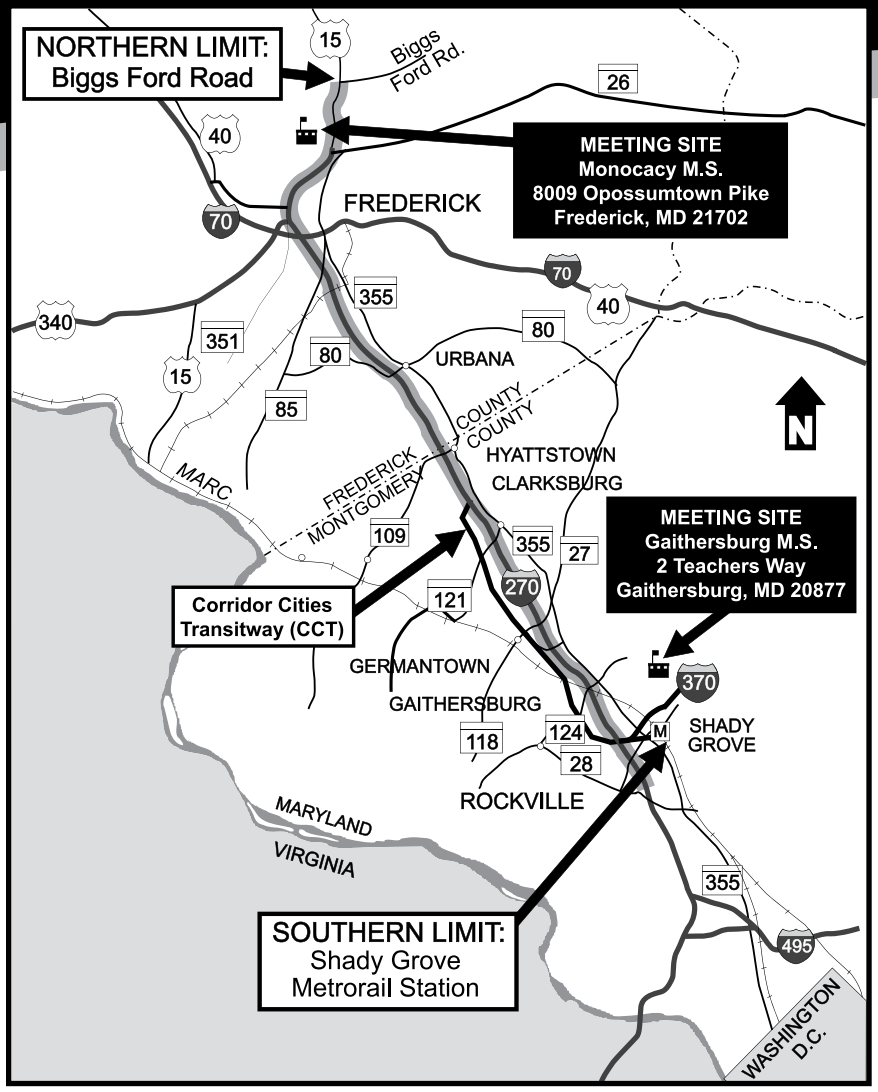
I-270/US 15 Multi-Modal Corridor Study

Public Hearings



Montgomery County

Tuesday, June 16, 2009
5:00 p.m.

Gaithersburg Middle School
2 Teachers Way
Gaithersburg, MD 20877

Frederick County

Thursday, June 18, 2009
5:00 p.m.

Monocacy Middle School
8009 Opossumtown Pike
Frederick, MD 21702

www.i270multimodalstudy.com

INTRODUCTION

The I-270/US 15 Multi-Modal Corridor Study is a joint project planning study undertaken by the Maryland State Highway Administration (SHA) and the Maryland Transit Administration (MTA). The study area includes 31 miles of proposed highway improvements along the I-270 and US 15 corridor between I-370 in Montgomery County and north of Biggs Ford Road in Frederick County, and the 14-mile Corridor Cities Transitway (CCT), a proposed rapid transit corridor within Montgomery County that extends from the Shady Grove Metrorail station in Rockville to the COMSAT area just south of Clarksburg. The transitway would provide direct connections to the Metrorail Red Line at Shady Grove and the MARC Brunswick Line at Metropolitan Grove. The CCT will directly serve a number of major activity centers and growth centers in the corridor. Feeder bus service to station areas will be provided by local transit operators.

The objective of the I-270/US 15 Multi-Modal planning study is to provide the public and decision-makers with appropriate and relevant information needed to make an informed decision on a preferred mix of highway and transit investments as defined by the various alternatives under study. The National Environmental Policy Act of 1969 (NEPA) requires consideration of the impacts to the natural and built environment of any federally funded transportation investment. NEPA requires a systematic interdisciplinary analysis of the costs and benefits of a proposed action, including the following:

- The effects of the proposed action on the transportation system
- The measures taken to avoid potential impacts
- Strategies for minimizing or mitigating unavoidable impacts, as appropriate.

PROJECT HISTORY

In 2002, SHA and the MTA completed a Draft Environmental Impact Statement (DEIS) that reviewed nine separate alternatives of different combinations of highway and transit alternative investment strategies for the I-270/US 15 Multi-Modal Corridor, including a No-Build Alternative and Transportation System Management/Transportation Demand Management Alternative (TSM/TDM). Roadway build alternatives considered the addition of general-purpose lanes or managed lanes such as high-occupancy vehicle lanes. Transit alternatives included consideration of bus rapid transit, light rail transit, or premium bus paired with the alternative highway improvements.

The *Alternatives Analysis/Environmental Assessment* (AA/EA) completed this year serves as a companion to the DEIS issued in 2002. The companion designation means that new alternatives, Alternatives 6A/B and 7A/B, have been examined to the same level of environmental review as the alternatives that are presented in the 2002 DEIS. The assessment responds to a decision made in 2004 to study two additional highway alternatives that include Express Toll Lanes (ETLs). In this document the potential transportation and environmental impacts, costs, and benefits of the two new alternatives are introduced, along with any changes to the planning environment that have occurred since the DEIS was published. These may include changes to the existing land use, county and city master plans, and projected future traffic numbers.

The evaluation of the alternatives was a step-by-step process that included extensive coordination with public agencies, elected officials, stakeholders, and members of the public. Alternatives were evaluated for environmental impacts, engineering constraints, transportation benefits, economic development opportunities, costs, and cost-effectiveness.

As the title signifies, this document is also an *Alternatives Analysis*, prepared in accordance with Federal Transit Administration (FTA) requirements guiding the development of federally funded major capital transit investment projects. The requirements of the AA process are intended to allow for an objective, efficient, and fully-informed evaluation and rating of the transit projects seeking funding under the Federal New Starts process. The FTA discretionary New Starts program is the federal government's primary financial resource for funding locally planned, implemented, and operated capital transit investments.

The purpose of an AA document is to evaluate the costs and benefits of a range of transportation alternatives designed to address a specific transportation purpose and need for a specific transportation corridor. The information presented

Highway Lane Descriptions

- **General-Purpose** (GP) lanes are regular traffic lanes designed to accommodate all motor vehicle traffic on interstate and state highways, generally posted at speeds of 55 miles per hour or higher.
- **High-Occupancy Vehicle** (HOV) lanes are dedicated lanes which can only be used by vehicles with two or more occupants or by motorcycles. HOV lanes are managed lanes designed to encourage car-pooling.
- **Express Toll Lanes** (ETLs) are another type of managed lanes designed to alleviate congestion in the GP lanes and provide relatively free-flowing traffic. Motorists who wish to travel in the less congested ETLs pay a toll that is collected at highway speed by an E-ZPass℠ transponder.

is intended to support decision-making on a preferred investment strategy to take into more detailed study and development. This document compares the relative costs and benefits of Alternative 6.2: Transit TSM (premium bus operating on local roads and I-270) with Light Rail Transit (LRT) and Bus Rapid Transit (BRT) paired with the highway improvements included in Alternatives 6A/B and 7A/B. LRT is represented by the "A" in each alternative (6A and 7A) and BRT is represented by the "B" (6B and 7B).

Transit Mode Descriptions

- **Light Rail Transit** (LRT) is an electric railway system that can operate single cars or short trains. LRT for this project would operate completely on an exclusive right-of-way, not mixed with traffic.
- **Bus Rapid Transit** (BRT) is a high quality bus system that has characteristics common to both premium bus and LRT. BRT for this project would be a specially branded bus system operating on entirely exclusive bus lanes, not mixed with traffic.

LRT in Houston

BRT in France

PURPOSE OF THE HEARINGS

The purpose of the hearings is to provide interested individuals, associations, citizen groups, or government agencies, and other members of the public with the opportunity to review information about the project, ask questions of SHA and MTA staff, and provide comments as part of the public record on the results of detailed engineering and environmental studies for the two new alternatives, Alternatives 6A/B and 7A/B, including the results of the comparison of transit alternatives. The results are compiled in the AA/EA document, which will be available for review beginning on May 29, 2009.

