



BRAC Briefing

Bethesda Chevy Chase Chamber of Commerce
Economic Development & Government Relations Committee Meeting

January 27, 2010

Overview

- Overview
 - Coordination – Navy, NIH, MCDOT, MDOT, SHA, WMATA, MNCPP
 - Mult-modal approach
 - Demand management
 - Bike/ped
 - Transit
 - Highway
- Funding strategy

Job growth projections

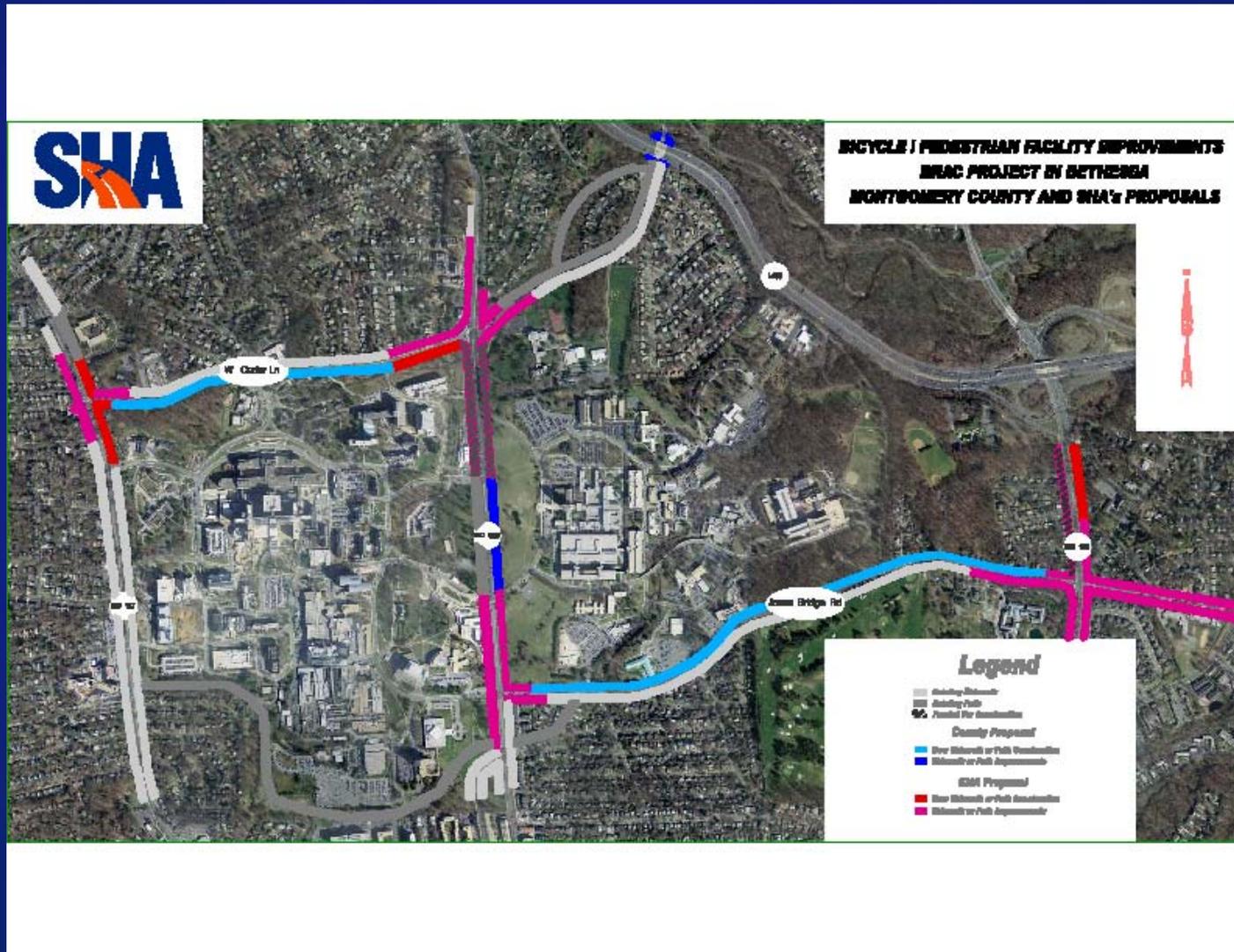
	<i>Current</i>	<i>2011</i>	<i>2020</i>
Navy	8,000	10,200	n/a
NIH	18,600	n/a	22,000
Bethesda/Chevy Chase	88,016	n/a	96,624
Countywide	500,000	n/a	590,000

Montgomery county Planning Department
April 2009 (7.2 Cooperative Forecast)

NNMC Transportation Management Plan

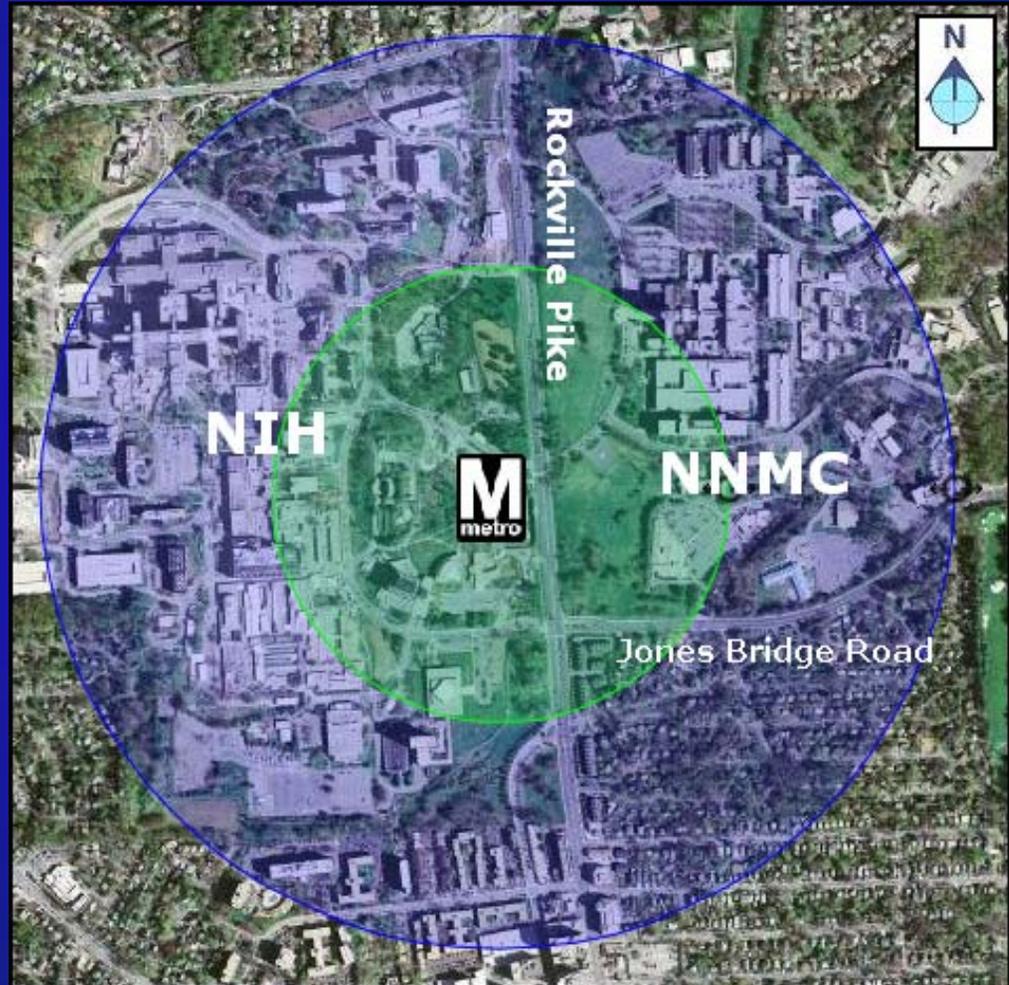
- Goals
 - Increase workers arriving by transit from 11% to 30%
 - Increase carpool/vanpool from 13.5% to 24%
 - Reduce trips thru telework, alternative work hours/schedules
- Implementation efforts include
 - Constrain parking
 - Market transit services, transit benefits, promote van pool, car pool, telework, alternative work hours/schedules
 - Guaranteed Ride Home, Commuter Connections
- Monitoring/reporting

