I-495 & I-270
Managed Lanes Study
Congestion relief (MD-5 and MD-210)

Express bus enhancements

Park-and-ride facilities

I-495 HOT lanes

Corridor Cities Transitway

MARC service and capacity improvements

Access improvements (MD-202)

Access improvements (MD-202)

Bike/ped crossings

Beltway interchange improvements

Public transit to Tysons

BW Parkway improvements

MCDOT BRT network

I-270 HOV

Public transit subsidies
Alternative Review Process

• Technical Review of Alternatives – transportation and NEPA process

• Function versus form – should it be studied, not whether appropriate to implement or degree of impact

• NEPA Requirements

• Fatal Flaws as identified by staff

• Screening down to nine alternatives to advance to the next stage – Alternatives Retained for Detailed Study (ARDS)
Fatal Flaws – General Principles

1. Adding general purpose lanes
2. Re-purposing general purpose lanes into HOV lanes or ETL/HOT lanes
3. Re-purposing existing peak period, peak direction (3 hours max) HOV lanes into 24/7 ETL/HOT lanes (legal concerns) –
   • 23 US Code § 129, Toll roads, bridges, tunnels, and ferries.
4. HOV lane(s) plus ETL/HOT managed lane(s) along same corridor operationally difficult
5. Contrary to transportation best practices
Alternatives Reviewed

• Nineteen Alternatives Total
Alternatives Reviewed

• Nineteen Alternatives Total

• Two Alternatives required by NEPA – Alt 1 & Alt 2
No Build (Existing)

All projects in Constrained Long-Range Plan (CLRP) including I-270 Innovative Congestion Management (ICM) Improvements
Transportation System 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

Transportation Systems Management (TSM): operating strategies that improve the operation and coordination of transportation facilities

Travel Demand Management (TDM): strategies or incentives to provide 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.)
Alternatives Reviewed

• Nineteen Alternatives Total

• Two Alternatives required by NEPA – Alt 1 & Alt 2

• Eleven Alternatives have fatal flaws – Alts. 3, 5, 6, 7, 8, 9, 10 without modification, 11, 12A, 12B, & 15
3 Add 1 General Purpose (GP) Lane

Add one general-purpose lane in each direction on I-495 and I-270

General Purpose (GP) Lanes: freeway or expressway lanes open to all motor vehicles
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 price managed lane on I-270

**Priced Managed Lanes** combines two highway management tools:

- *Congestion Pricing*: use of road user pricing that varies with the level of congestion and/or time of day to control traffic demand during peak periods, providing incentives for some motorists to shift trips to off-peak times, less-congested routes, or alternative modes

- *Lane Management*: approach that restricts access to designated highway lanes based on occupancy or vehicle type in designated lanes to maintain a desirable level of traffic service
Add 2 General Purpose (GP) Lanes

Add two general-purpose lanes in each direction on I-495 and I-270.
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 managed lane and add one HOV lane in each direction on I-270

High-occupancy Vehicle Lanes (HOV): lanes reserved for high-occupancy vehicles, a motor vehicle carrying at least two or more persons including carpools, vanpools, and buses

Managed Lanes: highway facility or set of lanes where operating strategies are used to control number of vehicles using the lanes
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 priced managed lane and retain one HOV lane in each direction on I-270.
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.
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**.
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 and on I-270.
12A Contraflow on I-495

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

Contraflow Lanes: lanes operating adjacent to but in the opposite direction of the normal flow of traffic during peak-direction travel; usually separated by pylons or movable barrier
Contraflow on I-270

Convert existing HOV lane on I-270 to contraflow lane during peak periods

I-495 could include improvements from another alternative

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

* Note: Managed Lanes Could Include Buses
Alternatives Reviewed

- Nineteen Alternatives Total
- Two Alternatives required by NEPA – Alt 1 & Alt 2
- Eleven Alternatives have fatal flaws – Alts. 3, 5, 6, 7, 8, 9, 10 without modification, 11, 12A, 12B, & 15
- Two Alternatives need revision to advance to Alternatives Retained for Detailed Study (ARDS) – Alt 10 and Alt 14C
Modification: Convert peak-period HOV lanes to General Purpose lanes
Bus Transit