HEARING FORMAT

Maps and other exhibits depicting the studied alternatives will be on display for public viewing beginning at 5:00 p.m. on each day of the hearings. Representatives from the I-270/US 15 project team will be available to answer questions related to the project. The maps and other exhibits will remain on display until 9:00 p.m. There will be no formal presentation; however, there will be an opportunity for interested persons to speak to provide public testimony beginning at 7:00 p.m. The amount of time per speaker will be limited to three minutes. Those interested in speaking may contact Mr. Russell Anderson (see page 3 for contact information) until June 9, 2009. People may also sign up at the registration desk the day of the hearing to provide public testimony. The public may also provide testimony privately to a court reporter during the hearing. All proceedings will be recorded and a transcript will be prepared. The transcript will be available for public review within approximately eight weeks after the public hearing, at the locations indicated in this brochure.

Public Hearing Schedule

5:00 p.m. – 9:00 p.m.	Review maps and displays Q&A with project team
Starting 7:00 p.m.	Public testimony* (limited to 3 minutes per person)

*5:00 p.m. – 8:30 p.m. Private testimony will be taken by a court reporter

Hearing-impared persons who wish to attend this meeting should notify Mr. Anderson as noted above. The Maryland Relay Service can assist teletype users at 711. Non-English speaking persons who wish to attend should also notify Mr. Anderson to request an interpreter. A Spanish interpreter will be present to assist. All requests for an oral, sign-language, or non-English interpreter must be received by June 9, 2009. To the extent that this is feasible and possible, an interpreter will be provided.

HOW TO COMMENT ON THE STUDY

The public is encouraged to review the document, participate in the Public Hearing, or provide written comments as preferred. The postage-paid return mailer included in this brochure will enable interested persons to submit their comments. Additional copies of this mailer will be available at the check-in desk during the Public Hearing. Written comments for inclusion in the project record and the public hearing transcript may be submitted until Friday, July 31, 2009.

Please note that all comments, whether written or oral, carry equal weight in the AA/EA document deliberation process. **All comments received in the period from May 29, 2009 until July 31, 2009 will become part of the public record.** Anyone submitting a comment must include their name and address. Comments will be responded to in subsequent environmental documentation. Comments may be provided in the following ways:

Provide written comments to:

Mr. Russell Anderson, Project Manager
Maryland State Highway Administration
Project Management Division
707 North Calvert Street, Mail Stop C-301
Baltimore, MD 21202
410-545-8839 / 1-800-548-5026
randerson2@sha.state.md.us

The Maryland Relay Service can assist Teletype users at 711.

- Use the postage-paid return mailer included in this brochure
- Provide public oral testimony during the Public Hearing
- Provide private oral testimony with a court reporter

PROJECT MAILING LIST

Persons wishing to have their names placed on the project mailing list should complete the enclosed mailer or furnish appropriate information to the receptionist at the public hearings. If you have previously submitted your name and address by postcard, through the website, or by other means, or if you have received this brochure in the mail, you are already included on the project mailing list and do not need to resubmit.

ALTERNATIVES CONSIDERED IN THE AA/EA

The following section describes the new alternatives proposed in the AA/EA document.

Alternative 1: No-Build Alternative: The No-Build Alternative provides a basis to compare the build alternatives and represents existing conditions, with only routine maintenance and programmed improvements occurring in the corridor.

Alternatives 6A/B and 7A/B – Highway Component: The highway component of Alternatives 6A/B and 7A/B would provide general-purpose (GP) lanes, auxiliary lanes, Express Toll Lanes (ETLs), additional interchanges and improvements to existing interchanges. The two alternatives are designed on an identical physical footprint throughout the length of the project.

- Both Alternatives 6A/B and 7A/B would have four GP lanes and two ETLs in each direction between Shady Grove Road and MD 124.
- Both Alternatives 6A/B and 7A/B would have three GP lanes and two ETLs in each direction between MD 124 and proposed Newcut Road.
- Alternative 6A/B would have three GP lanes and one ETL in each direction between proposed Newcut Road and MD 121, and Alternative 7A/B would have three GP lanes and two ETLs in this section.
- Alternative 6A/B would have two GP lanes and one ETL in each direction between MD 121 and north of MD 80, and Alternative 7A/B would have two GP lanes and two ETLs in each direction in this section. The ETLs will terminate north of MD 80 in the vicinity of Park Mills Road.
- Alternative 6A/B would have three GP lanes in each direction from north of MD 80 in the vicinity of Park Mills Road to I-70, and Alternative 7A/B would have four GP lanes in each direction in this section.
- Both Alternatives 6A/B and 7A/B would have three GP lanes in each direction from I-70 north to Biggs Ford Road.

Alternatives 6A/B and 7A/B – Transit Component:
The transit component of Alternatives 6A/B and 7A/B would provide a fixed guideway service on the proposed Corridor Cities Transitway (CCT) alignment from the Shady Grove Metrorail Station to the Communications Satellite, Inc. (COMSAT) area in Montgomery County. Service would be provided by light rail transit or bus rapid transit on the guideway. Twelve new stations are proposed at residential, mixed-use, and employment centers along the route. Four additional stations have been identified as future facilities beyond 2030 to be built as needed. A new Operations and Maintenance (O&M) facility would be constructed to service transit vehicles. The transit component includes new feeder bus routes, new premium bus routes, park-and-ride facilities, and interactive transit information. A shared use hiker-biker trail adjacent to the transitway is also included.

The proposed CCT alignment is included as a component of Montgomery County's master planning documents, and the proposed alignment of the hiker-biker trail is described in the Montgomery County Countywide Bikeways Functional Master Plan (2005).

Alternative 6.1: No-Build Transit: The No-Build Transit Alternative is identical to the highway component of Alternative 6A/B without transit component. The No-Build Transit Alternative includes the existing transit services and programmed improvements listed in the Constrained Long Range Transportation Plan (CLRP). This alternative is included to support the transit Alternatives Analysis.

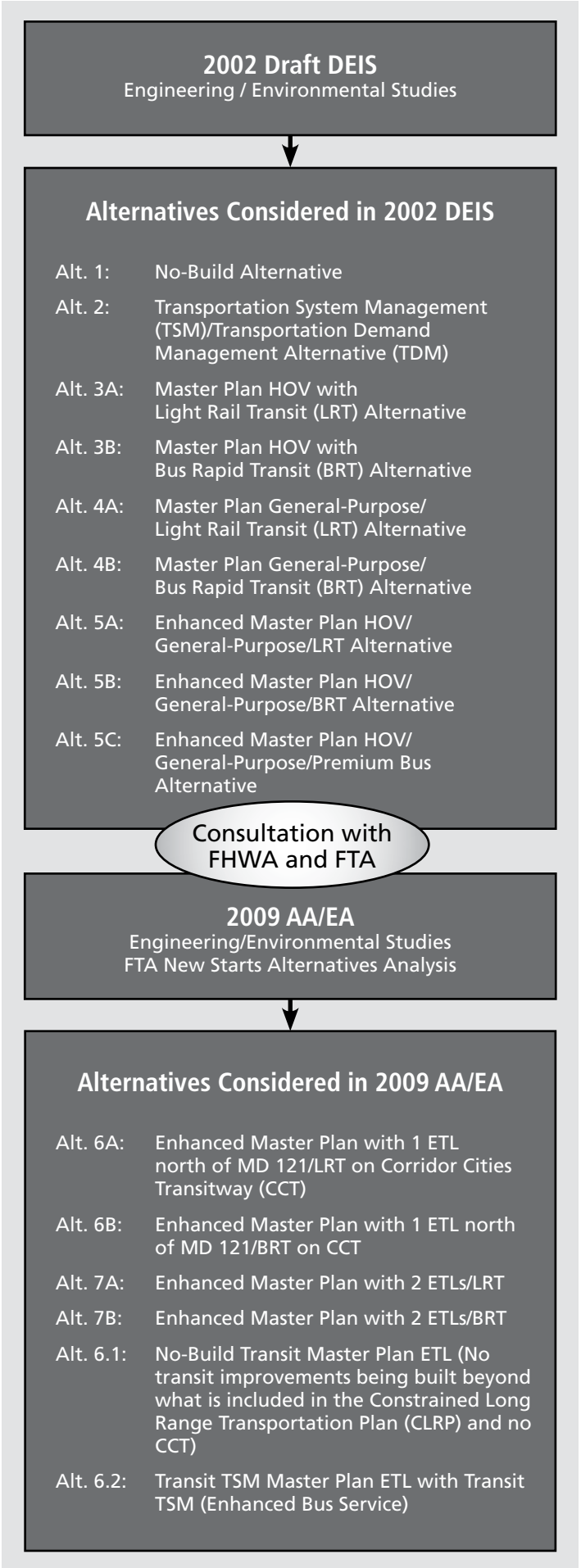
Alternative 6.2: Transit TSM: Transit Transportation System Management (TSM) provides a baseline for the FTA cost-effectiveness evaluation. The highway component for the alternative is the same as Alternative 6 A/B. The transit component for this alternative does not include the dedicated transitway but includes:

- Existing transit facilities with routine maintenance and minor improvements
- New stations at the CCT station locations
- New premium bus route serving those stations
- Park and ride facilities in the same locations as for Alternative 6A/B
- Additional new premium bus routes serving major activity centers
- Enhanced feeder bus route to Metrorail and MARC stations.

The Transit TSM alternative permits analysis of the additional costs and benefits that can be expected from the major capital investments included in Alternatives 6A/B and 7A/B.

PROJECT NEED

The need for the project results from the mobility challenges presented by the growing traffic congestion in the I-270/US 15 Corridor. The I-270/US 15 Corridor is currently served by a variety of transportation modes (including interstate highway, High-Occupancy Vehicle (HOV) lanes, commuter rail, and bus service) and intermodal opportunities (including-park-and ride lots and Metrorail). However, even with the variety of modal options available, the corridor is highly congested at many locations within the project area.



