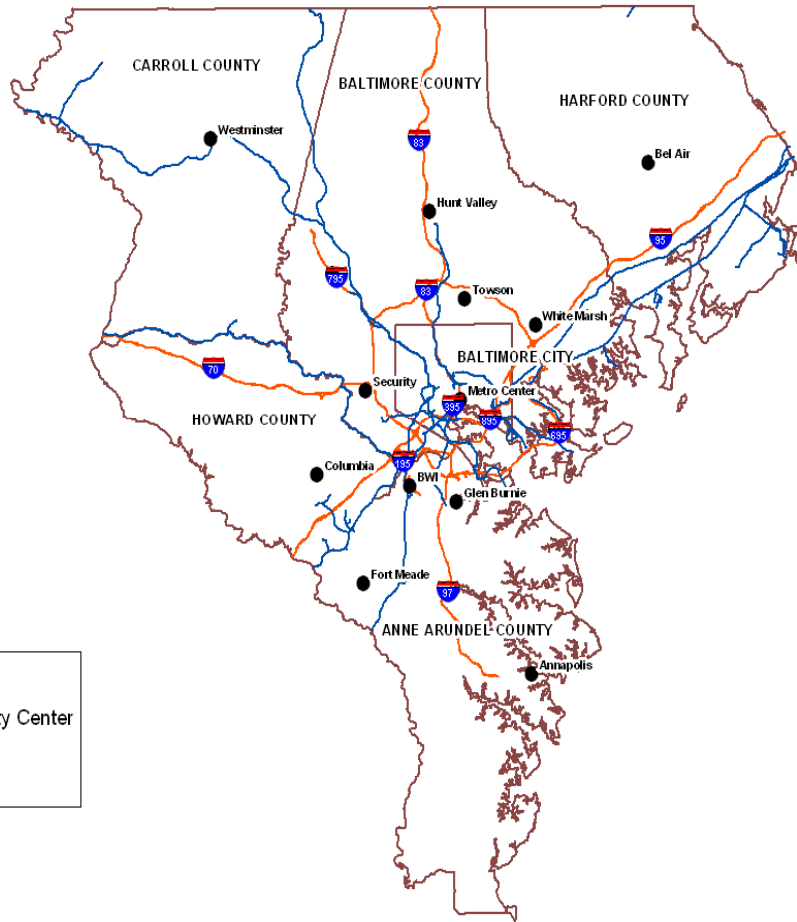
## LIST OF EXHIBITS

	<u>Page</u>
I-1 The Baltimore Region .....	v
II-1 Minority Concentration, Baltimore Region, 2000 .....	10
II-2 Low Income Concentration, Baltimore Region, 2000 .....	11
IV-1 Congestion Management Corridors in the Baltimore Region .....	41
IV-2 The National Highway System in the Baltimore Region .....	42
V-1 Comparison of Total Costs of Projects in the 2007, 2008, and 2010 TIP .....	60
V-2 Summary of the 2010 Annual Element by Project Listing:	
- Number of Projects by Percentage .....	61
- Percent of Federal Funds .....	62
V-3 Summary of the 2010 Annual Element by Project Type:	
- Number of Projects by Percentage .....	63
- Percent of Federal Funds .....	64
V-4 Summary of the 2010 Annual Element by Fund Source .....	65
V-5 Summary of the 2010 Annual Element by Fund Source: Percent of Federal Funds .....	66
VI-1 TIP Projects in Anne Arundel County & City of Annapolis with Low Income & Minority Concentrations.....	69
VI-2 TIP Projects in Baltimore City with Low Income & Minority Concentrations .....	71
VI-3 TIP Projects in Baltimore County with Low Income & Minority Concentrations .....	73
VI-4 TIP Projects in Carroll County with Low Income & Minority Concentrations.....	75
VI-5 TIP Projects in Harford County with Low Income & Minority Concentrations.....	77
VI-6 TIP Projects in Howard County with Low Income & Minority Concentrations .....	79

**Left blank intentionally**

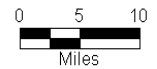
Exhibit I-1

*The Baltimore Region*



**LEGEND**

- Major Regional Activity Center
- Rail Line
- Major Highway



**Left blank intentionally**

**BALTIMORE METROPOLITAN PLANNING ORGANIZATION**

**BALTIMORE REGIONAL TRANSPORTATION BOARD  
RESOLUTION #11-3**

**APPROVAL OF THE BALTIMORE REGION  
2011-2014 TRANSPORTATION IMPROVEMENT PROGRAM AND CONFORMITY  
DETERMINATION OF *TRANSPORTATION OUTLOOK 2035* AND THE  
2011-2014 TRANSPORTATION IMPROVEMENT PROGRAM**

**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 of the cities of Annapolis and Baltimore, the counties of Anne Arundel, Baltimore, Carroll, Harford, and Howard, and the Maryland Department of Transportation, the Maryland Department of the Environment, and the Maryland Department of Planning; and

**WHEREAS**, the 2011-2014 Transportation Improvement Program was prepared in response to the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users and meets all of the requirements of the February 2007 final rule governing the development of metropolitan plans and programs, and all projects and activities funded in this document have been developed in relationship to the regionally adopted *Transportation Outlook 2035*; and

