MANAGED LANES STUDY

495 270

TRAFFIC RELIEF PLAN

WELCOME!

Alternatives Public Workshop for the I-495 & I-270 Managed Lanes Study

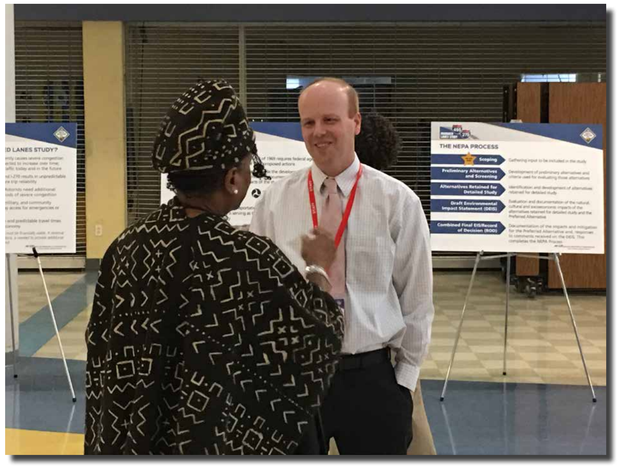
MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MANAGED LANES STUDY

TRAFFIC RELIEF PLAN

PURPOSE OF TODAY'S PUBLIC WORKSHOP

- Provide an update on the study status and schedule
- Provide a summary of the study Purpose and Need
- Present a Preliminary Range of Alternatives developed from the scoping process
- Present the Screening Criteria to evaluate the alternatives



Future meetings will focus on detailed alternatives and environmental/property information.

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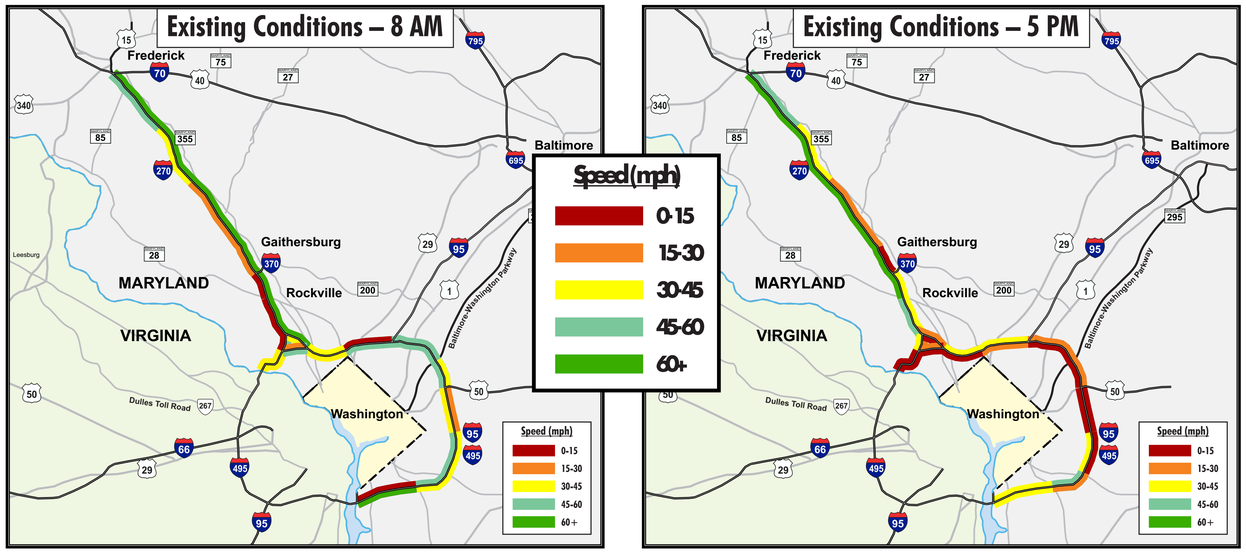
MANAGED LANES STUDY 495 270

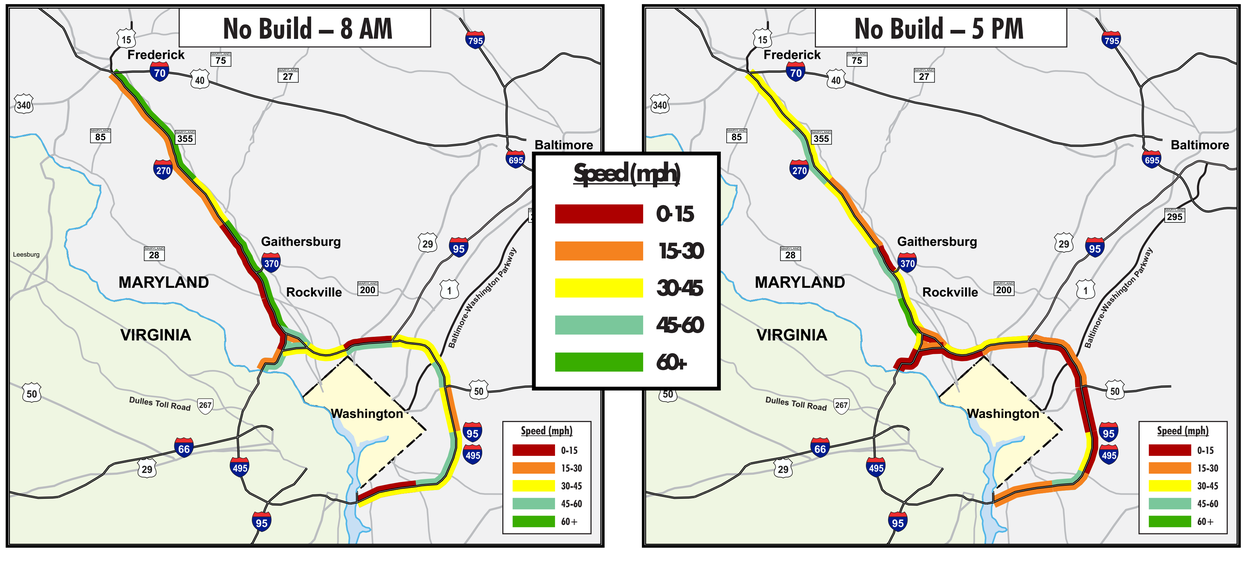
TRAFFIC RELIEF PLAN

TRAFFIC CONDITIONS

EXISTING



NO BUILD



- Top 5 highest volume freeway sections in Maryland are within study area
- Today, on average, severe congestion lasts for 7 hours each day on I-270 and 10 hours each day on I-495
- Study area includes several of the most unreliable freeway sections in Maryland (highly variable travel times day to day)
- Many sections experience speeds less than 15 mph under existing conditions and traffic is expected to deteriorate

Average Annual Daily Traffic (AADT)		
Location	**2018**	**2040**
I-270: I-370 to I-495	259,000	299,000
I-495: VA Line to I-270	253,000	282,000
I-495: I-270 to I-95	235,000	252,000
I-495: I-95 to MD 4	230,000	245,000

