



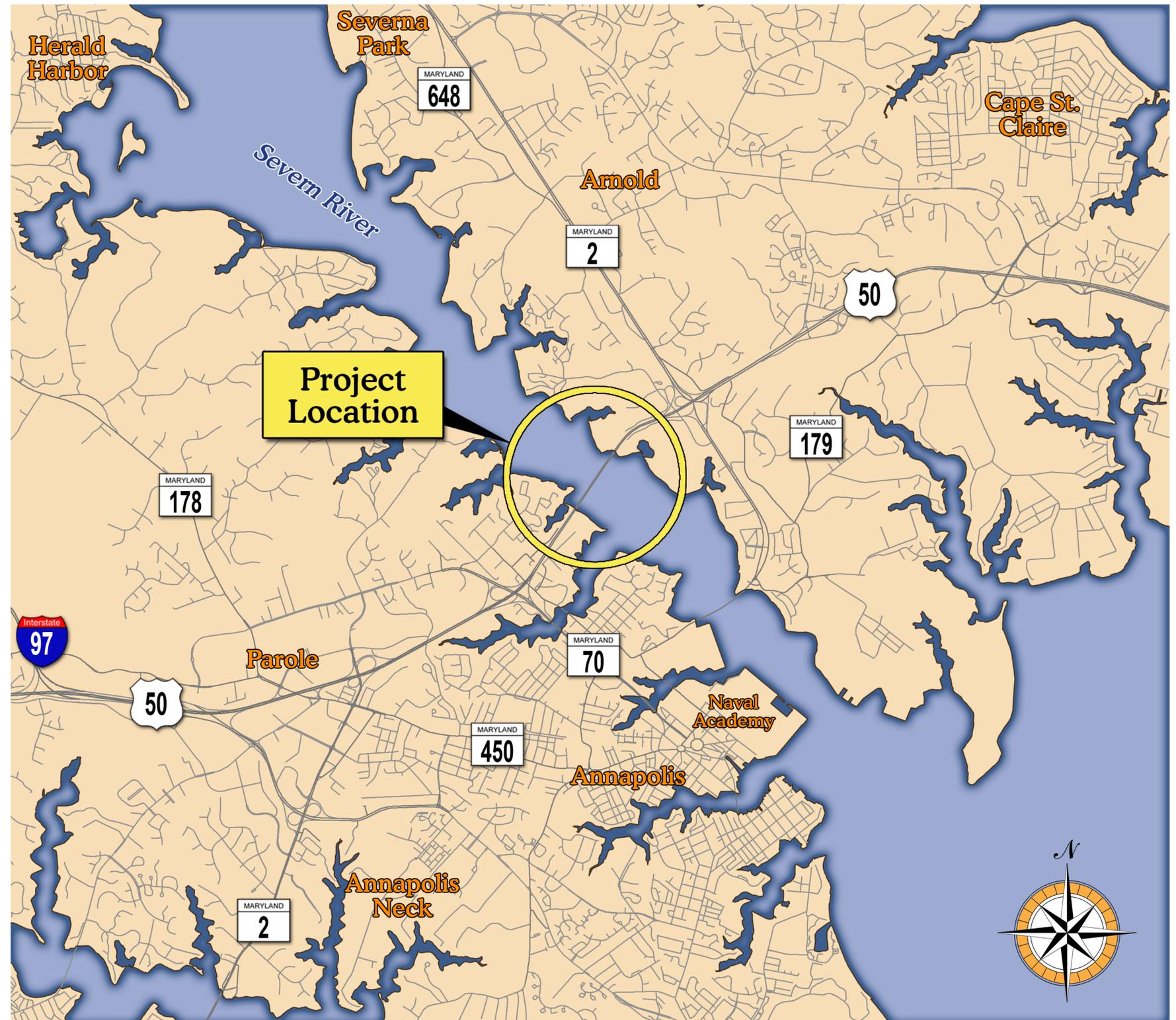
WELCOME

US 50 at Severn River Bridge Project Planning Study Informational Workshop

October 23, 2014

PURPOSE OF THE MEETING

- Provide review of the US 50 at Severn River Bridge Feasibility Study
- Present technical studies conducted to date
- Obtain public comments



PURPOSE OF THE PROJECT

- **Investigate operational improvements for the US 50 Severn River Bridge**
- **Provide a near-term solution, primarily for the US 50 eastbound direction, that addresses recurring traffic congestion**