**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 I-270 corridors.

Modification: Relocate from Off-Alignment onto I-495 and I-270; could optimize use of Managed Lanes network.
Alternatives Reviewed

• Nineteen Alternatives Total

• Two Alternatives required by NEPA – Alt 1 & Alt 2

• Eleven Alternatives have fatal flaws – Alts. 3, 5, 6, 7, 8, 9, 10 without modification, 11, 12A, 12B, & 15

• Two Alternatives need revision to advance to Alternatives Retained for Detailed Study (ARDS) – Alt 10 and Alt 14C

• Nine Alternatives recommended to advance to the ARDS process
1. No Build (Existing)

All projects in Constrained Long-Range Plan (CLRP) including I-270 Innovative Congestion Management (ICM) Improvements
Transportation System 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

Transportation Systems Management (TSM): operating strategies that improve the operation and coordination of transportation facilities

Travel Demand Management (TDM): strategies or incentives to provide 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.)
1-Lane, High-Occupancy Vehicle (HOV) Managed Lane Network

Add one lane in each direction on I-495 and retain existing HOV lane in each direction on I-270

Managed Lanes: highway facility or set of lanes where operating strategies are used to control number of vehicles using the lanes
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.

Modification: Convert peak-period HOV lanes to General Purpose lanes.
Priced Managed, Reversible Lane Network on I-495

Add two priced managed reversible lanes on I-495

**Reversible Lanes:** lanes where direction of traffic flow can be changed to match peak direction of travel, typically inbound in the morning and outbound in the afternoon
Price Managed, Reversible Lane Network on I-270:

Convert existing HOV lanes to two priced managed reversible lanes on I-270.
Fixed Guideway Transit

14A **Heavy Rail:** This alternative considers heavy rail transit parallel to the existing I-495 and/or I-270 corridors

14B **Light Rail:** This alternative considers light rail transit parallel to the existing I-495 and I-270 corridors, such as the Purple Line currently under construction
Alt 14A – Fixed Guideway Transit (Heavy Rail/Metro)

Alternative developed by MDOT SHA has NO detail. Staff recommendation for detailed study:

- Heavy rail – 3rd track and operational improvements – Brunswick Line
- Metro – extend Red Line to Metropolitan Grove
- Metro – extend Red Line to Germantown Transit Center
Alt 14B – Fixed Guideway Transit (Light Rail)

Alternative developed by MDOT SHA has NO detail. Staff recommendation for detailed study:

• Light rail – Extend Purple Line to Tysons
• Light rail – Extend Purple Line to Largo Town Center
• Light rail – Extend Purple Line to National Harbor
• Light rail – Extend Purple Line to Alexandria
• Light rail – Shady Grove Metro to Germantown Transit Center
Bus Transit

**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 I-270 corridors.

Modification: Relocate from Off-Alignment onto I-495 and I-270; could optimize use of Managed Lanes network.
Staff Recommendation – Alternatives to Advance to ARDS

1. Alt 1 – No Build
2. Alt 2 – TSM/TDM
3. Alt 4 – 1-Lane Managed (HOV) Network
4. Alt 10 modified – 2-Lane Managed (ETL/HOT) Network
   • Current HOV lanes converted to GP lanes
5. Alt 13A – Reversible Managed Lanes on I-495
6. Alt 13B – Reversible Managed Lanes on I-270
7. Alt 14A – Fixed Guideway Transit (Heavy Rail/Metro)
8. Alt 14B – Fixed Guideway Transit (Light Rail)
Next Steps

A. Inter-Agency Working Group (IAWG) Process
   Monthly meetings among Lead, Sponsoring, Cooperating and Participating Agencies to collaboratively identify and resolve issues that could delay the environmental review process or affect approvals required for the project under NEPA.

B. Immediate Project Milestones
   1. 1/23/19 – Through IAWG process, MDOT SHA seeking agency concurrence with comment on the selection of ARDS prior to public release late-January/early-February
   2. Spring 2019: Mandatory Referral prior to selection of Preferred Alignment will serve as M-NCPPC concurrence/concurrence with comment to MDOT SHA selection of Preferred Alignment