Pedestrian improvements

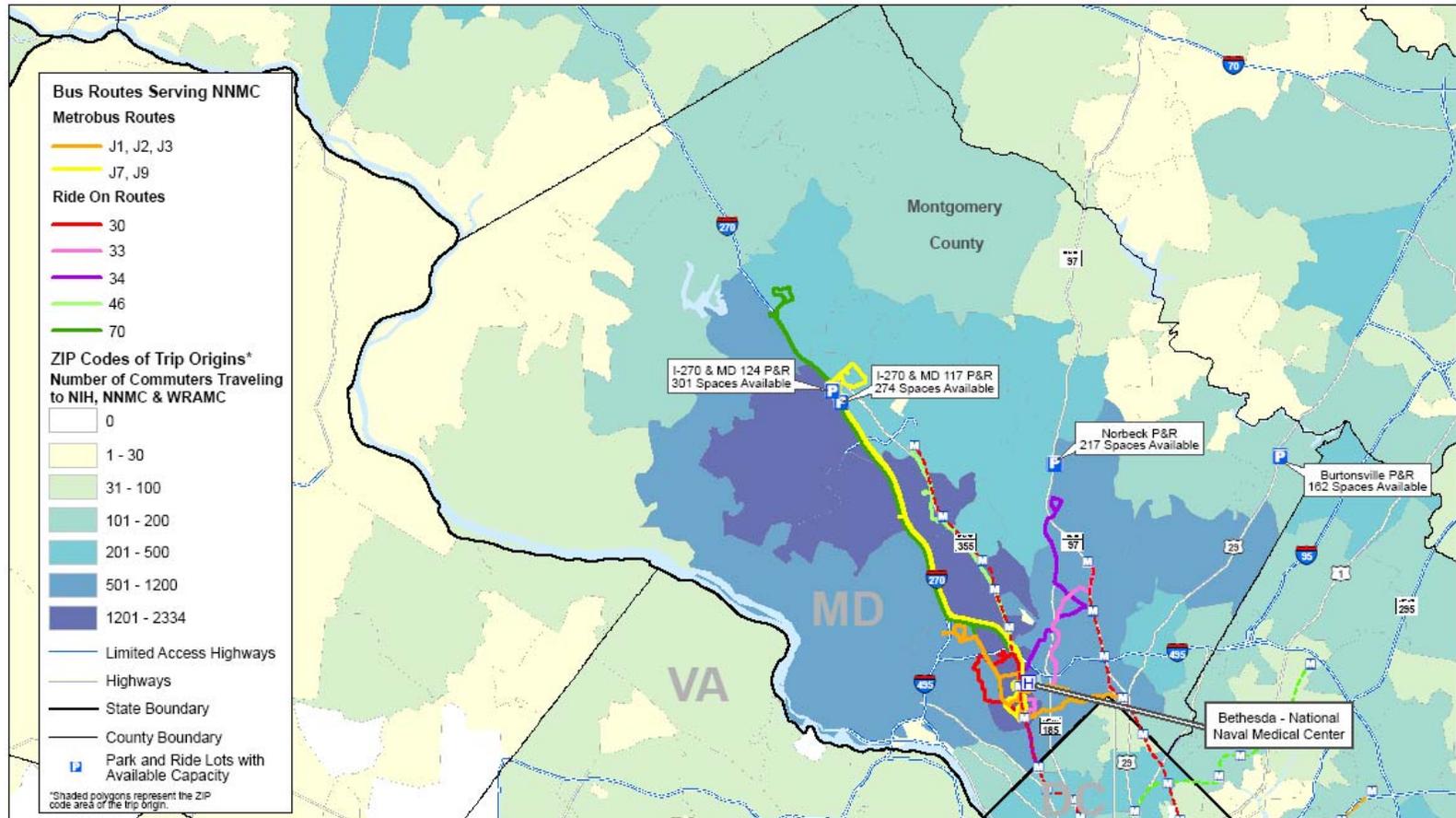


Metrorail

- Walking distance to campus
- High level of service
 - 5 AM to midnight weekdays
 - 2.5 minute peak headways
- Navy employee shuttle
- Connections to Metrobus, RideOn, MARC, Commuter Bus
- County studying pedestrian link to Metro station



Direct bus service and workforce distribution



Existing Transit & Workforce Distribution

COMBINED: Bethesda - National Naval Medical Center,
Walter Reed Army Medical Center & National Institutes of Health

Source: NIH, WRAMC, NNMC, NMMC USU and JTF Military and Civilian Personnel - Home Residence ZIP Code data (2009).