NEED FOR THE PROJECT

- **Significant traffic congestion on eastbound US 50 occurs in the evenings**
- **Drivers use local streets to avoid congestion**
- **Anne Arundel County has identified improvements along US 50 near the Severn River Bridge as a transportation priority**

2011 FEASIBILITY STUDY

- **Study limits: I-97 to MD 179 (St. Margarets Road)**
- **Heaviest congestion occurs in the eastbound direction during evening peak periods on weekdays and summer Friday's**
- **SHA examined a number of concepts to determine their effectiveness**
- **Adding an eastbound lane on US 50 (Concept 1B) is the recommended alternative**
- **Most concepts would improve traffic conditions for 8-10 years, based on existing traffic volume analysis**
- **A parallel span of the Severn River Bridge (Option 6) is the only concept that would relieve 2030 congestion**

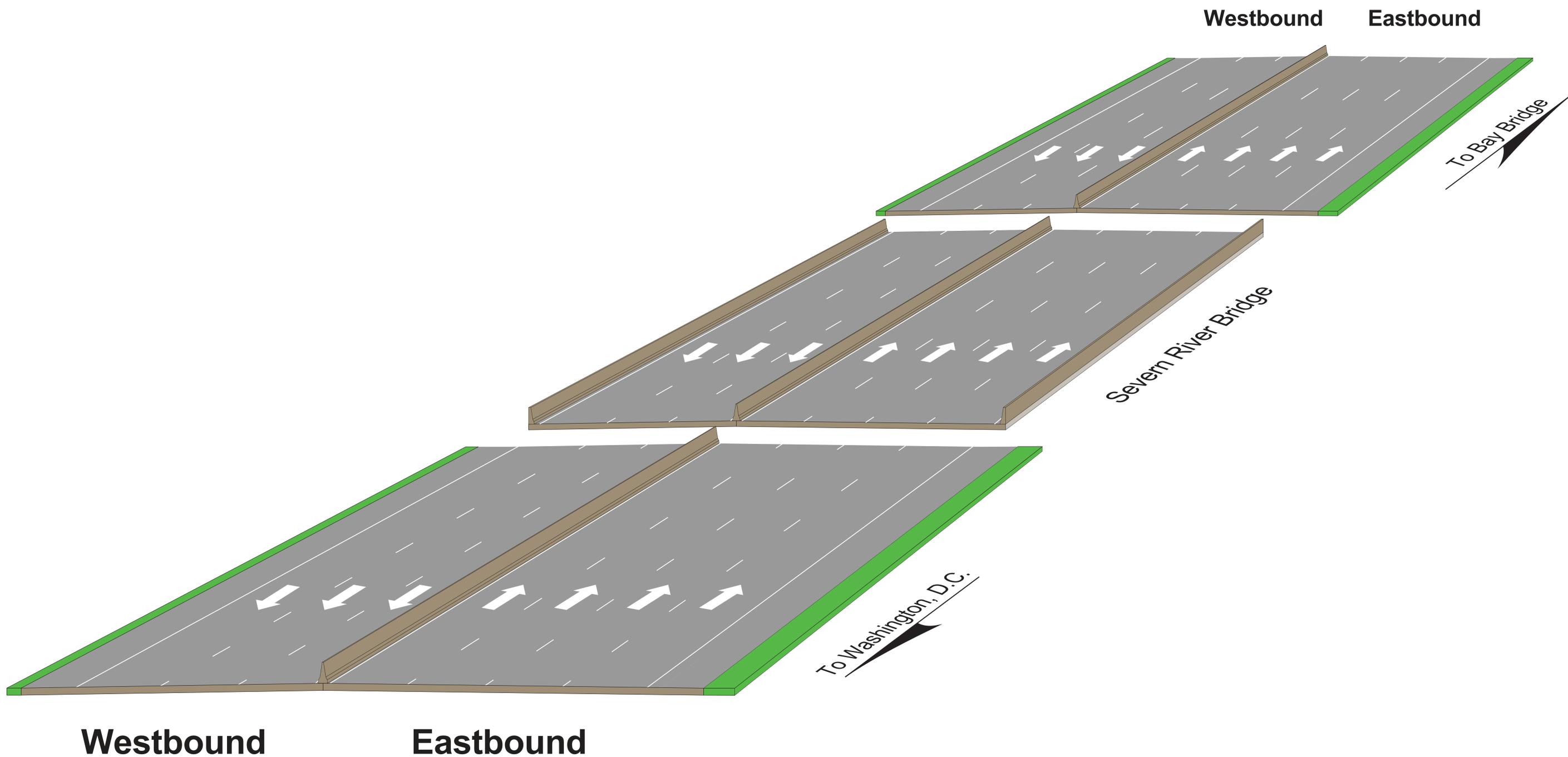
CONCEPTS DROPPED FROM CONSIDERATION

Concept	Description	Reason Concept was Dropped
Concept 1A	<ul style="list-style-type: none"> Reversible Lanes with a Moveable Barrier (replace existing median barrier with moveable barrier) 	<ul style="list-style-type: none"> High costs of moveable barrier system's annual maintenance requirements
Concept 2A-D	<ul style="list-style-type: none"> Reversible Lanes with a Moveable Barrier (maintain existing median barrier and add a moveable barrier to each side of the bridge) 	<ul style="list-style-type: none"> High cost of barrier and elimination of one lane in the off-peak direction causes congestion and queuing in the off-peak direction, especially in the westbound direction and on summer Friday evenings
