I-270 Innovative Congestion Management Project Industry Meeting

October 27, 2015

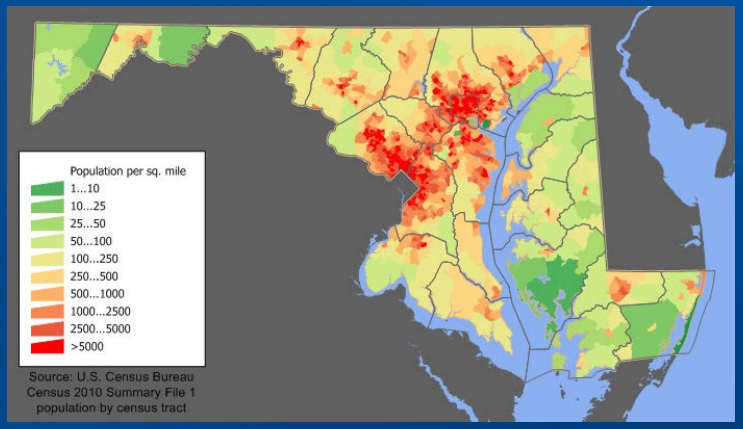
Overview

- Background
- Progressive Design-Build

Background

I-270 Corridor Facts

- Study corridor is one of the most traveled in the State with average daily traffic of about 240K in many segments
- One of the most congested corridors in MD and the Washington, DC region with strong directional peaks
- Over-saturated conditions, extended peak periods greatly impacts reliability
- Strong economic and housing activity projected along the corridor



I-270 Segments	2013 Volumes
I-70 to MD 109	90000
MD 109 to MD 118	102000
MD 118 to I-370	170000
I-370 to I-270Y	238000

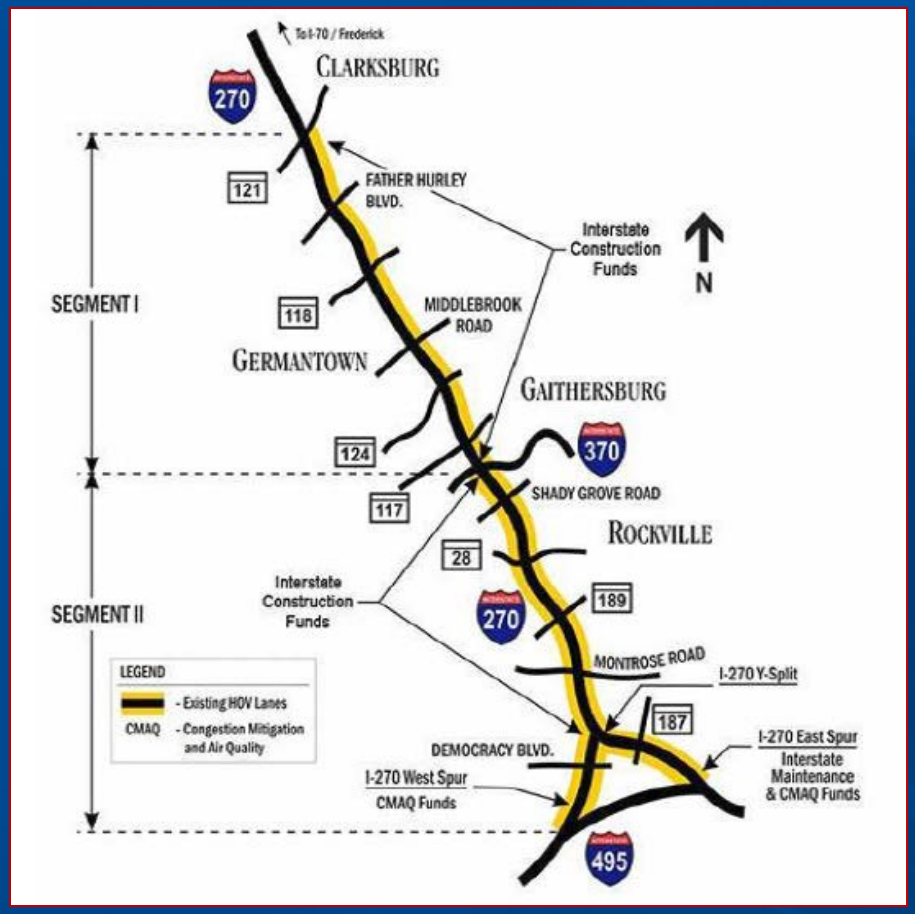
I-270 Corridor Facts

HOV Hours of Operations:

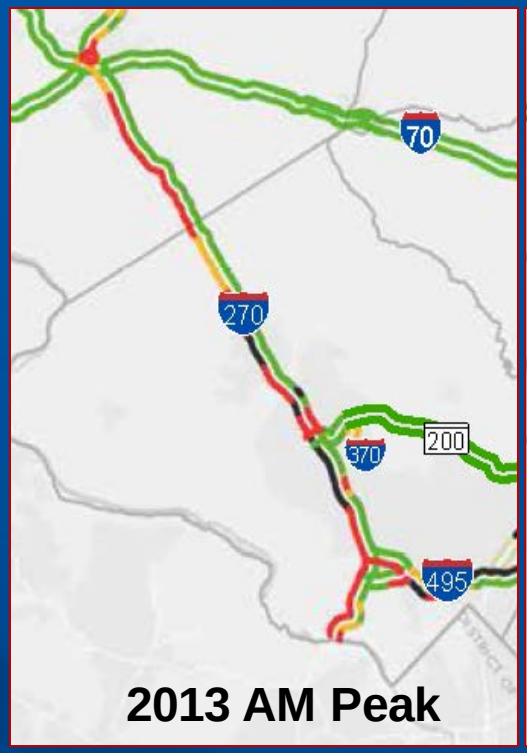
Southbound
I-370 to I-495 (Capital Beltway)
6:00 am to 9:00 am

Northbound
I-495 to MD 121 (Clarksburg Road)
3:30 pm to 6:30 pm

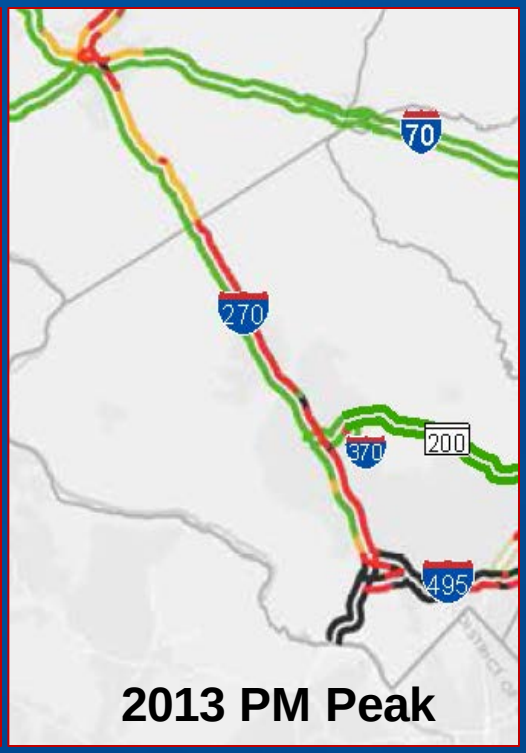
HOV implementation utilized FHWA-CMAQ funds



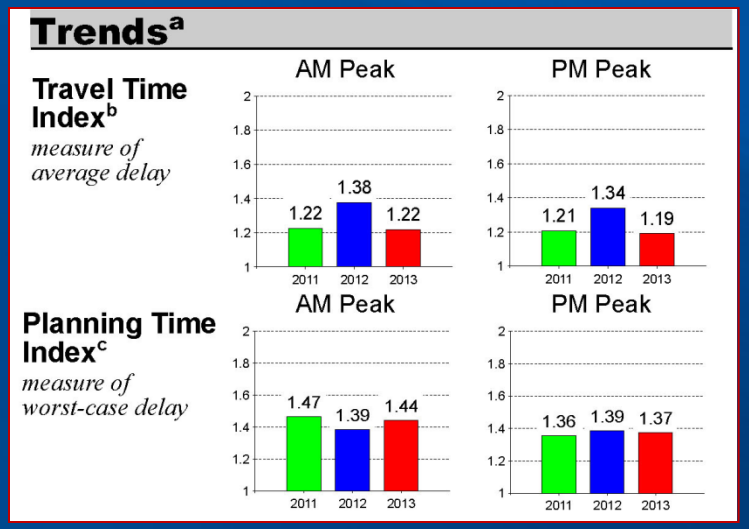
I-270 Corridor Facts



2013 AM Peak



2013 PM Peak



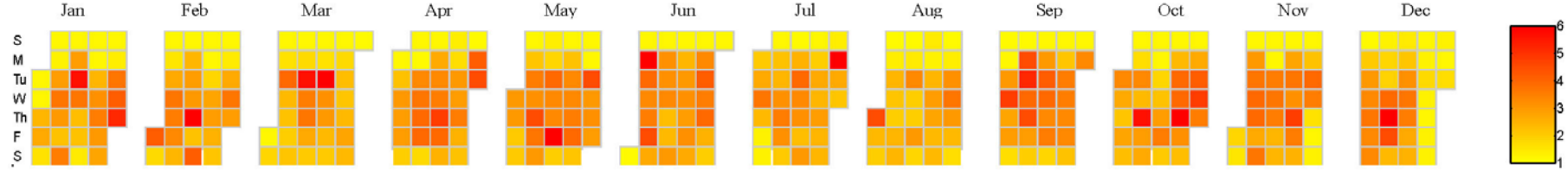
Strong directional peaks, slow speeds and extended queues

2013 AM Peak Hour: 7 locations in top 30 most congested freeway segments
2013 PM Peak Hour: 6 locations in top 30 most congested freeway segments

I-270 Corridor Facts

Reliability of the corridor is a huge challenge all round the year

Daily Variability[e]



Top Bottlenecks[f]

2013 Rank	LOCATION	Direction	Number of Occurences Q1	Q2	Q3	Q4	Average Duration (minute)	Average Length (mile)	Impact Factor	2012 Rank	Change
6	I-270 Spur S @ I-270	Southbound	182	251	210	241	101	7.4	5.9	3	3
9	I-270 N @ MD-80/Exit 26	Northbound	64	90	127	76	101	9.8	3.0	2	7
10	I-270 Local N @ I-270/Washington National Pike	Northbound	162	156	128	159	126	4.3	2.5		10
14	I-270 N @ I-70/US-40	Northbound	85	106	81	128	83	8.1	2.3	7	7
15	I-270 S @ MD-109/Exit 22	Southbound	126	178	156	118	84	4.6	2.1	15	0
25	I-270 N @ Middlebrook Rd/Exit 13	Northbound	98	91		83	104	6.0	1.4	11	14
46	I-270 N @ I-270	Northbound	138	155	151	120	120	1.6	1.0		46
67	I-270 N @ MD-85/Exit 31	Northbound	26	32	21	29	85	10.2	0.8	32	35
70	I-270 N @ MD-109/Exit 22	Northbound	288	263	213	190	41	3.0	0.8	62	8
77	I-270 S @ MD-121	Southbound	23	20	17	26	111	9.6	0.7	56	21

Progressive Design-Build

The Vision

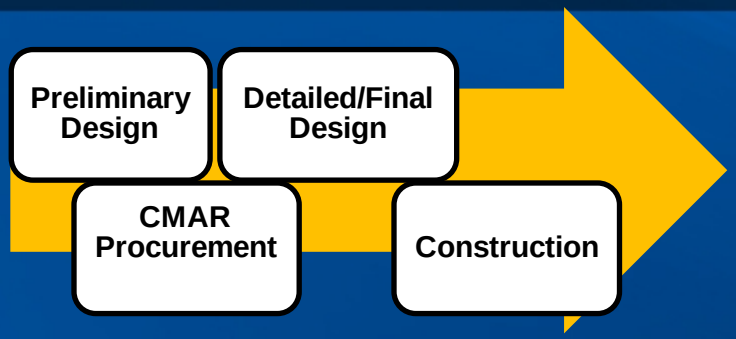
- Fixed Price Design-Build Contract
- Best Value Selection
- Looking for Proposer who can move the most vehicles the fastest
- Limits start at I-495 and proceed north
- No constraints on proposed solutions to single concept
- Relevant experience/solutions elsewhere in world
- Two Step Procurement (RFQ/RFP)
- Stipends will be provided for RFP phase

The Goals

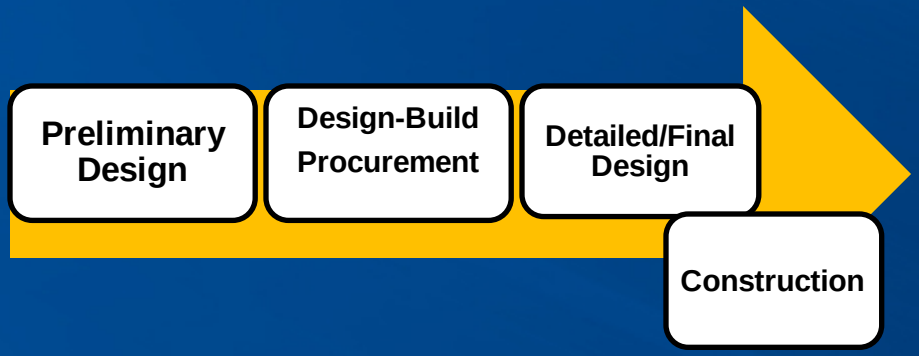
- **Mobility – Maximize vehicle throughput, minimize travel times, and provide more predictable commuter trip**
- **Safety – Safer corridor**
- **Operability/Maintainability – Minimizes SHA O&M**
- **Well Managed Project**

Alternative Delivery Options

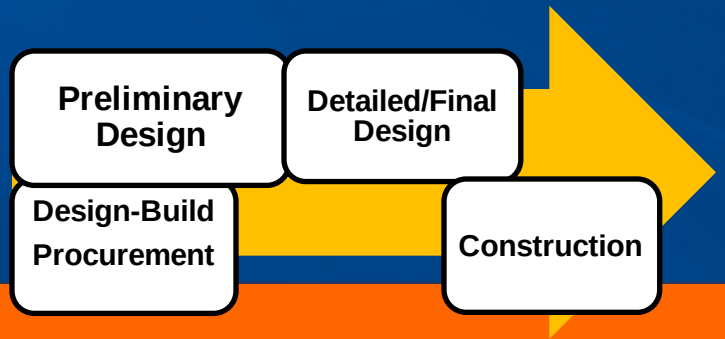
Construction Management at Risk (CMAR)



Design-Build



Progressive Design-Build



“Progressive” Design-Build Approach

- Two-Phase Contract
  - Design/Preconstruction Services
  - Construction
- Design-Builder is selected primarily on qualifications, proposed solutions, and minor price element (Design/Preconstruction Fee)
- Design-Builder becomes part of project team to develop design solutions/concept
- Once design is advanced to significant level, a Guaranteed Maximum Price (GMP) would be developed and agreed upon
- Multiple GMPs may be agreed upon for standalone construction packages

DISCUSSION/ QUESTIONS?