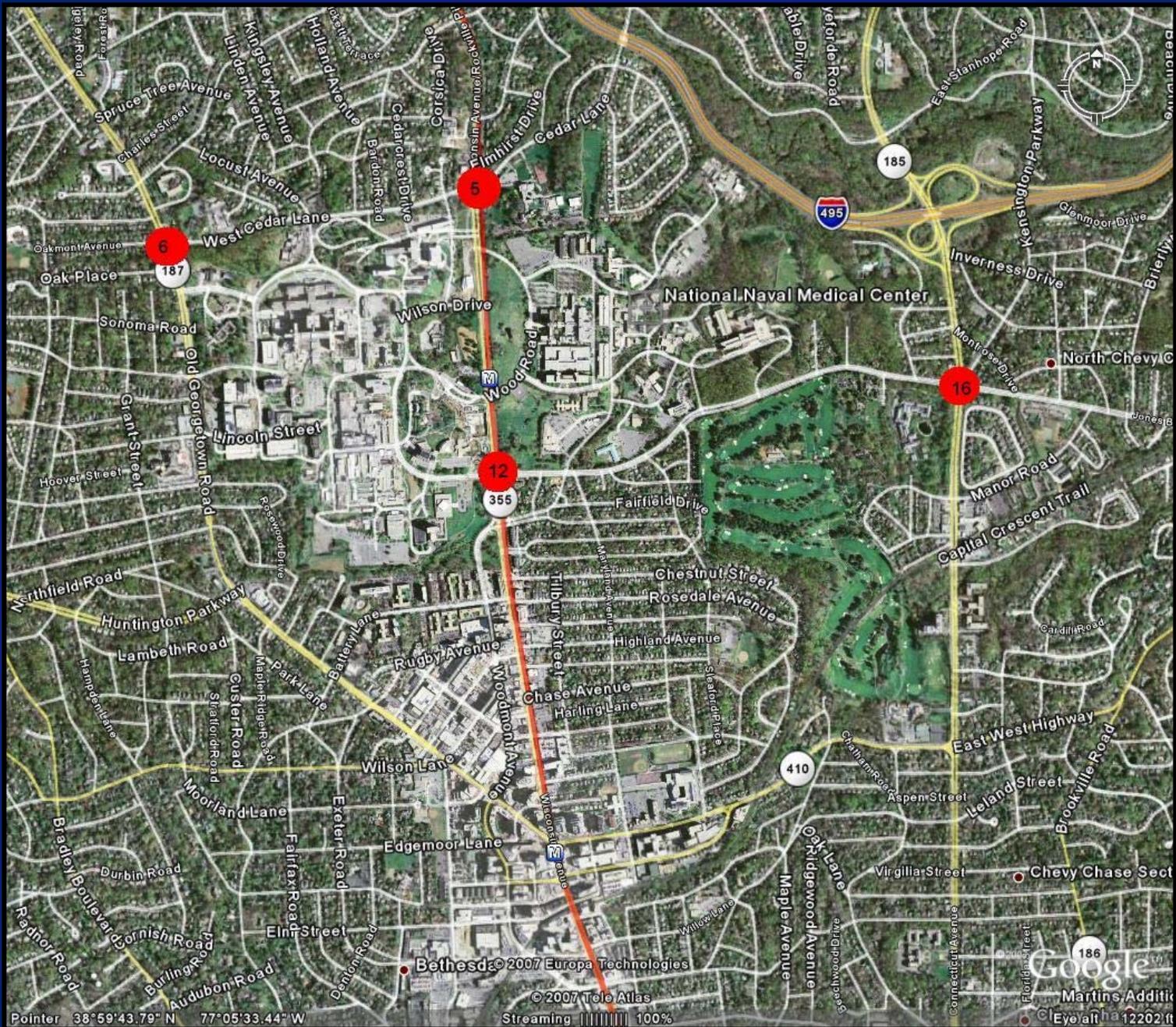
0 0.8 1.6 2.4 3.2 Miles

BRAC Intersection Improvement Goals

Move forward with the design of short-term intersection improvements, based on concepts developed during the Planning stage, to bring intersections anticipated to fail, due to the influx of BRAC traffic, to their existing Level of Service (LOS) or better.

Background

- Conducted traffic studies at 27 locations (based on 2011 traffic forecasts) in the Bethesda area.
- Developed short-term intersection improvement concepts, including costs and impacts for those that fail in 2011.
- Selected priority intersections for inclusion in the CTP
 - MD 355 (Rockville Pike) @ West Cedar Lane
 - MD 355 (Rockville Pike) @ Jones Bridge Road
 - MD 187 (Old Georgetown Road) @ West Cedar Lane
 - MD 185 (Connecticut Avenue) @ Jones Bridge Road
- Currently preparing detailed design for 4 of the failing intersections.
- Current designs are approximately 50% to 65% complete.



Pointer 38°59'43.79" N 77°05'33.44" W

© 2007 Tele Atlas
Streaming 100%

Google
Martins Addit
Eye alt 12202 ft

Available Funding	\$34.1 M
Design Costs	\$6.1 M
Funding Available for Construction	\$28.0 M

Total cost of intersection improvements: \$99.7 M

- Due to lack of funding, where possible and practical, broke intersection improvements into phases:
 - MD 355/West Cedar Lane (5 Phases)
 - MD 185/Jones Bridge Road (3 Phases)
 - MD 355/Jones Bridge Road (1 Phase)
 - MD 187/West Cedar Lane (1 Phase)

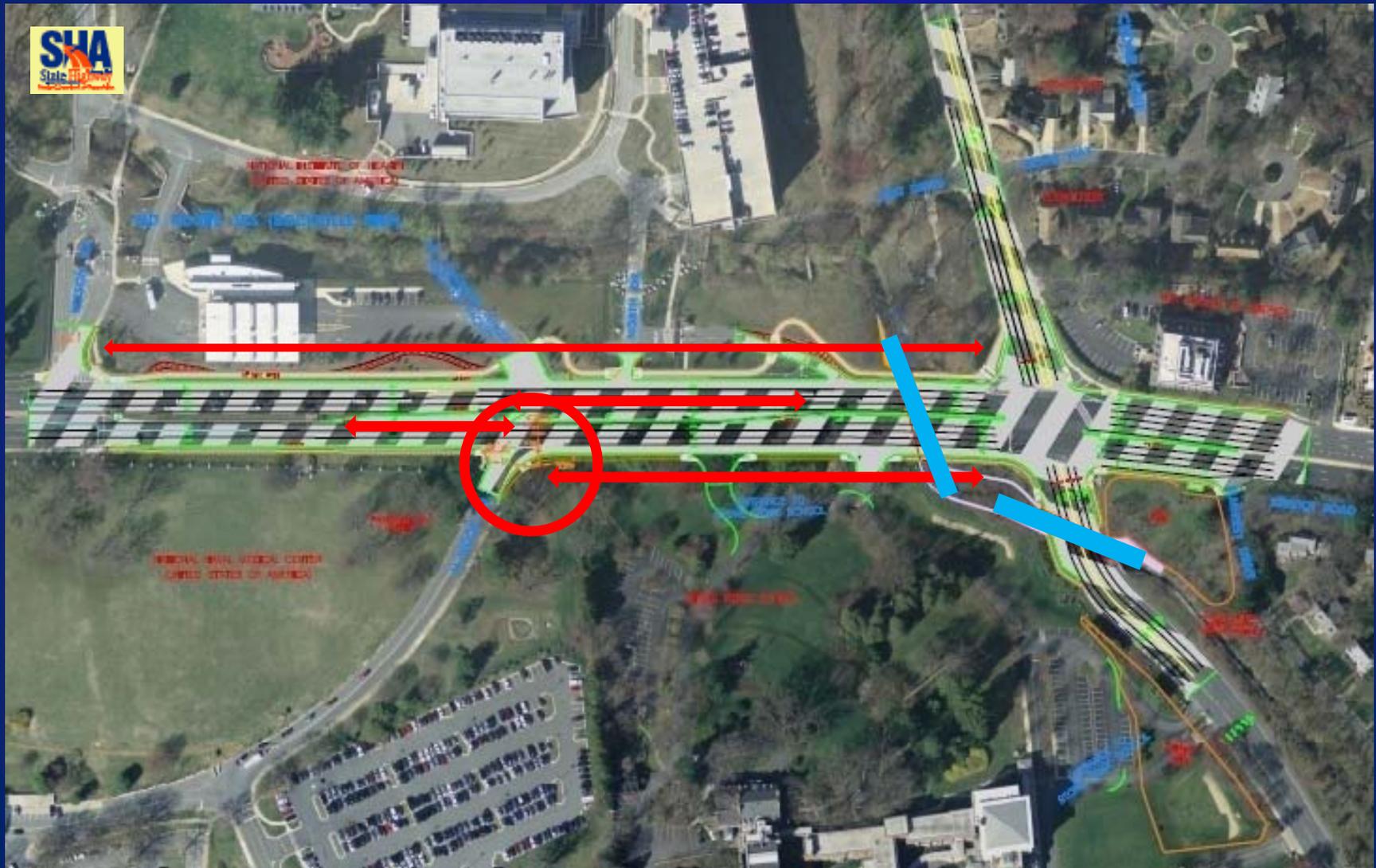
Tiered Approach

- Tier 1:
 - Projects that can be constructed with existing funding
- Tier 2:
 - Projects to be constructed assuming success of securing TIGER grant and DAR funding
- Tier 3:
 - Projects that could be constructed if additional funding is secured
- Tier 4:
 - Long term study projects