TRAFFIC OPERATIONS AND CONGESTION

Congestion in the corridor is expected to increase. Average Daily Traffic (ADT) traffic volumes on the I-270/ US 15 corridor are projected to increase as shown in ***Table 1*** by the year 2030.

The demand for transit service in the area, especially for rail transit, is strong. Growth in the demand for transit trips within the study area in Montgomery County in the Gaithersburg/Derwood and Germantown/Clarksburg transit market districts is anticipated to have a 99 to 110 percent increase by 2030, respectively. This represents a larger growth rate than the expected growth in population (26 percent). The Frederick County market district is anticipated to have over 450 percent growth in demand for transit trips.

As shown in ***Table 2***, continuing population and employment growth in Montgomery and Frederick counties are the main factors affecting travel through the project area.

Table 1: ADT Volumes Percent Growth under No-Build Conditions

Location	2002 DEIS Projections			Current Projections		
	1998 ADT Volumes	2025 ADT Volumes	Percent Growth	2000 ADT Volumes	2030 ADT Volumes	Percent Growth
I-270: Shady Grove Road and I-370	174,900	254,000	45%	210,000	247,000	18%
I-270: MD 124 and Middlebrook Road	119,600	213,500	79%	142,500	186,600	31%
I-270: MD 118 and Father Hurley Boulevard	83,100	130,200	57%	96,000	148,000	54%
I-270: MD 109 and MD 80	68,350	102,800	50%	74,000	113,800	54%
I-270: MD 80 and MD 85	71,250	125,600	76%	80,000	141,000	76%
US 15: Opossumtown Pike and MD 26	68,700	80,400	17%	76,000	85,500	12%
US 15: Hayward Road and Biggs Ford Road	35,700	61,900	73%	41,125	62,300	51%

Table 2: Demographic Forecast

Area	2000 Population	2030 Population	Percent Change	2000 Employment	2030 Employment	Percent Change
Montgomery County	875,672	1,158,074	32.2%	474,602	670,404	41.3%
Frederick County	195,277	339,696	74.0%	96,304	167,257	73.7%
Metropolitan Washington Region	5,748,109	8,250,078	43.5%	3,506,663	5,275,961	50.5%

A Level of Service (LOS) analysis was conducted for existing and forecasted (2030) No-Build conditions for the study area. The LOS is a measure of the congestion experienced by drivers, and ranges from "A" (free flow, with little or no congestion) to "F" (failure, with stop-and-go conditions). LOS is normally computed for the peak-periods of a typical weekday, with LOS D (approaching unstable flow) or better generally considered acceptable for intersections or highways in urban and suburban areas. At LOS E, volumes are near or at capacity. Once an intersection passes its theoretical capacity, extensive delay begins. LOS F represents conditions where demand exceeds capacity and where there are operational breakdowns with stop-and-go traffic and extremely long delays at signalized intersections.

Existing daily traffic volumes along the I-270/US 15 corridor vary greatly, depending upon location, with traffic volumes generally increasing as one approaches Washington, D.C. In addition, peak-hour LOS measurements show many sections within the corridor failing. In the I-270/US 15 corridor, the morning peak period is from 6:00 to 9:00 when the peak-hour traffic volumes occur. However, due to congestion, volumes similar to those experienced during the peak-hour last for several more hours at certain locations along I-270.

SUMMARY OF EFFECTS ON TRANSPORTATION SYSTEM PERFORMANCE

Highway Component

Implementing the proposed I-270/US 15 highway alternatives with ETLs will result in improved LOS on general-purpose lanes. ***Table 3*** shows the anticipated reduction of LOS F segments and roadway mileage for Alternatives 6A/B and 7A/B.

Transit Component

Transit coverage and hours of service will generally mirror existing coverage and service times. Travel speeds will increase as shown in ***Table 4***. By using a dedicated guideway, transit vehicles are expected to provide faster and more reliable service in mixed traffic on existing congested roadways. New stations would be equipped to provide real-time transit information and commuter amenities. Existing transit schedules may be adjusted to provide better connections to the new stations. New transit vehicles (light-rail cars or articulated buses) would provide a comfortable ride. The BRT Alternative would also allow some connecting feeder bus routes to be continuous by using the guideway between stations.

Table 3: Level of Service Improvements

	Alternative 1: No-Build	Alternative 6A/B	Alternative 7A/B
Total Miles of Roadway lanes	64	64	64
Number of Miles with LOS F (peak direction)	43	31	17
Total Roadway Segments Analyzed	42	48	48
Number of Segments with LOS F	23	14	7

Table 4: Sample Station to Station Travel Times in 2030 Peak Period

Alternative	COMSAT to Shady Grove	COMSAT to Germantown	Germantown to NIST	NIST to DANAC	DANAC to Shady Grove
Alternative 6.2: Transit TSM	60 min	11.3 min	19.9 min	11.8 min	16.6 min
Alternative 6A/7A (LRT)	36 min	10.6 min	9.1 min	8.3 min	8.1 min
Alternative 6B/7B(BRT)	38 min	11.1 min	9.3 min	8.6 min	8.9 min

ENVIRONMENTAL SUMMARY

The construction of a build alternative in the I-270/US 15 Corridor will impact the environment. Detailed analyses were performed on Alternatives 6A/B and 7A/B to identify the potential impacts to natural, cultural, and socioeconomic resources within the study area. A comparison and summary of potential impacts for each alternative – with Alternatives 3A/B, 4A/B, and 5A/B/C from the 2002 DEIS are included in ***Table 8***. Alternatives 6A/B and 7A/B have the same physical footprint, as an equal width of pavement will be provided for both highway alternatives. Similarly, the BRT and LRT transit guideways also have an identical footprint. Therefore, the impacts to environmental resources of the two alternatives are identical. Summary of Impacts of the Potential O&M Sites are shown in ***Table 9***. A summary of affected resources follows.

Land Use

In general, the master plan context for improvements in the I-270/US 15 Corridor is based on the Frederick and Montgomery County master planning documents, including:

- Montgomery County's On Wedges and Corridors master plan and the area plans within which the I-270 Corridor and CCT alignments lie (City of Gaithersburg, Gaithersburg Vicinity, Germantown, Clarksburg, and Hyattstown).
- Frederick City and County comprehensive plans and the area plans for the Frederick and Urbana Regions.

Existing land use in the study corridor is a mixture of residential, commercial, employment, agricultural, parkland, and conservation areas. Future land use in the corridor is designated for additional commercial, employment and residential development concentrated primarily in planned growth areas. Most transportation strategies are consistent with the various Montgomery and Frederick County master plans along the corridor.

The intent of the Smart Growth Priority Funding Areas Act of 1997 is to limit sprawl and direct state funding for growth-related projects toward county-designated Priority Funding Areas (PFAs). On-going coordination with the Maryland Department of Planning, including Board of Public Works approval consistent with the Act, will be required prior to the project entering the Construction Program.

Alternatives 6A/B and 7A/B would require the acquisition of 578 acres for the proposed right-of-way for the highway component. The transitway component would require the acquisition of 170 acres. An additional 12-40 acres of land would be required for the O&M facility, depending on the location that is selected.

Socioeconomic Resources

Alternatives 6A/B and 7A/B would displace between 256 and 260 residences (251 under the highway construction and ranging from five to nine under the transitway). Approximately 13 to 43 businesses would be displaced by the build alternatives. During final project design, subsequent minimization efforts such as the use of retaining walls and/or reductions in the roadway width could reduce residential displacements to approximately 12 to 83 (approximately nine to 74 for highway impacts) and business displacements to approximately five to 36. The construction of a transit O&M facility may displace up to four residences and up to 29 businesses, depending upon the site chosen.

Community facilities and services are located throughout the study area. They include 12 schools, two libraries, 16 places of worship, three post offices, six public safety departments (police, fire, and rescue), and eight hospitals. None of the community facilities or services would be displaced by any of the alternatives. Right-of-way acquisition will be required from one cemetery, the planned Montgomery County 6th District police station, the Montgomery County Correctional Facility, two schools, one church, one fire station, and two government facilities. None of the right-of-way required will affect activities of these facilities and services.

Affected property owners will receive relocation assistance in accordance with federal and/or state requirements depending on the project construction funding source. The Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987, will provide guidance for the relocation process. The SHA publication, "Your Land and Your Highways" provides guidance for property owners about the process.

Emergency response time in the study area is expected to improve due to the greater accessibility provided by the build alternatives. MTA and SHA will continue to coordinate with emergency services providers to identify potential traffic delays during construction and detour routes that may affect response times.

Environmental Justice (EJ)

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, directs federal agencies to "promote nondiscrimination in federal programs substantially affecting human health and the environment, and provide minority and low-income communities with access to public information on, and an opportunity for participation in, matters relating to human health or the environment." In compliance with Executive Order 12898, MTA and SHA are taking steps to identify and avoid disproportionately high and adverse effects on minority and low-income communities throughout the study area. An analysis of Year 2000 census data and an on-going field survey reveal that minority and/or low-income populations exist in various locations of the study area.

The project includes an extensive outreach program to involve these communities in the I-270/US 15 Project Planning Study. This program includes various meetings with community groups and the public. MTA and SHA will continue to involve these communities in the project area through mail notifications, public meetings, and presentations as appropriate.

