MARYLAND
97

WELCOME

MD 97 MONTGOMERY HILLS PROJECT PLANNING STUDY

Location/Design Public Hearing

Montgomery Blair High School
51 University Boulevard East
Silver Spring, MD 20901

Tuesday, December 1, 2015

6:00 p.m. – Open House	7:00 p.m. - Public Hearing
Maps and displays for review Staff available for questions	30 minute presentation Public Testimony

HEARING OBJECTIVES

- Provide updates on the progress of the Study
- Present alternatives under consideration
- Present results of detailed engineering/environmental studies
- Present the next steps
- Receive feedback

MARYLAND 97

MD 97 Montgomery Hills Project Planning Study

PUBLIC HEARING PROCEDURES

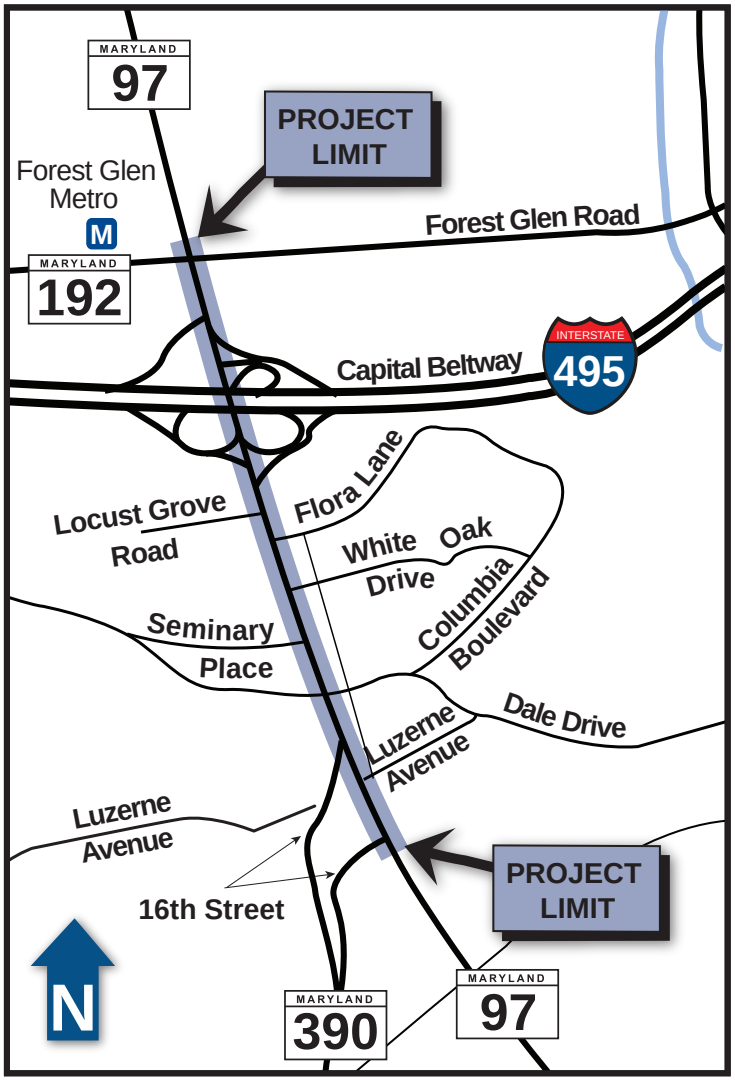
PUBLIC TESTIMONY

- **Speakers for public testimony will be called in the order they registered. You may add your name to the Speakers List at the registration table**
- **The Project Team will receive statements only - no questions will be addressed from the floor. Staff members are available to answer questions in the open house area.**
- **If a large number of people enroll, a time limit of three minutes for each speaker may be necessary to ensure that everyone can be heard**
- **Please begin your testimony by spelling your name, and providing your address and organization name, if you are representing one**
- **Please speak into the microphone. Testimony will be taped and transcribed for a hearing transcript**

OTHER WAYS TO COMMENT

- **Individuals may speak privately to a court reporter outside of the auditorium to provide testimony or to add to their public testimony**
- **Written statements and comment card submissions are also welcomed and must be received by December 31, 2015 for inclusion in the hearing transcript**
- **Public, private and written testimony will be considered equally in project considerations**

PROJECT LOCATION



PROJECT DEVELOPMENT PROCESS

Planning*

Design*

Right-of-Way Acquisition*

Construction*

**Each phase is funded separately in the Consolidated Transportation Program*

Initiation & Scoping Process

- Develop Purpose and Need Statement
- Conduct preliminary environmental inventory
- Develop Preliminary Alternatives
- Conduct travel demand analysis

Alternatives Public Workshop

- Evaluate comments from public and regulatory agencies
- Select alternatives for detailed study
- Develop Detailed Alternatives
- Perform detailed environmental analysis
- Prepare draft environmental document

Location/Design Public Hearing

- Evaluate comments from public and regulatory agencies
- Perform additional studies, if necessary
- Prepare final environmental document
- Select Preferred Alternative

Obtain Location & Design Approvals

- Public Involvement
- Agency Coordination

SHA State Highway Administration
Driven to Excel
Maryland Department of Transportation

PUBLIC OUTREACH

Public Meetings

- Informational Workshop February 2012
- Alternatives Public Workshop June 2013

Stakeholder Group

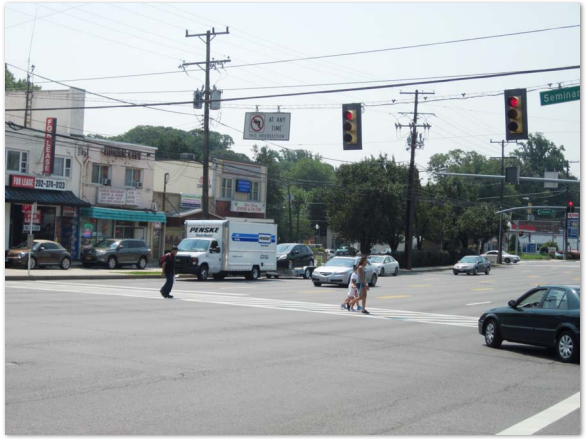
- Stakeholder Group has met seven times
- Includes 18 representatives of civic associations, faith communities, Holy Cross Hospital, area businesses, bicycle proponents, Montgomery County Chamber of Commerce, commuters, residents, transit users, and other members recommended by local elected officials