BRAC
Transportation Investment Priorities

Tier	Intersection / Project	Phases	Federal Cost	State Cost	County Cost	Undetermined source	Total Cost
1	Md 355 @ Cedar Lane	1 and 2		\$ 25,000,000			\$25,000,000
1	Md 185 @ Jones Bridge Road	1		\$ 4,000,000			\$4,000,000
1	Cedar Lane, Md 355, Jones Bridge Rd. and signing	1	\$750,000		\$5,000,000		\$5,750,000
1	Preliminary engineering and Environmental Assessment for Multi-modal Underpass from Metro Station to NNMC	N/A			\$300,000		\$300,000
1	Md 355 @ Jones Bridge Road	1A				See note Tier 1.	
Total Tier 1			\$750,000	\$29,000,000	\$5,300,000		\$35,050,000
2	Multi-modal underpass from Metro Station to NNMC	N/A	\$40,000,000				\$40,000,000
2	Md 355 @ Jones Bridge Road	1B	\$5,000,000				\$5,000,000
2	Md 185 @ Jones Bridge Road	3	\$6,000,000				\$6,000,000
2	Md 187 @ Cedar including bikeway from Charles St. to NIH	1	\$7,000,000				\$7,000,000
Total Tier 2			\$58,000,000	\$ -			\$58,000,000
Total: (Immediate and Intermediate Range)			\$58,750,000	\$29,000,000	\$5,300,000	\$0	\$93,050,000
3	Md 355 @ Cedar	3				\$22,000,000	\$22,000,000
3	Md 355 @ Cedar	4				\$13,000,000	\$13,000,000
3	Md 355 @ Cedar	5				\$15,000,000	\$15,000,000
3	Md 185 @ Jones Bridge Road	2				\$14,000,000	\$14,000,000
Total Tier 3 (Intermediate and Long Range)			\$0	\$0	\$0	\$84,000,000	\$84,000,000
4	Study Possible Direct Access from I-495 to NNMC (Very long range)	N/A				N/A	N/A
4	Study other long range transit solutions. See note on Tier 4.	N/A				N/A	N/A
Grand Total (2009 dollars)							\$157,050,000
NOTES							
Tier 1. Projects that can be done with existing funding or funding fairly secured.							
Phase 1A, at JBR, refers to an evaluation of a dynamic left turn signal that would be implemented if technically feasible.							
Tier 2. Projects to be done assuming success in getting TIGER grant approvals and DAR funding							
Tier 3. Priority for projects that could be added if additional funding, beyond TIGER, becomes available.							
Tier 4. Projects to study possible additional solutions including, direct access from I-495; Interchange of Md 355 @ Cedar, bus access improvements, Metro core capacity improvements, etc. Not funded.							
BRAC Final Tiers 9-25-09							

Tier 1: MD 355 at Cedar Lane (Phase 1 & 2) (\$25 M)



Tier 1 SHA Contracts

MD 355 at Cedar Lane (Phases 1 & 2), in the year 2011, proposed modifications are projected to:

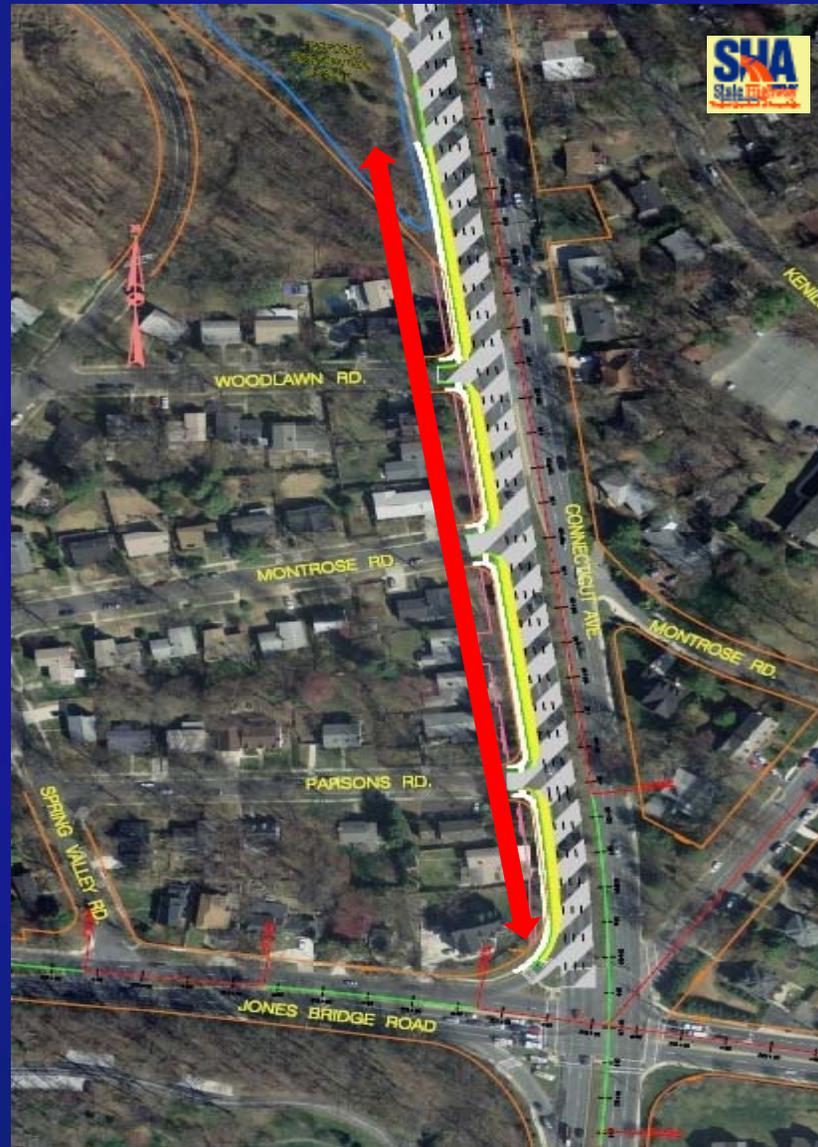
- Reduce vehicle delay by 36% during the AM peak period from 136 sec/veh to 87 sec/veh
- Reduce vehicle delay by 46% during the PM peak period from 168 sec/veh to 90 sec/veh
- Improve the volume-to-capacity ratio during the AM peak period by 17% from 1.35 to 1.12
- Improve the volume-to-capacity ratio during the PM peak period by 16% from 1.43 to 1.20
- The proposed improvements at MD 355 and Cedar Lane would be expected to provide operations as-good or better than pre-BRAC conditions through the year **2022**, despite the additional traffic generated from the BRAC action and other local developments.

Tier 1 SHA Contracts

MD 355 at Cedar Lane (Phases 1 & 2) Schedule:

Begin R/W Acquisitions:	April 2010
Advertise:	April 2011
Begin Construction:	June 2011
Complete Construction:	Fall 2012

Tier 1: MD 185 at Jones Bridge Road (Phase 1) (\$4 M)



Tier 1 SHA Contracts

MD 185 at Jones Bridge Road (Phases 1), in the year 2011, proposed modifications are projected to:

- Reduce vehicle delay by 41% during the AM peak period from 146 sec/veh to 86 sec/veh
- Reduce vehicle delay by 2% during the PM peak period from 194 sec/veh to 190 sec/veh
- Improve the volume-to-capacity ratio during the AM peak period by 19% from 1.29 to 1.05
- Improve the volume-to-capacity ratio during the PM peak period by 0% from 1.40 to 1.40
- The proposed improvements at MD 185 and Jones Bridge Road would be expected to provide operations as-good or better than pre-BRAC conditions through the year **2018** during the am peak period, despite the additional traffic generated from the BRAC action and other local developments.