Cultural Resources

SHA and MTA, in consultation with the Maryland Historical Trust (MHT), has conducted a survey of the study area for cultural resources. Ten historic properties were identified within the Area of Potential Effects (APE) of Alternatives 6A/B and 7A/B. Impacts to historic properties include the physical taking of land, noise, and visual changes that would result in adverse effects.

Monocacy Battlefield

Of the ten historic properties within the APE, Alternatives 6A/B and 7A/B would have an adverse impact on eight, which are listed below with their Maryland Inventory of Historic Properties (MIHP) numbers:

- England/Crown Farm (M:20-17)
- Belward Farm (M:20-21)
- Atomic Energy Commission Building (M:19-41)
- Monocacy National Battlefield (F-3-42)
- Schifferstadt (F-3-47)
- Rose Hill Manor (F-3-126)
- Spring Bank (F-3-22)
- Birely-Roelkey Farm (F-3-134)

Alternative 6A/B and 7A/B would have no adverse impact on the remaining two properties, Worman House (F-3-198) and Harmony Grove Union Chapel (F-3-197).

On-going archeological investigations will continue through to the selection of an alternative. MHT has concurred with MTA/SHA's determination that the project will have an adverse effect on historic properties.

In accordance with the Section 106 procedures of the National Historic Preservation Act, this public hearing provides the opportunity for public input regarding impacts to historic properties. Public views on the resolution of adverse effects on historic properties are being sought.

Section 4(f) Summary

Right-of-way from up to 13 publicly-owned public parks or recreational areas may be required depending upon the alternative selected. Section 4(f) permits the use of publicly-owned public parks and recreational areas, wildlife or waterfowl refuges, or significant historic sites only if there is no feasible and prudent alternative to that use. A Section 4(f) evaluation to develop and evaluate the avoidance or minimization of such use has been prepared to address these potential impacts.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and 23.CFR 774 allow the Federal Highway Administration (FHWA) to determine that certain minor uses of Section 4(f) lands will have no adverse effect on the protected resource(s). With respect to Section 4(f) resources, a finding of *de minimis* (minimal) impact may occur if a transportation project does not "adversely affect the activities, features and attributes" of the Section 4(f) property, based upon concurrence from the official(s) with jurisdiction over the resource(s). In addition, public notice and opportunity for public review and comment on the finding is required.

The SHA/MTA will seek concurrence from the FHWA/FTA and the resource jurisdictional officer on *de minimis* impact findings for the following parks:

- Malcolm King Park
- Morris Park
- Seneca Creek State Park
- Middlebrook Hill Neighborhood Conservation Area
- North Germantown Greenway
- Black Hill Regional Park
- Little Bennett Regional Park
- Urbana Lake Fish Management Area
- Urbana Community Park

Public input on these determinations is requested.

Black Hill Regional Park

Little Bennett Regional Park

NATURAL RESOURCES

The I-270/US 15 study area traverses the Washington Metropolitan and Middle Potomac River sub-basins. Streams in the project area are classified as Use I-P waters (protection of fish and aquatic life and contact recreation, including drinking water), Class III-P (natural trout waters and the protection of public water supply), and Class IV (recreational trout). Class I-P waters have an in-stream work restriction period of March 1 through June 15, Class III-P, from October 1 through April 30, and Class IV, from March 1 through May 31. Potential impacts to 100-year floodplains associated with Great Seneca Creek, Little Seneca Creek, Monocacy River, Carroll Creek and Tuscarora Creek, to name a few, is approximately 29 acres under either build alternative.

Potential wetland impacts are approximately 15.6 acres. Palustrine emergent wetlands are most impacted, followed by forested wetlands. Potential impacts to streams are approximately 24,200 linear feet, under either build alternative. In general, the stream impacts that would result from the build alternatives are due to pipe and culvert extensions, grading for fill slopes for the highway, and new culvert or bridge crossings related to the transit improvements. Adverse impacts to water quality during construction would be minimized through strict adherence to SHA and MTA sediment and erosion control procedures. Plans for stormwater management and sediment and erosion control will be developed in accordance with MDE criteria.

(Go to page 21)

Public Hearing Comment Form

Only comments received by 5:00 PM on July 31, 2009 will be included in the Public Hearing Record for the I-270/US 15 Multi-Modal Corridor Study.

PLEASE PRINT

Name: _____ Organization: _____

Address: _____

City: _____ State: _____ Zip Code: _____

I/We wish to submit the following comments on this project:

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STATE HIGHWAY ADMINISTRATION
ATTN: MR. RUSSELL ANDERSON, PROJECT MANAGER
PO BOX 717
BALTIMORE MD 21298-8317