Meetings with Community Associations, Businesses, Property Owners as requested

EXISTING CONDITIONS

ROADWAY

- 3 lanes northbound, 3 lanes southbound, 1 reversible center lane (no physical median) between I-495 and 16th Street
- Visual clutter with light poles and signs
- Commercial corridor with multiple access points
- Left-turns prohibited during peak travel periods



TRANSIT SERVICES

- Metrobus
- Ride-on bus
- Metrorail

PEDESTRIAN/BICYCLE FACILITIES

- Sidewalks not compliant with Americans with Disabilities Act (ADA) Standards
- Limited crosswalks
- No on-road bicycle accommodations
- Pedestrian bridge crosses I-495

PROJECT PURPOSE

To establish a balanced approach to transportation within the MD 97 corridor that:

- **Evaluates vehicular, pedestrian and bicyclist mobility and safety**
- **Accommodates proposed transit enhancements**
- **Establishes a sense of place within the Montgomery Hills community**

PROJECT NEEDS

Improved Vehicular Circulation

- The Montgomery Hills section of MD 97 carries more vehicular traffic than any other non-interstate road in Montgomery County. Access to side streets and local businesses along the corridor is difficult.

Unobstructed Pedestrian Access

- Sidewalks along this corridor are generally non-compliant with Americans with Disabilities Act (ADA) standards. Signs and utility poles on sidewalks in both directions along MD 97 present numerous reduced-width areas and obstacles for wheelchair accessibility.

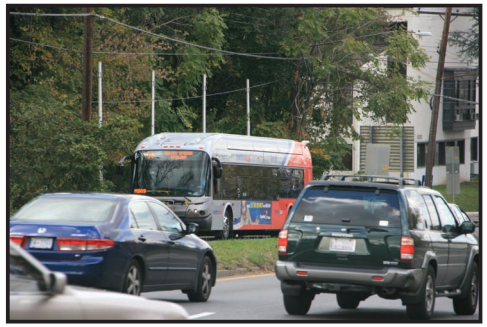
PROJECT NEEDS

Designated Bicycle Access

- The lack of dedicated bicycle lanes and road-sharing signage or markings makes it difficult for bicyclists to travel through the area. Heavy traffic volumes and the lack of shoulders create conditions that discourage bicycle use.

Improved Transit Accessibility

- Transit accessibility within the study corridor is impeded by the high levels of traffic congestion along MD 97 and the lack of adequate pedestrian/bicyclist connectivity throughout the study area.



PROJECT NEEDS

Improved Safety

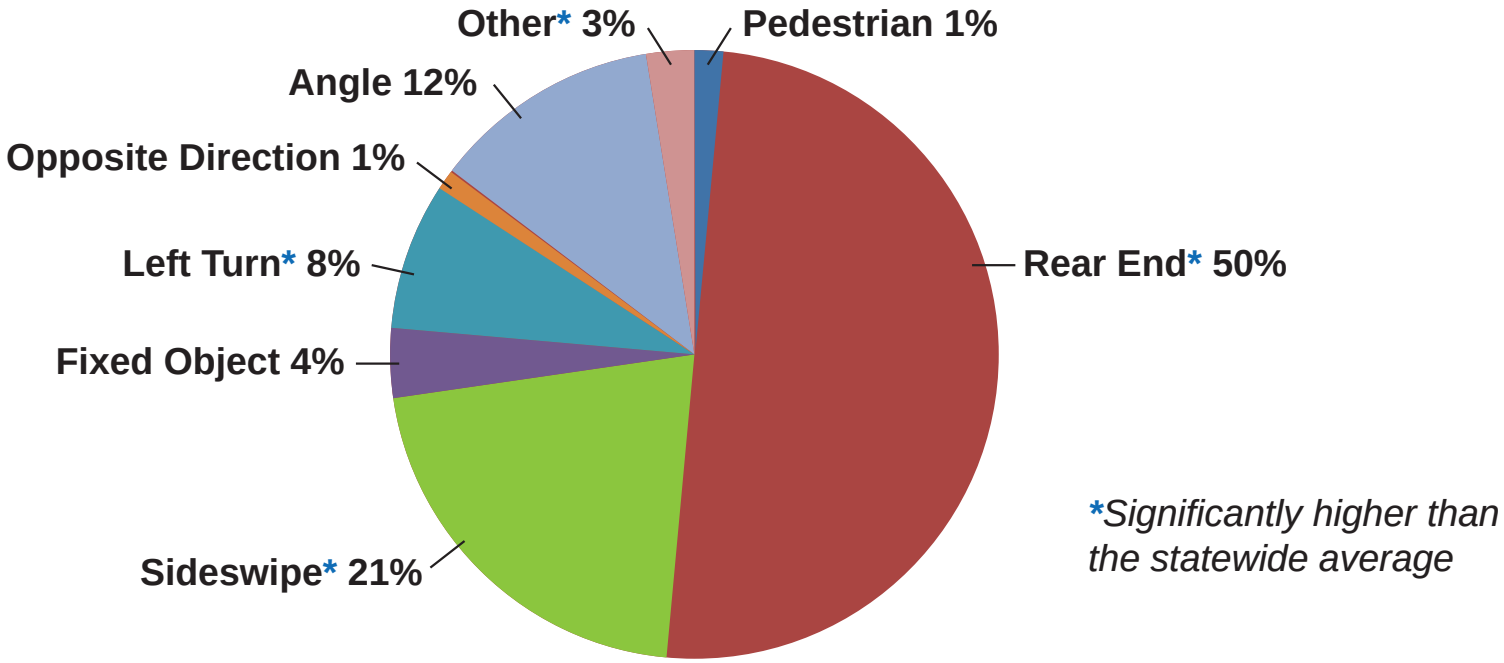
- 297 police-reported crashes occurred from 2012 through 2014. Approximately 94 of those crashes (32 percent) resulted in injuries; none were fatal.