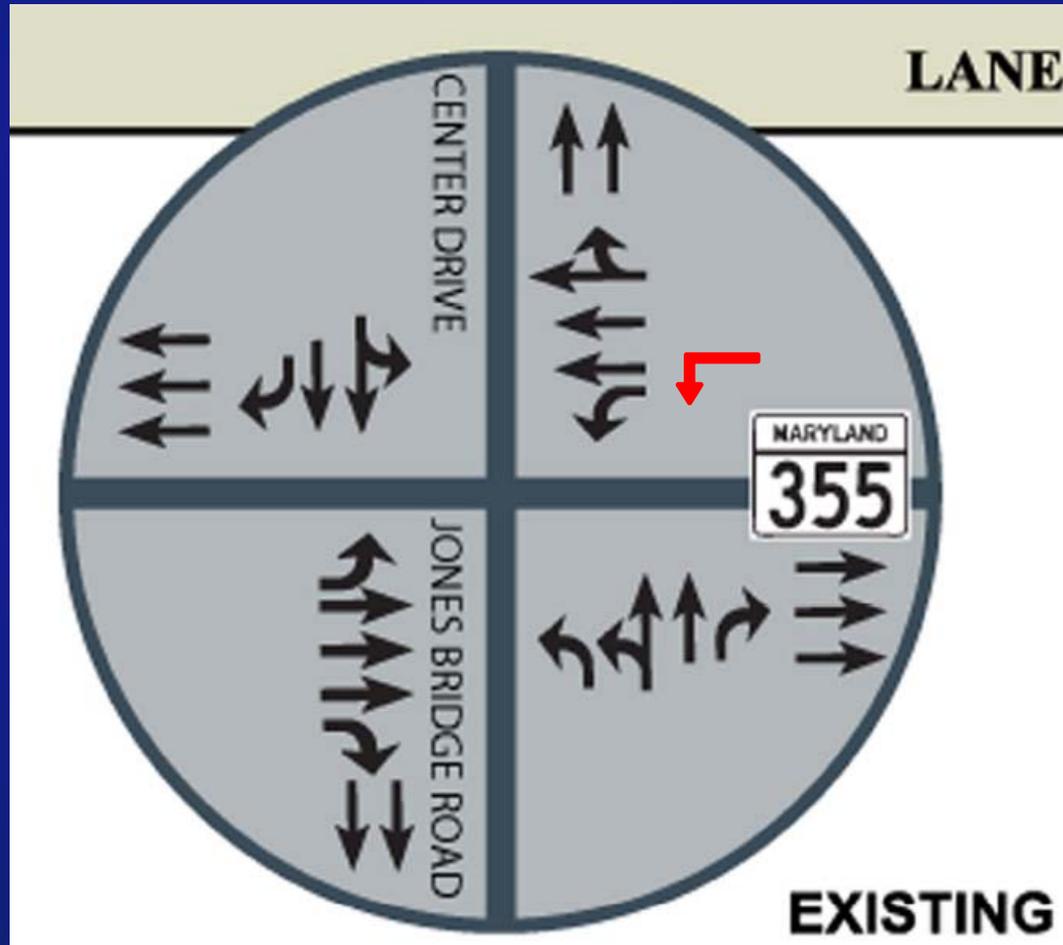
Tier 1 SHA Contracts

MD 185 at Jones Bridge Road (Phase 1) Schedule:

Begin R/W Acquisitions:	February 2010
Advertise:	September 2010
Begin Construction:	December 2010
Complete Construction:	Fall 2011

Tier 1: MD 355 at Jones Bridge Road (Phase 1A)

Dynamic Lane Control



Tier 1 SHA Contracts

MD 355 at Jones Bridge Road Dynamic Lane Controls (Phases 1A), in the year 2011, proposed modifications are projected to:

- Reduce vehicle delay by 51% during the PM peak period from 105 sec/veh to 52 sec/veh
- Improve the volume-to-capacity ratio during the PM peak period by 12% from 1.18 to 1.04
- The proposed improvements at MD 355 and Jones Bridge Road would be expected to provide operations as-good or better than pre-BRAC conditions through the year **2016** during the pm peak period, despite the additional traffic generated from the BRAC action and other local developments

Note: The Tier 1 improvements at this location do not change the existing operations during the AM peak period.

Tier 1 – Network Benefits

The proposed Tier 1 modifications are projected to result in the following network benefits:

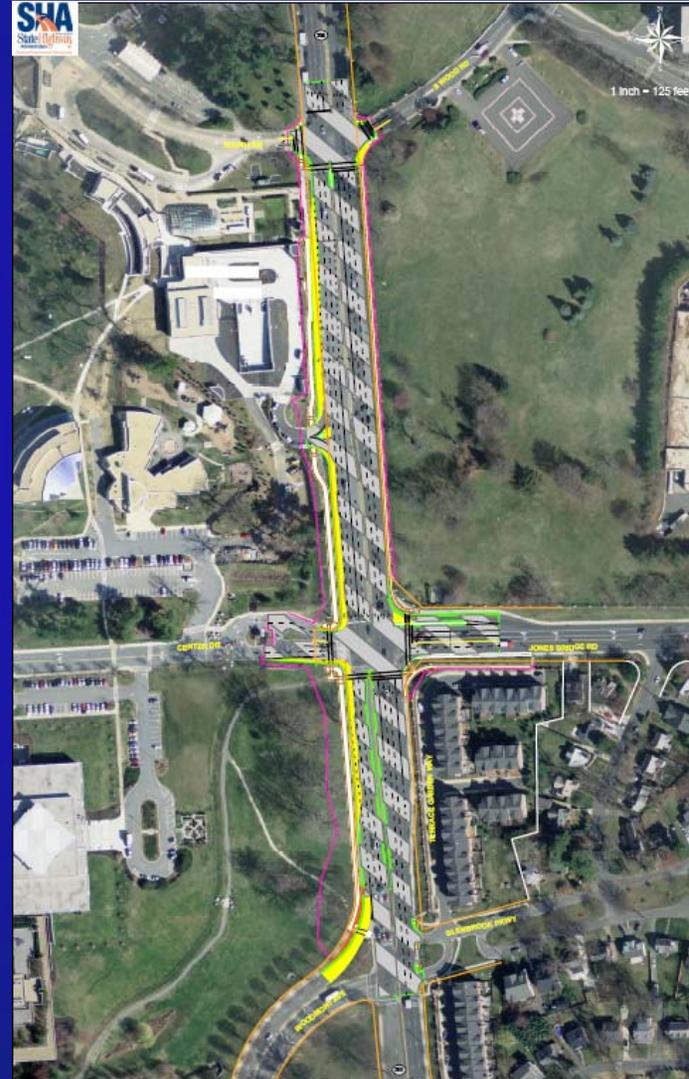
- Reduce emissions of carbon monoxide (CO), nitrogen oxides (NO_x), and volatile oxygen compounds (VOC) by 34% during the AM peak hour and by 11% during the PM peak hour compared to the No-Build condition
- Reduce fuel consumption by over 800 gallons each day during the peak hours, compared to the No-Build condition
- At \$2.50 per gallon, this reduction in fuel consumption equates to a total user cost savings of approximately \$1.3 million per year

BRAC
Transportation Investment Priorities

Tier	Intersection / Project	Phases	Federal Cost	State Cost	County Cost	Undetermined source	Total Cost
1	Md 355 @ Cedar Lane	1 and 2		\$ 25,000,000			\$25,000,000
1	Md 185 @ Jones Bridge Road	1		\$ 4,000,000			\$4,000,000
1	Bikeway and Sidewalk Improvements on Cedar Lane, Md 355, Jones Bridge Rd. and signing	1	\$750,000		\$5,000,000		\$5,750,000
1	Preliminary engineering and Environmental Assessment for Multi-modal Underpass from Metro Station to NNMC	N/A			\$300,000		\$300,000
1	Md 355 @ Jones Bridge Road	1A				See note Tier 1.	
Total Tier 1			\$750,000	\$29,000,000	\$5,300,000		\$35,050,000
2	Multi-modal underpass from Metro Station to NNMC	N/A	\$40,000,000				\$40,000,000
2	Md 355 @ Jones Bridge Road	1B	\$5,000,000				\$5,000,000
2	Md 185 @ Jones Bridge Road	3	\$6,000,000				\$6,000,000
2	Md 187 @ Cedar including bikeway from Charles St. to NIH	1	\$7,000,000				\$7,000,000
Total: (Immediate and Intermediate Range)			\$58,750,000	\$29,000,000	\$5,300,000	\$0	\$93,050,000
3	Md 355 @ Cedar	3				\$22,000,000	\$22,000,000
3	Md 355 @ Cedar	4				\$13,000,000	\$13,000,000
3	Md 355 @ Cedar	5				\$15,000,000	\$15,000,000
3	Md 185 @ Jones Bridge Road	2				\$14,000,000	\$14,000,000
Total Tier 3 (Intermediate and Long Range)			\$0	\$0	\$0	\$84,000,000	\$84,000,000
4	Study Possible Direct Access from I-495 to NNMC (Very long range)	N/A				N/A	N/A
4	Study other long range transit solutions. See note on Tier 4.	N/A				N/A	N/A
Grand Total (2009 dollars)							\$157,050,000
NOTES							
Tier 1. Projects that can be done with existing funding or funding fairly secured.							
Phase 1A, at JBR, refers to an evaluation of a dynamic left turn signal that would be implemented if technically feasible.							
Tier 2. Projects to be done assuming success in getting TIGER grant approvals and DAR funding							
Tier 3. Priority for projects that could be added if additional funding, beyond TIGER, becomes available.							
Tier 4. Projects to study possible additional solutions including, direct access from I-495; Interchange of Md 355 @ Cedar, bus access improvements, Metro core capacity improvements, etc. Not funded.							
BRAC Final Tiers 9-25-09							