MANAGED LANES STUDY

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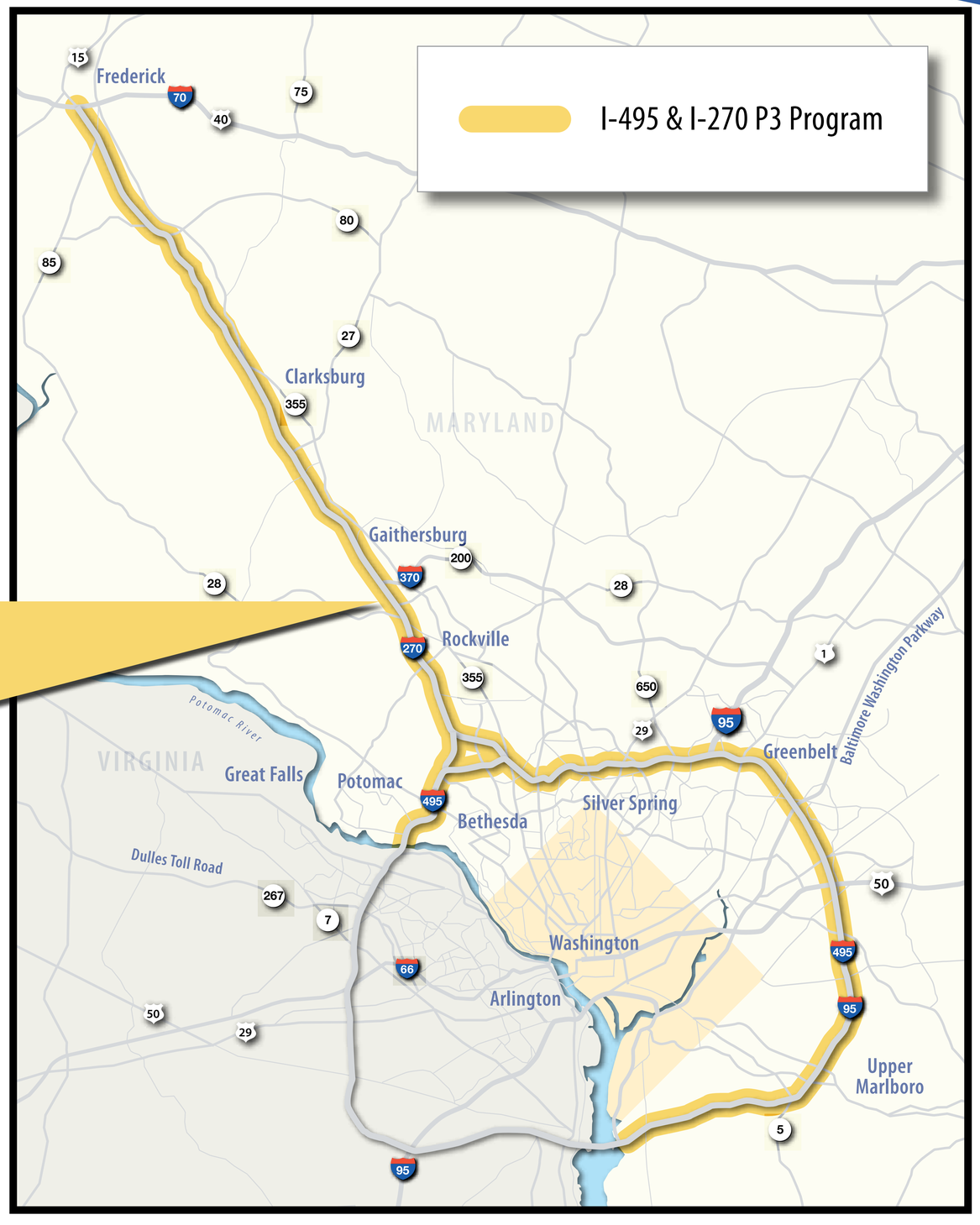
I-495 & I-270 P3 PROGRAM

The overall I-495 & I-270 Public-Private Partnership (P3) Program includes improvements for over 70 miles of interstate in Maryland including:

- I-495 (Capital Beltway) from south of the American Legion Bridge to east of the Woodrow Wilson Bridge
- I-270 from I-495 to I-70, including the east and west I-270 spurs



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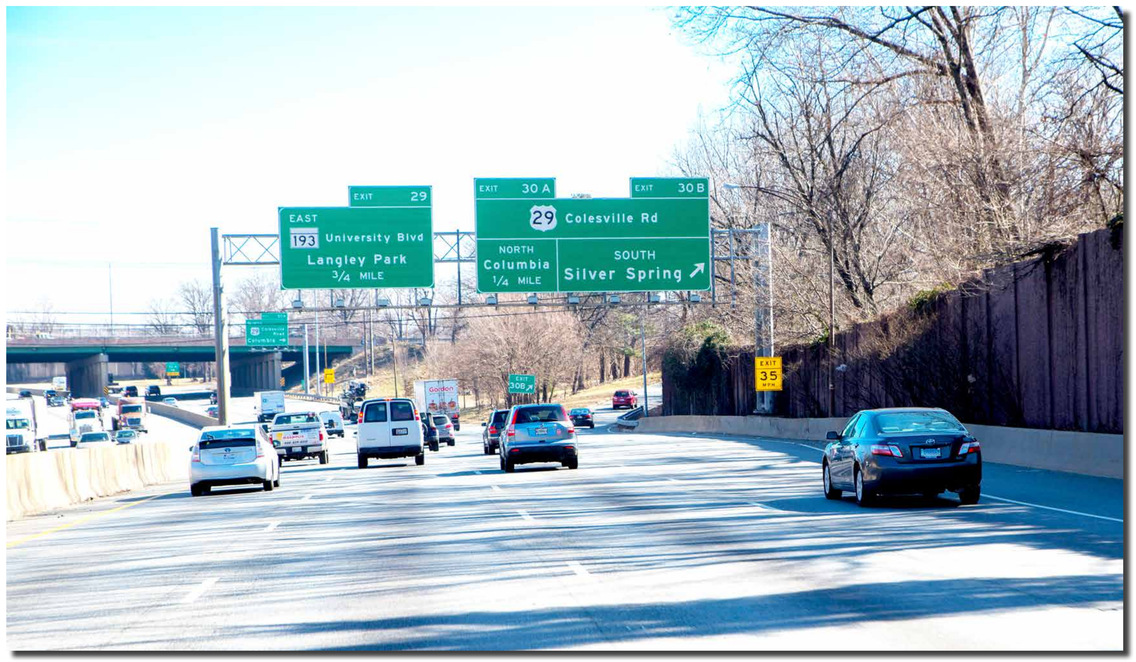
PUBLIC-PRIVATE PARTNERSHIP (P3)

- MDOT SHA will seek proposals from the private sector to enter into a Public-Private Partnership (P3) to develop innovative approaches to design, build, finance, operate, and maintain potential improvements developed through the I-495 & I-270 Managed Lanes Study
- Using a P3 encourages efficiencies and innovations to provide a better long-term value for the public in a shorter amount of time
- The state will use a competitive process to ensure the best value for the citizens of Maryland
- The state will maintain ownership of the transportation facilities and will ensure they meet their public functions