**WHEREAS**, the Interagency Consultation Group (ICG) which includes the Maryland Department of the Environment, the Maryland Department of Transportation and a local jurisdiction representative of the Baltimore Regional Transportation Board reviewed and approved the methodology used as well as the results of the technical analysis. The ICG has approved the conformity analysis as reported in the “Conformity Determination of *Transportation Outlook 2035* and the 2011-2014 Transportation Improvement Program,” dated July 2010, which provides the basis for a finding of conformity (Attachment 1: Tables II-9 and II-10) to the Reasonable Further Progress (RFP) motor vehicle emissions budgets in the Baltimore Nonattainment Area 8-Hour Ozone State Implementation Plan, as well as emissions budgets in the Carbon Monoxide Maintenance Plan and to the fine particulate matter nonattainment area interim emissions test required by §93.109 (i)(3) of the Final Transportation Conformity Rule updated most recently in March 2010; and

**WHEREAS**, the Transportation Improvement Program is a prioritized program of transportation projects which are financially constrained by year and includes a financial plan that demonstrates that projects can be implemented using current revenue sources; and

**WHEREAS**, the Annual Element of the 2011-2014 Transportation Improvement Program uses federal funds for the following project categories: sixty-four percent highway preservation, thirteen percent emission reduction strategies, eleven percent

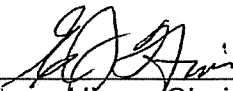
transit, six percent highway capacity, three percent environmental/safety, two percent miscellaneous, and one percent enhancement program; and

**WHEREAS**, opportunities for public comment were provided, including various public participation/education meetings on project elements, methodology and results of the conformity analysis and were duly considered by the Metropolitan Planning Organization; and

**NOW, THEREFORE, BE IT RESOLVED** that the Baltimore Regional Transportation Board approves the 2011-2014 Baltimore Region Transportation Improvement Program and the accompanying Conformity Determination.

**I HEREBY CERTIFY** that the Baltimore Regional Transportation Board, as the Metropolitan Planning Organization for the Baltimore region, approved the aforementioned resolution at its July 27, 2010 meeting.

7/27/2010  
Date

  
\_\_\_\_\_  
Emery Hines, Chairman  
Baltimore Regional Transportation Board

**Table II-9 Final Emissions Results – Ozone and CO Standard**  
(tons/day)

		2015 Emissions			2025 Emissions			2035 Emissions		
		VOC	NO <sub>x</sub>	CO	VOC	NO <sub>x</sub>	CO	VOC	NO <sub>x</sub>	CO
<i>Motor Vehicle Emissions Budgets</i> from the 8-hour ozone RFP SIP		41.2	106.8	--	41.2	106.8	--	41.2	106.8	--
<i>Motor Vehicle Emissions Budget</i> from the CO Maintenance Plan		--	--	1,689.80	--	--	1,689.80	--	--	1,689.80
<b>NETWORK BASED ANALYSIS</b>		<b>27.63</b>	<b>45.40</b>	<b>781.16</b>	<b>19.82</b>	<b>20.27</b>	<b>766.73</b>	<b>20.73</b>	<b>17.82</b>	<b>810.22</b>
<b>Emission Reduction Strategies</b>	<b>IMPLEMENTED</b>									
	* Includes Ride Share Program	-0.11	-0.61	-1.08	-0.01	-0.49	-0.47			
	<b>PROGRAMMED - TIP, CTP, &amp; CIP</b>									
	Bus Replacement and Bicycle/Pedestrian Improvements		-0.22	-0.09		-0.22	-0.09			
	CHART (Areawide Congestion Management)		-0.23			-0.09				
<i>Off-Network Analysis Total</i>		-0.11	-1.06	-1.17	-0.01	-0.80	-0.56	0.00	0.00	0.00
<b>IMPLEMENTATION TOTAL</b>		<b>27.52</b>	<b>44.34</b>	<b>779.99</b>	<b>19.81</b>	<b>19.47</b>	<b>766.17</b>	<b>20.73</b>	<b>17.82</b>	<b>810.22</b>
Eight-hour Ozone Budgets vs. Implementation		-13.68	-62.46	--	-21.39	-87.33	--	-20.47	-88.98	--
CO Maintenance Budget vs. Implementation		--	--	-909.81	--	--	-923.63	--	--	-879.58

**Table II-10 Final Emissions Results – PM2.5 Standard**  
(tons/year)

		2015 Emissions		2025 Emissions		2035 Emissions	
		Direct PM2.5	NOx	Direct PM2.5	NOx	Direct PM2.5	NOx
<i>Motor Vehicle Emissions Budget from the PM2.5 SIP</i>		686.97	36,502.41	686.97	36,502.41	686.97	36,502.41
<i>2002 Baseline Year Emissions</i> for the Interim Emissions Test		1,043.51	63,759.38	1,043.51	63,759.38	1,043.51	63,759.38
<b>NETWORK BASED ANALYSIS</b>		458.72	16,900.85	422.84	7,705.57	442.65	6,837.04
<b>Emission Reduction Strategies</b>	<b>IMPLEMENTED</b>						
	*Includes Ride Share Program	-15.28	-159.26	-0.60	-127.38		
	<b>PROGRAMMED - TIP, CTP, and CIP</b>						
	Bus Replacement and Bicycle/Pedestrian Improvements	-0.42	-56.45	-0.42	-56.45		
	CHART (Areawide Congestion Management)	-1.06	-60.91	-0.84	-24.33		
	<i>Off-Network Analysis Total</i>	-16.76	-276.62	-1.86	-208.16	0.00	0.00
<b>IMPLEMENTATION TOTAL</b>		441.96	16,624.23	420.98	7,497.41	442.65	6,837.04
PM2.5 Budgets vs. Implementation		-245.01	-19,878.18	-265.99	-29,005.00	-244.32	-29,665.37
2002 Baseline vs. Implementation		-601.55	-47,135.15	-622.53	-56,261.97	-600.86	-56,922.34