Tier 2: MD 355 at Jones Bridge Road (Phase 1B) (\$5 M)

Note: This project would only move forward if Dynamic Lane Control project in Tier 1 fails.

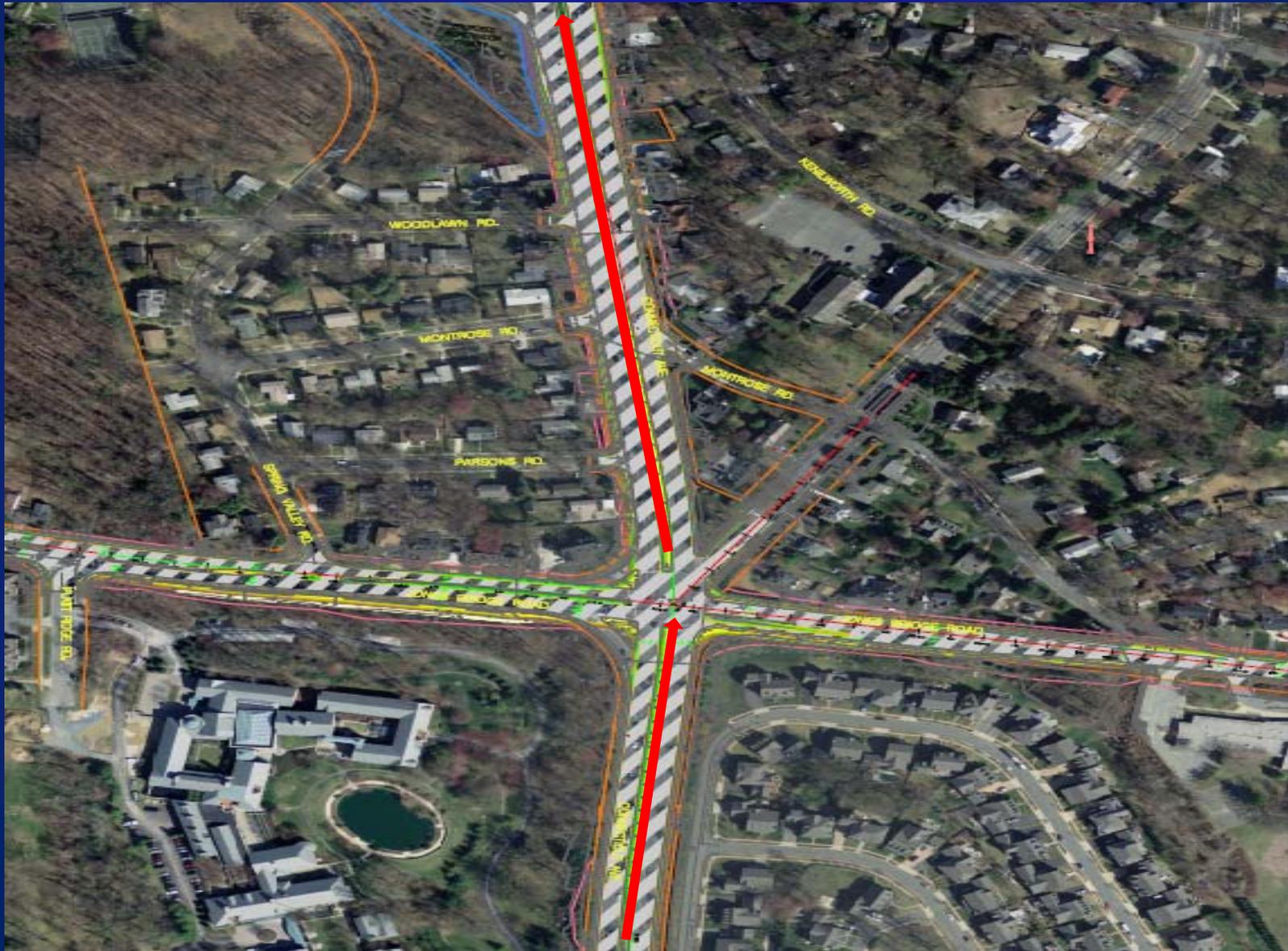


Tier 2 SHA Contracts

MD 355 at Jones Bridge Road, in the year 2011, proposed modifications are projected to:

- Reduce vehicle delay by 36% during the AM peak period from 57 sec/veh to 37 sec/veh
- Reduce vehicle delay by 53% during the PM peak period from 105 sec/veh to 49 sec/veh
- Improve the volume-to-capacity ratio during the AM peak period by 17% from 0.95 to 0.79
- Improve the volume-to-capacity ratio during the PM peak period by 18% from 1.18 to 0.97
- The proposed improvements at MD 355 and Jones Bridge Road would be expected to provide operations as-good or better than pre-BRAC conditions through the year **2024**, despite the additional traffic generated from the BRAC action and other local developments.

Tier 2: MD 185 at Jones Bridge Road (Phase 3) (\$6 M)