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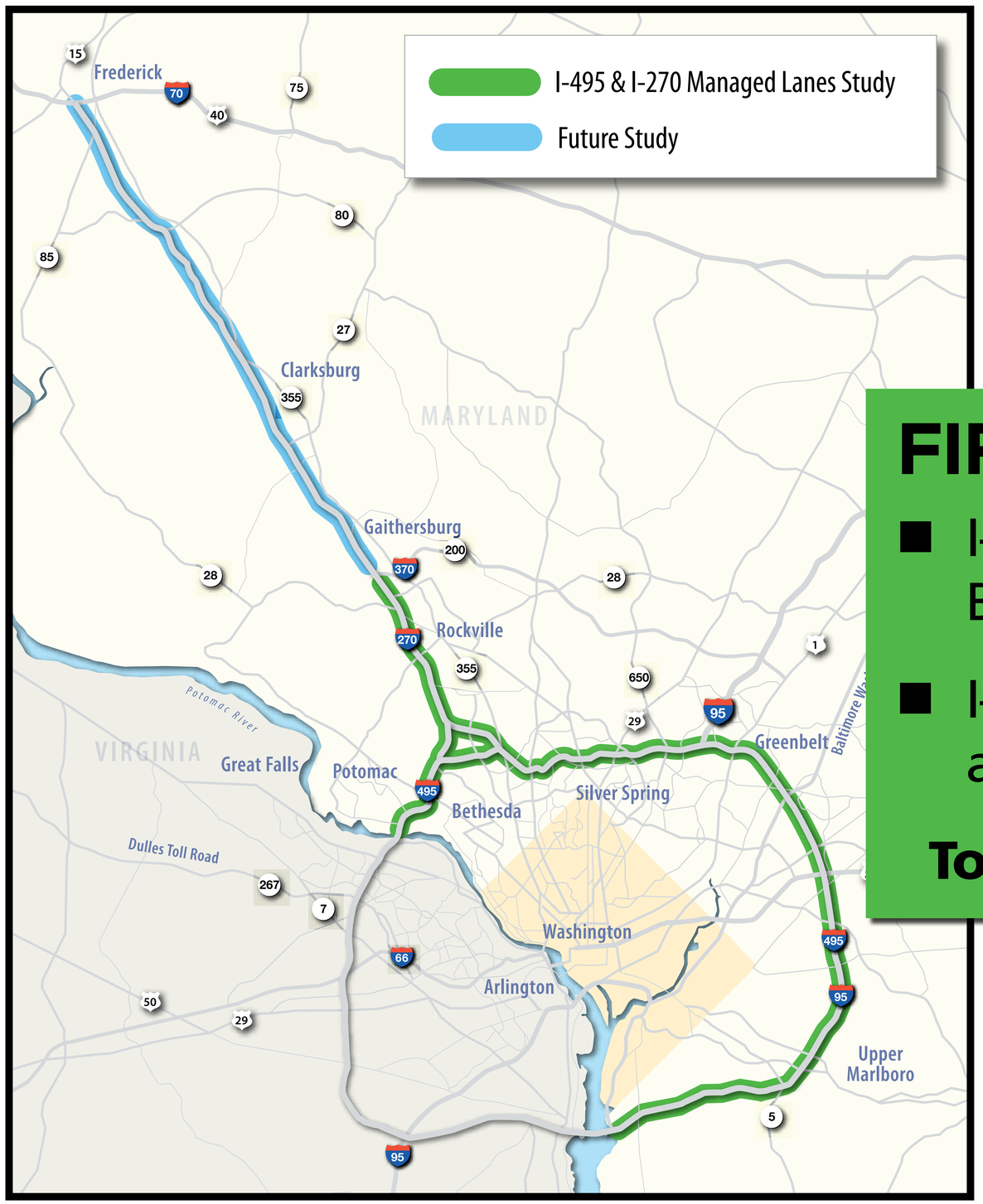
MANAGED LANES STUDY

495 270

TRAFFIC RELIEF PLAN



I-495 & I-270 MANAGED LANES STUDY

The first element of the P3 Program is the I-495 & I-270 Managed Lanes Study:

FIRST STUDY

- I-495 from south of the American Legion Bridge to east of the Woodrow Wilson Bridge
- I-270 from I-495 to I-370, including the east and west I-270 spurs

Today's meeting focuses on this study

FUTURE STUDY

- I-270 from I-370 north to I-70

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THE NEPA PROCESS

- The National Environmental Policy Act (NEPA) of 1969 requires federal agencies to evaluate the environmental impacts of their proposed actions
- The I-495 & I-270 Managed Lanes Study will include the development of an Environmental Impact Statement (EIS), which will document the potential natural, cultural, and socioeconomic impacts of the study's alternatives
- The Federal Highway Administration (FHWA) serves as the lead federal agency for the EIS

U.S. Department of Transportation
Federal Highway Administration

- The Maryland Department of Transportation State Highway Administration (MDOT SHA) is serving as the local project sponsor and joint lead agency

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MANAGED LANES STUDY 495 270

TRAFFIC RELIEF PLAN

THE NEPA PROCESS

Scoping	Gathering input to be included in the study
WE ARE HERE **Preliminary Range of Alternatives and Screening**	Development of preliminary alternatives and criteria used for evaluating those alternatives based on input from scoping process
Alternatives Retained for Detailed Study (ARDS)	Identification and development of Alternatives Retained for Detailed Study
Draft Environmental Impact Statement (DEIS)	Evaluation and documentation of the natural, cultural and socioeconomic impacts of the ARDS and the MDOT SHA's Preferred Alternative
Combined Final EIS/Record of Decision (ROD)	Documentation of the impacts and mitigation for the Selected Alternative and, responses to comments received on the DEIS. This completes the NEPA Process

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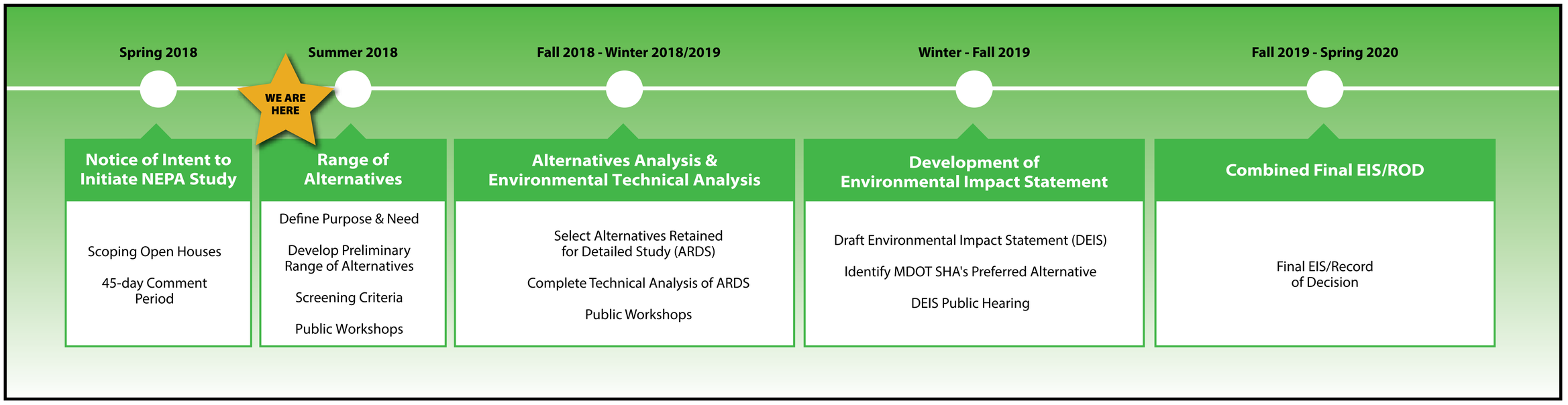
MANAGED LANES STUDY

