



Appalachian Development Highway System 2007 Cost-to-Complete Report

December 2007



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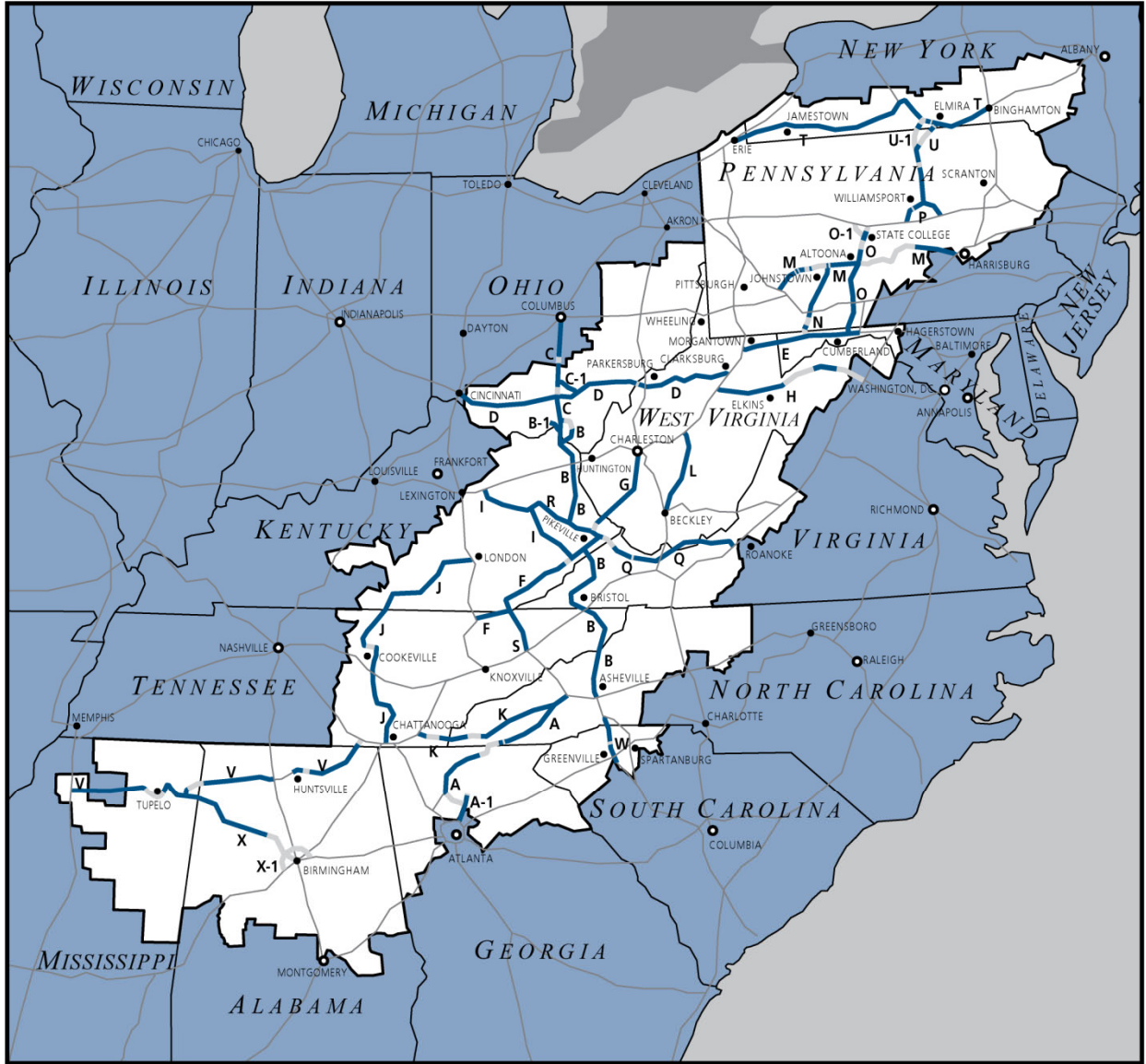
Federal Highway Administration, Office of Program Administration

The Nick J. Rahall Appalachian Transportation Institute (RTI), located at Marshall University, was responsible for developing and providing a web-based automated ADHS cost estimating system for State DOT's to prepare their 2007 ADHS Cost to Complete Estimate. The Appalachian Regional Commission extends its sincere appreciation to RTI for their role in developing the 2007 Cost to Complete Estimate in a cost efficient manner.



APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM

September 30, 2006






-  ADHS Miles Open to Traffic—September 30, 2006
-  ADHS Miles Not Open to Traffic
-  Interstate Highway System

TABLE OF CONTENTS

Executive Summary	1
Introduction	3
Methodology	5
Status of Completion	5
Cost to Complete the ADHS and Remaining Needs	7
Factors Affecting the Cost of Remaining Work	8
Projected ADHS Obligations.....	9
ADHS Unobligated Balances	10
Benefits of the ADHS	10
Adding Capacity to the Interstate System.....	12

Tables

Table 1. ADHS Funding Apportionment Factors	4
Table 2. Status of Completion of the ADHS (Miles)	6
Table 3. Cost to Complete the ADHS and Remaining ADHS Funds Needed	8
Table 4. Projected Annual ADHS Federal Funding Obligations, by State.....	9
Table 5. ADHS Unobligated Balances	10

Figures

Figure 1. Status of Completion of the ADHS: Percentage of Miles in Each Stage of Development	6
Figure 2. Status of Completion of the ADHS: Number of Miles in Each Stage of Development, by State	7