Established Sense of Place

- Existing conditions create a disorienting environment for motorists, especially for those exiting and entering I-495. For motorists unfamiliar with the corridor, the reversible lane, cluttered signage, and unclear lane markings may create confusion.

SAFETY SUMMARY

MD 97 Crashes 2012 - 2014



*Significantly higher than the statewide average

- 297 police-reported crashes occurred within the study limits between 2012-2014
- 94 of those crashes (32 percent) resulted in injuries
- Rear-end, sideswipe, and left-turn crashes each occurred at a rate significantly higher than the statewide average for those types of crashes on similar roadways.

TRAFFIC

2011 Existing and 2040 Projected Average Daily Traffic

Georgia Avenue Segment	Average Daily Traffic (vehicles per day)		
	2011 Existing	2040 Projected	Percent Growth
North of Forest Glen Road (MD 192)	65,000	75,000	15.3%
Forest Glen Road to I-495	73,000	84,000	15.1%
I-495 to Seminary Place	81,000	93,000	14.8%
Seminary Place to Seminary Road/ Columbia Boulevard	71,000	82,000	15.5%
Seminary Road to Southbound 16th Street	66,000	76,000	15.2%
Southbound 16th Street to Northbound 16th Street	51,000	59,000	15.7%
South of 16th Street	35,000	41,000	17.1%

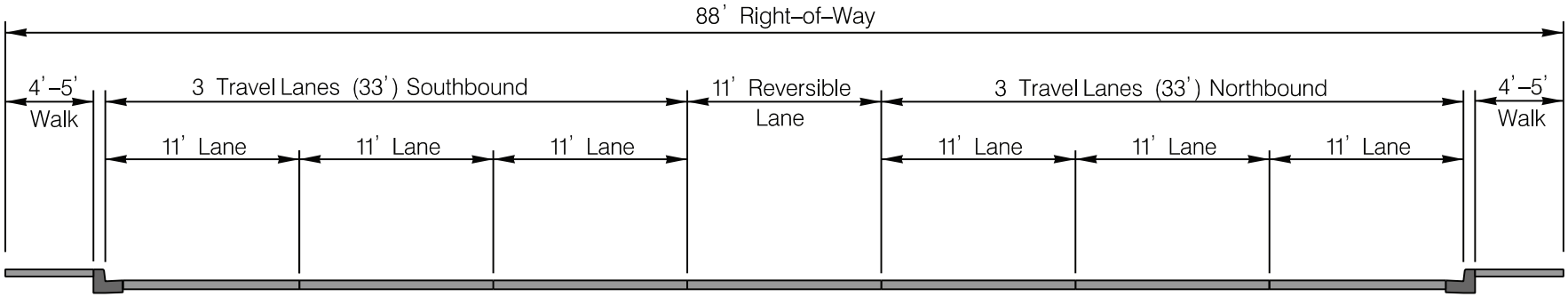
ALTERNATIVES

ALTERNATIVES CURRENTLY UNDER STUDY
Alternative 1: **No-Build***
Alternative 2: **Transportation System Management (TSM)/Transportation Demand Management (TDM)***
Alternative 3: **Master Plan***
Alternative 5: **4 Lanes Southbound and 3 Lanes Northbound***
Alternative 5 with Option B: **Flora Lane Intersection Improvements***
Alternative 5 with Cycle Track **(added during detailed study period)**
ALTERNATIVES DROPPED FROM CONSIDERATION
Alternative 4: **3 Lanes Northbound and 3 Lanes Southbound****
Alternative 5 with Option A: **Transit Queue Jumps/Transit Signal Priority*(dropped during detailed study period)**
Alternative 6: **Bus Rapid Transit****
Alternative 7: **Georgia Avenue Tunnel****

***Alternatives Retained for Detailed Study (ARDS), selected December 2013**

****Preliminary Alternatives dropped following a determination they were impractical or unfeasible**

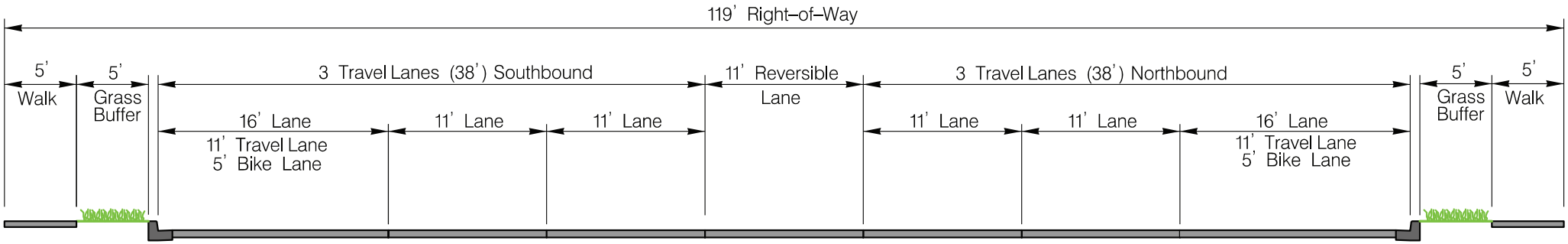
ALTERNATIVE 1: NO-BUILD



- **No major improvements**
- **No change in traffic flow**
- **No displacements**
- **Costs limited to normal maintenance**
- **Provides baseline for comparison to other alternatives**

ALTERNATIVE 2:

Transportation Systems Management (TSM) – Transportation Demand Management (TDM)