▲ FOLD HERE ▲

Questions & Comments

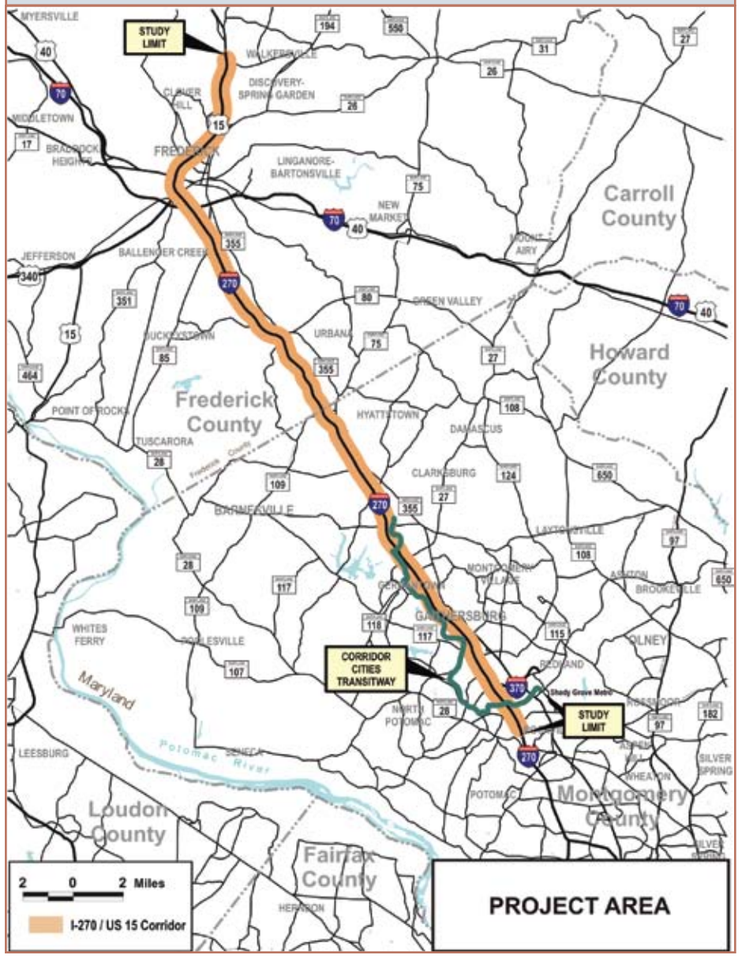
▼ TAPE HERE ▼

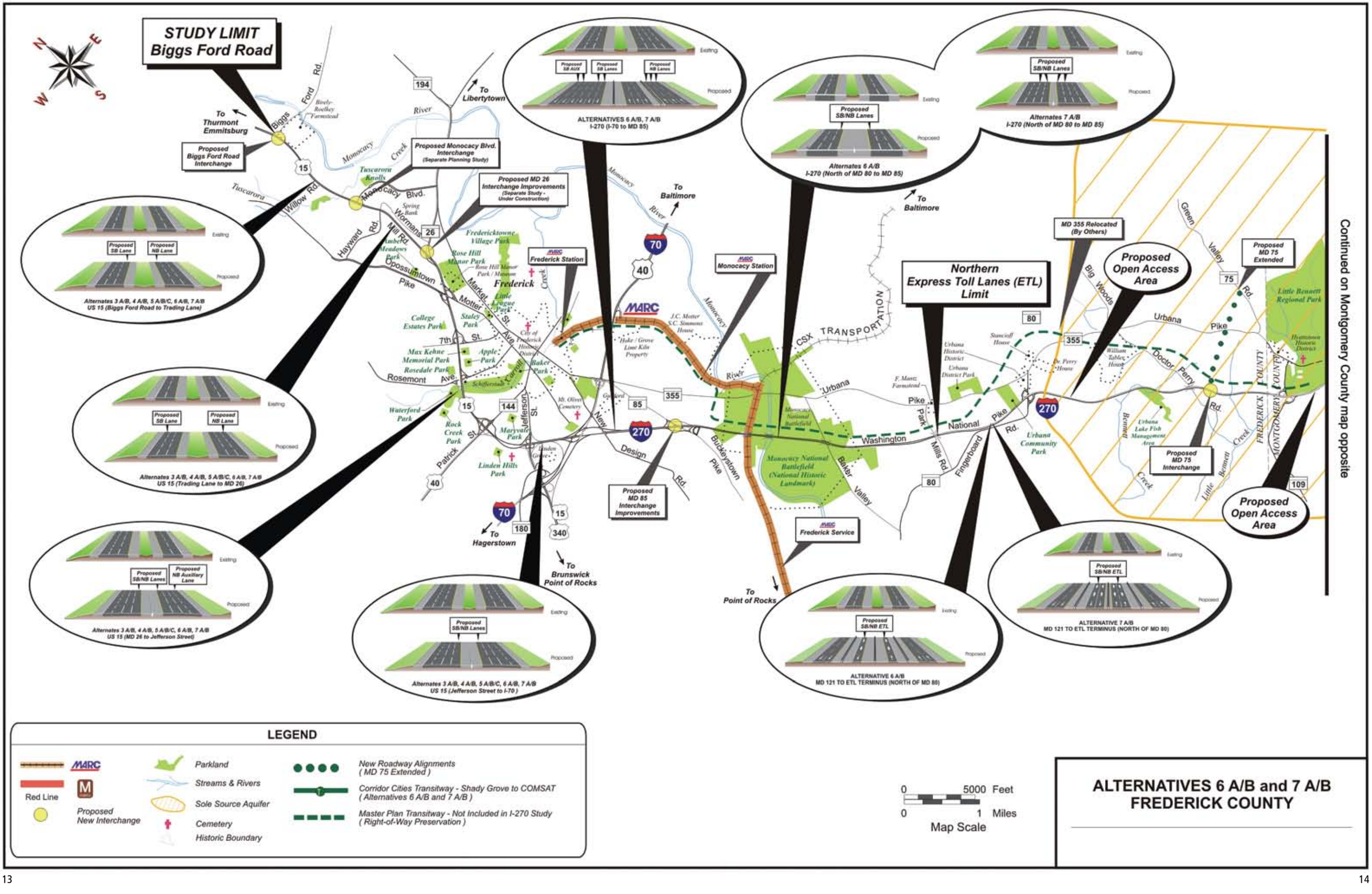
I-270/US 15 Multi-Modal Corridor Study

Maps Section

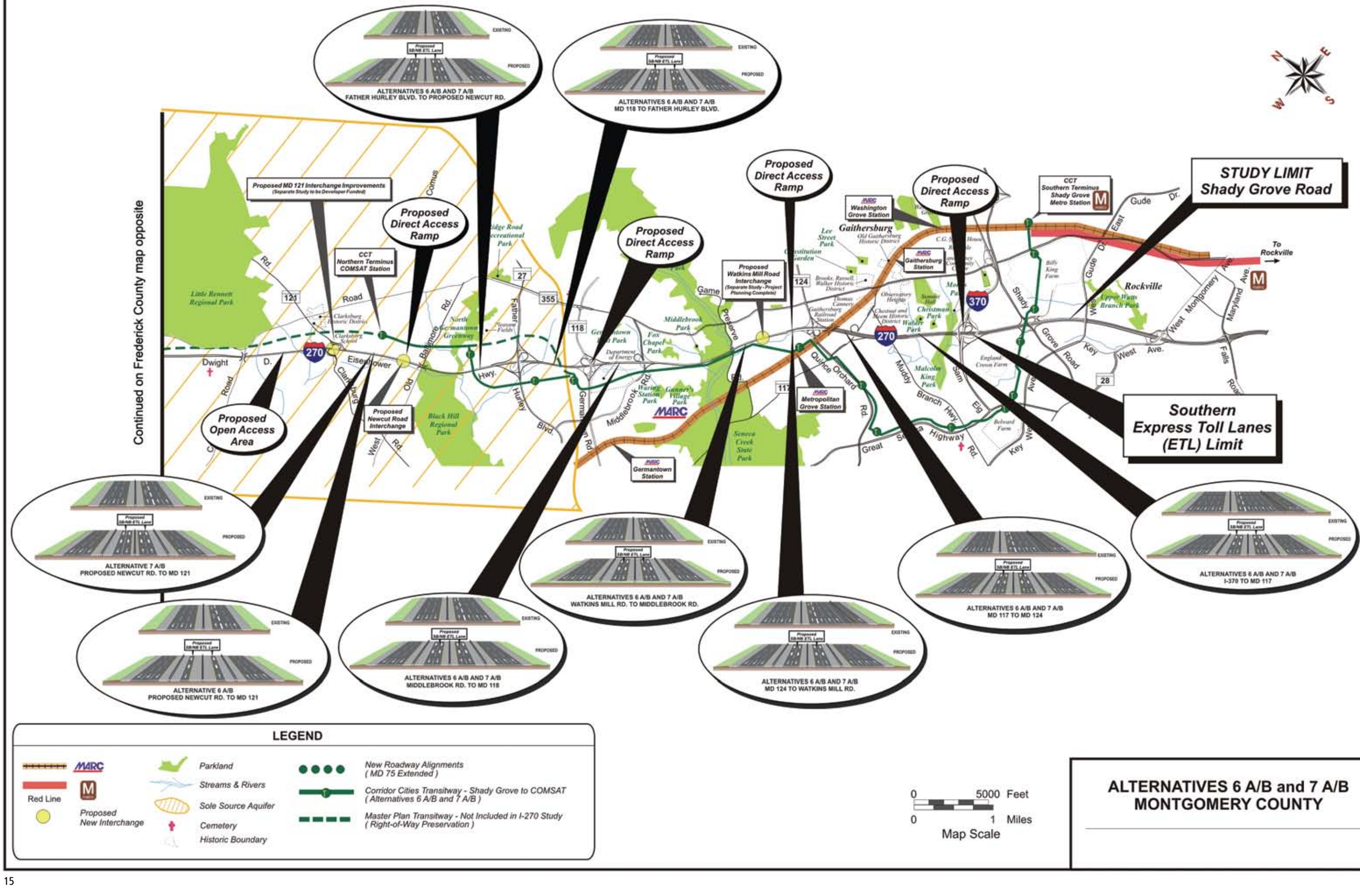
I-270/US 15 MULTI-MODAL CORRIDOR STUDY MAPS

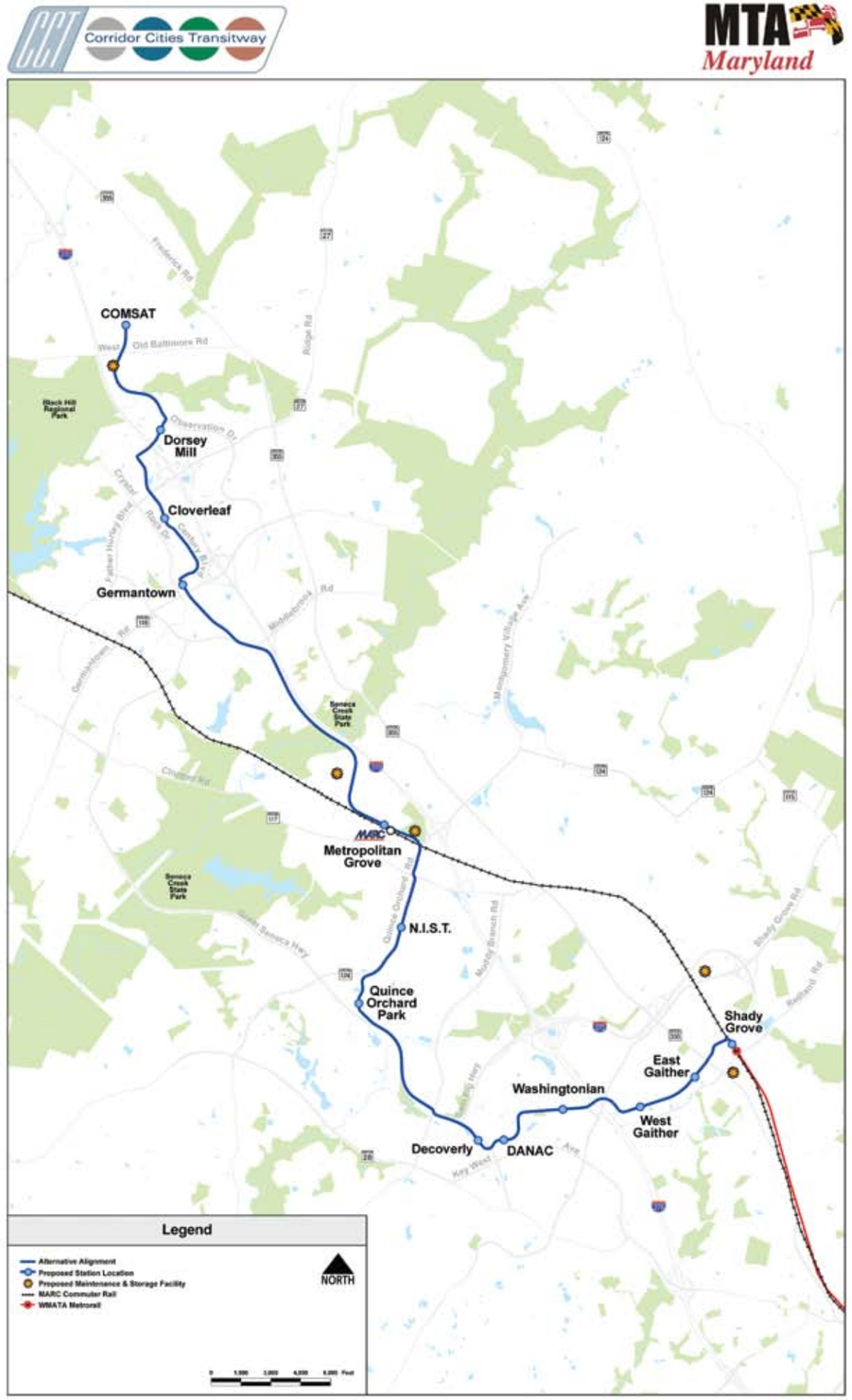
Below:	**Project Area**
Right:	**Corridor Cities Transitway**
Centerfold Left:	**Alternatives 6A/B and 7A/B Frederick County**
Centerfold Right:	**Alternatives 6A/B and 7A/B Montgomery County**