TRAFFIC RELIEF PLAN

MANAGED LANES STUDY TIMELINE



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SCOPING UPDATE

Scoping is the first step in the National Environmental Policy Act (NEPA) process. It provides opportunities for public and agency input on the purpose and need, potential alternatives, and environmental considerations to be addressed during the study.

The I-495 & I-270 Managed Lanes Study scoping occurred in Mid-March-Early May 2018 and included:

- Coordination meetings with local, State and federal agencies.
- Publication of a Notice of Intent (NOI) in the Federal Register on March 16, 2018.
- Launch of a website in March, which provided a study overview, contact information and the opportunity for the public to submit study-related comments and questions and to be added to the study mailing list.
- A series of four Open Houses designed to share study information and obtain community feedback. 374 citizens attended the Open Houses.

MANAGED LANES STUDY

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PUBLIC SCOPING COMMENTS

620 comments submitted from March 16 to May 1, 2018 including:

- 143 written comments at the Public Scoping Open Houses
- 126 comments via P3 study website and email and one letter received via mail
- 713 survey responses were received during the scoping period.
  Note: 345 comments via the study survey
- Six comments by phone to the toll-free number

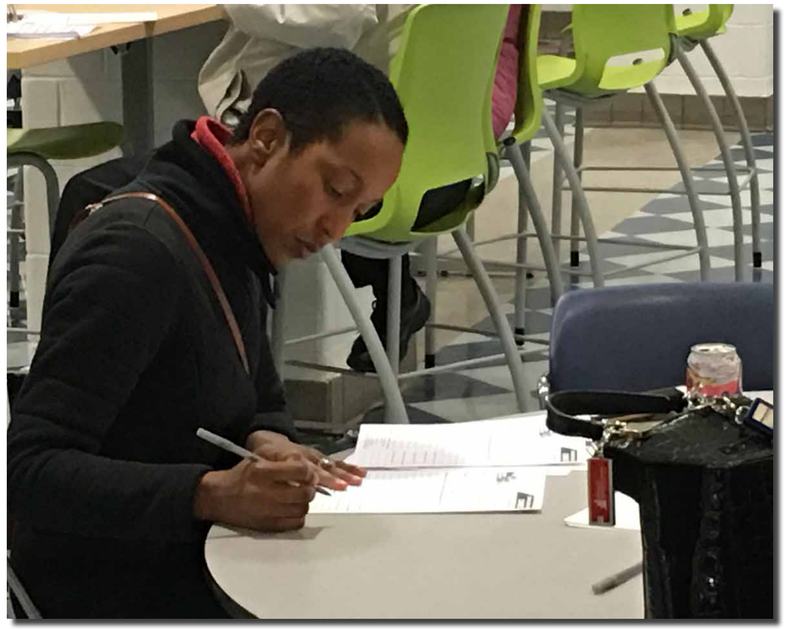
MANAGED LANES STUDY

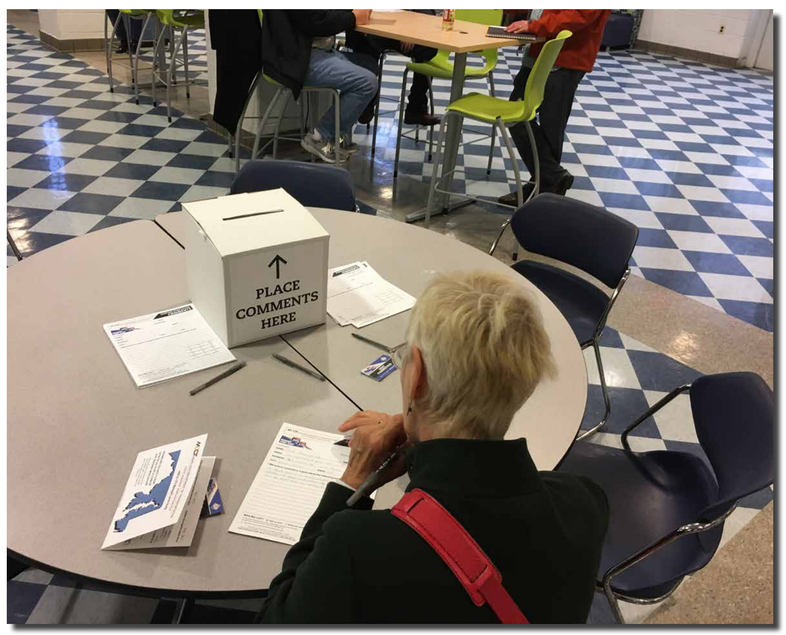
TRAFFIC RELIEF PLAN

MAJOR THEMES FROM THE PUBLIC SCOPING COMMENTS

- Support for the study, specific recommendations, or fixing congestion
- Statements about tolls and partnership with the private sector
- Concerns with effects to the environment, noise, air, and properties
- Support for improvements to transit
- Questions about the study timeline and initial outreach

The Scoping Report, including a complete matrix of comments received, is available on the website under Environmental > Resources





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PURPOSE & NEED

The purpose of the I-495 & I-270 Managed Lanes Study is to develop a travel demand management solution that addresses congestion, improves trip reliability on I-495 and I-270 within the study limits and enhances existing and planned multimodal mobility and connectivity.

The study will address the following needs.

- Accommodate Existing Traffic and Long-Term Traffic Growth
- Enhance Trip Reliability
- Provide Additional Roadway Travel Choices
- Accommodate Homeland Security
- Improve Movement of Goods and Services

Additional goals of the study include incorporating funding sources for financial viability and developing the study in an environmentally responsible manner.

TRANSPORTATION TERMINOLOGY

General purpose (GP) Lanes are lanes on a freeway or expressway that are open to all motor vehicles

Managed Lanes are highway facilities or a set of lanes where operational strategies are proactively implemented and managed in response to changing conditions.

High-occupancy Vehicle Managed Lanes (HOV) are a highway or street lane reserved for the use of high-occupancy vehicles, a motor vehicle carrying at least two or more persons, including carpools, vanpools, and buses.