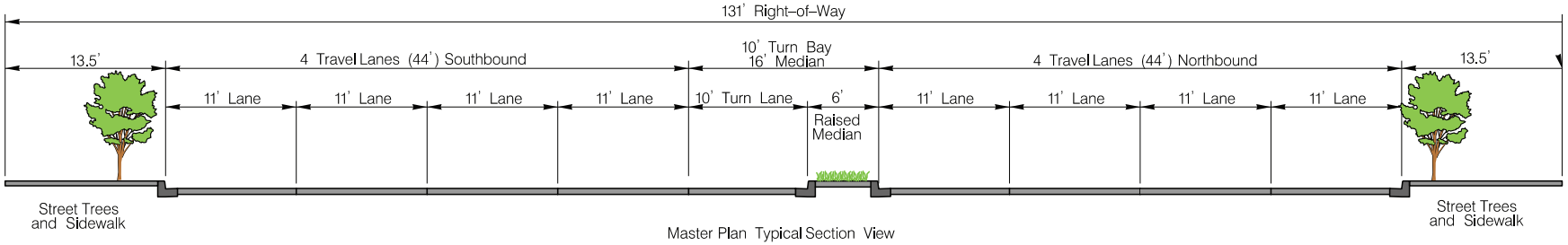


TSM–TDM Typical Section

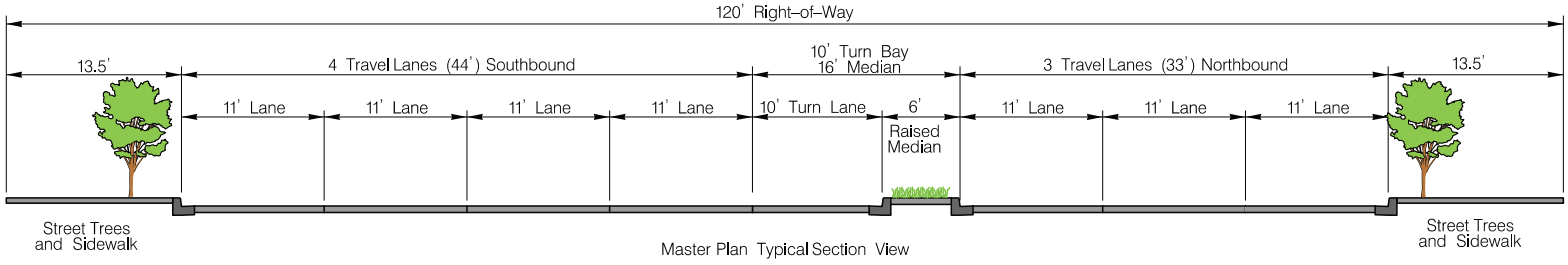
ROADWAY/TRANSIT FEATURES	PEDESTRIAN/BICYCLE FACILITIES
• Transit Signal Priority (TSP) – **Alters signal timing to allow buses to more easily pass through intersection without stopping** • Queue jumps – **Short additional lanes that allow approaching buses at signalized intersections to move to the front of through traffic on a green light** • Access consolidation – **Reducing the number of access points to reduce conflicts with turning vehicles**	• **Sidewalks compliant with Americans with Disabilities Act standards on both sides of Georgia Avenue, with grass buffer where space allows** • **Wide outside lanes accommodate on-road bicycle use**

ALTERNATIVE 3: MASTER PLAN

Four Southbound Travel Lanes/ Four Northbound Travel Lanes (Seminary Place through Forest Glen Road)



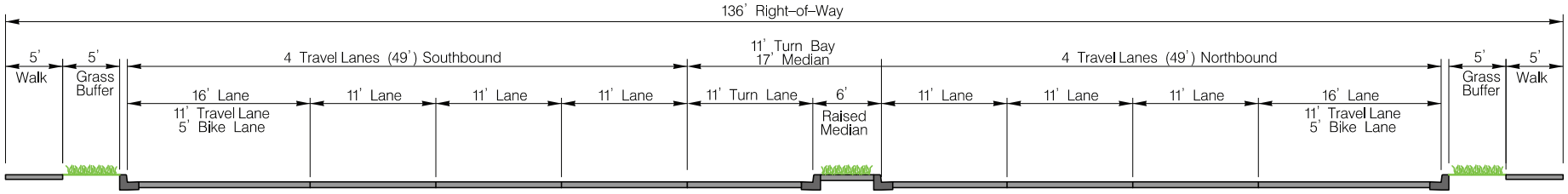
Four Southbound Travel Lanes/Three Northbound Travel Lanes (16th Street to Seminary Place)



ROADWAY FEATURES	PEDESTRIAN/BICYCLE FACILITIES
• Raised median with left turn lanes • Columbia Boulevard closed at Seminary Road intersection • Corwin Drive closed to create additional parking • Potential new traffic signal at Flora Lane • Realigned Seminary Road at Georgia Avenue	• Wide sidewalks compliant with Americans with Disabilities Act standards on both sides of Georgia Avenue • Median refuge area at crosswalks • On-road bicycles directed to county road network

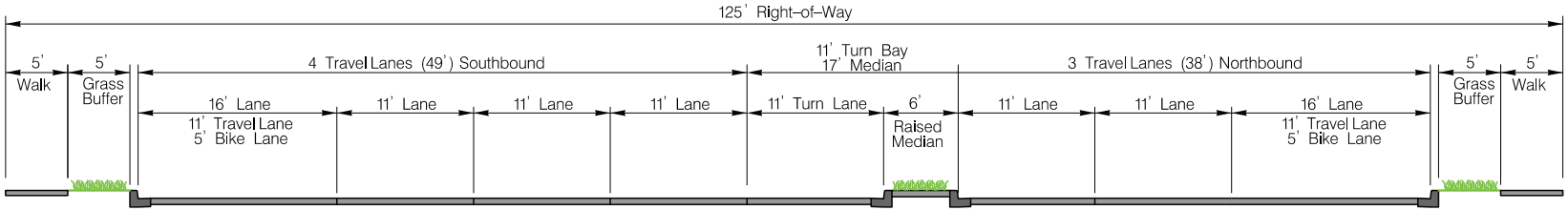
ALTERNATIVE 5

Four Southbound Travel Lanes/Four Northbound Travel Lanes (Seminary Place through Forest Glen Road)