STUDY LIMIT
Biggs Ford Road
To Thurmont Emmitsburg
Proposed Biggs Ford Road Interchange
Biggs Ford Rd.
Proposed Monocacy Blvd. Interchange (Separate Planning Study)
Proposed MD 26 Interchange Improvements (Separate Study - Under Construction)
To Libertytown
To Baltimore
To Baltimore
MARC Frederick Station
MARC Monocacy Station
MARC Frederick Service
Northern Express Toll Lanes (ETL) Limit
Proposed Open Access Area
MD 355 Relocated (By Others)
Proposed MD 75 Extended
Proposed MD 75 Interchange
Proposed Open Access Area
Proposed MD 85 Interchange Improvements
To Hagerstown
To Brunswick Point of Rocks
To Point of Rocks
CSX TRANSPORTATION
Frederick
Urbana
Monocacy National Battlefield (National Historic Landmark)
Urbana Community Park
Urbana Lake Fish Management Area
Little Bennett Regional Park
Hyattstown Historic District
Alternates 3 A/B, 4 A/B, 5 A/B/C, 6 A/B, 7 A/B US 15 (Biggs Ford Road to Trading Lane)
Alternates 3 A/B, 4 A/B, 5 A/B/C, 6 A/B, 7 A/B US 15 (Trading Lane to MD 26)
Alternates 3 A/B, 4 A/B, 5 A/B/C, 6 A/B, 7 A/B US 15 (MD 26 to Jefferson Street)
Alternates 3 A/B, 4 A/B, 5 A/B/C, 6 A/B, 7 A/B US 15 (Jefferson Street to I-70)
ALTERNATIVES 6 A/B, 7 A/B I-270 (I-70 to MD 85)
Alternates 6 A/B I-270 (North of MD 80 to MD 85)
Alternates 7 A/B I-270 (North of MD 80 to MD 85)
ALTERNATIVE 6 A/B MD 121 TO ETL TERMINUS (NORTH OF MD 80)
ALTERNATIVE 7 A/B MD 121 TO ETL TERMINUS (NORTH OF MD 80)
Existing
Proposed
Proposed SB Lane
Proposed NB Lane
Proposed SB/NB Lanes
Proposed NB Auxiliary Lane
Proposed SB/NB ETL
Continued on Montgomery County map opposite
LEGEND
MARC
Red Line
Proposed New Interchange
Parkland
Streams & Rivers
Sole Source Aquifer
Cemetery
Historic Boundary
New Roadway Alignments (MD 75 Extended)
Corridor Cities Transitway - Shady Grove to COMSAT (Alternatives 6 A/B and 7 A/B)
Master Plan Transitway - Not Included in I-270 Study (Right-of-Way Preservation)
0 5000 Feet
0 1 Miles
Map Scale
ALTERNATIVES 6 A/B and 7 A/B
FREDERICK COUNTY

Continued on Frederick County map opposite




COMSAT
Old Baltimore Rd
Black Hill Regional Park
Observation Dr
Dorsey Mill
Cloverleaf
Germantown
Seneca Creek State Park
Metropolitan Grove
MARC
N.I.S.T.
Quince Orchard Park
Shady Grove
East Gaither
Washingtonian
West Gaither
Decoverly
DANAC
Legend
Alternative Alignment
Proposed Station Location
Proposed Maintenance & Storage Facility
MARC Commuter Rail
WMATA Metrorail
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Summary of Effects on Transportation System Performance	1	2	3	4
Environmental Summary	1	2	3	4
Natural Resources	1	2	3	4
Summary of Costs	1	2	3	4
Cost-Effectiveness Analysis	1	2	3	4
Remaining Steps in the Project Planning Process	1	2	3	4
Right-of-way Relocation Assistance	1	2	3	4

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The study area contains prime farmland soils and soils of statewide importance. While there are active farms in the project area, the ability to actively farm these lands could remain. Conversion of existing forest land to transportation use would require approximately 296 acres. The majority of forest impacts will occur primarily to forest edges along existing roadways.

Coordination with the U.S. Fish and Wildlife Service (USFWS) and the Department of Natural Resources (DNR) Wildlife & Heritage Service indicates that while there are no federally listed threatened or endangered plant or wildlife species known to exist in the study area, there are two state listed threatened fish species, the Pearl Dace and the Comely Shiner, that could be adversely affected under either build alternative. Best management practices and in-stream time of year restrictions will be utilized during construction and stormwater management planning to avoid and/or minimize impacts to these fish species.

Air Quality

A detailed air quality analysis has been conducted for this project. The air quality analysis used data from the travel demand model to estimate the total emissions produced under the No-Build Alternative and under Alternatives 6A/B and 7A/B.

As Montgomery and Frederick counties are considered to be in "non-attainment" for particulate matter (PM 2.5), an analysis was performed to determine the extent of impacts associated with the proposed I-270/US 15 study improvements. The project falls under the jurisdiction of the Metropolitan Washington Council of Governments (MWCOG). MWCOG is the federally-recognized Metropolitan Planning Organization for transportation planning in the Washington D.C. Region. MWCOG approved the 2008-2012 Transportation Improvement Plan on April 16, 2008, and has concluded the region's transportation plan and program are in conformity with the State Implementation Plan relative to air quality goals. Therefore, the I-270/US 15 study has been included in a conforming plan and program in accordance with 40 CFR 93.115. The current conformity determination is consistent with the final conformity rule found in 40 CFR, Parts 51 and 93.

A revised air quality analysis, which will include Mobile Source Air Toxics (MSATs) analysis, will be completed when an alternative has been selected. A PM 2.5 analysis will also be completed and submitted to the FHWA, EPA, MDE, and MWCOG. In addition, the analysis will be posted on SHA's website, www.marylandroads.com, for a 15 day public comment period.

Noise and Vibration

A detailed noise analysis has been conducted in accordance with SHA noise policy. Fifty-five representative noise sensitive properties were identified along the proposed I-270/US15 corridor. The noise analysis findings indicate that there would be 40 locations impacted under the proposed Alternative 6A/B build design and 39 locations with the proposed Alternative 7A/B improvements.

Great Heron Wetland at Urbana Elementary School

Along the proposed transitway corridor, 25 representative properties were evaluated for noise impact assessment in accordance with FTA noise impact guidelines. Noise impacts associated with LRT operations were projected with or without horn noise. Horn noise contributions were determined to not cause any new noise impacts. Noise generated from BRT and LRT transit line operations were evaluated, with four impacts identified under the LRT alternative.

Noise barrier feasibility and reasonableness at impacted properties identified along the highway corridor was determined in accordance with SHA noise abatement policy guidelines. Noise mitigation acoustic effectiveness at impacted properties identified along the transitway corridor was determined following the analysis methodology contained in the FTA Transit Noise manual applying SHA unit barrier factors. A final determination of the feasibility and reasonableness of noise barriers will be made after a preferred alternative has been identified and additional design information becomes available.

Noise generated from activities associated with proposed O&M facilities (i.e. moving trains and other sources) would generally be acceptable during the daytime hours at most of the residential sites near the potential O&M facilities sites. However, these noise levels would be unacceptable at night; therefore, it is recommended that noise-producing O&M activities be limited to daytime hours.

Vibration generated from LRT and BRT line operations along the transitway corridor would result in no vibration impacts to the nearest sensitive properties.

SUMMARY OF COSTS

Capital Cost Estimates

A summary of the capital cost estimates for Alternatives 6A/B and 7A/B is shown in ***Table 5***. The costs for the build alternatives range between approximately $4.3 billion (Alternatives 6B and 7B) and approximately $4.7 billion (Alternatives 6A and 7A). The capital cost estimates represent total project costs and include project planning, engineering design, right-of-way, vehicles (transit), and construction.

The estimated cost of the highway alternatives ($3,879 million) is the same for both Alternatives 6A/B and 7A/B, as they have the same physical footprint and the same quantity of pavement. The capital cost of the LRT Alternative ($777.5 million), is greater than for the BRT Alternative ($449.9 million).

Operations and Maintenance (O&M) Costs

Highway O&M costs are relatively low; they include routine repairs and periodic road resurfacing. Following construction, these costs will be incorporated into the overall repair cycle budget for the I-270 and US 15 roadways.

For the transit system, O&M costs cover labor and material costs to operate the transit service and maintain the vehicles and guideway. O&M costs fluctuate based on the level of transit service provided; e.g., frequency of service and number of vehicles needed to maintain that service. A summary of the estimated annual O&M costs is provided in ***Table 6***.

Funding Strategy

Highway funding is anticipated to be through a combination of Federal-aid highway funds and Maryland Transportation Trust Fund (TTF) funds. The collection of tolls on the ETLs, if selected as a build alternative, will help to provide funds as well. Additional funding options may be evaluated as needed.

Funding for the transit component will be achieved through a variety of sources. Maryland's TTF will provide funding for capital and operating costs. FTA's New Starts Program is anticipated to provide a portion of the capital funding cost. Additional sources of revenue may include funds from Montgomery County; the probable source will be local property tax revenues. Montgomery County is also anticipated to contribute portions of the right-of-way needed for the CCT. Private sector funding options will also be considered. The construction and maintenance of the hiker-biker trail component of the project is not anticipated to be funded as a part of the total package.