Concept 2E-H	<ul style="list-style-type: none"> Reversible Lanes without a Moveable Barrier (maintain existing median barrier, convert one lane to a reversible lane, vary the length of reversible lane) 	<ul style="list-style-type: none"> High cost of barrier and elimination of one lane in the off-peak direction causes congestion and queuing in the off-peak direction, especially in the westbound direction and on summer Friday evenings
Concept 3	<ul style="list-style-type: none"> Collector Distributor (CD) Road/Express Lanes (extend the CD road from I-97 to Rowe Boulevard) 	<ul style="list-style-type: none"> Provides barrier separation for local and commuter traffic but does not resolve congestion across the bridge
Concept 4	<ul style="list-style-type: none"> Lane Speed Control (LSC) / Variable Speed Limit (VSL) (LSC and VSL systems have speed limits that vary by lane) 	<ul style="list-style-type: none"> Negligible effect on queue length regardless of speed
Concept 5	<ul style="list-style-type: none"> Ramp Metering /Signal Timing at the Rowe Boulevard on-ramp to US 50 	<ul style="list-style-type: none"> No reduction in congestion across the bridge; will introduce congestion on the ramp and MD 70
Concept 6	<ul style="list-style-type: none"> New Severn River Bridge (parallel span adjacent to the north side of the existing bridge) 	<ul style="list-style-type: none"> Dropped as a short-term measure to relieve existing traffic congestion, but will be reconsidered, if needed

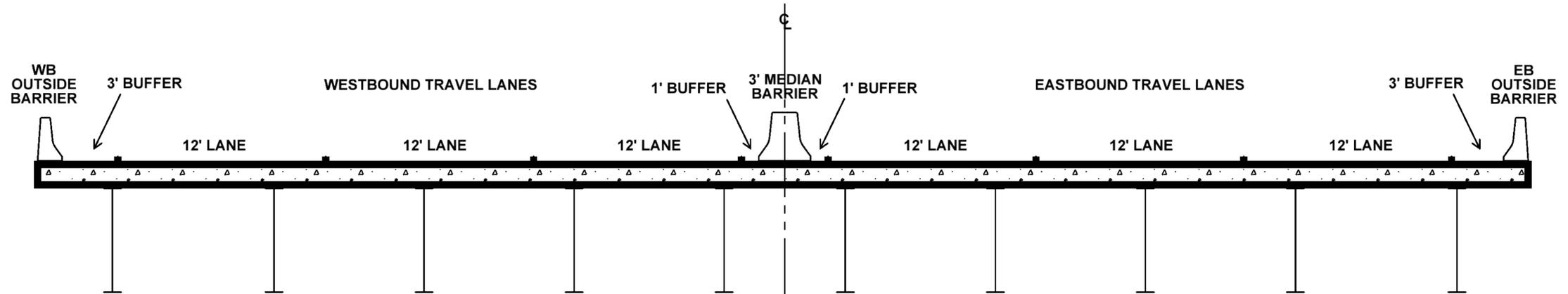
RECOMMENDED CONCEPT

- **The study corridor, from MD 70 (Rowe Boulevard) to MD 2 (Governor Ritchie Highway), is approximately two-miles long**
- **The existing barrier between the east and west approaches of the US 50 Severn River Bridge will be removed from a one-mile section of the roadway**
- **A new permanent concrete-median traffic barrier will separate the four eastbound through lanes from the three westbound through lanes**
- **US 50 will be restriped to accommodate seven through lanes**

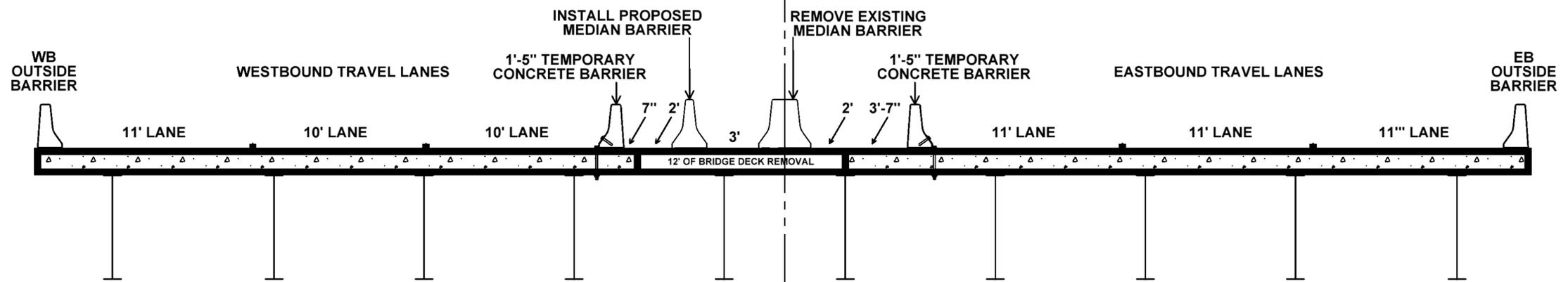
RECOMMENDED CONCEPT ROADWAY AND BRIDGE SURFACE



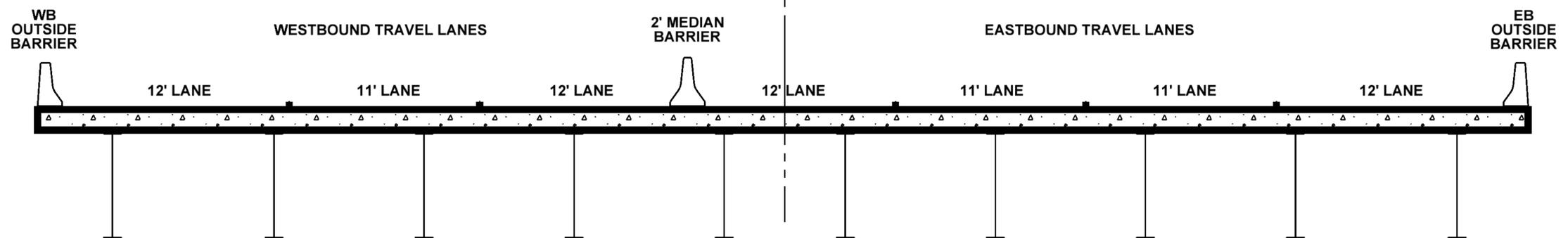
MAINTENANCE OF TRAFFIC CONCEPT



EXISTING CONDITION



CONSTRUCTION CONDITION



PROPOSED CONDITION

MAINTENANCE OF TRAFFIC CONCEPT

- **During construction, three lanes of traffic will be maintained in each direction**
- **Proposed median barrier will be constructed in one phase**
- **A minimum 12-foot work zone is required to remove existing median barrier and construct proposed median barrier**

TRAFFIC AND LEVEL OF SERVICE

* Average Daily Traffic (ADT) - US 50 at Severn River Bridge	
Year	ADT
2014	120,000
2025	135,000
2040	160,000

Level of Service (LOS) and Density (vehicle / miles / lane) - US 50 at Severn River Bridge						
Direction	Existing			Near-Term Build		
	Typical AM Peak	Typical PM Peak	Summer Friday PM	Typical AM Peak	Typical PM Peak	Summer Friday PM
Eastbound	C	F	F	C	D	E
Westbound	E	C	C	E	C	C

* Average Daily Traffic (ADT) is the average number of vehicles that pass a given location on a roadway during a 24-hour period

VEHICLE DELAY

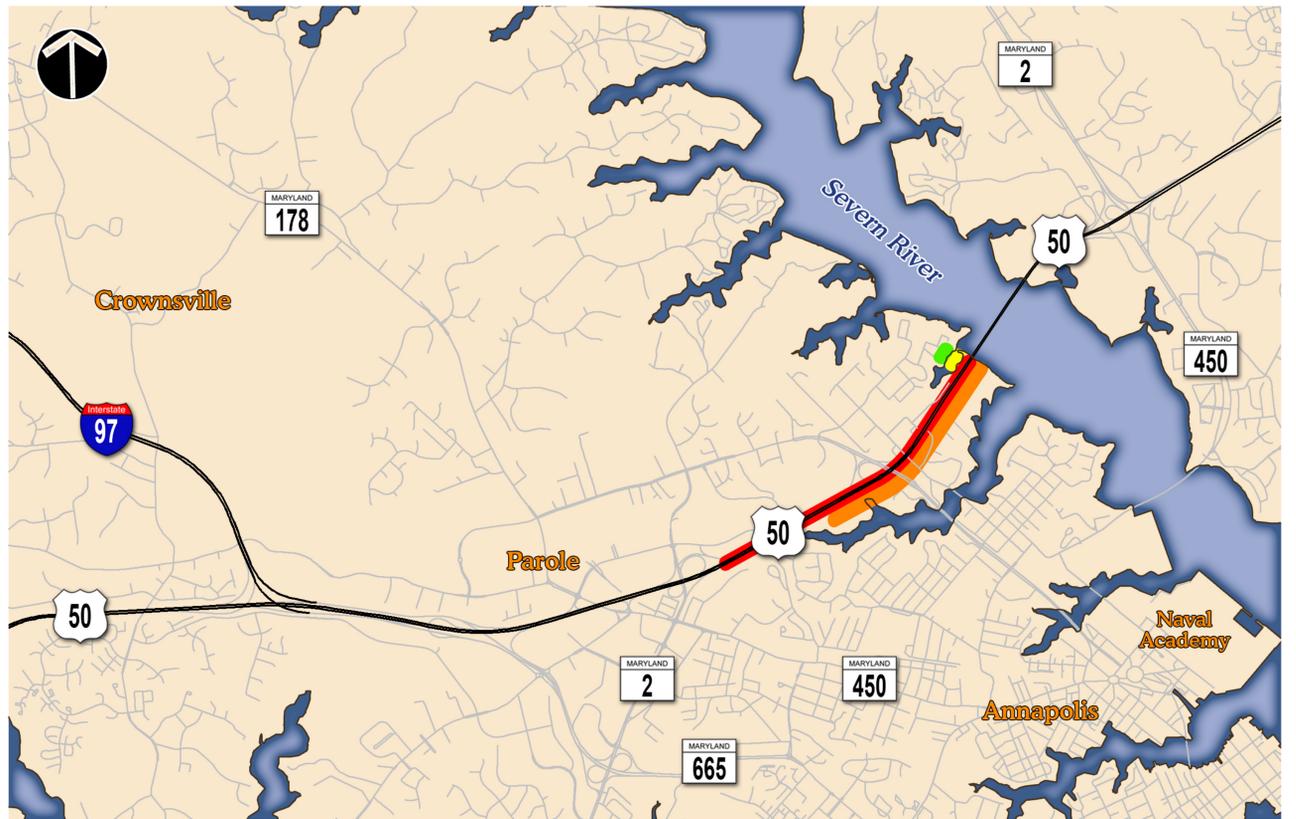
Approximate Average Delay (minutes per vehicle) US 50 Eastbound Traffic Between I-97 and MD 179						
Year	No-Build Condition			Build Condition		
	Typical AM Peak	Typical PM Peak	Summer Friday PM	Typical AM Peak	Typical PM Peak	Summer Friday PM
2014 (Existing)	0	3	8	0*	1*	1*
2025	0	10	16	0	1	10
2040	0	11	21	0	2	20

***These values represent the amount of delay if the Build condition were in place.**

QUEUE LENGTHS

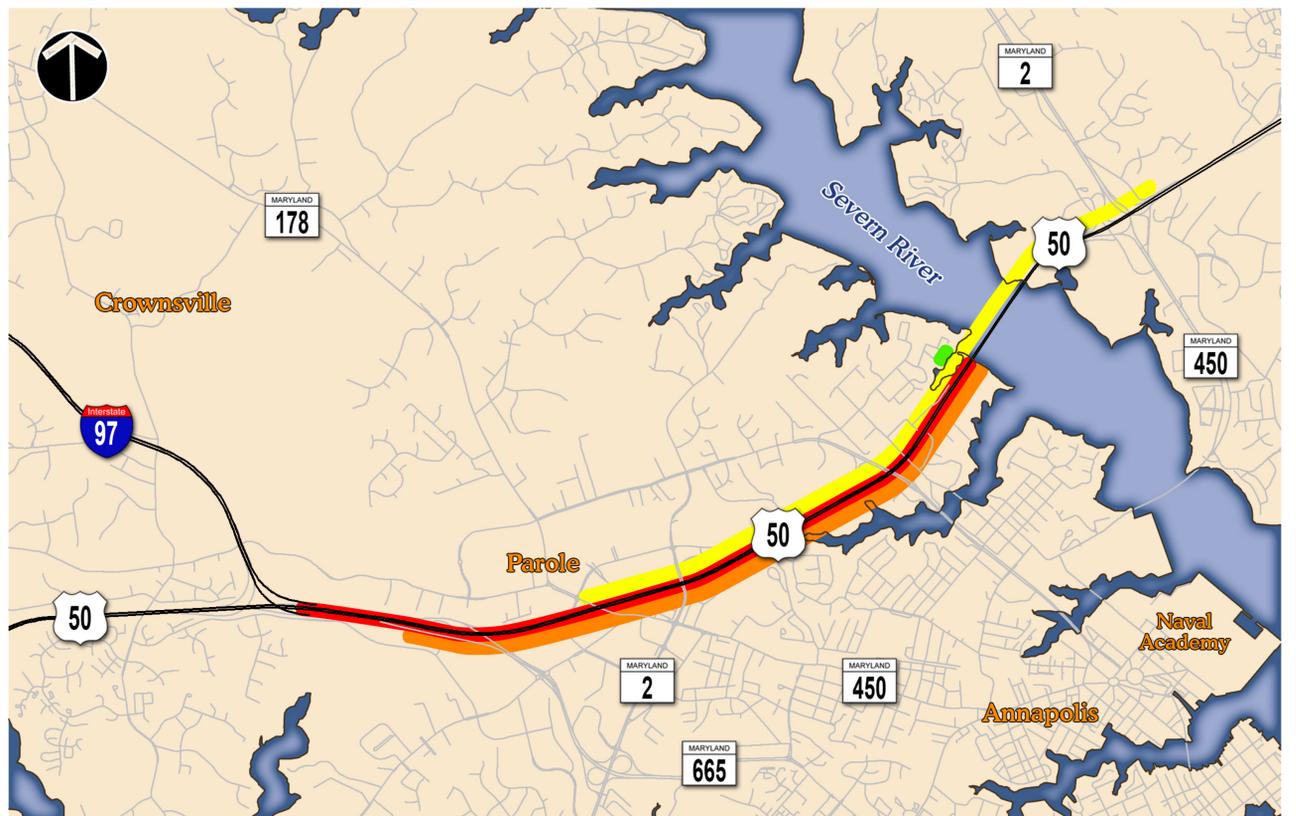
2014 Queues (Eastbound)

- No-Build Non-Summer Weekday PM - 1.1 Miles
- No-Build Summer Friday PM - 1.8 Miles
- Build Non-Summer Weekday PM - 0 Miles
- Build Summer Friday PM - 0 Miles



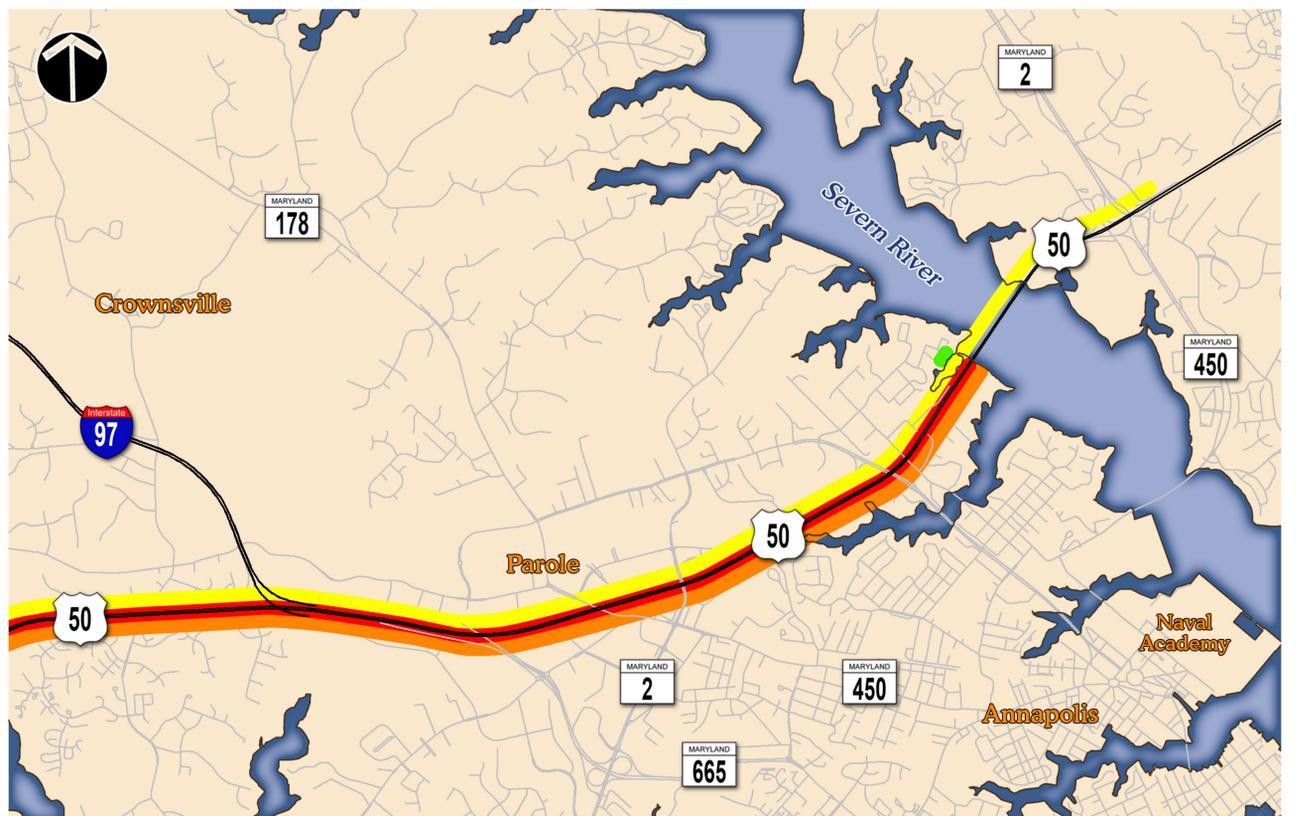
2025 Queues (Eastbound)

- No-Build Non-Summer Weekday PM - 3.5 Miles
- No-Build Summer Friday PM - 4.2 Miles
- Build Non-Summer Weekday PM - 0 Miles
- Build Summer Friday PM - 3.8 Miles



2040 Queues (Eastbound)

- No-Build Non-Summer Weekday PM - >5.0 Miles
- No-Build Summer Friday PM - >5.0 Miles
- Build Non-Summer Weekday PM - 0 Miles
- Build Summer Friday PM - >5.0 Miles



REGIONAL PLANNING INFORMATION

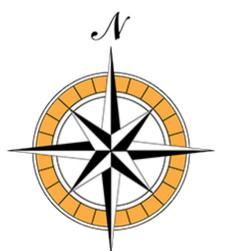


Construction Program

1. MD 175, Annapolis Road (at MD 713, Rockenbach Road / Ridge Road)
2. MD 175, Annapolis Road (Reece Road and Maples Road / Charter Oaks Boulevard)
3. MD 648, Baltimore Annapolis Boulevard, Replace small structure over Cattail Creek

Development and Evaluation Program

4. MD 3, Robert Crain Highway (MD 32 to US 50)
5. MD 175, Annapolis Road (MD 295 to MD 170)
6. MD 198, Laurel Fort Meade Road (West of MD 295 to MD 32)
7. MD 295, Baltimore Washington Parkway (MD 100 to I-195 and Hanover Road)
8. US 50, John Hanson Highway (MD 70 to MD 2)



NEXT STEPS

- **Complete Data Collection and Surveys** *Winter 2014 / 2014*
- **Complete Concept Design** *Summer 2015*
- **Complete Draft Environmental Document** *Fall 2015*
- **Conduct Public Hearing** *Fall 2015*
- **Receive Location / Design Approvals** *Spring 2016*