4 Northbound /4 Southbound Typical Section

Four Southbound Travel Lanes/Three Northbound Travel Lanes (16th Street to Seminary Place)



3 Northbound /4 Southbound Typical Section

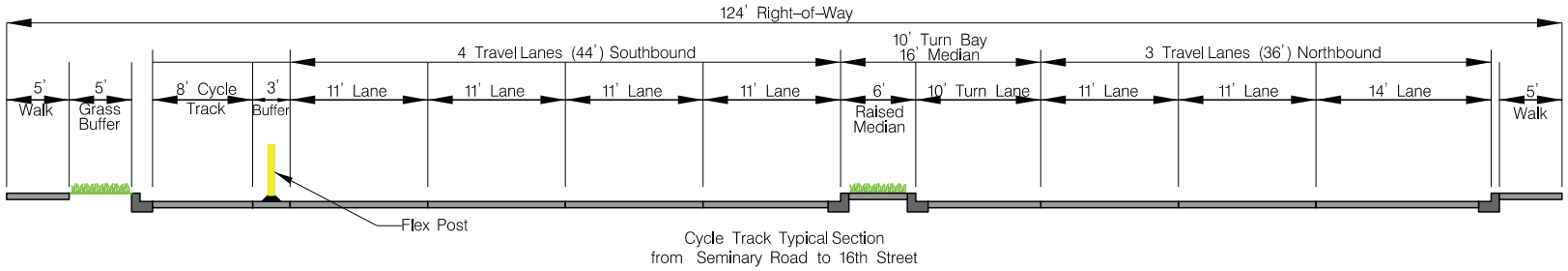
ROADWAY FEATURES	PEDESTRIAN/BICYCLE FACILITIES
• **Raised median with left turn lanes** • **Columbia Boulevard closed at Seminary Road intersection** • **Southbound 16th Street ramp relocated to signalized intersection with northbound 16th Street**	• **Sidewalks compliant with Americans with Disabilities Act standards on both sides of Georgia Avenue, with grass buffer where space allows** • **Median refuge area at crosswalks** • **Wide outside lanes accommodate on-road bicycle use** • **Closed Southbound 16th Street ramp becomes bicycle/pedestrian path**

ALTERNATIVE 5 WITH OPTION B:
Flora Lane Intersection Improvements

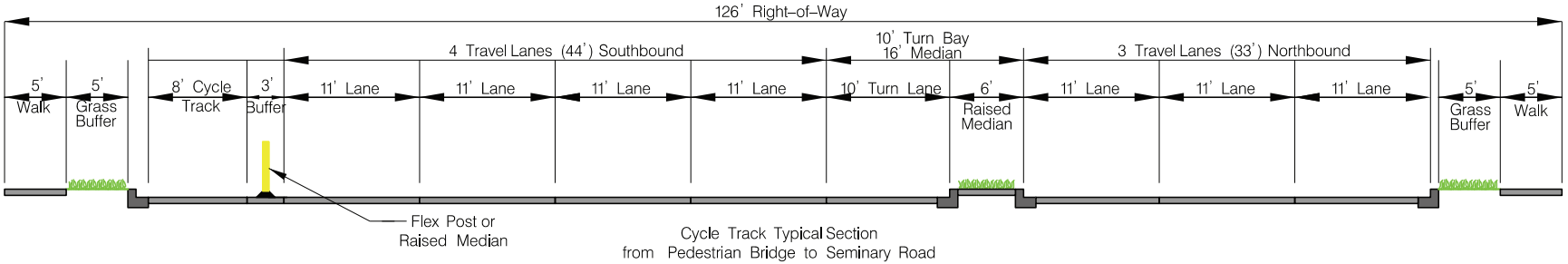
- **Potential new traffic signal on Georgia Avenue at Flora Lane**
- **Flora Lane would be shifted south to intersect with the existing shopping center entrance**
- **Left-turns would be permitted onto Flora Lane**
- **Intersection would include pedestrian crosswalks**

ALTERNATIVE 5 – WITH CYCLE TRACK

Four Southbound Travel Lanes/Three Northbound Travel Lanes (16th Street to Seminary Place)



Four Southbound Travel Lanes/Four Northbound Travel Lanes (Seminary Place to Pedestrian Bridge)



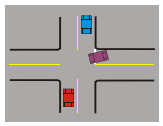
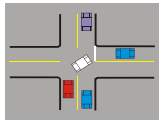
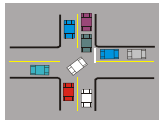
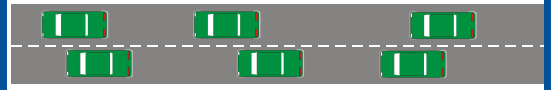
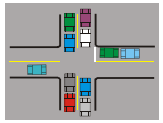
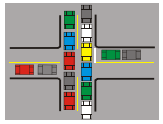
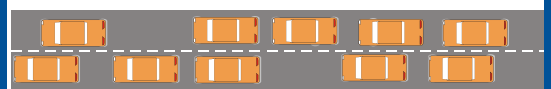
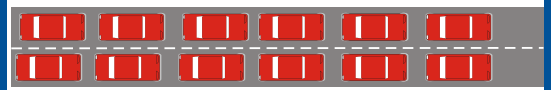
FEATURES

- **Two-way cycle track would be located on the west side of Georgia Avenue from pedestrian bridge to southbound 16th Street ramp**
- **Bicycle traffic separated from motorized traffic with three-foot-wide buffer**
- **Bicycle lanes would be four-foot-wide in each direction**
- **At southbound 16th Street ramp, the cycle track ends and on-road bicycle lanes would be provided on both sides of Georgia Avenue to the intersection with northbound 16th Street**

What is Level of Service (LOS)?

Level of Service is a quantitative measure of traffic operational conditions. Ranges of operation are defined for each type of roadway section (signalized intersections, freeways, ramp junctions and weaving sections) and are related to the amount of traffic demand at a given time as compared to the capacity of that type of roadway section.

Six levels of service are defined for each type of roadway section and are given letter designations from A to F, with A representing good operating conditions and F representing unsatisfactory operating conditions.