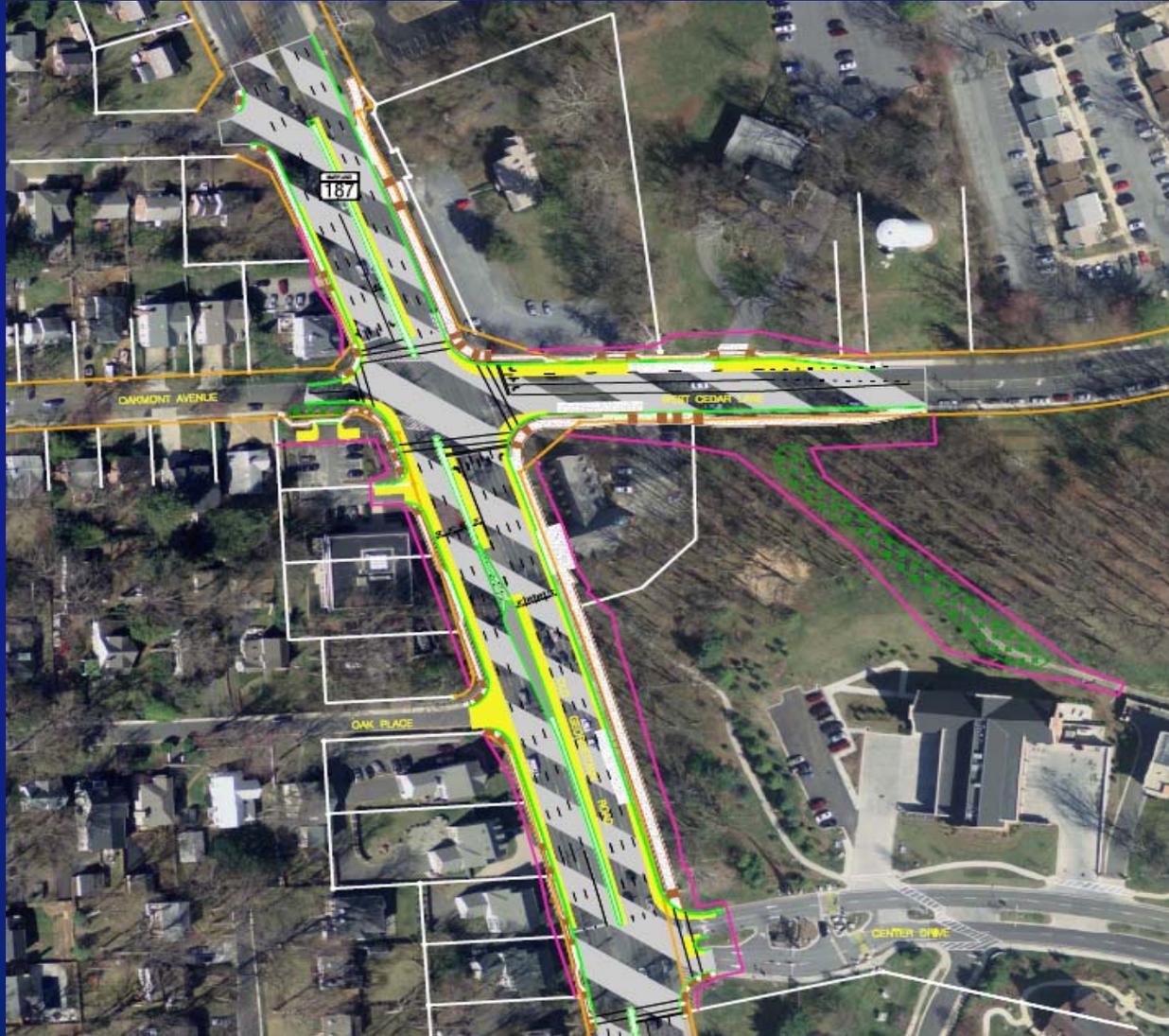


Tier 2 SHA Contracts

MD 185 at Jones Bridge Road (Phase 3), in the year 2011, proposed modifications are projected to:

- Reduce vehicle delay by 42% during the AM peak period from 146 sec/veh to 85 sec/veh
- Reduce vehicle delay by 24% during the PM peak period from 194 sec/veh to 148 sec/veh
- Improve the volume-to-capacity ratio during the AM peak period by 19% from 1.29 to 1.05
- Improve the volume-to-capacity ratio during the PM peak period by 13% from 1.40 to 1.22
- These proposed improvements at MD 185 and Jones Bridge Road would be expected to provide operations as-good or better than pre-BRAC conditions through the year **2018** during all peak periods, despite the additional traffic generated from the BRAC action and other local developments.

Tier 2: MD 187 at Cedar Lane (\$7 M)



Tier 2 SHA Contracts

MD 187 at Cedar Lane, in the year 2011, proposed modifications are projected to:

- Reduce vehicle delay by 12% during the AM peak period from 31 sec/veh to 27 sec/veh
- Reduce vehicle delay by 53% during the PM peak period from 83 sec/veh to 39 sec/veh
- Improve the volume-to-capacity ratio during the AM peak period by 9% from 0.87 to 0.79
- Improve the volume-to-capacity ratio during the PM peak period by 26% from 1.15 to 0.85
- These proposed improvements at MD 187 and Cedar Lane would be expected to provide LOS E or better operations through the year **2027**, despite the additional traffic generated from the BRAC action and other local developments.

Tier 2 – Network Benefits

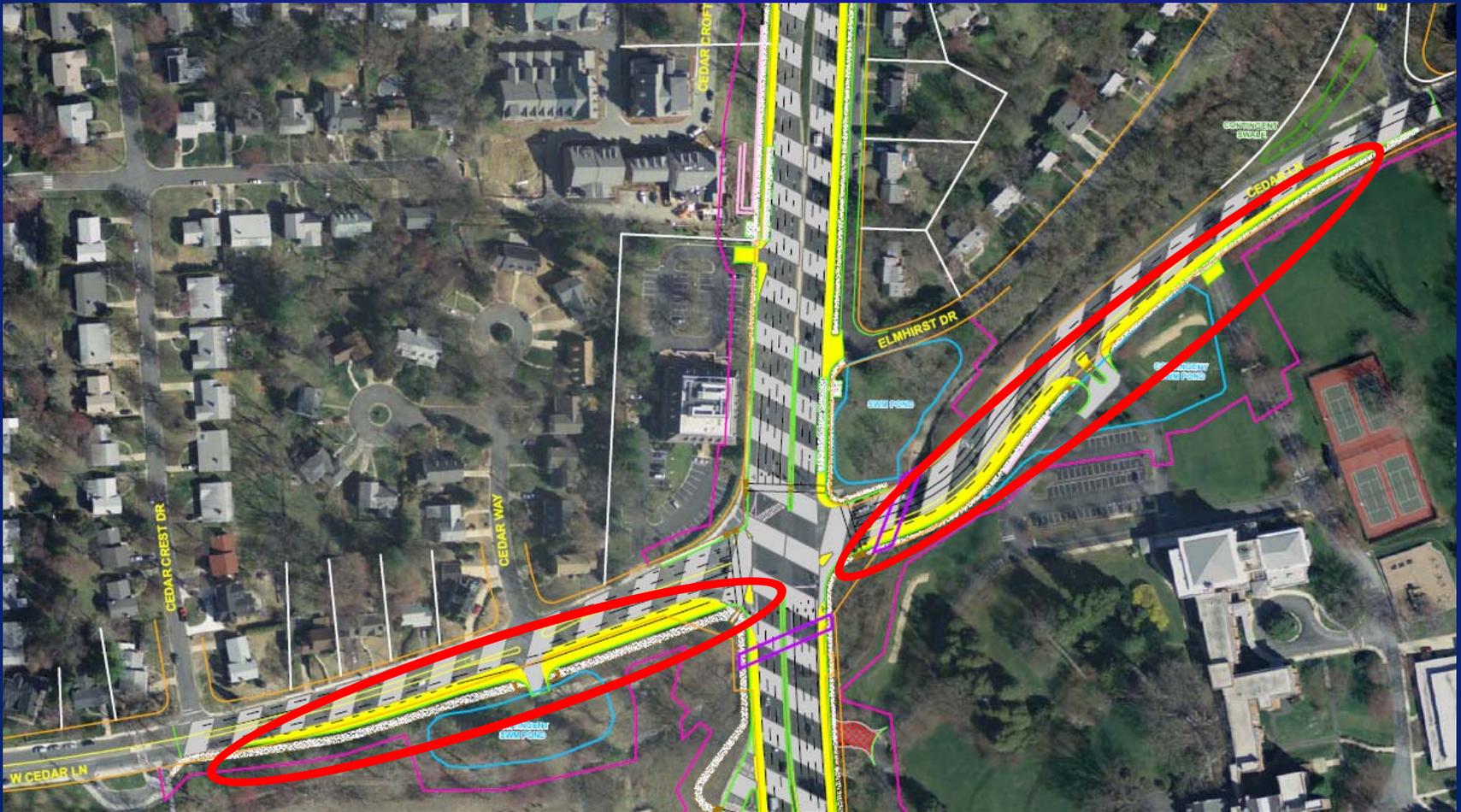
The proposed Tier 2 modifications are projected to result in the following network benefits:

- Reduce emissions of carbon monoxide (CO), nitrogen oxides (NO_x), and volatile oxygen compounds (VOC) by 38% during the AM peak hour and by 18% during the PM peak hour compared to the No-Build condition
- Reduce fuel consumption by over 1,000 gallons each day during the peak hours, compared to the No-Build condition
- At \$2.50 per gallon, this reduction in fuel consumption equates to a total user cost savings of approximately \$1.6 million per year