Cost Effectiveness

A cost effectiveness analysis of the transit components of Alternatives 6A/B and 7A/B provides a comparative index for FTA to use in determining the level of New Starts funding that would be provided for the proposed transit component. Cost effectiveness is a comparative measure of the value of travel time saved by transit system users due to the construction of the proposed transit project in each alternative.

Each of the build alternatives would optimize public investment by increasing the efficient use of the transportation system by reducing travel times and encouraging the use of transit. Because the BRT Alternatives 6B and 7B have a lower capital cost (see ***Table 5***), they rank much higher in terms of value provided per dollar than LRT Alternatives 6A and 7A. It is unclear whether Alternative 7A/B would provide the better public investment return because of the additional ETL between MD 121 and north of MD 80. By adding the second ETL, toll revenues may be decreased (to be dynamically determined based on general-purpose lane congestion), thereby requiring a higher public capital cost share to construct the same improvements.

Table 5: Summary of Capital Cost Estimates by Alternative

Cost Component	Alternative 6.2: Transit TSM	Alternative 6A or 7A	Alternative 6B or 7B
Highway			
Project Planning	$17.37	$17.37	$17.37
Engineering Design	$476.03	$476.03	$476.03
Right-of-Way	$378.65	$378.65	$378.65
Construction	$3,006.85	$3,006.85	$3,006.85
Subtotal – Highway	$3,878.90	$3,878.90	$3,878.90
Transit			
Construction	$49.22	$455.82	$281.93
Right-of-Way	$7.38	$35.00	$35.00
Vehicles	$11.36	$112.20	$25.66
Other*	$18.90	$174.51	$107.33
Subtotal – Transit	$86.86	$777.53	$449.92
TOTAL COST	$3,965.76	$4,656.43	$4,328.82

** Includes professional services and contingency.*

Cost estimates in $million 2007. Costs represent a "snapshot" in time for comparison. Project costs are subject to change based on world and local financial markets.

Table 6: Annual O&M Costs by Transit Alternative

Alternative	Light Rail Transit	Bus Rapid Transit	Background Bus	Total
Alternative 6.2: Transit TSM		$ 5,842,400	$8,950,950	$14,793,350
Alternative 6A, 7A	$26,985,700		$1,143,400	$28,129,100
Alternative 6B, 7B		$17,907,850	$8,950,950	$26,858,800

Note: All costs are shown relative to the No-Build.

COST-EFFECTIVENESS ANALYSIS

Estimated capital costs are summarized in ***Table 5***. Annual O&M costs, summarized in ***Table 6***, include daily operating expenses (fuel, operators and other personnel) as well as guideway maintenance. Cost effectiveness is calculated for FTA using their specified methodology. The results in ***Table 7*** show that the two BRT Alternatives 6B and 7B, with ratings of $18.50 and $18.25 per hour of user benefit, respectively, meet the FTA threshold with a "medium" cost-effectiveness rating, and would be acceptable to proceed into preliminary engineering, where more detailed studies would be conducted on the alignments and costs. Both of the LRT alternatives have "low" cost-effectiveness ratings.

Table 7: Cost-Effectiveness

	Alternative 6.2: Transit TSM	Alternative 6A	Alternative 6B	Alternative 7A	Alternative 7B
Total Daily Guideway Boardings	7,000	30,000	26,000	30,000	27,000
Capital Costs	$86,860,000	$777,530,000	$449,920,000	$777,530,000	$449,920,000
Net Change in Operating Costs	$14,793,000	$28,129,000	$26,859,000	$28,129,000	$26,859,000
Operating Costs above TSM		$13,336,000	$12,066,000	$13,336,000	$12,066,000
Daily User Benefit Hours	6,300	13,200	13,700	13,300	13,800
Annual Benefit Hours		2,070,000	2,220,000	2,100,000	2,250.000
Cost-Effectiveness Index		$32.90	$18.50	$32.43	$18.25

OTHER CORRIDOR PROJECTS

- US 15/MD 26 Interchange — New Northbound On-ramp — Completed 2006
- I-270/Watkins Mill Road — New Interchange in Gaithersburg (Preliminary Engineering)
- I-270/MD 121 Interchange — Developer Funded improvement in Clarksburg (Planning phase)
- US 15/Monocacy Boulevard Interchange — New Interchange in Frederick (Design phase)

REMAINING STEPS IN THE PROJECT PLANNING PROCESS

The following steps are required to complete the Project Planning Process:

- Evaluate and address public and agency comments received from the public hearings (Summer 2009)
- Receive MTA and SHA Administrator Concurrence on Locally Preferred Alternative (Fall 2009)
- Receive Location Approvals from the Federal Transit Administration and Federal Highway Administration and Design Approval from the Maryland Transit Administrator and State Highway Administrator for the Locally Preferred Alternative (Spring 2010)

NON-DISCRIMINATION IN FEDERALLY ASSISTED AND STATE-AID PROGRAMS

For information concerning non-discrimination in federally assisted and State-Aid programs, please contact:

State Highway Administration
Ms. Jennifer Jenkins, Director
Office of Equal Opportunity
707 North Calvert Street
Mail Stop C-406
Baltimore, Maryland 21202
Phone: 410-545-0315
Toll Free: 1-888-545-0098
jjenkins4@sha.state.md.us

Maryland Transit Administration
Ms. Paula Cullings, Director
Office of Fair Practices
6 Saint Paul Street
Baltimore, Maryland 21202
Phone: 410-767-3934
Toll Free: 1-888-218-2267
pcullings@mtamaryland.com

RIGHT-OF-WAY AND RELOCATION ASSISTANCE

Alternatives 6A/B and 7A/B would require the acquisition of land for the proposed right-of-way. Efforts are taken to minimize overall impacts associated with both the highway and transit alternatives. Minimization efforts would be considered where impacts could be further reduced. For information regarding right-of-way and relocation assistance, please contact:

SHA - Montgomery County
Mr. Paul Lednak
District #3 Office of Real Estate
State Highway Administration
9300 Kenilworth Avenue
Greenbelt, Maryland 20770
Phone: 301-513-7455
Toll Free: 1-800-749-0737
plednak@sha.state.md.us

SHA - Frederick County
Mr. Patrick Minnick
District #7 Office of Real Estate
State Highway Administration
5111 Buckeystown Road
Frederick, Maryland 21704
Phone: 301-624-8156
Toll Free: 1-800-635-5119
pminnick@sha.state.md.us

MTA - Montgomery & Frederick Counties
Mr. George Fabula
Office of Real Estate
Maryland Transit Administration
6 Saint Paul Street
Baltimore, Maryland 21202
Phone: 410-767-3695
Toll Free: 1-888-218-2267
gfabula@mtamaryland.com

MEDIA USED FOR MEETING NOTIFICATION

An advertisement will appear in the following newspapers to announce the public hearings:

- *The Washington Post*
- *The Examiner* (D.C.)
- *The Sun* (Baltimore)
- *The Afro-American* (D.C.)
- *The Frederick News Post*
- *Gazette* (F, G, and R Zones)
- *Washington Hispanic*
- *El Tiempo Latino*

YOUR OPINION MATTERS

These meetings are intended to provide an opportunity for the public to discuss with the Project Team its thoughts and concerns about the project and to provide written and oral comments to us. The Project Team will carefully review and consider the concerns and preferences expressed by the public during these public meetings. To assist you in providing comments, we have provided a pre-paid postage mailer as well as team member addresses and telephone numbers as part of this brochure.

PROJECT PLANNING TEAM

If you have questions about this project, please feel free to contact one of the persons listed below or access the project website at *www.i270multimodalstudy.com* or *www.marylandroads.com.*

Mr. Russell Anderson, Project Manager Maryland State Highway Administration Project Management Division 707 North Calvert Street Mail Stop C-301 Baltimore, MD 21202 410-545-8839 / 1-800-548-5026 randerson2@sha.state.md.us	Mr. Rick Kiegel, Project Manager Maryland Transit Administration Office of Planning 6 Saint Paul Street, Suite 902 Baltimore, MD 21202 410-767-1380 / 1-888-218-2267 rkiegel@mtamaryland.com
Mr. Gregory Slater, Director Maryland State Highway Administration Office of Planning and Preliminary Engineering 707 North Calvert Street Mail Stop C-411 Baltimore, MD 21202 410-545-0412 / 1-800-548-5026 gslater@sha.state.md.us	Ms. Diane Ratcliff, Director Maryland Transit Administration Office of Planning 6 Saint Paul Street Baltimore, MD 21202 410-767-3787 / 1-888-218-2267 dratcliff@mtamaryland.com
Ms. Anne Elrays, Environmental Manager Maryland State Highway Administration Environmental Planning Division 707 North Calvert Street Mail Stop C-301 Baltimore, MD 21202 410-545-8562 / 1-866-527-0502 aelrays@sha.state.md.us	Mr. Darrell Mobley, District Engineer Maryland State Highway Administration District #3 9300 Kenilworth Avenue Greenbelt, MD 20770 301-513-7300 / 1-800-749-0737 dmobley@sha.state.md.us
Mr. David Coyne, District Engineer Maryland State Highway Administration District #7 5111 Buckeystown Pike Frederick, MD 21704 301-624-8100 / 1-800-635-5119 dcoyne@sha.state.md.us	

THANK YOU

Thank you for your participation in the I-270/US 15 Multi-Modal Corridor Study. Your feedback is important to us, so please do not hesitate to send us your comments. In addition, please feel free to contact one of the project team members should you have any questions or concerns.