Intersection			Roadway	
• Highly stable, free-flow condition with little or no congestion • Delay: <10 seconds/vehicle		LOS A		• Free flowing • Uninterrupted vehicle
• Stable, free-flow condition with little congestion • Delay: 10 to 20 seconds/vehicle		LOS B		• Stable flow • Other vehicles are more noticeable
• Free-flow condition with moderate congestion • Delay: 20 to 35 seconds/vehicle		LOS C		• Stable flow • Vehicle operations affected by other vehicles
• Approaching unstable condition with increasing congestion • Delay: 35 to 55 seconds/vehicle		LOS D		• High density free flow • Operation of vehicle is affected by other vehicles
• Unstable, congested condition • Delay: 55 to 80 seconds/vehicle		LOS E		• High density traffic flow, nearing capacity • Operating conditions are extremely poor
• Stop and go • Delay: >80 seconds/vehicle		LOS F		• Forced or breakdown flow • Amount of traffic exceeds capacity

LEVEL OF SERVICE

Overview of 2011 Existing and 2040 Traffic

Signal Intersection LOS	Existing Conditions (2011)				Alternative 1: No-Build (2040)				Alternative 2: TSM/TDM (2040)				Alternative 3: Master Plan (2040)				Alternative 5: Four Lanes Southbound; Three to Four Lanes Northbound (2040)				Alternative 5, Option B: Flora Lane Intersection (2040)				Alternative 5 Cycle Track Option (2040)			
	AM		PM		AM		PM		AM		PM		AM		PM		AM		PM		AM		PM		AM		PM	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
Forest Glen Road (MD 192)	D	48	C	32	E	66	C	32	F	133	D	41	F	81	E	79	D	52	D	42	E	64	D	51	E	64	D	51
I-495 Outer Loop Ramps	B	14	B	16	B	16	B	16	D	53	C	27	C	22	F	87	B	11	C	21	C	25	B	19	C	25	B	19
I-495 Inner Loop Ramps	C	34	A	8	D	43	B	11	E	63	B	14	C	33	C	34	-	-	-	-	-	-	-	-	-	-	-	-
Flora Lane	-	-	-	-	-	-	-	-	-	-	-	-	A	7	B	16	-	-	-	-	A	10	A	10	A	10	A	10
Seminary Place	D	41	B	11		47	B	12	E	59	B	17	D	47	C	34	D	35	B	14	E	60	D	46	E	60	D	46
Seminary Road	C	25	C	32	C	25	D	36	C	31	D	46	C	24	D	38	C	23	C	34	D	27	D	36	D	27	D	36
16th Street (MD 390)	C	25	C	27	C	26	C	26	D	51	F	123	C	24	F	148	B	15	F	94	B	16	F	81	B	16	F	81

Legend	
LOS	Delay (sec)
A	<10
B	10-20
C	20-35
D	35-55
E	55-80
F	>80

MEASURES OF EFFECTIVENESS EVALUATION

MOE Measures	Alternative 1 No build	Alternative 2 TSM/TDM	Alternative 3 Master Plan	Alternative 5	Alternative 5B	Cycle Track
1. Automobile Accessibility						
Determined using factors of travel time including vehicular delay	1	1	3	3	3	3
2. Pedestrian Accessibility						
Determined using factors of Pedestrian Level of Comfort, presence of pedestrian refuge area, crossing distance, and number of crossings	1	2	5	4	5	5
3. Bicycle Accessibility						
Determined using factors of Bicycle Level of Comfort and consistency with the Montgomery County Bike Master Plan and SHA bicycle standards	1	4	3	4	4	5
4. Transit Accessibility						
Determined using factors such as availability of queue jumps, opportunity for TSP, and on-street bus lanes	1	4	3	3	3	3
5. Safety						
Determined using factors of access points, conflict points, presence of a safety buffer, presence of a median, number of crosswalks, and 16th Street redesign.	1	2	4	5	5	5
6. Community Considerations						
Determined based on potential for aesthetic improvements	1	2	4	4	4	4
Determined based on number of displacements, impacts, and parking impacts	5	4	2	2	2	2

LEGEND					
Designation:	Worst				Best
Color Code:	1	2	3	4	5

AS VEHICLE OPERATORS ON MARYLAND ROADS BICYCLISTS HAVE RIGHTS AND RESPONSIBILITIES

It's the law:

Section 21-1202 Annotated Code of Maryland

> "Vehicle" means any device in, on, or by which any individual or property is or might be transported or towed on a highway.
>
> *Annotated Code of Maryland*

It's MDOT Policy:

Twenty-Year Bicycle and Pedestrian Access Master Plan

As part of roadway construction projects, SHA provides on-road features like these:

wide outside lane for bicycle compatibility

minimum four-foot-wide shoulder

bicycle lane/pocket bike lane markings

Bicycle Route & Share the Road signage

And off-road features like:

shared-use path (hiker/biker trail)

Bicycles provide a valuable transportation option for many people and will help Maryland meet our state's long-term transportation needs.

BICYCLE FAQ

Why are bicyclists allowed on the road?

Bicyclists are vehicle drivers, too. By law, "vehicle" means "any device in, on, or by which any individual or property is or might be transported or towed on a highway." (Section 11-176, Annotated Code of Maryland) Every person operating a bicycle in a public area has all the rights granted to and is subject to all the duties required of the driver of a vehicle. (Section 21-1202, Annotated Code of Maryland)

Why are bicyclists allowed to ride next to cars that are going fast?

Bicyclists are prohibited on roadways with a posted maximum speed greater than 50 mph unless a continuous paved shoulder or bicycle lane is provided. In addition, a person may not ride a bicycle on an expressway or on any controlled-access highway with signs stating that bicycles are prohibited.