High-occupancy Vehicle Lanes

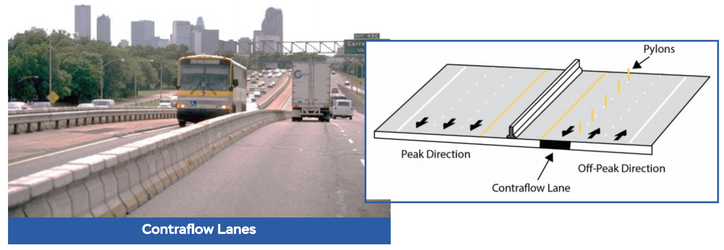
Priced Managed Lanes combines two highway management tools:

Congestion Pricing: The use of pricing to moderate demand during peak periods is common in sectors such as power and air travel. Similarly, the concept of value pricing within the highway sector involves the introduction of road user charges that vary with the level of congestion and/or time of day, providing incentives for motorists to shift some trips to off-peak times, less-congested routes, or alternative modes. Higher prices may also encourage motorists to combine lower-valued trips with other journeys or eliminate them entirely. When peak-period volumes are high, a shift in a relatively small proportion of trips can lead to substantial reductions in overall congestion levels and more reliable travel times.


Priced Managed Lanes

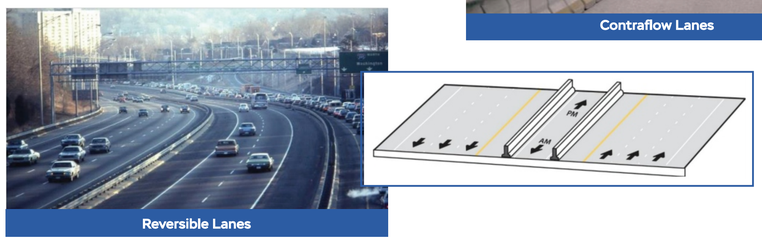
Lane Management: The rationale for lane management is to maintain a superior level of service and provide an alternative to general-purpose lanes during peak travel periods. Lane management involves restricting access to designated highway lanes based on occupancy or vehicle type. By limiting the number of vehicles in designated lanes, it is possible to maintain a desirable level of traffic service. Managed lanes are separated from general-purpose lanes by differentiating pavement striping or physical barriers, with entry often but not always limited to designated locations.

Contraflow Lane is a managed lane operating in the opposite direction of the normal flow of traffic and designated for peak-direction travel; separated by pylons or movable barrier.



Contraflow Lanes

Reversible Lane is facility in which the direction of traffic flow can be changed at different times of the day to match peak direction of travel, typically inbound in the morning and outbound in the afternoon.


Reversible Lanes

Transportation Systems Management (TSM) are actions that improve the operation and coordination of transportation services and facilities.

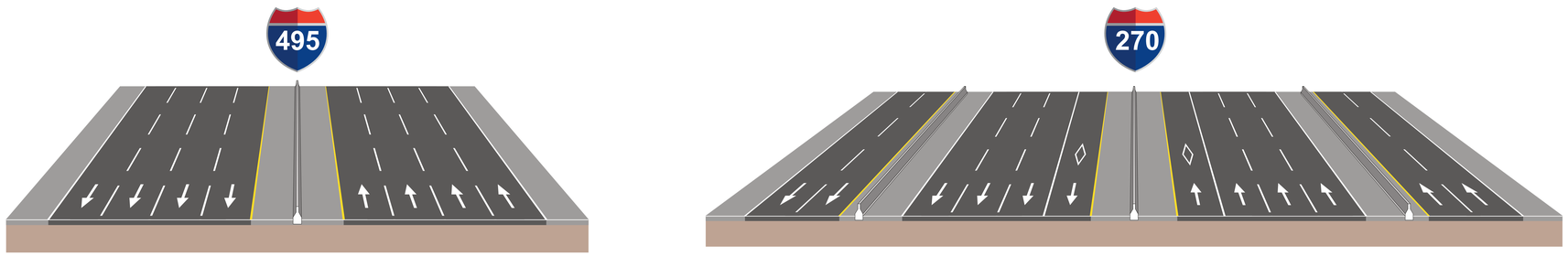
Travel Demand Management (TDM) is a variety of strategies, techniques, or incentives aimed at providing the most efficient and effective use of existing transportation services and facilities (e.g. rideshare and telecommuting promotion, managed lanes, preferential parking, road pricing, etc.)

MANAGED LANES STUDY

TRAFFIC RELIEF PLAN

PRELIMINARY RANGE OF ALTERNATIVES

ALTERNATIVE / DESCRIPTION



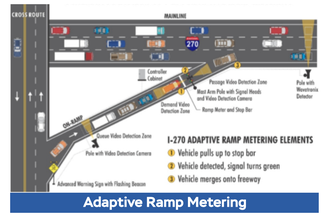
1 **No Build (Existing):**
All projects in Constrained Long-Range Plan (CLRP) (including I-270 Innovative Congestion Management (ICM) improvements)

2 **Transportation Systems Management (TSM) / Travel Demand Management (TDM):**
Solutions **along I-495 and I-270**: restriping within existing pavement, peak period shoulder use, ramp metering and Active Traffic Management (ATM) strategies

Active Traffic Management

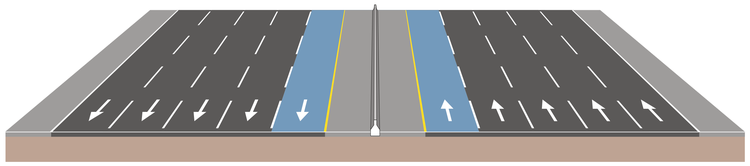
Photo: WSDOT

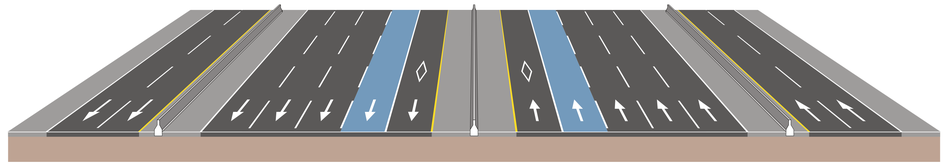
Peak Period Shoulder Use



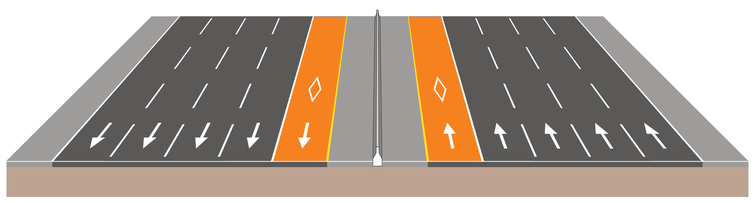
Adaptive Ramp Metering

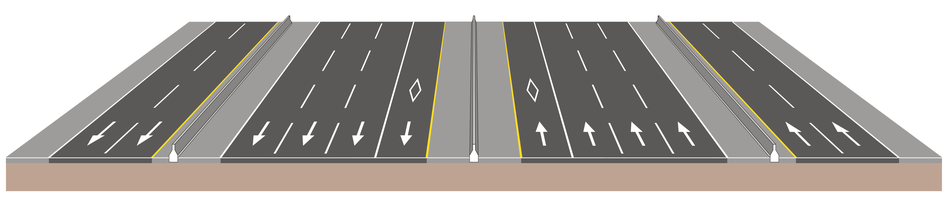
3 **Add 1- General Purpose (GP) Lane:**
Add one general-purpose lane in each direction on **I-495 and I-270**