BRAC
Transportation Investment Priorities

Tier	Intersection / Project	Phases	Federal Cost	State Cost	County Cost	Undetermined source	Total Cost
1	Md 355 @ Cedar Lane	1 and 2		\$ 25,000,000			\$25,000,000
1	Md 185 @ Jones Bridge Road	1		\$ 4,000,000			\$4,000,000
1	Bikeway and Sidewalk Improvements on Cedar Lane, Md 355, Jones Bridge Rd. and signing	1	\$750,000		\$5,000,000		\$5,750,000
1	Preliminary engineering and Environmental Assessment for Multi-modal Underpass from Metro Station to NNMC	N/A			\$300,000		\$300,000
1	Md 355 @ Jones Bridge Road	1A				See note Tier 1.	
Total Tier 1			\$750,000	\$29,000,000	\$5,300,000		\$35,050,000
2	Multi-modal underpass from Metro Station to NNMC	N/A	\$40,000,000				\$40,000,000
2	Md 355 @ Jones Bridge Road	1B	\$5,000,000				\$5,000,000
2	Md 185 @ Jones Bridge Road	3	\$6,000,000				\$6,000,000
2	Md 187 @ Cedar including bikeway from Charles St. to NIH	1	\$7,000,000				\$7,000,000
Total Tier 2			\$58,000,000	\$ -			\$58,000,000
Total (immediate and intermediate range)			\$66,750,000	\$29,000,000	\$5,300,000	\$0	\$101,050,000
3	Md 355 @ Cedar	3				\$22,000,000	\$22,000,000
3	Md 355 @ Cedar	4				\$13,000,000	\$13,000,000
3	Md 355 @ Cedar	5				\$15,000,000	\$15,000,000
3	Md 185 @ Jones Bridge Road	2				\$14,000,000	\$14,000,000
4	Study Possible Direct Access from I-495 to NNMC (Very long range)	N/A				N/A	N/A
4	Study other long range transit solutions. See note on Tier 4.	N/A				N/A	N/A
Grand Total (2009 dollars)							\$157,050,000
NOTES							
Tier 1. Projects that can be done with existing funding or funding fairly secured.							
Phase 1A, at JBR, refers to an evaluation of a dynamic left turn signal that would be implemented if technically feasible.							
Tier 2. Projects to be done assuming success in getting TIGER grant approvals and DAR funding							
Tier 3. Priority for projects that could be added if additional funding, beyond TIGER, becomes available.							
Tier 4. Projects to study possible additional solutions including, direct access from I-495; Interchange of Md 355 @ Cedar, bus access improvements, Metro core capacity improvements, etc. Not funded.							
BRAC Final Tiers 9-25-09							

Tier 3: MD 355 at Cedar Lane (Phase 3) (\$22 M)



Tier 3 SHA Contracts

MD 355 at Cedar Lane (Phase 3), in the year 2011, proposed modifications are projected to:

- Reduce vehicle delay by 53% during the AM peak period from 136 sec/veh to 63 sec/veh
- Reduce vehicle delay by 61% during the PM peak period from 168 sec/veh to 65 sec/veh
- Improve the volume-to-capacity ratio during the AM peak period by 22% from 1.35 to 1.05
- Improve the volume-to-capacity ratio during the PM peak period by 20% from 1.43 to 1.15
- These proposed improvements at MD 3555 and Cedar Lane would be expected to provide operations as-good or better than pre-BRAC conditions through the year **2027**, despite the additional traffic generated from the BRAC action and other local developments.

Tier 3: MD 355 at Cedar Lane (Phase 4) (\$13 M)

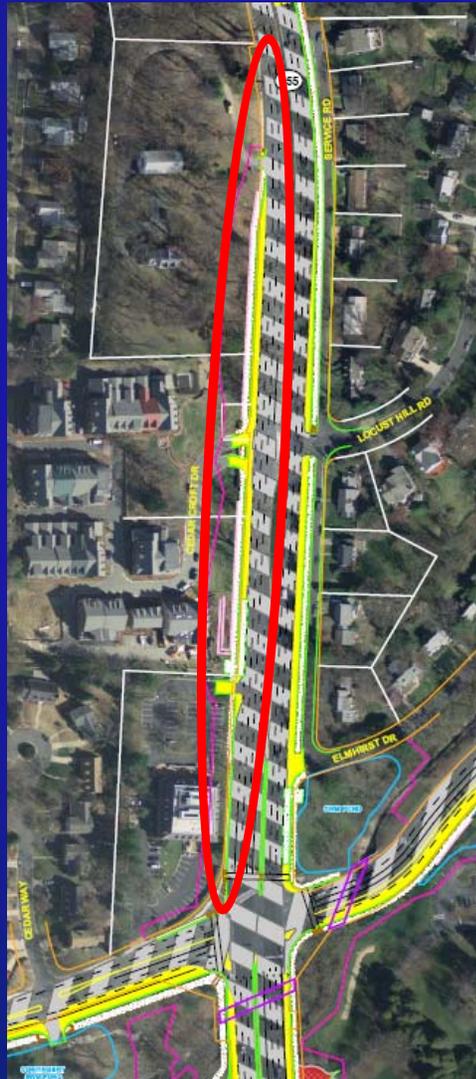


Tier 3 SHA Contracts

MD 355 at Cedar Lane (Phase 4), in the year 2011, proposed modifications are projected to:

- Reduce vehicle delay by 60% during the AM peak period from 136 sec/veh to 55 sec/veh
- Reduce vehicle delay by 67% during the PM peak period from 168 sec/veh to 56 sec/veh
- Improve the volume-to-capacity ratio during the AM peak period by 22% from 1.35 to 1.05
- Improve the volume-to-capacity ratio during the PM peak period by 27% from 1.43 to 1.04
- These proposed improvements at MD 3555 and Cedar Lane would be expected to provide operations as-good or better than pre-BRAC conditions through the year **2029**, despite the additional traffic generated from the BRAC action and other local developments.

Tier 3: MD 355 at Cedar Lane (Phase 5) (\$15 M)



Tier 3 SHA Contracts

MD 355 at Cedar Lane (Phase 5), in the year 2011, proposed modifications are projected to:

- Reduce vehicle delay by 60% during the AM peak period from 136 sec/veh to 55 sec/veh (same as Phase 4)
- Reduce vehicle delay by 67% during the PM peak period from 168 sec/veh to 56 sec/veh (same as Phase 4)
- Improve the volume-to-capacity ratio during the AM peak period by 22% from 1.35 to 1.05 (same as Phase 4)
- Improve the volume-to-capacity ratio during the PM peak period by 27% from 1.43 to 1.04 (same as Phase 4)
- Reduce queue lengths on SB MD 355 compared to Phase 4
- These proposed improvements at MD 355 and Cedar Lane would be expected to provide operations as-good or better than pre-BRAC conditions through the year **2029**, despite the additional traffic generated from the BRAC action and other local developments.

Tier 3: MD 185 at Jones Bridge Road (Phase 2) (\$14 M)



Tier 3 SHA Contracts

MD 185 at Jones Bridge Road (Phase 2), in the year 2011, proposed modifications are projected to:

- Reduce vehicle delay by 48% during the AM peak period from 146 sec/veh to 76 sec/veh
- Reduce vehicle delay by 54% during the PM peak period from 194 sec/veh to 89 sec/veh
- Improve the volume-to-capacity ratio during the AM peak period by 22% from 1.29 to 1.00
- Improve the volume-to-capacity ratio during the PM peak period by 25% from 1.40 to 1.05
- These proposed improvements at MD 185 and Jones Bridge Road would be expected to provide operations as-good or better than pre-BRAC conditions through the year **2024**, despite the additional traffic generated from the BRAC action and other local developments.

Questions?