There's a hiker/biker trail right next to the road. Shouldn't bicyclists be riding there?:

Maryland law requires SHA to include bicycle accommodations in roadway construction projects whenever appropriate and feasible. That's because not everyone who rides a bicycle does so for the same purpose. Hiker/biker trails are shared-use paths suitable for joggers, pedestrians, dog-walkers, children, babies in strollers, inexperienced or recreational cyclists, and others who enjoy exercising and spending time outdoors. Individuals who use a bicycle as their primary means of transportation may find that on-road bicycle accommodations better suit their needs. By removing themselves from the "mix" of hiker/biker trail-users, on-road bicyclists can reach their destinations more efficiently and lessen the risk that trail-users will find themselves in the path of bicyclists focused on getting from Point A to Point B as quickly as possible.

Shouldn't bicyclists ride on sidewalks?

The law allows bicyclists to ride on sidewalks only in Montgomery County. Not permitting bicycles on sidewalks minimizes conflicts between bicyclists and pedestrians.

Isn't it a law that bicyclists have to wear a helmet?

In Maryland, everyone under age 16 is required to wear a helmet when riding a bicycle on public property. Some local jurisdictions have requirements for helmet use that are tougher than State law. Wearing a helmet is a good safety measure for everyone who rides a bike: 85 percent of head and brain injuries resulting from bicycle crashes could be prevented if riders wore bicycle safety helmets.

Every day as I drive downtown I see bicyclists and motorists behaving in rude and dangerous ways. Whatever happened to common courtesy?

Motorists and bicyclists who share the road—especially in heavily traveled urban and suburban areas—need to look out for one another. Motorists should leave at least three feet between their vehicles and any bicycles they pass, and bicyclists should leave at least three feet between themselves and parked cars. By law, bicycles are vehicles: motorists should treat them as such, and bicyclists should obey all traffic laws, including those that govern left- and right-turns, lights and stop signs, right-of-way, and proper lane position.

I bike—where can I get more information on bicycling in Maryland?

Additional information is available on SHA's website at *www.marylandroads.com,* **click on Bicycling under EXPLORE MD, or by telephone at 1-888-204-4828.**

Handout materials are also available at the bicycling station during today's meeting.

MARYLAND

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BUSINESS AND CUSTOMER SURVEY

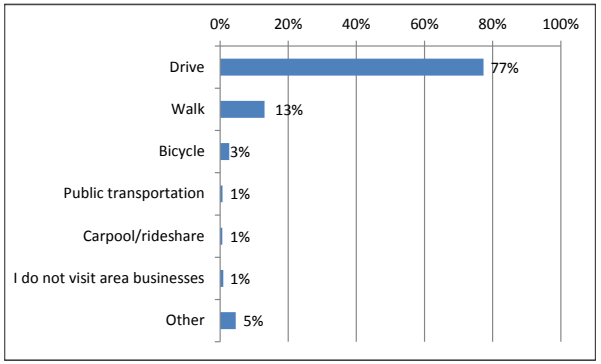
Respondent Totals

	Business	Customer	Total
Written Collection	12	72	84
Online Collection	12	1,291	1,303
Spanish Versions	0	3	3
Total	24	1,366	1,390

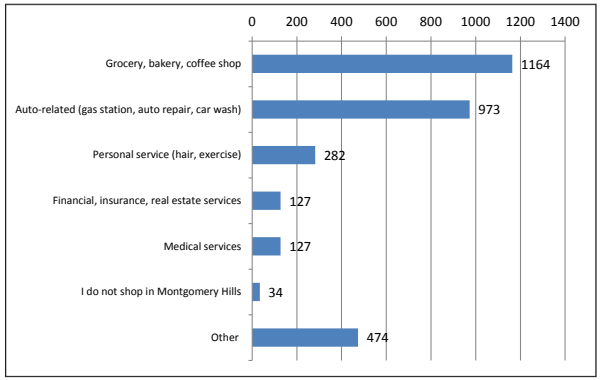
Parking Impacts to Businesses

If parking in front of your business is reduced or eliminated, how much would additional nearby off-street parking benefit your business?	Number	Percent
Very Much	11	65%
Somewhat	4	23%
Not at all	2	12%
If parking is not available in front of a business, how many minutes will you walk from a parking lot to reach that business? (Choose one)	**Number**	**Percent**
Less than 5 minutes	846	68%
5-10 minutes	239	19%
10-15 minutes	32	3%
More than 15 minutes	17	1%
I would not walk from a parking lot to a business in Montgomery Hills	115	9%

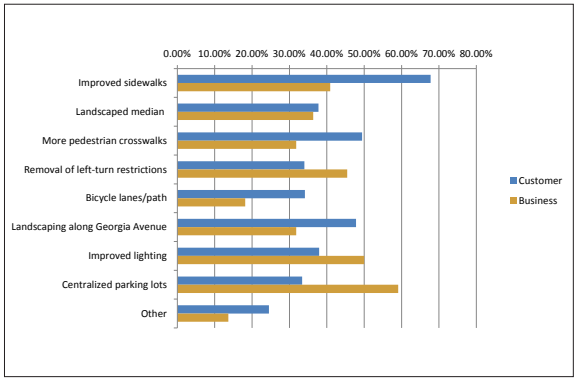
How They Arrive



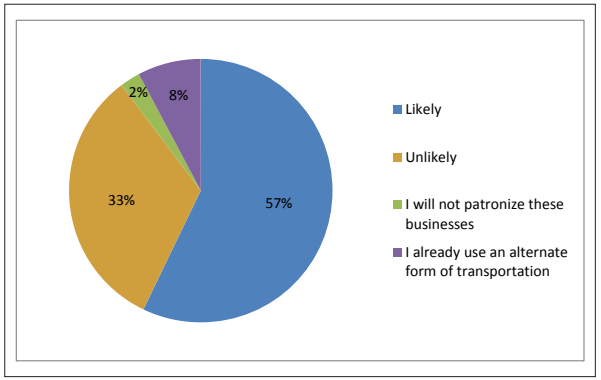
Why Customers Visit



What Improvements They Want to See



Willingness to Use Alternate Forms of Transportation with Multimodal Improvements



ENVIRONMENTAL CONSIDERATIONS

SHA State Highway Administration
Maryland Department of Transportation

National Environmental Policy Act (NEPA)

Requires an assessment of a project's impacts on the natural, cultural, and human environment. An analysis of reasonable alternatives must be prepared, including minimization and mitigation for unavoidable impacts. The results of the analysis must be included in the decision-making process and made available to the public.