The project team is available to meet with community groups, homeowner associations, business groups, etc. Please contact the project manager to schedule a presentation.

Table 8: Summary of Impacts of All Build Alternatives (not including O&M Facilities)

Resource		Alternatives 3A/B	Alternatives 4A/B	Alternatives 5A/B
Natural Environment		**DEIS Alternatives**		
Total Limit of Disturbance (Edge of Pavement to new ROW) Highway Component Transitway Component				
Prime Farmland Soils	Total Highway component Transitway component	284.6 acres 195.8 acres 88.8 acres	284.6 acres 195.8 acres 88.8 acres	290.2 acres 202.4 acres 88.8 acres
Soils of Statewide Importance	Total[3] Highway component Transitway component	367 acres	367 acres	391.9 acres
Number of farmlands/active farm parcels Farmland required		30 133 acres	30 133 acres	30 143 acres
Floodplains	Total Highway component Transitway component	23 acres 20 acres 3 acres	23 acres 20 acres 3 acres	24 acres 21 acres 3 acres
Forest	Total Highway component Transitway component	183 acres 156 acres 27 acres	183 acres 156 acres 27 acres	199 acres 172 acres 27 acres
Rare, Threatened and Endangered Species				
Waters of the US Waters of the US	Total Streams[7] Total Wetlands Highway Component Streams Ephemeral channels[7] Wetlands Transitway Component Streams Ephemeral channels[7] Wetlands	14,185 linear feet streams[6] 10.7 acres wetlands 11,245 linear feet -- 9.1 acres 2,940 linear feet -- 1.6 acres	14,185 linear feet streams[6] 10.7 acres wetlands 11,245 linear feet -- 9.1 acres 2,940 linear feet -- 1.6 acres	16,331 linear feet streams[6] 11.6 acres wetlands 13,391 linear feet -- 10.0 acres 2,940 linear feet -- 1.6 acres
Cultural Resources				
Historic Properties Highway component (number/acres) Transitway component (number/acres)		7 properties[8]	7 properties[8]	7 properties[8]
Socioeconomic Resources				
Public Parks Highway component (number acres) Transitway component (number/acres)	Total	11parks/37 acres	11parks/37 acres	12 parks/44 acres
Right-of-Way	Total[11] Highway component Transitway component	562 acres 392 acres 170 acres	562 acres 392 acres 170 acres	592 acres 422 acres 170 acres
Residential Displacements[12] Highway component Transitway component		64-127	64-127	64-128
Business Displacements[13] Highway component Transitway component		4-11	4-11	4-12
Air Quality - Number of receptors with CO violations		0	0	0
Noise – Highway Number of monitored/modeled locations Number of locations exceeding abatement criteria Noise – Transitway Number of monitored/modeled locations Number of locations exceeding abatement criteria		55 locations total 26 residential impacts 10 non-residential impacts 15 locations total 13 residential impacts with horn noise (LRT only) 7 residential impacts without horn noise (LRT)	55 locations total 26 residential impacts 10 non-residential impacts 15 locations total 13 residential impacts with horn noise (LRT only) 7 residential impacts without horn noise (LRT)	55 locations total 26 residential impacts 9 non-residential impacts 15 locations total 13 residential impacts with horn noise (LRT only) 7 residential impacts without horn noise (LRT)
Hazardous Materials - Number of affected properties		6(4 highway, 2 transitway)	6(4 highway, 2 transitway)	6(4 highway, 2 transitway)

Alternative 5C	Alternatives 6A/B	Alternatives 7A/B
DEIS Alternatives	**AA/EA Alternatives**	
	1,476 acres 1,192 acres 284 acres[4]	1,476 acres 1,192 acres 284 acres[4]
207.7 acres 207.7 acres n/a	720.7 acres 642 acres 78.7 acres[4]	720.7 acres 642 acres 78.7 acres[4]
339.6 acres[3]	483.5 acres 460 acres 23.5 acres[4]	483.5 acres 460 acres 23.5 acres[4]
27 106 acres	38 191 acres	38 191 acres
21 acres 21 acres n/a	28.4 acres 25.6 acres 2.8 acres[4]	28.4 acres 25.6 acres 2.8 acres[4]
180 acres 180 acres n/a	295.8 acres[4] 268.6 acres 27.2 acres	295.8 acres[4] 268.6 acres 27.2 acres
	Potential[5]	Potential[5]
13,407 linear feet streams[6] 10.7 acres wetlands 13,407 linear feet -- 10.7 acres n/a -- n/a	24,204 linear feet streams[4,6,7] 15.6 acres wetlands 20,198 linear feet 10,812 linear feet 13 acres 4,006 linear feet 1,646 linear feet 2.6 acres	24,204 linear feet streams[4,6,7] 15.6 acres wetlands 20,198 linear feet 10,812 linear feet 13 acres 4,006 linear feet 1,646 linear feet 2.6 acres
Cultural Resources		
5 properties[8]	7 properties/43.28 acres[9] 5/31.17 acres 3/12.11 acres	7 properties/43.28 acres[9] 5/31.17 acres 3/12.11 acres
Socioeconomic Resources		
13 parks/48 acres	13 parks/42.72 acres[10] 13/37.56 acres 1/5.16 acres	13 parks/42.72 acres[10] 13/37.56 acres 1/5.16 acres
446 acres 446 acres n/a	748 acres 578 acres 170 acres	748 acres 578 acres 170 acres
127-385	256-260 251 5-9	256-260 251 5-9
2-11	13-43 10-11 3-32	13-43 10-11 3-32
0	0	0
55 locations total 35 total impacts 9 noon-residential impacts	55 highway locations total 28 residential impacts 12 non-residential impacts 25 transit locations 4 residential impacts (LRT only)	55 highway locations total 27 residential impacts 12 non-residential impacts 25 transit locations 4 residential impacts (LRT only)
4 (highway)	6 (4 highway, 2 transitway)	6 (4 highway, 2 transitway)

NOTES:

1. Impacts of Alternatives 3A/B, 4A/B, 5A/B and 5C are from the 2002 DEIS.
2. Alternatives 6A/B and 7A/B have an identical highway footprint.
3. Total includes all soils in Frederick County (including prime farmland and soils of statewide importance) plus soils of statewide importance in Montgomery County (as calculated in the 2002 DEIS).
4. Does not include potential impacts of transit O&M facilities, as only one may be chosen.
5. Potential direct and indirect impacts to two fish species: Pearl Dace and Comely Shiner.
6. Does not include ephemeral streams.
7. Since 2002, the USACE has broadened the definition of waters of the US to include ephemeral streams (channels). Ephemeral streams were not considered in the 2002 DEIS.
8. The Atomic Energy Commission Building was not evaluated for eligibility in the 2002 DEIS and is not included in these numbers. It is presumed that the DEIS alternatives 3A/B, 4A/B and 5A/B would have similar impacts as Alternatives 6A/B and 7A/B. Alternative 5C would only have highway impacts.
9. Two resources, Seneca Creek State Park and the Atomic Energy Commission Building, are impacted by both highway and transitway. One additional property is only affected by noise.
10. One park is impacted by both the highway and transit components.
11. Highway component for Alternatives 6A/B and 7A/B include one park and ride lot. Highway component for the 2002 DEIS alternatives includes three park and ride lots.
12. Updates to displacements are ongoing.

Impacts do not include those from O&M facility, as only one may be chosen. O&M facility impacts are presented on ***Table 9***.

Table 9: Summary of Impacts of the Potential O&M Sites

Site	Shady Grove Area Sites			Metropolitan Grove Area Sites			COMSAT Area Site	Range of Impacts
	Redland Road LRT (1D)	Redland Road BRT (1D)	Crabbs Branch Way BRT (6)	PEPCO LRT (4/5)	Police Vehicle Impound Lot LRT (6)	Police Vehicle Impound Lot BRT (6)	Observation Drive BRT (5)	
Total ROW	17.7	16	12	22	18.7	18.7	40	12-40
Prime Farmland Soils, acres	7.4	5.89	8.23	2.68	12.48	12.48	6.29	2.68-12.48
Soils of Statewide Importance, acres	7.4	0	0.72	12.03	1.92	0.55	5.74	0.55-12.03
Floodplains, acres	0	0	0	0	0	0	0	0
Wetlands, acres	0	0	0	0	0	0	0	0
Streams, linear feet	0	0	0	660	486	486	0	0-660
Forest, acres	0	0	0	18.7	10.2	10.2	0.8	0-18.7
Historic Properties, number	0	0	0	0	0	0	0	0
Public Parks, number	0	0	0	0	0	0	0	0
Noise Impacts[1]	Yes	Yes	0	Yes	0	0	0	
Residential Displacements, number	0	0	0	4	0	0	1	0-4
Business Displacements, number	29	29	0	0	1	1	0	0-29

NOTE: Only one site will be chosen for an O&M Site. Any of the appropriate O&M sites (LRT sites for alternatives 'A' and BRT sites for alternatives 'B') could be constructed with any of the build alternatives (3A/B, 4A/B, 5A/B, 6A/B, or 7A/B).

1. Monitor Y-1 is representative of the Redland Road site 1D. Monitors Y-2 and Y-3 represent the PEPCO LRT site 4/5. No impacts from indoor activities; outdoor activities will produce impacts.

June 2009

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