

Major Projects Webinar

May 3, 2016

Sponsored by the FHWA Major Project Discipline



Agenda

1. Major Project Spotlight

- Lessons Learned for Establishing a Major Projects/ Public-Private Partnership (P3) Office
 - Virginia P3
- Delivering Arizona's First Highway P3: South Mountain Freeway Project
 - Arizona DOT
- The State of Tolling in Georgia
 - Georgia DOT
- 2. Major Project Announcements
 - FHWA Project Management Plan Guidance Update
- 3. Comments/Questions



Major Project Spotlight: DOT Peer Exchange

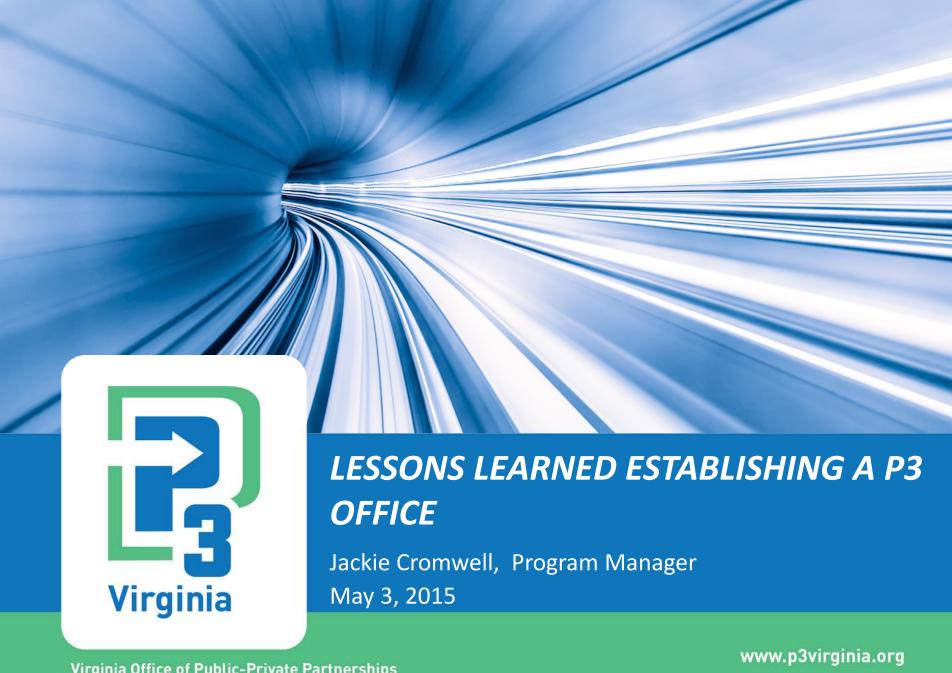
Peer Exchange Featuring:

Virginia P3 Arizona DOT Georgia DOT



Lessons Learned for Establishing a Major Projects/ Public-Private Partnership (P3) Office

Jacqueline Cromwell Virginia P3





FOUNDATION STONES

- 1995 Public-Private Transportation Act (PPTA) enacted for use in transportation sector. Includes roadway projects, ports, aviation, etc.
- 2002 Public- Private Educational Facilities & Infrastructure Act
 (PPEA) enacted for use in non-transportation sector (schools,
 solar energy development, DMV customer facilities, prison
 facilities, etc.)
- Both establish legislation for procuring projects bringing value to the Commonwealth through P3 delivery. Both can be used by any Responsible Public Entity, including the Virginia Office of Public-Private Partnerships.



P3 OFFICE DEVELOPMENT

- First PPTA projects completed by the Virginia Department of Transportation (VDOT) were primarily Design-Build projects, without transfer of risks or private investment.
- 2005 VDOT created the Division of Innovative Project Delivery (IPD) bringing together in-house expertise with DB and PPTA projects. Developed both programmatic processes and procurement documents to bring more value to Commonwealth.
- 2010 Secretary of Transportation created the Office of Transportation Public-Private Partnerships (OTP3) as a separate and distinct office with diverse professional expertise.

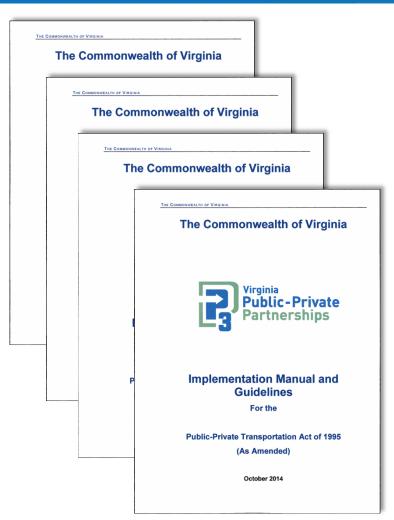


P3 OFFICE DEVELOPMENT

- 2014 OTP3 was rebranded as the Virginia Office of Public-Private
 Partnerships (VAP3) to emphasize P3 project delivery brings value
 when used in a <u>variety</u> of sectors (transportation, schools, biomass
 energy development, solar energy development, air rights
 development, port expansions, university parking, etc.).
- VAP3 has updated the Implementation Manuals and Guidelines for both PPTA and PPEA procurements to provide transparency, accountability, increased risk transfer, and enhanced public engagement.



Virginia P3 Programmatic Documents



2014 PPTA Implementation Manual and Guidelines

PPTA Guidelines:

- 1. Public Engagement
- 2. Risk Management
- 3. Value for Money Analysis

Draft 2015 PPEA Implementation Manual and Guidelines

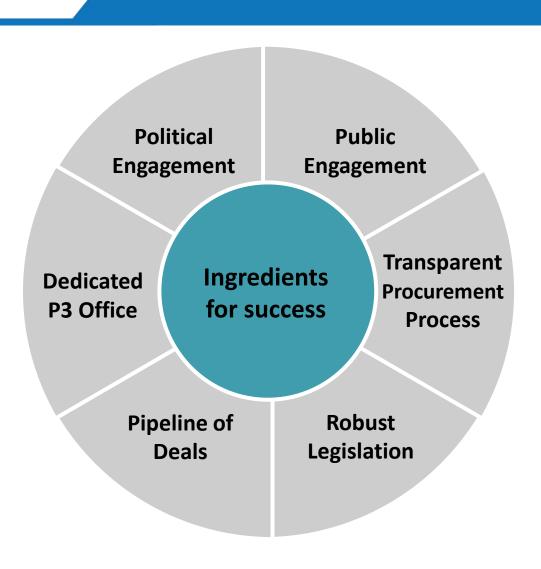
PPEA Guidelines:

 Cost Benefit and Opportunity Cost Analyses

All available at www.P3virginia.org

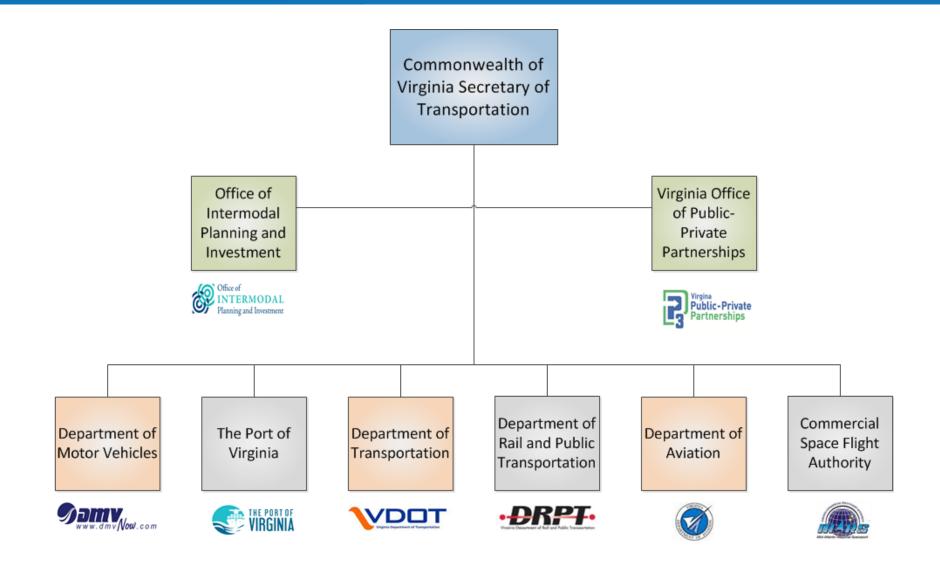


KEYS TO VIRGINIA'S P3 SUCCESS



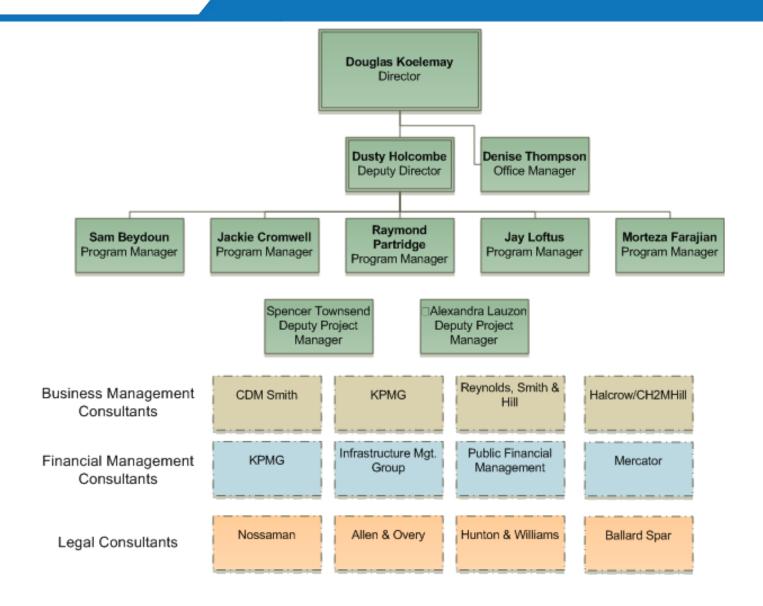


Organizational Chart





VAP3 Structure and Resources





Challenges, Lessons Learned & Best Practices in P3's



PROJECT LESSONS LEARNED

Stakeholder Support

- Begin the process early
- No surprises
- Keep local officials, FHWA and others informed of progress

Risk Management

- Fully consider riskmanagement strategies
- Understand the cost of risk transfer







PROJECT LESSONS LEARNED

Resources Management

- Strong Agency Leadership
- Consultant support is needed, but not enough
- Separate, dedicated P3 Office

Mature a Project

- Minimize risk with early information on typical risk elements
- Request for Information gains early input from private sector
- Going to the market too early can reduce competition







Defining Benefits = Gaining Support

Jobs Supported:

- I-495 Express Lanes = 31,000
- I-95 Express Lanes = 8,000
- Midtown Tunnel = 1,700



Potential Economic Activity

- I-495 Express Lanes = \$3.5B
- I-95 Express Lanes = \$2.0B
- Midtown Tunnel = \$254M/year





Defining Benefits = Gaining Support

DBE & SWaM Contract Values:

- I-495 Express Lanes = \$546M
- I-95 Express Lanes = \$190M
- Midtown Tunnel = \$308M



New Infrastructure on I-495:

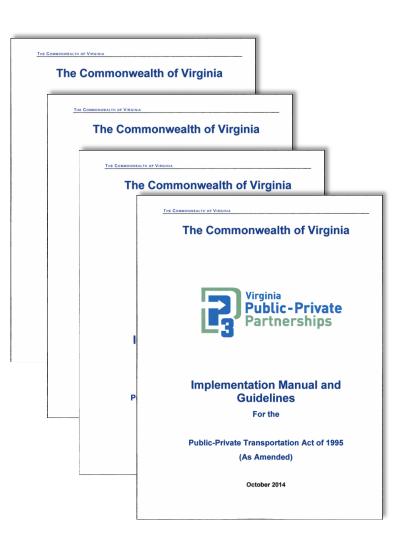
- 12 Key Interchanges re-built
- 50 new bridges and overpasses
- 80,000 LF of Sound Wall
- 890,000 SF of Retaining Walls





PROGRAM LESSONS LEARNED

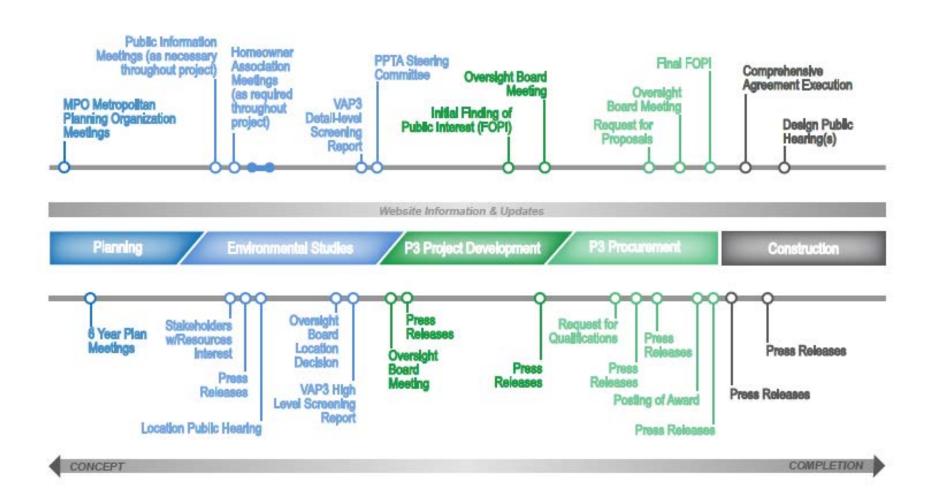
- P3 Fact Sheets explain benefits of economic activity, jobs, and improved transportation choices
- Create outreach plan early and throughout project development / procurement / construction and operations
- Avoiding silence and surprises





Virginia's P3 Public Engagement Opportunities

P3 PUBLIC ENGAGEMENT OPPORTUNITIES





TRANSLATING P3 BENEFITS

Project Benefits to the Region

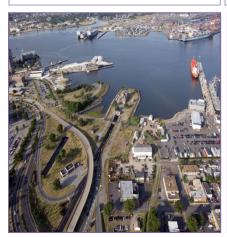
Downtown Tunnel/Mlk Freeway

Regional Connectivity • Reduced Congestion • Added Capacity • Project Delivery

\$2.1 billion regional network roadway project

6 million vehicle hours saved annually

17 million gallons of fuel wasted in traffic congestion **P3 Project** \$421 million for delivery of \$2.1 billion project







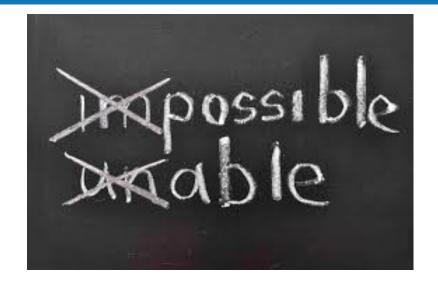


Workdays lost from HRMPO Hampton Roads Regional Benchmarking Study, December 2008 GRP from Old Dominion University Economic Forecasting Project Fuel wasted from HRMPO Hampton Roads Congestion Management Process Report, March 2009



NEXT STEPS FOR P3

- VAP3 moving into nontransportation P3's
- Working with entities such as Dominion Power, Department of Mines, Minerals, & Energy, Department of Corrections, Department of Conservation Recreation







VARIETY OF P3 PROJECTS







Contact Information

Jacqueline Cromwell

Program Manager for Communications and New Business Development

Virginia Office of Public-Private Partnerships

Jackie.Cromwell@p3.virginia.gov



Questions & Input

Submit a question using the chat box



Or



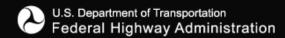
Dial *1 to call in your question by phone



Major Project Spotlight: Delivering Arizona's First Highway P3: South Mountain Freeway Project

Robert Samour Arizona DOT

Ken Smith HDR Engineering



South Mountain Freeway Project Public Private Partnership

Joint DOT/FHWA

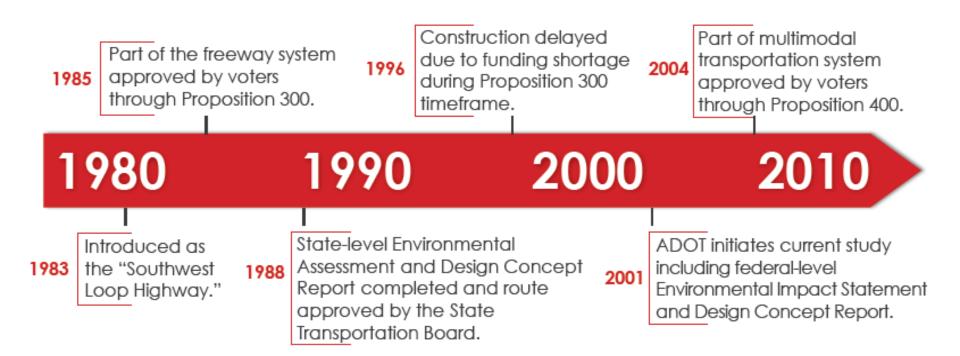
Major Project Webinar

Tuesday, May 3, 2016

Project Background

- Included in voter-approved:
 - Regional Freeway and Highway Program (1985)
 - Regional Transportation Plan (2004)
- Key component of region's multimodal transportation plan
 - Last segment to complete the Loop 202 in the regional freeway system
- Necessary for high-quality regional mobility
- ADOT's largest project to date (largest amount programmed for any single project)

Project Background



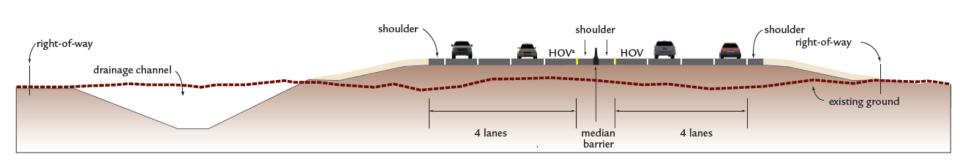
Basic Configuration

- P3 Delivery
- Design-Build-Maintain
- 22 miles
- 13 service traffic interchanges
- System traffic interchange at I-10 (Papago)
- 45 bridges



Basic Configuration

- Eight lanes with three general purpose lanes and one high-occupancy vehicle lane in each direction
- Closed median with median barrier
- 5 multiuse overpasses



Project Information

- Programmed amount \$1.77 billion
- Publicly financed
- ▶ 40% federal funding, 60% regional funding
 - State administered federally assisted
- Design-Build-Maintain
 - 18-month procurement
 - 3.5-year construction duration
 - 30-year maintenance duration

P3 Delivery Approach Options Considered

- Design-Build-Maintain: Accelerated design-build project delivery with maintenance of the completed project for a fixed period
- <u>Design-Build-Finance-Maintain (Availability Payment):</u> The developer would be responsible for arranging financing for the portion of the project capital costs that ADOT cannot accelerate with current and accumulated revenues allocated to the Project.
- ▶ Enhanced Design-Build: Utilize the P3 legislation to shift significant risks to a potential private partner with an objective of assigning risks to the party best able to manage them.

Why Design-Build-Maintain?

- Obtain the best possible value
- Accelerate project delivery
- Limited opportunities for modifications
- Provide greater cost and schedule certainty
- Improve life-cycle costs and/or quality
- Aggressive and effective risk shifting
- Alignment of incentives

Why Design-Build-Maintain Con't.?

- Encourage innovation and competition from mega-project proposers
- Provide economies of scale (quantities, unit costs, administration, etc.) from a single design-build-maintain project instead of nine smaller projects
- Incentive to reduce right-of-way footprint
- Realize travel time savings to the public earlier

South Mountain Freeway Procurement

- ▶ <u>Design-Build-Maintain:</u> Contract includes 30-year maintenance tail. Mutual commitment to the contractual approach to risk shifting at the outset.
- ▶ <u>Best Value Approach:</u> Selection based upon a combination of life-cycle price and other factors.
- ▶ <u>Significant risk shifting regime:</u> Current P3 legislation provides opportunity for ADOT to optimize the risk assignment to the lowest overall program cost. Riskbased project delivery approach focuses attention of project participants on risk management.
- Early price certainty and contingency release: Contract execution completed in February 2016. ADOT/MAG may release contingency (minus retained risks) to the program.

P3 Delivery Method Benefits

Cost and schedule certainty

- Open to traffic almost 3 years faster
- Largest piece of RTP Freeway Program is known
- MAG can confidently rebalance the program

Maintenance

- 30-year maintenance program makes life-cycle performance a major focus during design and construction
- Hand-back provisions provide insurance ADOT will receive a high-quality facility in 30 years

Managing Challenges

NEPA







Innovation During Procurement

- Requests for Information
- Draft Requests for Proposal period
- One-on-One confidential meetings throughout process
- RFP Addenda that addressed comments and questions from shortlisted proposers
- Alternate Technical Concepts
- Right-of-way avoidance credits
- Stipend agreements

TECHNICAL PROVISIONS

Prescriptive

Performance

INNOVATION

STANDARDS VS. GUIDANCE CONSIDERATIONS

Crafting Manuals

- 1. Want to haves
 - a. Maintenance basis
 - b. Constructability basis
- 2. Need to haves
 - a. Safety (driver expectancy)
 - b. Operational performance



Leave these to Developer to determine

Defend and include in technical provisions

Best Value Selection

\$122 million cost savings

| Proposer | Technical Evaluation Score ¹ | D&C Price (YOE\$) ^{2,3} | 30 yr. Factored Annual Maintenance Price (2015\$) ² | Final Score ⁴ |
|----------------------------------|---|-------------------------------------|---|-----------------------------|
| Connect 202 Partners | 805 | \$916,549,178.13 | \$131,913,347.60 | 100 |
| South Mountain Mobility Group | 745 | \$952,122,496.00 | \$199,305,065.95 | 88.71 |
| South Mountain Development Group | 797 | \$1,105,202,746.96 | \$172,404,150.47 | 86.62 |

Notes:

- 1 Technical Evaluation Score is out of a maximum of 1000 points
- 2 Values for Connect 202 Partners are based on negotiations
- 3 YOE\$ = Year of Expenditure Dollars
- 4 Combination of Technical Score and Price Score. Maximum of 100 points

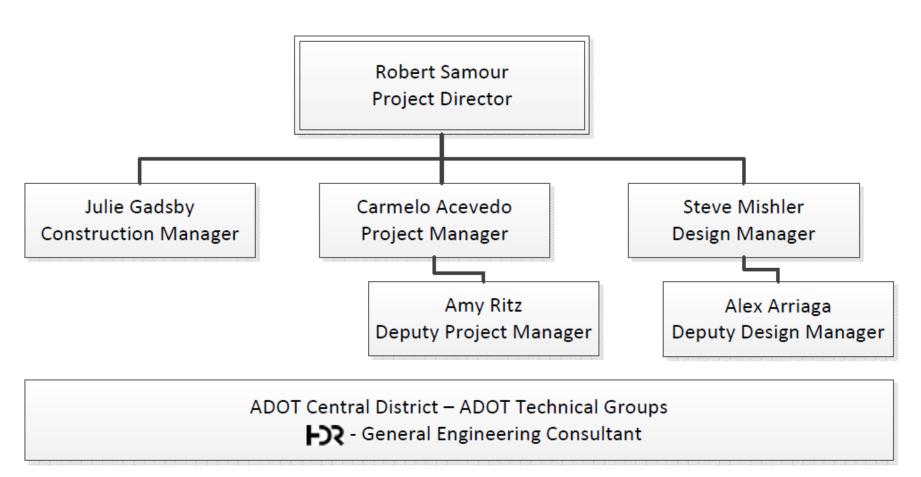


Successful Partnership with FHWA Arizona Division

- Federal-aid Highway Program
 - State administered federally assisted
- ▶ NEPA National Environmental Policy Act
- Federal Requirements
 - NEPA commitments
 - Uniform Act Right of Way
 - Disadvantaged Business Enterprise (DBE)
 - Buy America
 - Davis Bacon ...

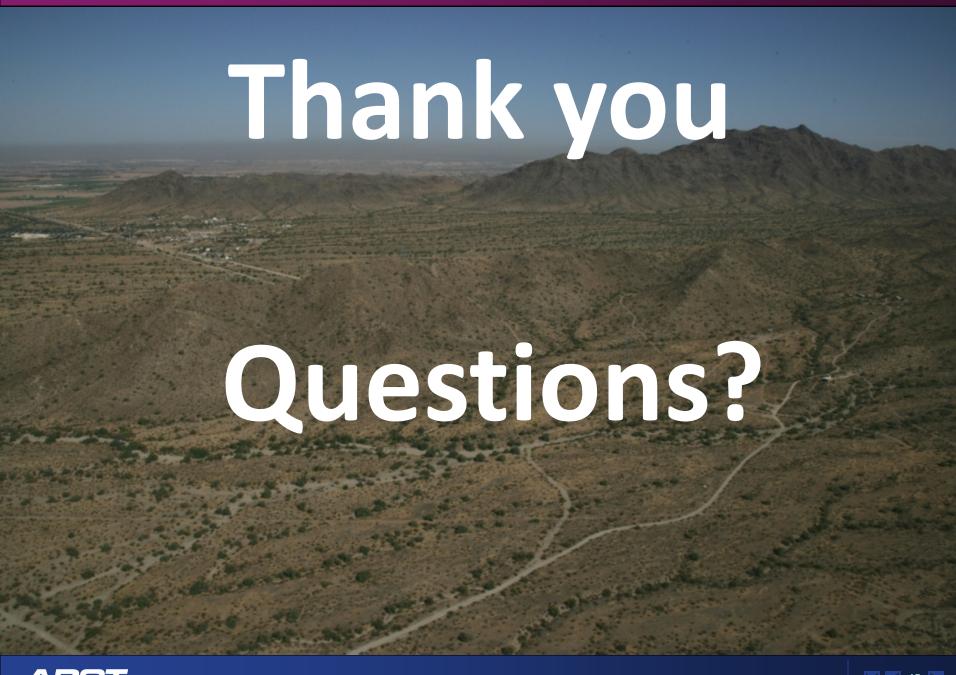
ADOT Organizational Structure





Lessons Learned and Considerations

- Political/Legislative climate conducive/supportive
- Agency management structure/team knowledgeable and empowered for P3s
- Focused industry input throughout P3 process
- Promote innovation through performance specifications
- Be decisive
- Assign risks to the party best positioned to manage





Contact Information

Robert Samour

Senior Deputy State Engineer, Major Projects

Arizona DOT

rsamour@azdot.gov

Ken Smith

Senior Vice President and Principal Project Manager

HDR Engineering

Ken.Smith@hdrinc.com



Questions & Input

Submit a question using the chat box



Or



Dial *1 to call in your question by phone



Major Project Spotlight: The State of Tolling in Georgia

John Hancock Georgia DOT



Tolling in the State of Georgia

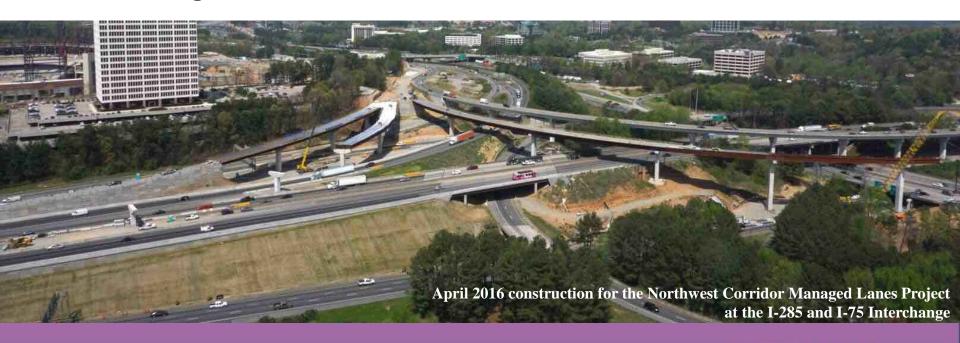
John D. Hancock, P.E. – Georgia Department of Transportation, Assistant State Innovative Delivery Engineer

May 5, 2016



Tolling in the State of Georgia: Overview

- History of tolling and managed lanes in Georgia
- Experiences gaining public acceptance of tolling
- Current status and future of tolling and managed lanes
- Challenges and lessons learned



History of Tolling/Managed Lanes in Georgia

State Toll Authority dates back to 1953

- Talmadge Memorial Bridge,
 Savannah; tolled from 1954-1975
- Sidney Lanier Bridge, Brunswick; tolled from 1956-1962
- Torras Causeway, Brunswick;
 First integrated electronic/cash toll collection in GA and 2nd in the U.S.; \$0.35 toll from 1984 to 2003
- GA 400, Atlanta; electronic open road/cash toll; \$.50 toll from 1993 to 2013



History of Tolling/Managed Lanes in Georgia



Sidney Lanier Bridge, Brunswick

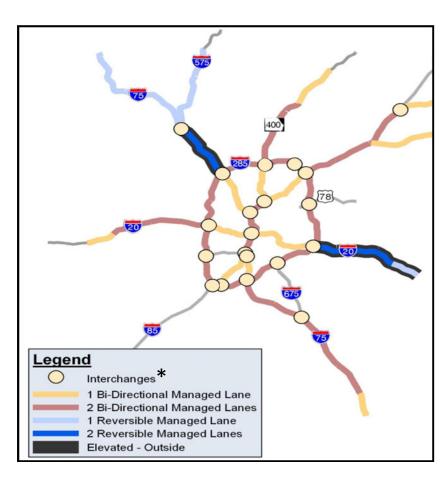


Talmadge Memorial Bridge, Savannah

History of Tolling/Managed Lanes in Georgia

- Atlanta Urban Area Toll System Plan (developed in the early 1970s)
- Managed Lane System Plan (completed 2009); Tiered recommendations, \$16B total capital cost, nearly 310 centerline miles
- First Tolled Managed Lanes Project;
 I-85 Conversion of HOV to HOT (2011)
- * More information is available at: http://www.dot.ga.gov/BuildSmart/Studies/ManagedLanesD ocuments/FINALREPORT.pdf

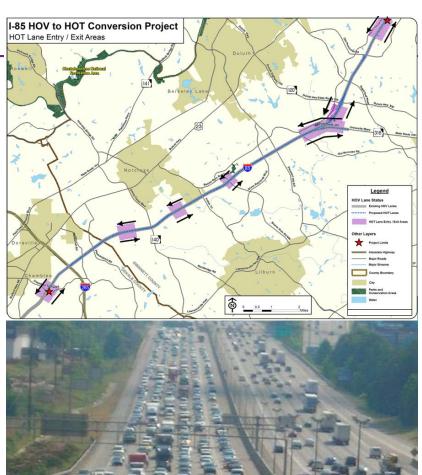
MANAGED LANE SYSTEM PLAN





I-85 Corridor

- A working managed lane project in **Atlanta**
- Part of State Managed Lane System Plan
- Expands transit in the corridor
- HOV2+ not producing reliable throughput as originally anticipated
- Heavy congestion in the corridor

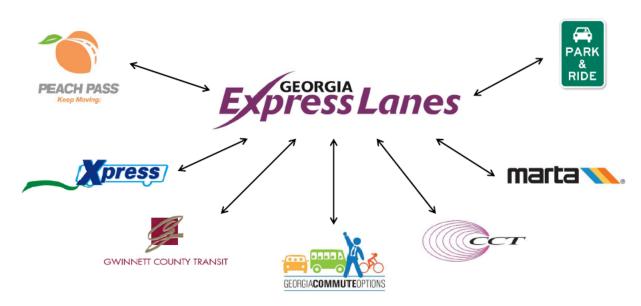




Experiences Gaining Public Acceptance of Tolling

Program Alignment

- The Georgia Express Lanes communications program incorporates messaging and promotion of tolling technology, transit services that use the system, and park and ride facilities.
- The program is designed to show integration of these systems,
 promote ease of use and highlight the variety of options available.



Experiences Gaining Public Acceptance of Tolling

Strategic Approach to Managed Lanes Public Education

- Establish the Georgia Express Lanes identity as a brand
- Formalize a messaging platform to support all communications
- Develop/refine materials to support all education and outreach activities, including those efforts led by project teams
- Institute a comprehensive communications program that includes:
 Stakeholder engagement, community and government relations, internal communications and media relations
- Institute monitoring and tracking to gauge impact of program and guide strategic evolution



Experiences Gaining Public Acceptance of Tolling





GEL Public Outreach Events

Consistent messaging regarding communicating benefits of the Georgia Express Lanes program:

- Improved mobility
- Reliability
- Greater choice
- Transit benefits
- Economically viable
- Support for economic development

Georgia Express Lanes – 2016 Outreach Plan

Continue to generate awareness and understanding of Express Lanes strategy among key stakeholders within project corridors

- NWC, South Metro and I-85 Extension
- Tailor messaging specific to each project corridor at various stages of project to align with activities
- Continue to conduct outreach by targeting key stakeholders and by identifying community events and festivals
- Leverage media relations to expand stakeholder engagement
- Designate program champions engage with key influencers in communities to foster third-party advocates to assist in communicating about Express Lanes
- Track and report all outreach engagement



GEL Public Outreach Events

Public Education: Dynamic Pricing

- Toll rate range set by SRTA Board
- Toll prices rise and fall based on demand for use of the Express
 Lanes to keep traffic free flowing and ensure reliable travel times
- Toll rates are displayed at each
 Express Lane entry point giving
 motorists the choice to enter the
 lanes when it makes the most
 sense for them



I-85 Express Lanes

Public Education: Regional Interoperability

- Interoperability began at end of 2014
- GA, FL and NC have partnered to make regional travel easier
- Peach Pass provides access to 750 miles of toll roads in all three states
- Peach Pass available on line <u>www.peachpass.com</u>, in stores and at Peach Pass customer service centers



| Project | Cost | Features | Project Status |
|--|---|--|---|
| I-85 | \$182 M | 16 milesHOT lanes | Open to traffic |
| I-75 | \$226 M | 12 milesReversible | 60% completeOpen to traffic 2017 |
| Northwest Corridor | \$834 M (TIFIA loan up to \$275M) | 30 miles Reversible ML interchange and slip ramps | 50% completeOpen to traffic 2018 |
| I-85 Extension | \$139.6 M | 10 milesNorth on I-85HOT lanes | NTP – CST Summer 2016 Open to traffic 2018 |
| Major Mobility Investment Program (MMIP) | \$14 B | • 10+ projects throughout Atlanta region | • Funding 2016 - 2026 |

Current Managed Lanes System

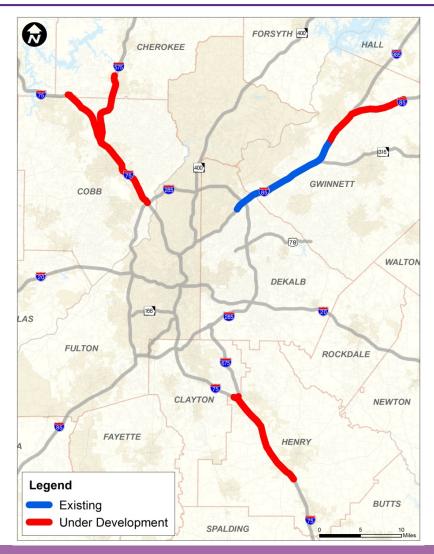
(I-85 Express Lanes Only)

- 16 miles
- 26,151 Average Weekday Traffic
- Toll Rate varies from 1 cent to 90 cents per mile
- \$2.94 Average Toll Rate per Trip



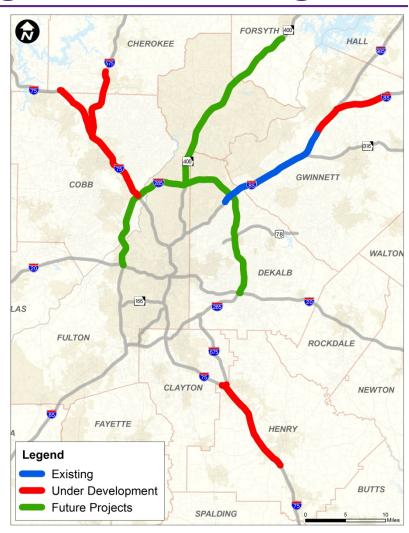
Managed Lanes Systems Under Construction

- Northwest Corridor
- I-75 South Metro
- I-85 Extension



The Future Managed Lanes System – Major Mobility Investment Program (MMIP)

- GA 400
- I-285 West/I-20 Interchange
- I-285 East/ I-20 Interchange
- I-285 West Wall (I-75 to I-20)
- I-285 East Wall (I-85 to I-20)
- I-285 Revive 285 (from I-75 to I-85)
- I-16/I-95 Interchange (Savannah)
- I-75 Truck Lanes (McDonough to Macon)
- SR 400 (from I-285 to McFarland)



Challenges

Multi-Agency Delivery

GDOT is tasked with the delivery of the infrastructure and SRTA is the agency to toll operations and collections



- Project Procurement
- Project Management (Design-Build Phase)
- Project Financing
- Long Term Operations and Maintenance (O&M) and Renewal and Replacement (R&R) Costs
- Financial Backstop of Tolling O&M and R&R Costs



- Toll Rate Management
- Toll Collection and Enforcement
- Customer Service
 Center Operations
- Issue Toll Revenue Bonds
- Issue GARVEE Bonds

Challenges

Toll System Options

No stand alone tolled highway system, all tolled systems have a parallel no pay option (General Purpose Lanes)

Public Understanding of Multi Toll System Policy

Barrier-separated reversible toll lanes; non-barrier separated High Occupancy Toll (HOT) Lanes, future projects toll policy to be determined

Funding challenge

Recent legislation (2015) created funding stream for Managed Lane Systems projects

Resource/Delivery/Operational

16 current miles in use, 52 miles to be opened in next 2 years, and over 191 new miles of Managed Lanes as part of Major Mobility Investment Program (MMIP) in next 10 years.

Public Perception

Understanding value and use of the system



Lessons Learned

Consistent Contracting

Thoughtful approach to developing procurement documents which allows industry to provide the best innovative solutions

Pricing Policy

Maintaining minimum speed throughout without over pricing

Public Outreach

Early education of the various tolled systems, new access locations, reversible use and understanding dynamic pricing

Go Live Coordination

Third party stakeholders with local governmental agencies, emergency responders, maintenance and operations

More to come...

Georgia's tolled and managed lanes program is still in its infancy

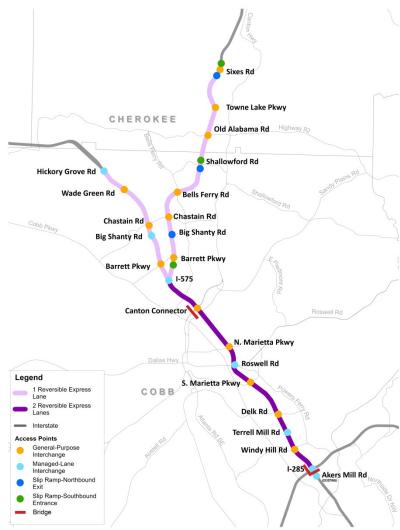
Current Managed Lanes Projects

- Northwest Corridor Ongoing, completion 2018
- I-75 South Ongoing, completion 2017
- **I-85 Express Extension** Construction begins summer 2016, completion 2018

Northwest Corridor

- 29.7 miles of newly constructed roadway north of Atlanta
- Reversible lanes allow traffic to travel southbound in the morning and northbound in the evening
- Two barrier-separated lanes along the west side of I-75 from I-285 to 75/575 split
- One barrier-separated express lane in the median on both I-75 and I-575 from the 75/575 split





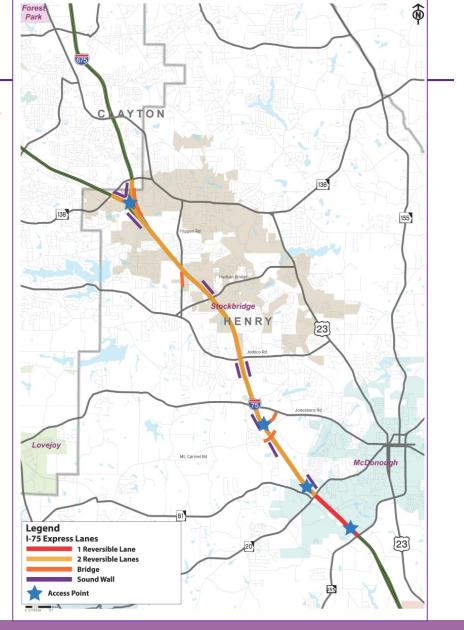


NWC Construction – I-285/I-75 Interchange



I-75 South Metro

- 12 miles of newly constructed roadway
- Lanes will extend between SR 155/
 McDonough Road and SR 138/
 Stockbridge Highway
- Express Lanes will be constructed within the median of the existing roadways
- Lanes are reversible, allowing traffic to travel northbound in the morning and southbound in the evening
- Traffic flow will be adjusted to support special events such as NASCAR races and spring break travel



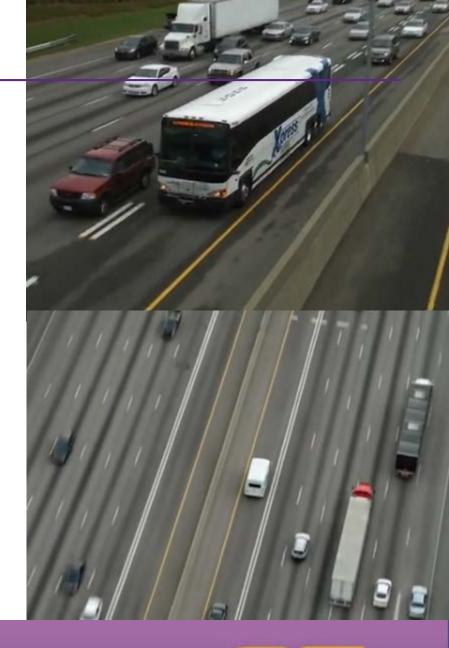


I-75 South Metro – I-675 Interchange



I-85 Extension

- These new lanes will be built in addition to the existing, providing additional capacity
- Additional auxiliary lanes in the right hand shoulder will provide better traffic flow between key interchanges
- 10 miles of newly constructed roadway
- Lanes will be extended starting at the end of the existing I-85 Express Lanes
- Limits of construction are from Old Peachtree Road to Hamilton Mill Road; includes 1200 space Hamilton Mill Park and Ride Lot
- Project will include one northbound lane and one southbound lane





For More Information

Contact: NWC Express Lanes Project

Georgia Department of Transportation

881 Franklin Gateway, Suite 405

Marietta, Georgia 30067

Project Hotline: (678) 486-3767

Sign up to receive construction updates

Email: northwestcorridor@dot.ga.gov

www.dot.ga.gov/DS/GEL







John Hancock

Assistant State Innovative Delivery Engineer

Georgia DOT

jhancock@dot.ga.gov



Questions & Input

Submit a question using the chat box



Or



Dial *1 to call in your question by phone



Major Project Announcements

Project Management Plan Guidance Update Sajid Aftab, OIPD



PMP Requirements

23 U.S.C. 106(h)(2)

"PROJECT MANAGEMENT PLAN

A project management plan shall document-

- (A) the procedures and processes that are in effect to provide timely information to the project decision makers to effectively manage the scope, costs, schedules, and quality of, and the Federal requirements applicable to, the project; and
- (B) the role of the agency leadership and management team in the delivery of the project."



Why New PMP Guidance?

- The last PMP Guidance was issued in 2009.
- Reasons
 - Provide project sponsor more flexibility on how they report project management activities
 - Clarify the approval process and role of multiple sponsors
 - Address the OIG Audit recommendations
 - Clarify when the PMP should be updated
 - Document FHWA assessment of PMP implementation by project sponsor
 - Better align with the current project management practices adopted by many project sponsors and outlined in the Project Management Book of Knowledge (PMBOK)



Process

- PDT began updating the guidance in 2015
- Reviewed the following documents and incorporated the best practices:
 - PMBOK: Project Management Institute standards
 - SHRP 2 R10: guidebook, case studies, and best practices
 - Project/Construction/Design Management Manuals of Caltrans, Utah DOT, Washington DOT, and Maryland State Highway Administration
 - OIG Recommendations
 - 10 best PMP examples
- 1st Round of FHWA internal review completed in March 2016



Next Steps

- June 2016: Complete FHWA internal review
- Summer 2016: Publish draft guidance in Federal Register for comment
- Fall 2016: Address/respond to all Federal Register comments
- December 2016: Issue new guidance
- January 2017: Roll-out webinars



Sajid Aftab

Major Project Engineer

FHWA OIPD Project Delivery Team

(202) 493-0334

sajid.aftab@dot.gov



Questions & Input

Submit a question using the chat box



Or



Dial *1 to call in your question by phone



Upcoming Webinars

Joint DOT/FHWA Major Project Webinar

Tuesday, November 10th

1:30 p.m. to 3:30 p.m. ET

Quarterly Major Project Webinar (FHWA)

Tuesday, August 2nd

1:30 p.m. to 3:30 p.m. ET

Recordings available at: http://www.fhwa.dot.gov/ipd/project_delivery/training/

Contact LaToya at latoya.johnson@dot.gov or 202-366-0479 if you have topic ideas for upcoming webinars



LaToya Johnson

Major Project Highway Engineer

Office of Innovative Program Delivery

Federal Highway Administration

(202) 366-0479

Latoya.johnson@dot.gov



Jim Sinnette

Project Delivery Team Leader

Office of Innovative Program Delivery

Federal Highway Administration

(202) 366-1561

James.Sinnette@dot.gov