Natural Environment

- Geology/Groundwater Resources
- Soils
- Surface Water
- Floodplains
- Wetlands
- Aquatic Life
- Wildlife

Section 404 of the Clean Water Act, Nontidal Wetlands Protection Act

Regulates dredge and fill of Waters of the United States. Guidelines published by the Environmental Protection Agency for evaluating alternatives require that the Corps of Engineers evaluate the proposed project for environmental impacts (including historic and rare/threatened/endangered species impacts) and select the least environmentally damaging, practicable alternative.

Endangered Species Act

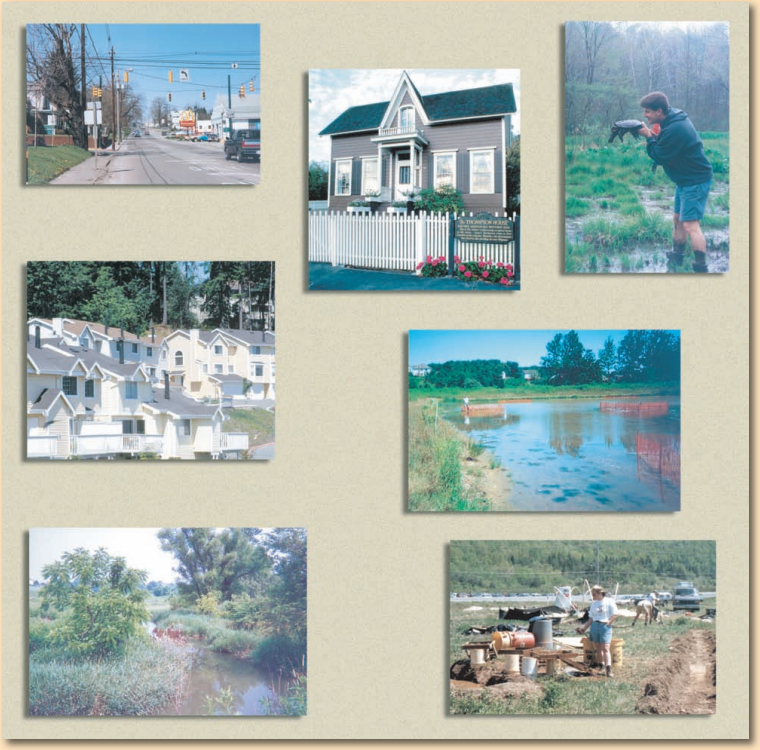
Ensures that actions are not taken to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of the critical habitat of such species.

Cultural Environment

- Historic Structures
- Archaeological Sites

Section 106 of the National Historic Preservation Act

Requires that agencies take into account the effects of a project on properties that are included in or eligible for the National Register of Historic Places.



Socio-Economic Environment

- Demographics
- Community Facilities
- Economic Setting and Land Use
- Noise
- Air

Section 4(f) of the US Department of Transportation Act

Requires that special effort be made to preserve publicly owned public parks and recreation areas, wildlife/waterfowl refuges and historic sites. No project which requires land from these resources may be approved unless 1) there is no feasible and prudent alternative to the use of the land and 2) the action includes all possible planning to minimize harm to the property resulting from such use.

Clean Air Act and Clean Air Act Amendments

A microscale air quality analysis must be performed to determine if there are violations of the State or National Ambient Air Quality Standards for carbon monoxide. Also, a conformity analysis must be completed by the Metropolitan Planning Organization to make sure the Transportation Improvement Plan conforms to the State Implementation Plan.

Farmland Protection Policy Act

Requires that federal programs minimize conversion of farmland to non-agricultural uses (does not apply to farmland that is zoned or committed (planned) for urban development).

Executive Order 12898 (Environmental Justice)

Requires that agencies identify and address disproportionately high and adverse human health or environmental effects on minority or low-income populations.

ENVIRONMENTAL IMPACTS

Resources		Alternative 1: No- Build	Alternative 2: TSM/TDM	Alternative 3: Master Plan	Alternative 5	Alternative 5 with Option B	Alternative 5 with Cycle Track
Relocations/Property	Residential Displacements	0	0	0	0	0	0
	Business Displacements	0	0	5	5	5	5
	Number of Impacted Properties	0	42	44	44	44	44
	Right-of-way Required (acres)	0	1.4	3.8	3.8	3.8	3.4
Natural Resources	Woodland/Forest Impacts (acres)	0	0.2	0.5	0.7	0.7	0.7
	Hazardous Waste Sites (no.)	0	13	13	13	13	13
Cultural Resources	Historic Sites (no.)	0	0	1	1	1	1
	Archeological Sites (no.)	0	0	0	0	0	0
Section 4(f) Resources	Name of Resource(s)	N/A	N/A	Calvary Evangelical Lutheran Church	Calvary Evangelical Lutheran Church	Calvary Evangelical Lutheran Church	Calvary Evangelical Lutheran Church
	Resource Impact (acre)	N/A	N/A	0.26	0.24	0.27	0.24
Total cost (million $) *Present day dollars*		$0	$17-$24	$25 - $34	$30 - $40	$31 - $41	$33 - $43

***There will be no impacts on the following resources by any alternative:** *Rare, threatened or endangered species; streams; 100-year floodplain; wetlands; prime farmland; Chesapeake Bay Critical Area*

NEXT STEPS

- **Evaluate and address public/agency comments**
  Winter 2015/2016

- **Identify SHA's Preferred Alternative and Conceptual Mitigation**
  Winter 2015/2016

- **Obtain Location and Design Approvals**
  Summer 2016

STAY CONNECTED

For information and updates about the MD 97 – Montgomery Hills Project Planning Study, please visit www.roads.maryland.gov under Projects and Studies, SHA Projects Page, Montgomery County.

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