Appendices

Appendix A: Federal Highway Administration Oversight of the Preparation of the Cost-to-Complete Estimate	13
Appendix B: Overview of States' Estimates	17
Appendix C: Overview of Cost Changes since the ADHS 2002 Cost-to-Complete Estimate	51
Appendix D: Summary Tables	
Table D-1. Summary of ADHS Costs and Miles by Stage of Development	63
Table D-2. ADHS Cost to Complete and Funding Needs.....	64
Table D-3. ADHS Authorizations	66
Table D-4. ADHS Total Federal Allocations and Apportionments, FY 1998 to FY 2009	67
Table D-5. ADHS Total Federal Obligation Authority, FY 1998 to FY 2009	68
Table D-6. Status of ADHS Mileage as Component of the National Highway System	69
Table D-7. ADHS Approved Corridors and Termini.....	70

EXECUTIVE SUMMARY

Congress created the Appalachian Regional Commission (ARC) in 1965 to facilitate economic and social development in the Appalachian Region. The Appalachian Region is a 200,000-square-mile region that follows the spine of the Appalachian Mountains from southern New York to northern Mississippi. It includes all of West Virginia and parts of 12 other states: Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, and Virginia.

Recognizing the importance of an efficient transportation system to the Region's development, Congress established the Appalachian Development Highway System (ADHS) as the centerpiece of ARC's economic and social development programs. The ADHS was designed to connect Appalachia, both physically and economically, to the rest of the nation and to generate jobs across the Region.

In 1998, ARC completed a study to objectively measure the extent to which completed portions of the ADHS had contributed to the Region's economy. The study determined that the ADHS corridor sections studied had returned \$1.32 in economic benefits (increased jobs, wages, and productivity) and \$1.18 in travel efficiency benefits (reduced travel time, savings in vehicle operation costs, and fewer accidents) for each \$1.00 spent building them. The study demonstrated that investment in the ADHS benefited the people of Appalachia.

A new economic study on the benefits of the ADHS will be released by ARC in 2008. Key differences between this study and the earlier one include

- The 1998 study examined the economic impact of 12 completed highway segments, while the 2008 study estimated the benefits of completing the entire ADHS;
- The 2008 study emphasized the network benefits of a complete highway system, while the 1998 study focused on individual segment analysis;
- National freight flow data that had not been available for the 1998 study was used in the 2008 study to assess the benefits of the ADHS to the national freight system; and
- The 2008 study estimated potential economic development benefits due to improved market access to labor force, buyers, suppliers, and multimodal facilities.

The 2008 study determined that the majority of user benefits of completing the ADHS would accrue to the nation as a whole, due to reductions in travel time, while the majority of economic development benefits would accrue to the Appalachian Region. Therefore, economic benefit-cost ratios were developed from two perspectives—that of the Appalachian Region and the nation as a whole. While costs are the same from each perspective, benefits vary in important ways. Completing the ADHS would benefit the Region by increasing accessibility to markets, resulting in increased competitiveness and economic growth for Appalachia. The nation as a whole would benefit because a significant share of traffic on the ADHS would consist of long-distance freight shipments with origins and destinations outside the Region.

The study estimated the economic development benefit-cost ratio of completing the ADHS at 3.6 for the Appalachian Region, using a medium-growth scenario based on the most conservative, high-cost projections. The estimated return for the nation, using the same scenario, is \$3.00 for every \$1.00 invested. In addition, the study estimated the travel-efficiency benefit-cost ratio of completing the ADHS, using the medium-growth scenario based on the most

conservative, high-cost projections, at 1.9 for the Appalachian Region and 2.9 for the nation as a whole.

As of September 30, 2006, 2,362.3 miles, or more than 76 percent of the total 3,090 miles of ADHS authorized by Congress, were complete; 144.3 miles were open to traffic with stage construction remaining; 128.9 miles were in the construction stage; and 454.6 were in either the location or the design stage.

Federal funding for the ADHS is currently authorized through the federal transportation authorization act SAFETEA-LU (Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users). The act authorized \$470 million for the ADHS for each of the fiscal years 2005 through 2009, to cover 80 percent of the costs associated with constructing eligible ADHS miles. It directs those funds to be apportioned to the Appalachian states based on the most current ADHS cost-to-complete estimate. The funds remain available to the states until expended.

In 2007, ARC undertook a full-scale study of the cost to complete the ADHS, the first formal estimate since 2002. The purpose of the ADHS 2007 Cost-to-Complete Estimate is to determine the level of federal funding needed to complete the system and to provide the basis for apportioning and allocating the funds authorized and appropriated for the ADHS.

The 2007 total estimated cost to complete the ADHS (combined federal and state costs in 2005 dollars) is \$11.8 billion, including \$0.309 billion in pre-financed projects currently under construction with state funds. At an 80 percent participation rate, the federal share of the cost to complete the ADHS would be \$9.4 billion. However, due to limitations on federal funds placed on several states by ARC, the actual federal share of the cost to complete the ADHS is \$8.8 billion. With \$2.3 billion in available federal funding, the remaining federal funding needed to complete the ADHS is \$6.5 billion. This amount is an increase of \$2 billion over the remaining federal funding needs estimated in the ADHS 2002 Cost-to-Complete Report. The increase can be attributed to three factors: the authorization by Congress of Corridor X-1 in Alabama, which added 65 miles to the ADHS; an average inflation rate of 40 percent in construction costs in the Appalachian Region between 2002 and 2007; and refinement of cost estimates as ADHS projects have progressed through the stages of development.