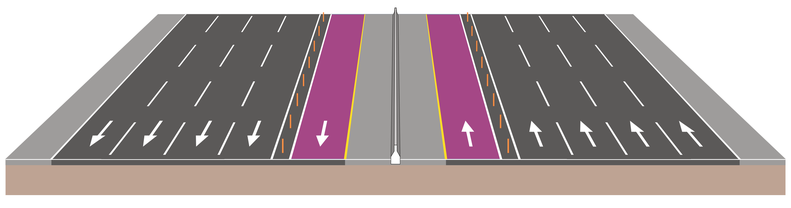


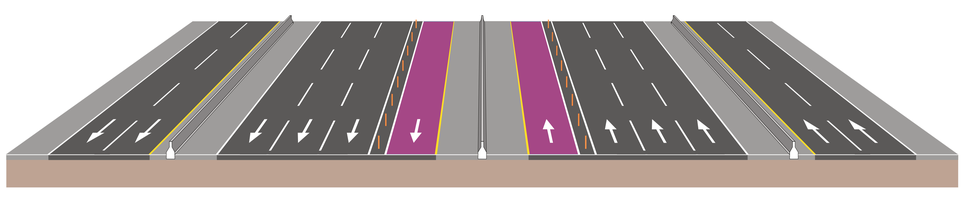
4 **1-Lane, High-occupancy Vehicle (HOV) Managed Lane Network:**
Add one HOV lane in each direction **on I-495** and retain existing HOV lane in each direction **on I-270**





5 **1-Lane, Priced Managed Lane Network:**
Add one priced managed lane in each direction **on I-495** and convert one existing HOV lane in each direction to a priced managed lane **on I-270**





Legend
- New GP Lanes
- New HOV Managed Lanes
- New Priced Managed Lanes
- Contraflow Lanes

* **Note:** Managed Lanes Could Include Buses

NOT TO SCALE

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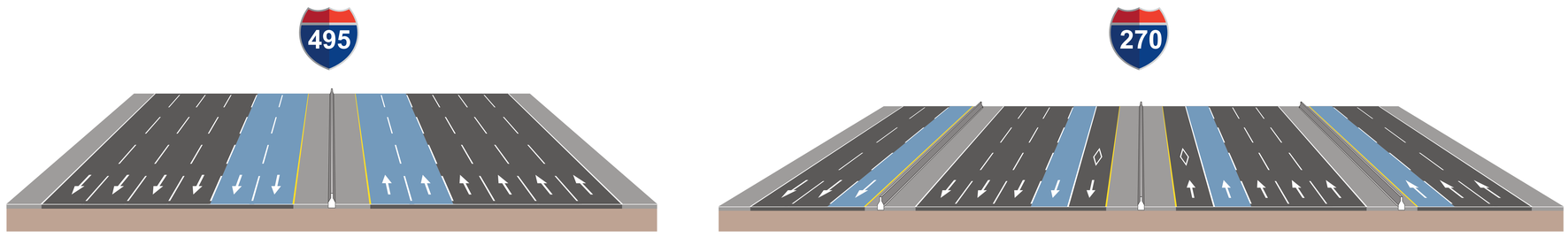
STATE HIGHWAY ADMINISTRATION

MANAGED LANES STUDY

TRAFFIC RELIEF PLAN

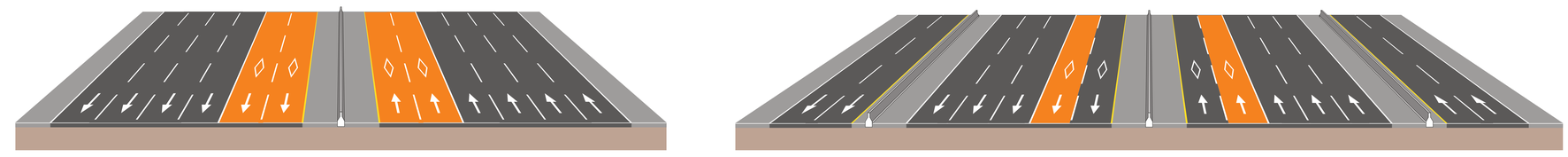
PRELIMINARY RANGE OF ALTERNATIVES (continued)

ALTERNATIVE / DESCRIPTION

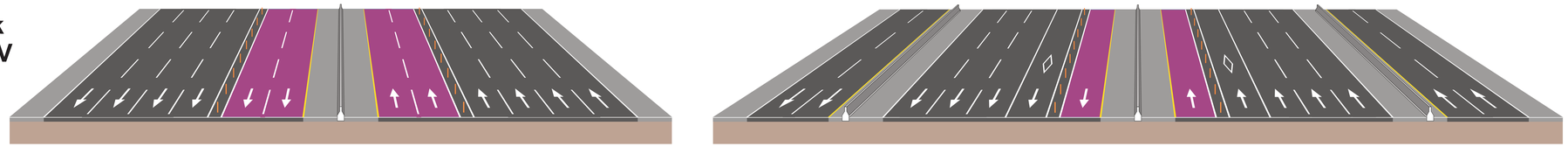


6 **Add 2 General Purpose (GP) Lanes:**
Add two general-purpose lanes in each direction **on I-495 and I-270**

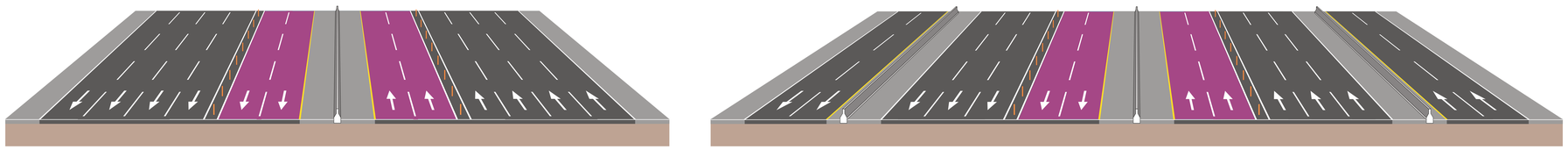
7 **2-Lane, High-occupancy Vehicle (HOV) Managed Lane Network:**
Add two HOV managed lanes in each direction **on I-495** and retain one existing HOV lane and add one HOV managed lane in each direction **on I-270**



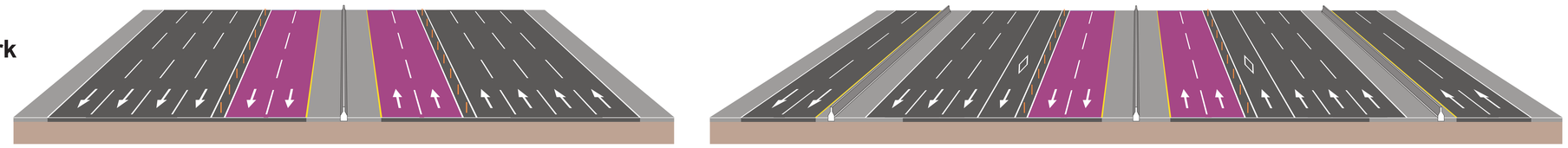
8 **2-Lane, Priced Managed Lanes Network on I-495, 1-Lane Priced and 1-Lane, HOV Managed Lane network on I-270 only**
Add two priced managed lanes in each direction **on I-495** and add one priced managed lane and retain one HOV lane in each direction **on I-270**



9 **2-Lane, Priced Managed Lane Network:**
Add two priced managed lanes in each direction **on I-495** and convert one existing HOV lane to a priced managed lane and add one priced managed lane in each direction **on I-270**



10 **2-Lane, Priced Managed Lane Network and 1-Lane HOV Managed Lane Network on I-270 only**
Add two priced managed lanes in each direction **on I-495 and on I-270** and retain one existing HOV lane in each direction **on I-270 only**



Legend

- New GP Lanes
- New HOV Managed Lanes
- New Priced Managed Lanes
- Contraflow Lanes

*** Note:** Managed Lanes Could Include Buses

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MANAGED LANES STUDY

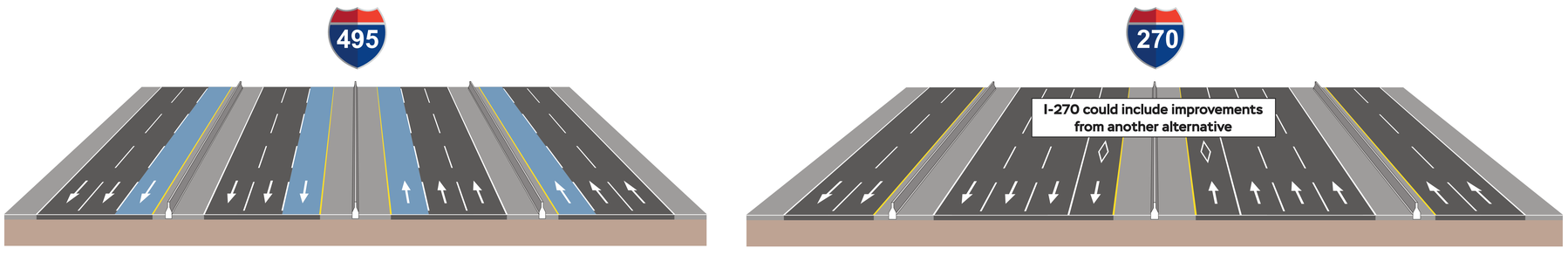
TRAFFIC RELIEF PLAN

PRELIMINARY RANGE OF ALTERNATIVES (continued)

ALTERNATIVE / DESCRIPTION

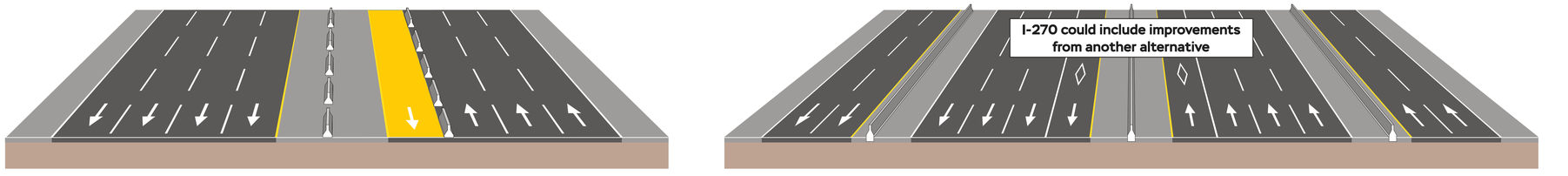
11 Collector/Distributor on I-495:

Physically separate traffic using collector-distributor (C-D) lanes, adding two GP lanes in each direction **on I-495**; retain existing lanes **on I-270**



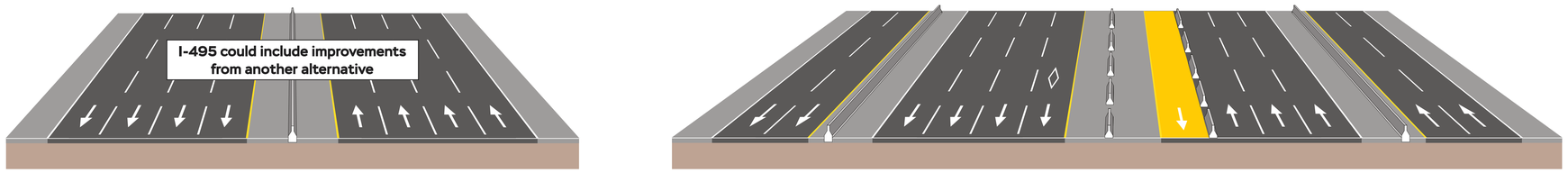
12A Contraflow on I-495:

Convert existing general-purpose lane **on I-495** to contraflow lane during peak periods



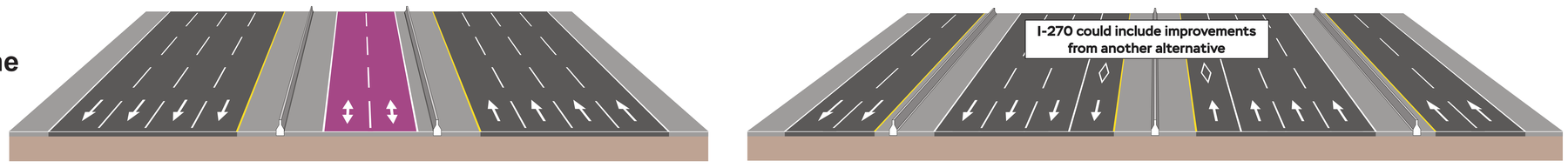
12B Contraflow on I-270:

Convert existing HOV lane **on I-270** to contraflow lane during peak periods while maintaining GP lanes



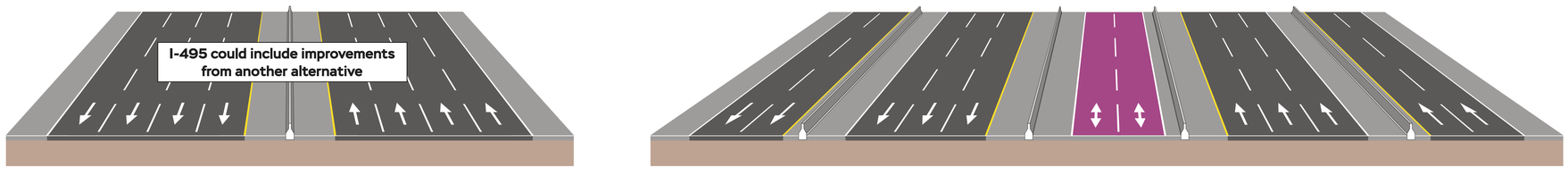
13A Priced Managed, Reversible Lane Network on I-495:

Add two priced managed reversible lanes **on I-495**



13B Priced Managed, Reversible Lane Network on I-270:

Convert existing HOV lanes to two priced managed reversible lanes **on I-270** while maintaining GP lanes



Legend

- New GP Lanes
- New HOV Managed Lanes
- New Priced Managed Lanes
- Contraflow Lanes

* **Note:** Managed Lanes Could Include Buses

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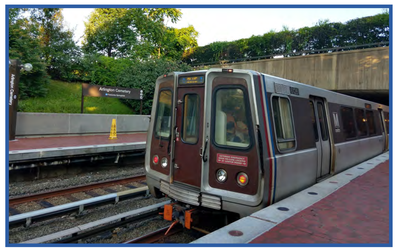
PRELIMINARY RANGE OF ALTERNATIVES (continued)

ALTERNATIVE / DESCRIPTION

14A Heavy Rail

This alternative considers heavy rail transit parallel to the existing I-495 and/or I-270 corridors. Heavy Rail is a mode of transit service (also called metro, subway, rapid transit, or rapid rail) operating on an electric railway with the capacity for a heavy volume of traffic. It is characterized by high speed and rapid acceleration passenger rail cars operating singly or in multi-car trains on fixed rails.



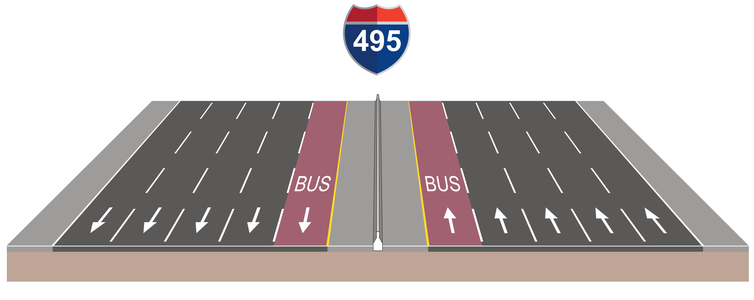
14B Light Rail

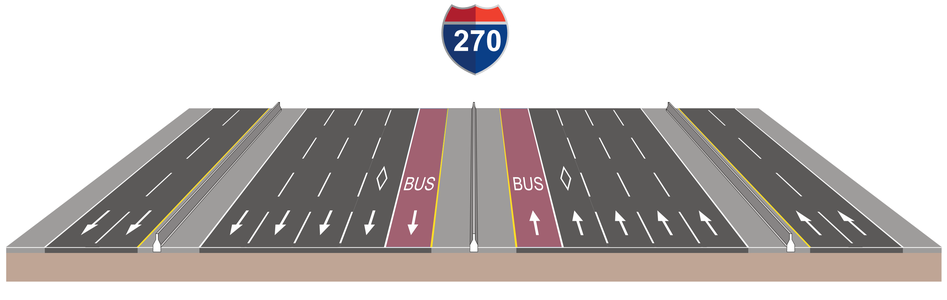
This alternative considers light rail transit parallel to the existing I-495 and/or I-270 corridors, such as the Purple Line currently under construction. Light Rail is a mode of transit service (also called streetcar, tramway, or trolley) operating passenger rail cars singly (or in short, usually two-car or three-car, trains) on fixed rails. Light rail vehicles are typically driven electrically with power being drawn from an overhead electric line via a trolley or a pantograph and driven by an operator on board the vehicle.

14C Fixed Guideway Bus Rapid Transit (Off Alignment)

This alternative considers fixed guideway bus rapid transit (BRT) along a new alignment parallel to the existing I-495 and/or I-270 corridors. Bus Rapid Transit is a high-quality bus-based transit system that delivers fast and efficient service that may include dedicated lanes, busways, traffic signal priority, off-board fare collection, elevated platforms and enhanced stations.

15 Dedicated Bus Managed Lane on I-495 and I-270 Roadways





MANAGED LANES STUDY 495 270

TRAFFIC RELIEF PLAN

SCREENING CRITERIA

Why do we screen the Preliminary Range of Alternatives?

The screening of alternatives is one of the key elements of the NEPA process to determine which alternatives will be carried forward to more detailed analysis in the DEIS.

The initial screening of alternatives will involve a general, qualitative assessment of each alternative to determine if it is reasonable or unreasonable, or if there is another similar alternative that would better meet the screening criteria.

The following criteria related to the study's Purpose and Need will be used to evaluate and screen the Preliminary Range of Alternatives.

ENGINEERING CONSIDERATIONS

- **Existing Traffic and Long-Term Traffic Growth:** Does the alternative accommodate existing traffic and long-term traffic growth?
- **Trip Reliability:** Does the alternative enhance travel time reliability?
- **Additional Travel Choice:** Does the alternative provide an additional travel choice while retaining full-time general-purpose lanes?
- **Ease of Useage for Travelers:** Will the alternative include complex operating configurations that could lead to driver confusion?

HOMELAND SECURITY

- Does the alternative provide additional capacity to assist in accommodating population evacuation?
- Does the alternative extend the ability to quickly coordinate a traffic response by allowing use by emergency responders?

MOVEMENT OF GOODS AND SERVICES

- Does the alternative improve the movement of goods via truck freight travel?
- Does the alternative enhance the movement of services by improving access to employment centers?

FINANCIAL VIABILITY

- Does the alternative have the potential to be financially self-sufficient?

MULTI-MODAL CONNECTIVITY

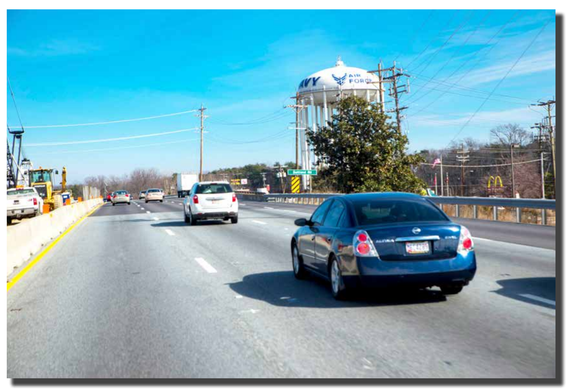
- Would the alternative enhance connectivity to and between existing transit facilities near the corridor?
- Could it accommodate new or modified transit service within the alternative?

ENVIRONMENTAL

- Would the alternative require additional property?
- Would the alternative impact park properties?
- Would the alternative impact historic properties?
- Would the alternative impact wetlands and waters?

STAY CONNECTED

- MDOT SHA is committed to keeping the public informed about this important study
- To learn more about the study, visit the project website at **495-270-P3.com**
- You can reach the study team and provide comments:
  - By email at:
    495-270-P3@sha.state.md.us
  - By calling toll free at:
    833-858-5960
  - By mail at:
    Maryland Department of Transportation
    State Highway Administration
    I-495 & I-270 P3 Office
    707 North Calvert Street
    Mail Stop P-601
    Baltimore, MD 21202

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION