



Innovative Program Delivery

# Joint DOT/FHWA Major Project Webinar

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**November 10, 2015**

***Sponsored by the FHWA Major Project Discipline***



# Agenda

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## 1. Major Project Spotlight

- Planning and Environmental Lessons Learned on I-5 North Coast Project
  - *Caltrans*
- R-10 Project Management Strategies for Complex Projects & Project Management Plans
  - *Michigan DOT*
- I-595 Express Corridor Improvements Project
  - Florida DOT

## 2. Build America Transportation Investment Center (BATIC)

## 3. Comments/Questions



Innovative Program Delivery

# Major Project Spotlight: DOT/FHWA Peer Exchange

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## Peer Exchange Featuring:

*Caltrans*  
*Michigan DOT*  
*Florida DOT*



Innovative Program Delivery

# Planning and Environmental Lessons Learned on I-5 North Coast Project

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**Clint Peace**  
**Arturo Jacobs**  
*Caltrans*

# I-5 North Coast Corridor Program

## DOT/FHWA Major Project Webinar

### November 10, 2015



**North Coast Corridor**  
*A better environment for the future*



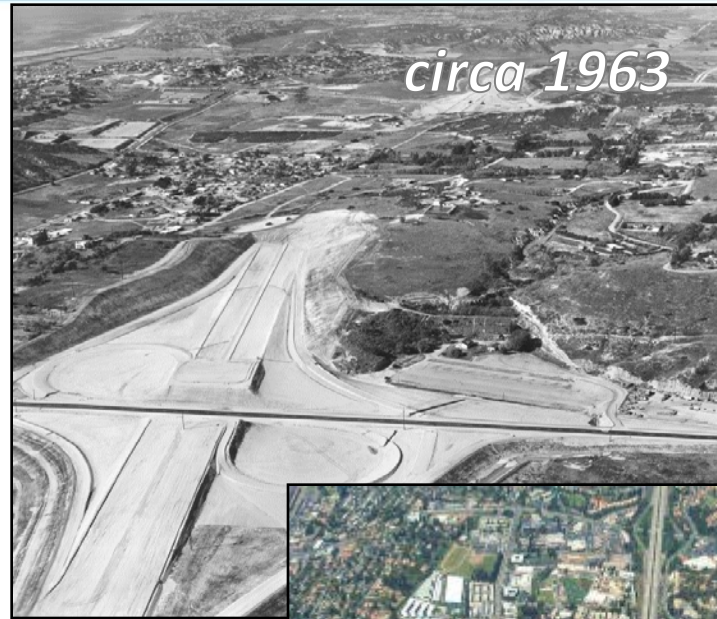
# I-5 North Coast Corridor

- 27 miles
- \$6B 30 year project
  - Four Express Lanes on I-5
  - Completing LOSSAN Double track
  - Improve Coastal Access
  - Coastal Habitat Improvements
- Coastal Commission approval August 2014



# North Coast Corridor Existing Condition

- Limited rail capacity and modal choice
- Low density and widely spread job centers
- Increasing population
- Heavy congestion limits coastal access, increases emissions and reduces quality of life



# Existing Condition - Batiquitos Lagoon

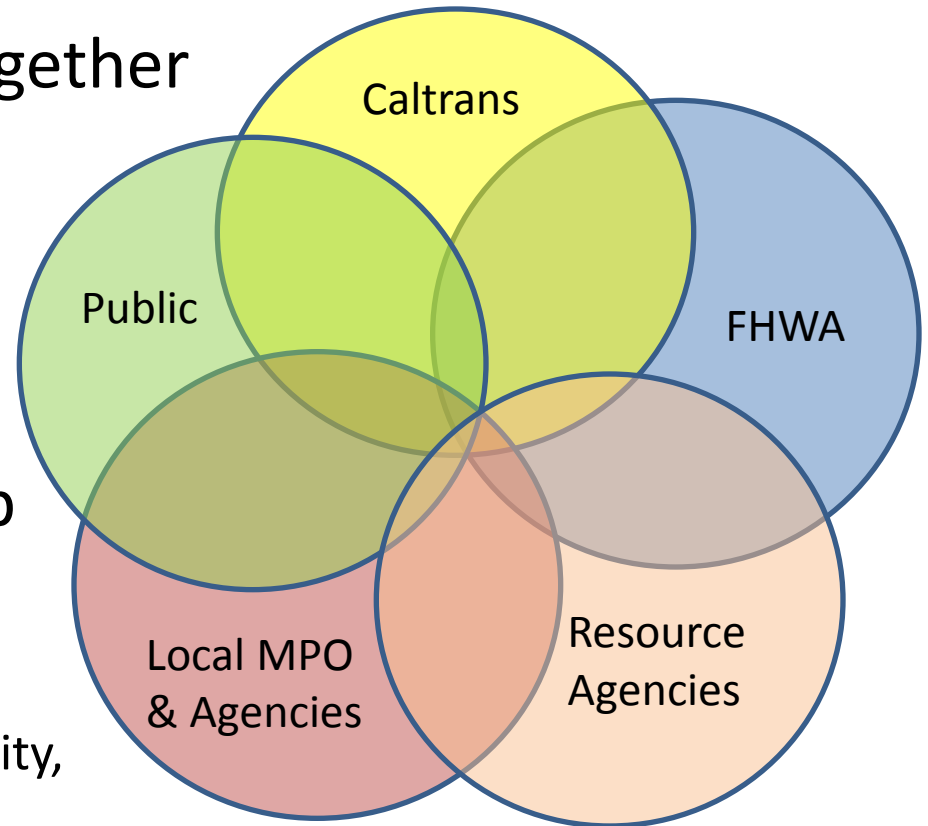
- Degrading coastal resources
- Restricted tidal flushing
- Development demand for open space
- I-5 & LOSSAN corridors act as a barrier to east-west bike/ped movement





# Multi-Agency Collaboration

- Recognize need to work together
- Presidential Order \*\*\*\*\*
- Corridor of the future
- Multiple Agency Partnership
- SB 468
  - Balanced rail, highway, community,
  - bike/ped improvements
  - “Get in, get out” of coastal lagoons
- One of six California CMGC pilot projects



# Program Scope

A 30-year comprehensive and sustainable solution for the region.

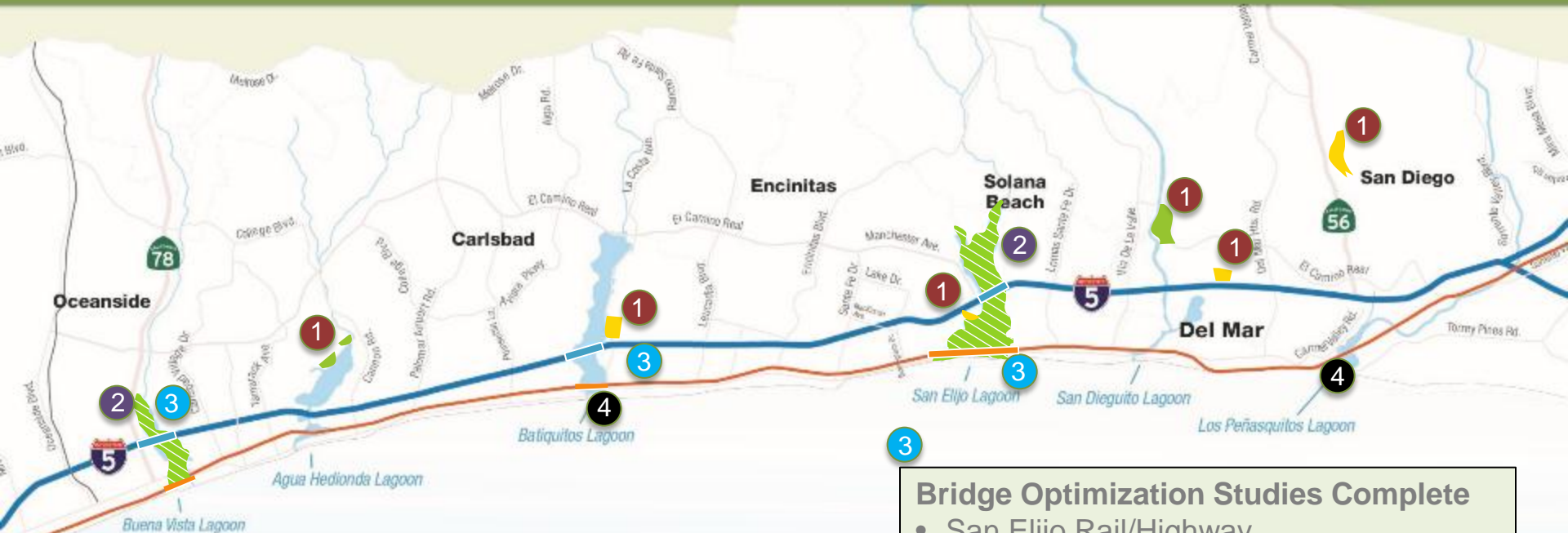
- Express Lanes on I-5
- Double tracking the coastal rail line
- Integrated bike, pedestrian, and habitat improvements



# Active Transportation



# Improving the Coastal Environment



## 1 Site Purchased; Restoration Plan Underway

- Hallmark (east/west)
- Dean Family Trust
- Laser Property
- La Costa Property
- Deer Canyon II (*site in escrow*)
- San Dieguito Lagoon W19 (*environmental review underway*)

## 2 Restoration Projects in EIR/EIS Process

- San Elijo Lagoon (*draft out for review*)
- Buena Vista Lagoon (*draft to be released November 2014*)

## 3 Bridge Optimization Studies Complete

- San Elijo Rail/Highway
- Batiquitos Rail/Highway
- Buena Vista Rail/Highway

## 4 Endowment Account and Oversight Committee to be Established

- Batiquitos Lagoon Inlet Maintenance
- Los Peñasquitos Lagoon Inlet Maintenance



# Opportunities and Integration

- Improve coastal access
- Improve tidal flushing








Manchester Ave. Bridge (before)



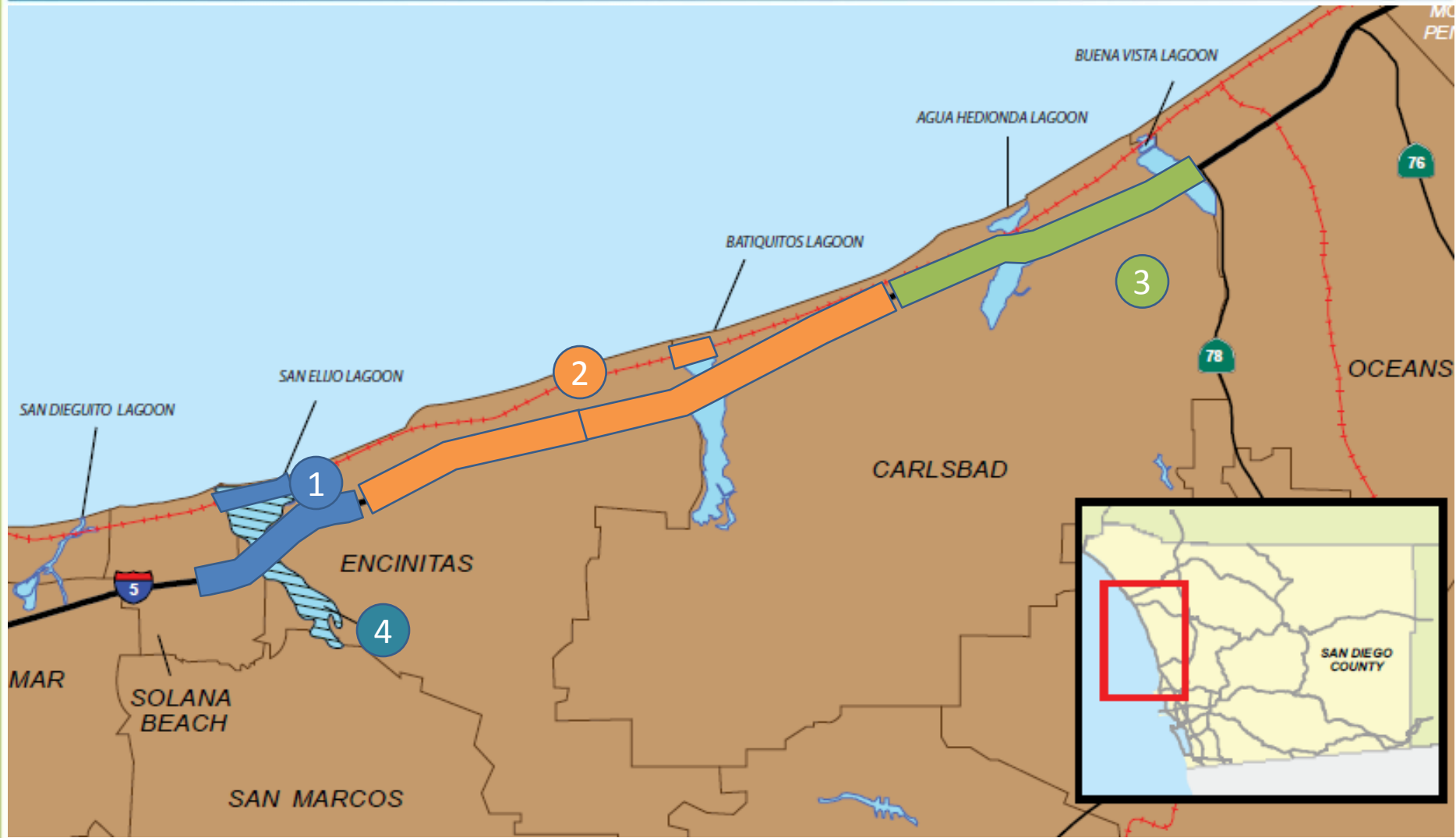
(after)

# Net Benefit

	No Build	Build	Highlights
Coastal Access			<ul style="list-style-type: none"> <li>• New 27-mile NCC Bike Trail and 7 miles of coastal rail trail</li> <li>• Completes east-west/north-south bike/ped trail links</li> <li>• Highway/rail improvements maximize coastal access</li> <li>• Alleviates demand/spillover traffic on local roadways, further improving coastal access and maintaining coastal character</li> </ul>
Coastal Habitat			<ul style="list-style-type: none"> <li>• Regionally significant habitat restoration and preservation</li> <li>• Advanced no net loss mitigation prior to project impacts</li> <li>• Restores/preserves open space threatened by development</li> <li>• 78 acres of uplands and 55 acres of wetlands established and restored</li> </ul>
Water Quality/Wetlands			<ul style="list-style-type: none"> <li>• Improved tidal flushing</li> <li>• Long-term endowment for lagoon maintenance</li> <li>• Significantly improve run-off treatment</li> <li>• Improves hydrology of 10 coastal drainages</li> </ul>
Air Quality			<ul style="list-style-type: none"> <li>• New bike/ped facilities creates non-vehicular links to transit and activity centers</li> <li>• Improved travel on rail and highway and local surface streets minimizes congestion, reducing emissions</li> </ul>
Multimodal Alternatives			<ul style="list-style-type: none"> <li>• Facilitates smart growth, ensuring transit, roads, bike&amp;ped routes support infill development</li> <li>• Prioritizes alternates to SOV trips, including carpools, vanpools, rail and bus transit</li> <li>• Express Lane revenue supports corridor transit services</li> <li>• Increase options for non-motorized and transit access to the coast</li> </ul>

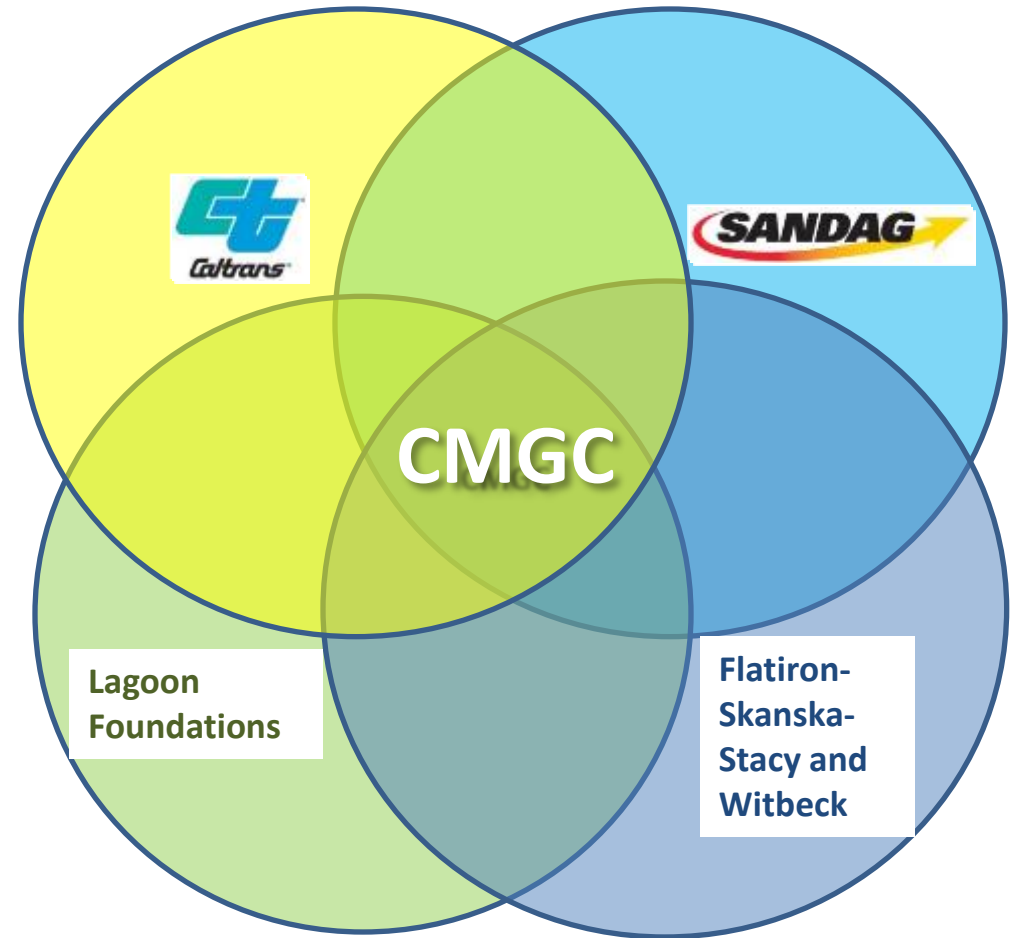


# Where we are today



# Construction Manager General Contractor

- Minimize impacts to the environment and public
- Maximize opportunities for construction alternatives
- Common understanding of project elements to reduce construction risks
- Design to cost





# Best Practices

## Entitlement Best Practices

- Holistic system approach
- Shared agency objectives
- Integration brings opportunity

## CMGC Best Practices

- Good owner/contractor relationship results in design innovations
- Cost negotiations require new skills and knowledge
- Integration requires blending agency business practices

# Next Steps

- Phase 1 Begin Initial GMP Jan 16
- Phase 1 Coastal Commission Hearing March 2016
- Begin Construction Late Spring 2016
- 5 year construction



# Contact Information

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## Allan Kosup

Corridor Director for Interstate 5, State Route 76, and  
State Route 78

Caltrans

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# Questions & Input

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Submit a question using the chat box



Or



Dial \*1 to call in your question by phone



Innovative Program Delivery

# **Major Project Spotlight: *R-10 Project Management Strategies for Complex Projects & Project Management Plans***

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**Sue Datta**  
***Michigan DOT***

**Carlos Figueroa**  
***FHWA - OIPD***



# SHRP2 Renewal (R10) Project Management Strategies for Complex Projects

Joint DOT/FHWA Major Projects Webinar

Carlos F. Figueroa, P.E.  
FHWA Office of Innovative Program Delivery

November 10, 2015



# What is SHRP2?

Tools to save lives, save money, save time.



- Products developed from objective, credible research



- Solutions that respond to challenges of the transportation community – safety, aging infrastructure, congestion



- Collaborative effort of AASHTO, FHWA, and TRB
- Tested products, refined in the field

**SHRP2 Solutions offer new technologies and processes to enhance the efficiency of transportation agencies**

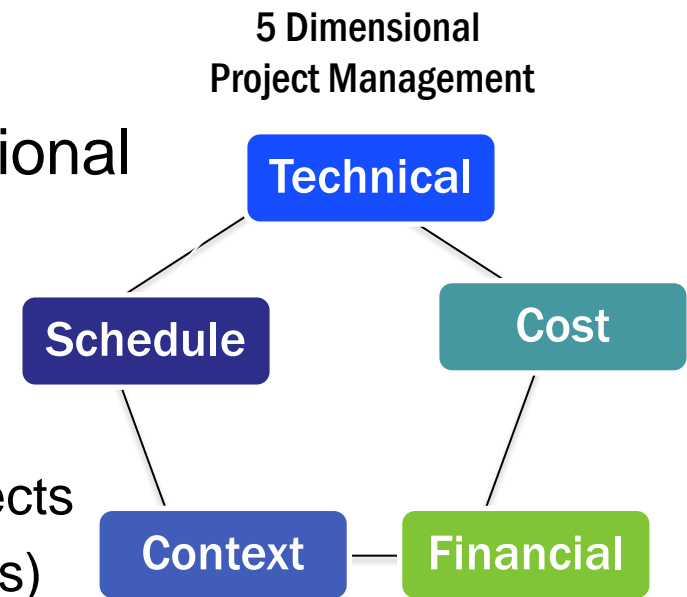
# R10 - Managing Complex Projects

- ***Guide for Project Management Strategies for Complex Projects***

- Outlines techniques for managing complex projects, e.g. Five dimensional project management model

- Tools:

- Training program for DOT staff
- Case studies on various types of projects
- Forms (5 methods + 13 execution tools)



- Link to Guidebook

<http://onlinepubs.trb.org/onlinepubs/shrp2/SHRP2prepubR10Guide.pdf>

- Link to TRB Tuesdays webinars

<http://www.trb.org/ElectronicSessions/Blurbs/168714.aspx>

R10



# R10 - Managing Complex Projects

## Benefits:

- Early communication in the process
- Early identification of complexity based on needs of the specific project
- Early preparation of the financials, schedule, and resources
- Looking at context and financing as drivers of the project
- Earlier identification of critical success factors
- Creates a realistic balance between the available funding and scope
- Develop project action plans for success



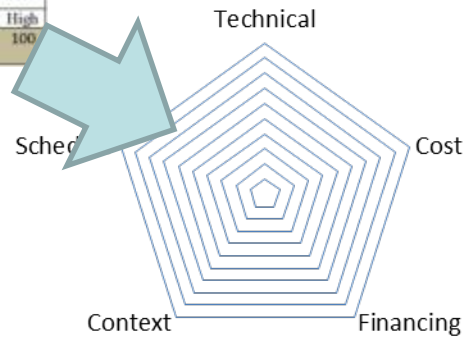
# Complexity Mapping

Project: \_\_\_\_\_

Please circle the top 3 in each dimension	Within each dimension, how is this project different (more complex) than the "traditional" project?
<b>Cost Factors</b> Contingency usage Risk analysis Estimate formation Owner resource cost allocation Cost control Optimization's impact on project cost Incentive usage Material cost issues User costs/benefits Payment restrictions	
<b>Schedule Factors</b> Timeline requirements Risk analysis Milestones Schedule control Optimization's impact on project schedule Resource availability Scheduling System/Software Work Breakdown Structure Earned Value Analysis	

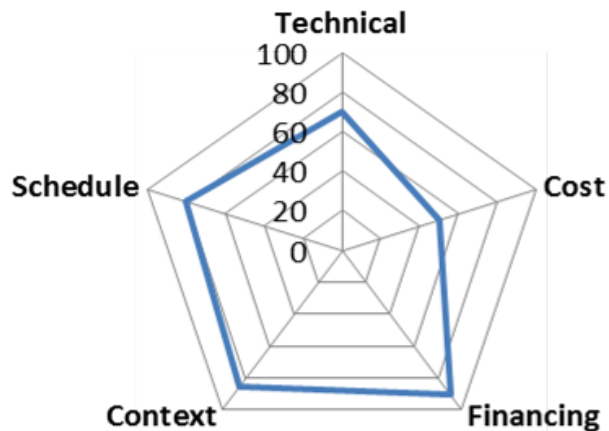
Complexity map - a visual tool that helps identify and understand the dimension(s) with the most complexity

Dimension Complexity	Scale				
	Minimal	Average	Average	High	High
Cost Dimension Complexity	0	25	50	75	100
Schedule Dimension Complexity	0	25	50	75	100
Technical Dimension Complexity	0	25	50	75	100
Context Dimension Complexity	0	25	50	75	100
Financing Dimension Complexity	0	25	50	75	100



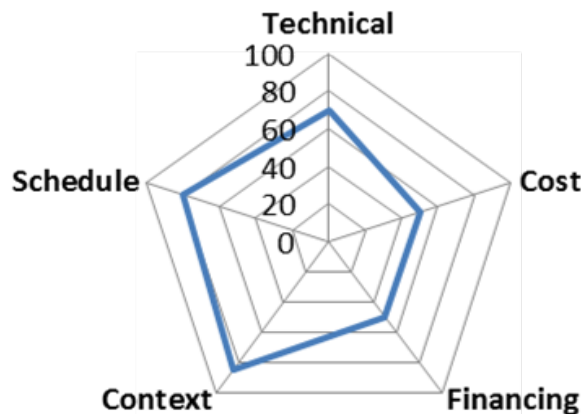
# Iterative Mapping Example

**Initial Complexity Map  
Project Concept**



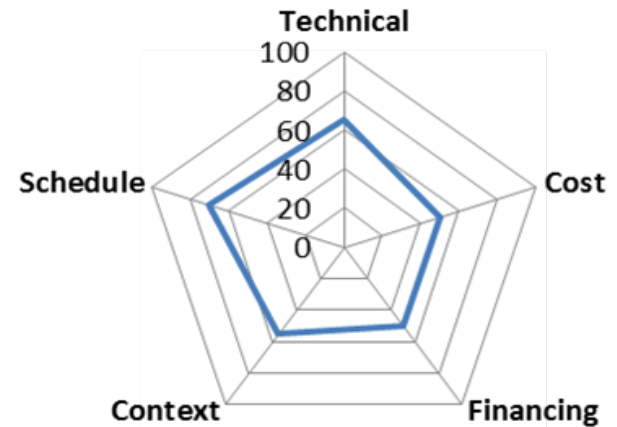
**Complexity Footprint = 13434**

**Second Complexity Map  
Project Authorization**



**Complexity Footprint = 10485**

**Third Complexity Map  
Project Execution**



**Complexity Footprint = 7894**

Average Complexity (all rated 50) = 5944; Maximum Complexity (all rated 100) = 23776

# 5DPM Methods

## Method 1: Define Critical Project Success Factors

Most Complex				Least Complex
Schedule	Technical	Context	Cost	Financing
Complete the project on time or early (Date 1/1/2002 in time for Olympics)	Define scope critical issues to allow early start of work immediately after notice to proceed (RR, utilities, ROW)	Get waiver of typical DBE requirements on federal aid portion and agree to yearly goals over five year project duration, based on local DBE capacity (\$4 million/year)	Complete the project at or below cost (Total Cost < \$1.7 billion)	Change cash flow models and federal aid waivers to accommodate use of design build (approval by 1/1/1996)

# 5DPM Methods (cont.)

- Method 4: Prepare Early Cost Model and Finance Plan
  - Process to map cash inflows and outflows
  - Identify secured and unsecured sources of funds and when those funds will become available
- Method 5: Develop Project Action Plans (PAPs)
  - PAPs Goal: develop innovative solutions to remove or reduce constraints to project success
  - Targeted Project Action Plans to anticipate and overcome project *roadblocks* and reduce *speed bumps*

# Project Execution Tools



1. Incentivize Critical Project Outcomes
2. Develop Dispute Resolution Plan
3. Perform Comprehensive Risk Analysis
4. Identify Critical Permit Issues
5. Evaluate Applications of Off-Site Fabrication
6. Determine Required Level of Involvement in ROW/Utilities
7. Determine Work Package/Sequence
8. Design to Budget
9. Co-Locate Team
10. Establish Flexible Design Criteria
11. Evaluate Flexible Financing
12. Develop Finance Expenditure Model
13. Establish Public Involvement Plan

# R10 Current Users

R10	Type	DOT
Round 1 – Feb. 2013	Lead Adopter	FHWA Federal Lands Georgia Massachusetts <b>Michigan</b> New Mexico
Round 4 – Aug. 2014	User Incentive	Alaska Arizona Iowa New Hampshire North Carolina Washington Wisconsin Rhode Island

# Contact Information

**Carlos F. Figueroa, P.E.**

**Transportation Engineer**

**Office of Innovative Program Delivery**

**Project Delivery Team**

Federal Highway Administration

(202) 366-5266

[carlos.figueroa@dot.gov](mailto:carlos.figueroa@dot.gov)

**SHRP2 Implementation Assistance Website**

<http://www.fhwa.dot.gov/goshrp2>



# Comments or Questions?



[goSHRP2@dot.gov](mailto:goSHRP2@dot.gov)



Save lives. Save money. Save time.





# I-75 Modernization Project

## **R-10 Project Management Strategies for Complex Projects & Project Management Plans**

Joint DOT/FHWA Major Project Webinar  
November 10, 2015  
1:30-3:30 PM



# I-75 Modernization Project

- I-75 is an interstate freeway that runs north to south from Michigan's upper peninsula to Florida
- Constructed in the 1960s and without any major upgrades in project corridor
- Both an urban (depressed) and rural/suburban (at-grade) section





# I-75 Modernization Project

## North of M-102 to South Boulevard

- Six-lane facility with three travel lanes in each direction from M-102 to south of 12 Mile Road
- From 12 Mile Road to South Boulevard, it is a six-lane rural freeway with interchanges every few miles





# I-75 Modernization Project

## North of M-102 to South Boulevard

- Project covers about 18 miles within Oakland County, including 11 interchanges, 16 road crossings, traversing through six communities
- Contains one freeway to freeway interchange (I-696, not included in project improvements)
- 51 structures: 47 bridge replacements (41 vehicular and 6 pedestrian) with four new structures



# Background

**1992:** I-75 Northern Oakland County Corridor Study

**1999:** I-75 SEMCOG/MDOT Corridor Study

**2002:** Draft Environmental Impact Statement

**2005:** Final Environmental Impact Statement

**2006:** Record of Decision

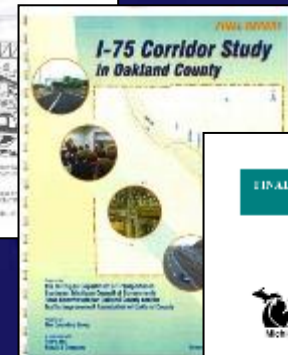
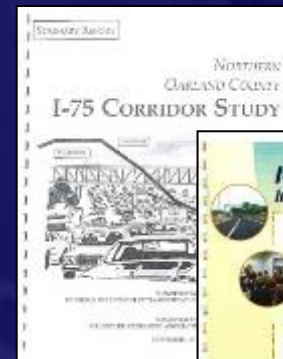
**2009:** Engineering Report for 12 Mile Road to M-59 (at-grade)

**2010:** Engineering Report for M-102 to 12 Mile Road (depressed)

**2011:** Success Management Workshops

**2013:** Design Modification Analysis

**2013/2014:** Community Aesthetic Workshops



# Scope of Work

- Reconstruct existing three lanes
- Construct one new High-Occupancy Vehicle (HOV) lane for peak hour operation only
- Reconstruct Square Lake interchange to standard right exits and entrances
- Reconstruct 14 Mile and 12 Mile Road interchanges
- Reconstruct I-696 ramp to northbound I-75 by separating on-ramp from the northbound off-ramp to 11 Mile Road



# Scope of Work

- Upgrade freeway geometrics
- Replace all vehicular and pedestrian bridges
- Reconstruct service drives (southern portion to 12 Mile Road)
- Construct corridor wide aesthetic improvements
- Improve drainage system
- Upgrade and construct carpool lots & ITS technologies





# Cost

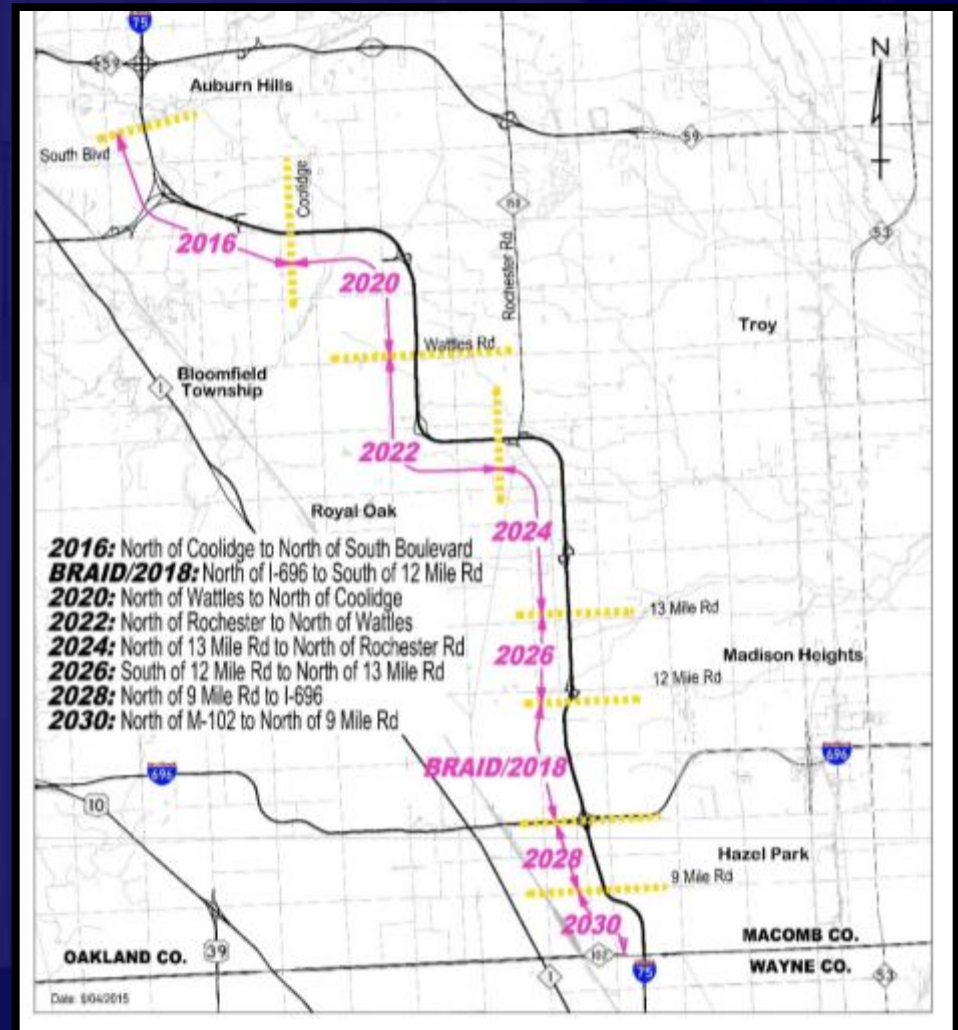
Total cost \$1.32B  
Year of Expenditure Dollars

- Roadway
- Bridges
- Right-of-way
- Maintenance of traffic
- Design
- Construction engineering



# Construction Segments

- Due to funding limitations and mobility concerns, project corridor was divided into eight construction segments
- First two construction segments address operations and crash concerns
- Remaining segments are constructed from north to south in succession





# 2016 Schedule

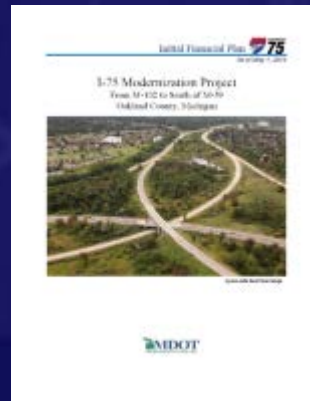
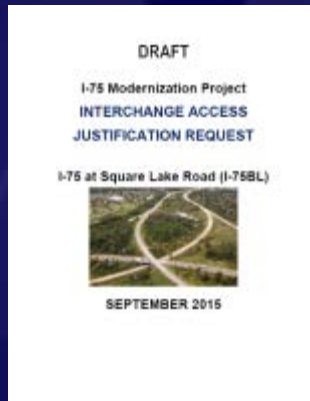
TASKS	COMPLETION DATE
<b>Cost Estimate Review and Financial Plan</b>	
I-75 Modernization Cost Estimate Review	June 16-18, 2015
I-75 Modernization Cost Estimate Review Final Report Submitted	August 14, 2015
I-75 Modernization Initial Financial Plan (IFP)	August 21, 2015
FHWA Review and Approval of IFP	August 28, 2015
<b>Interchange Access Justification Report (IAJR)</b>	
IAJR Submitted to MDOT	September 17, 2015
IAJR Submitted to FHWA	September 24, 2015
<b>2016 Design Build Segment</b>	
Project Information Sheet Posted	June 5, 2015
Request for Qualifications Posted	September 8, 2015
Statements of Qualifications Received	October 26, 2015
Issue Final Preliminary Plans to MDOT	December 4, 2015
Issue Final RID to MDOT	December 4, 2015
Final MDOT Approval of Books, Plans and RID	December 18, 2015
RFP Advertisement	December 21, 2015
Proposal Due Date	April 4, 2016
Contract Award	June 1, 2016



# Corridor Schedule

SEGMENTS	COMPLETION DATE
<b>2016 - N of Coolidge to N of South Blvd</b>	
Design/Build Contract Award	June 1, 2016
Design/Build Construction & Utilities	December 31, 2018
<b>2018 - N of I-696 to S of 12 Mile Rd.</b>	
ROW	September 29, 2017
Design	December 31, 2017
Construction & Utilities	December 31, 2020
<b>2020 - N of Wattles to N of Coolidge</b>	
Design	December 31, 2019
Construction & Utilities	December 31, 2022
<b>2022 - N of Rochester to N of Wattles</b>	
Design	December 31, 2021
Construction & Utilities	December 31, 2023
<b>2024 - N of 13 Mile Rd. to N of Rochester Rd.</b>	
Design	December 31, 2023
Construction & Utilities	December 31, 2025
<b>2026 - S of 12 Mile Rd. to N of 13 Mile Rd.</b>	
ROW	December 31, 2023
Design	December 31, 2025
Construction & Utilities	December 31, 2027
<b>2028 - N of 9 Mile Rd. to I-696</b>	
ROW	December 31, 2025
Design	December 31, 2027
Construction & Utilities	December 31, 2029
<b>2030 - N of M-102 to N of 9 Mile Rd.</b>	
ROW	December 31, 2027
Design	December 31, 2029
Construction & Utilities	December 31, 2031

- Re-Evaluation, IFP, and IAJR in review
- PMP Executive Leadership Endorsement underway
- Design/Build Books and 30% plans under review
- RFQ advertised
- RFP to be issued late 2015/early 2016
- Selection and contract award expected Spring 2016



# R10 Workshops

- Provided discussion and alternate perspectives at key points of plan development
- Reviewed the Five-Dimensional Project Management Planning method and applicability to mega-projects
- Highlighted financing issues
- Defined and reviewed context and implications to project advancement
- Provided expertise from other parts of the country to share experience and guide plan development



# R10 Success

- Focused MDOT to develop feasible, reasonable funding for the mega-projects
- Identified & ensured context was identified, acknowledged, and addressed with a plan
- Introduced risk management planning
- Enabled early preparation of cost modeling and financial plan development





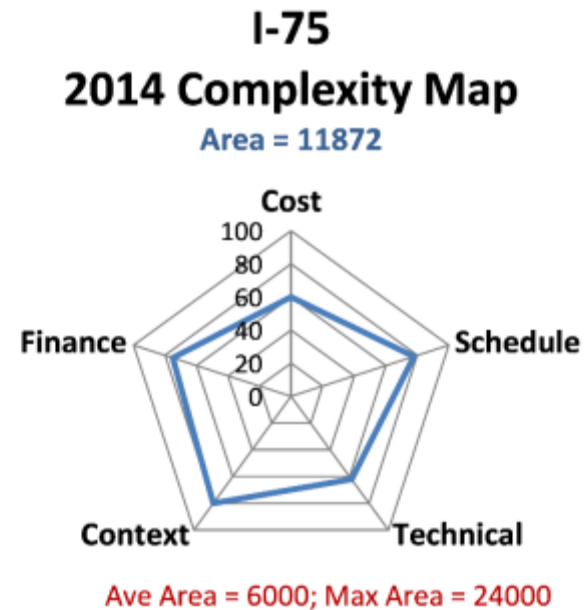
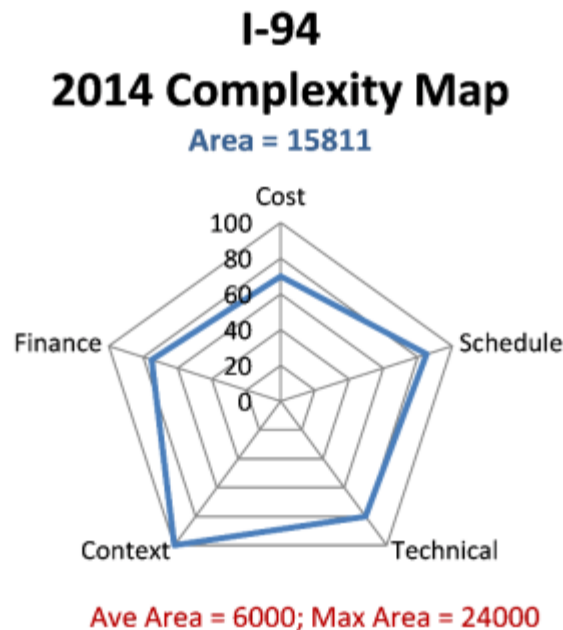
# Other Elements

- Unable to easily transfer and apply to average or small sized projects



# Lessons Learned

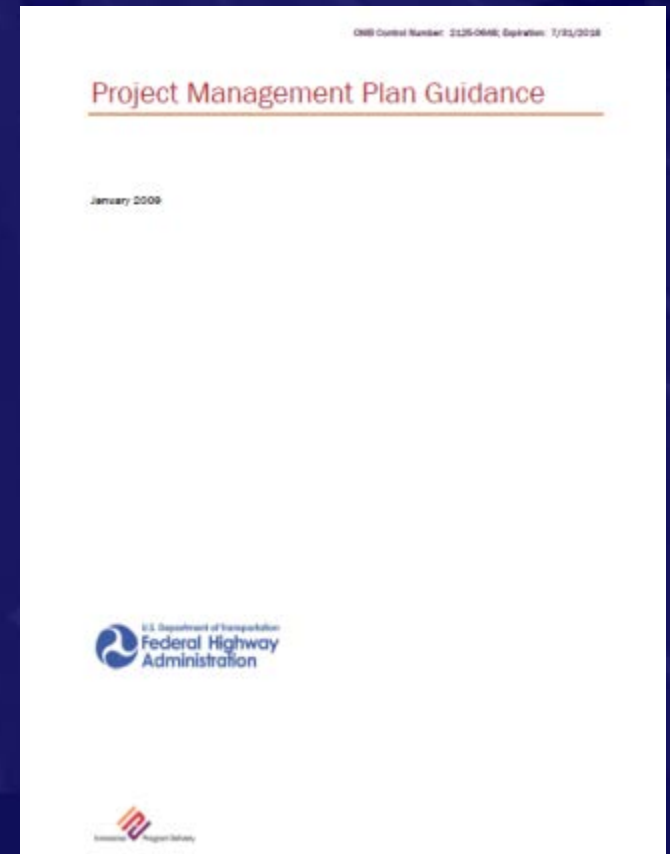
- Complexity mapping should be an electronic visual tool in project development and as checkpoints throughout the process





# Lessons Learned

- Context and financing are key elements that need to be planned for and addressed early
- Use of focused, strategic plans help guide development
- Incorporate expectations and R10 elements in PMP outline



# STAKEHOLDER ENGAGEMENT OVERVIEW



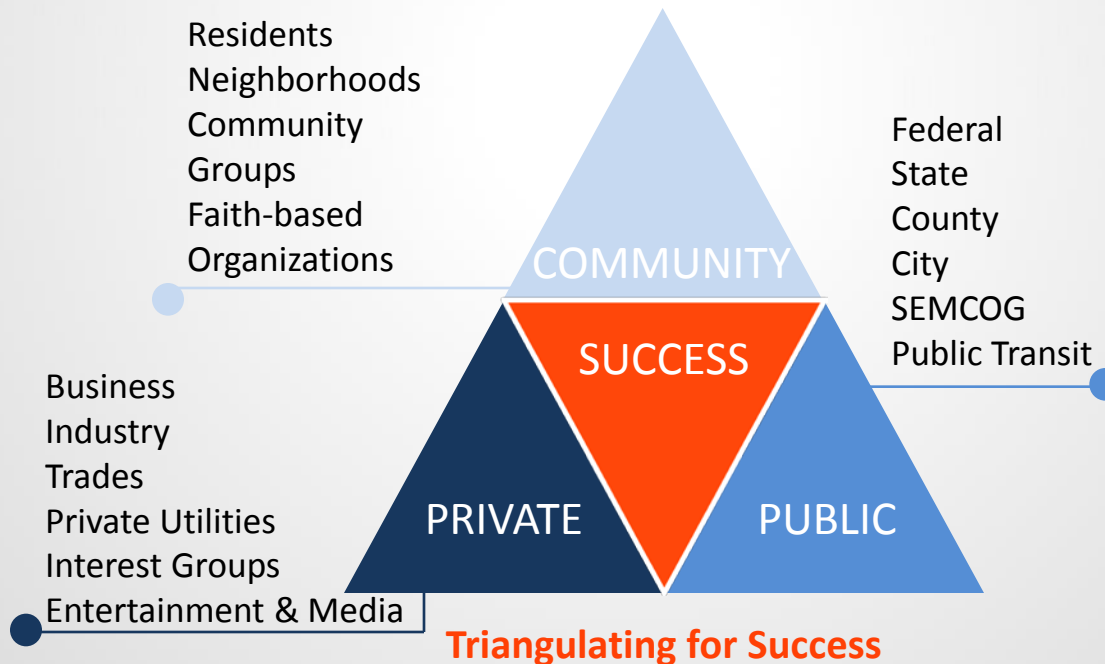
## Goals:



Achieve a 90% success rating on the public engagement process by engage 100% of stakeholders so they know MDOT is listening to their concerns.

Engagement MUST be...

- Relevant, Credible and Inclusive



# STAKEHOLDER ENGAGEMENT PROCESS



## Methods to engage the public

- Stakeholder meetings
- Advisory committees
- Public meetings
- Surveys
- Project website <http://www.michigan.gov/94Detroit>
- Social media
- Traditional media
- Email/Direct mail
- Newsletters



**MDOT says it wants feedback on I-94 expansion**

By Eric D. Lammens, Detroit Free Press | 12:08 am EDT July 14, 2015



Some of the more controversial parts of the proposal to modernize, and possibly expand, a 7-mile stretch of I-94 in Detroit may be up for debate.

Michigan Department of Transportation spokesman Rob Morosi said the agency is seeking feedback on the addition of continuous service drives along the route, from Conner on Detroit's east side, to I-95 on the city's west side, along with the other aspects of what has been proposed as a \$2.5-billion highway reconstruction plan.

Public meetings will be held today and Thursday.

Please attend a community meeting about the

**INTERSTATE 94 MODERNIZATION PROJECT**

**WHAT:**  
An open house-style meeting to gather public input on the future I-94 Modernization Project in Detroit.

**BACKGROUND:**  
The I-94 Modernization Project... (text partially obscured)

**Tuesday, July 14, 2015**  
8:30 a.m. - 4:00 p.m.  
Cathedral Church of St. Paul - North Hall  
4800 Woodward Ave., Detroit 48221  
(Opposite all of Warren Ave. just east of Woodward)

**Thursday, July 16, 2015**  
8:30 a.m. and 6:00 p.m.  
Wayne County Community College - Eastern Campus  
5301 Conner Ave., Detroit 48213

For special accommodations, please call:  
Cristi Hovick, MDT, at 313-661-5736  
cristi.hovick@MDOT.com

**HOW MDOT IS RIGHT-SIZING THE PROJECT**

MDOT is currently refining the design of the I-94 corridor to reduce the potential impacts to the surrounding community and provide additional capacity to relieve congestion and safety concerns **WITHOUT WIDENING** the project footprint. There are several ways to accomplish this.

Example: Trumbull Avenue Bridge reduced from 7 to 5 lanes

**RIGHT-SIZE**

2010 CONCEPTUAL PLAN (7 LANES)

2015 CONCEPTUAL PLAN (5 LANES)

CROSS SECTION VIEW

MDOT

**INTERSTATE 94 MODERNIZATION PROJECT**

*News*

**W**elcome to the website of the I-94 Modernization Project... (text partially obscured)

July 14 at the Cathedral Church of St. Paul in Detroit and at the Wayne County Community College Eastern Campus.

I am pleased to see MDOT is taking the time to hold public meetings to help us right-size I-94. See page 7 for meeting details and contact information.

I had to take the primary garages into the city of Detroit and an important link in the infrastructure that supports local regional and suburban mobility and economic impacts. Working together, we can create safe, modern I-94 that will serve everyone here and in the future.

MDOT Director Taylor Ingber



# STAKEHOLDER ENGAGEMENT SUCCESSSES



- July 2015 Public Meetings (184 attendees)
- Media Coverage by 12 media groups
- 600+ Facebook subscribers
- Published Summer 2015 Newsletter
- Outreach to 79 organizations
- 266 Stakeholder Survey participants



## Next Steps:

- Fall 2015 Local Access coordination with City Detroit
- Community Connector Bridge Design Charrette
- Winter/Spring 2016 Public Meeting
- Advisory Committee Meetings
- Project Branding (logo, video)



**Contact Us:**  
Rob Morosi, MDOT Communications Specialist, 248-483-5107  
[www.michigan.gov/drive](http://www.michigan.gov/drive)  
[www.twitter.com/MDOT\\_MetroDet](https://twitter.com/MDOT_MetroDet)  
[www.facebook.com/MichiganDOT](https://www.facebook.com/MichiganDOT)  
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# I-75 Modernization Project

Questions



# Contact Information

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## Carlos Figueroa

SHRP2 Project Management Program Manager

FHWA – Office of Innovative Program Delivery

Carlos.Figueroa@dot.gov



# Questions & Input

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Submit a question using the chat box



Or



Dial \*1 to call in your question by phone





Innovative Program Delivery

# Major Project Spotlight: *I-595 Express Corridor Improvements Project*

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**Kelley Hall, P.E.**  
**Paul Lampley, PE**  
***Florida DOT***



# **I-595 Express Corridor Improvements Project**

*Accelerating Innovation through  
Public-Private-Partnership (P3)*

**Kelley Hall, P.E.**  
595 Operations Project Manager

**Paul Lampley, P.E.**  
595 Construction Project Manager

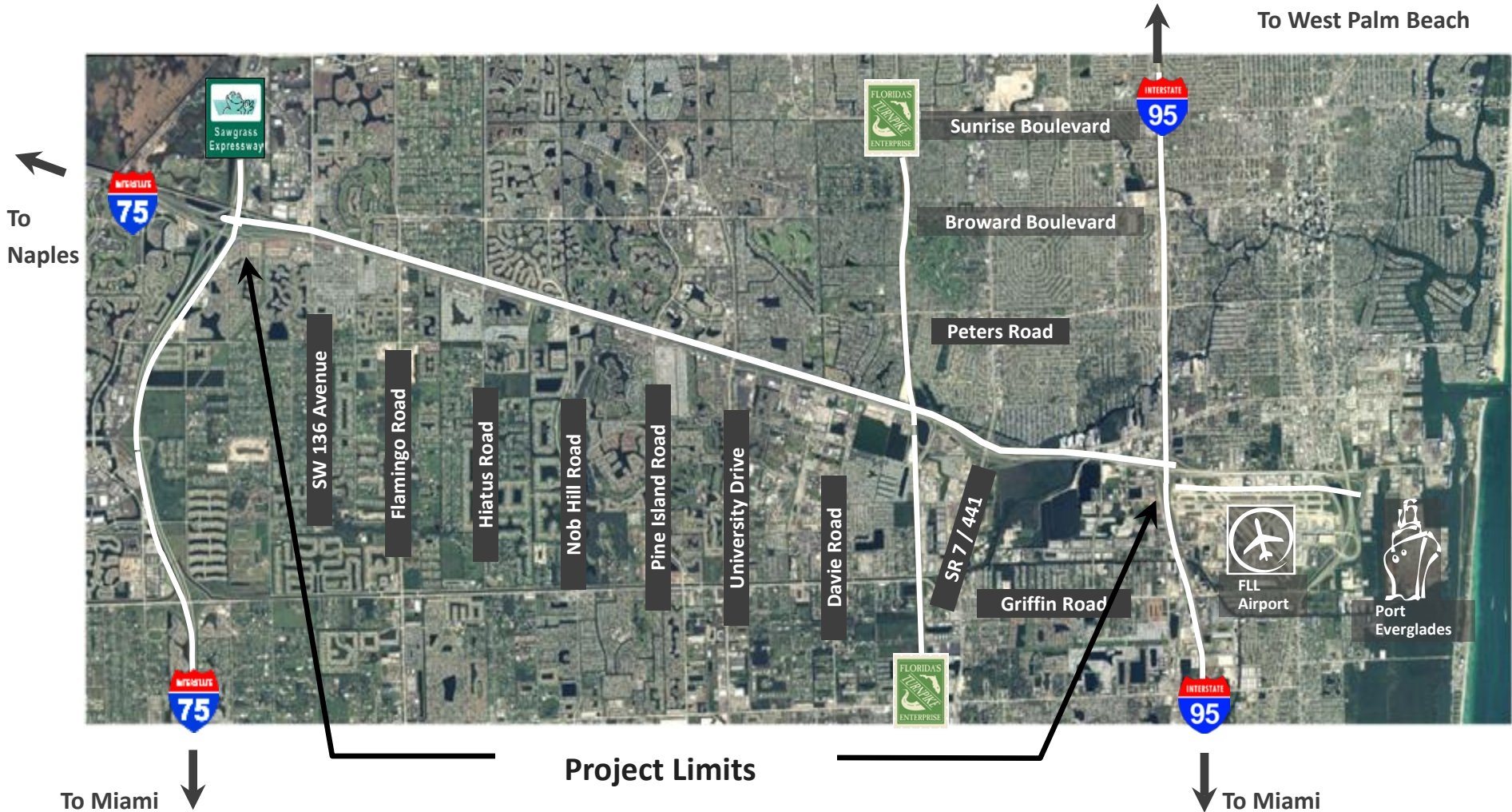
**Florida Department of Transportation**



**595 EXPRESS**



# PROJECT LIMITS



**Project Limits**

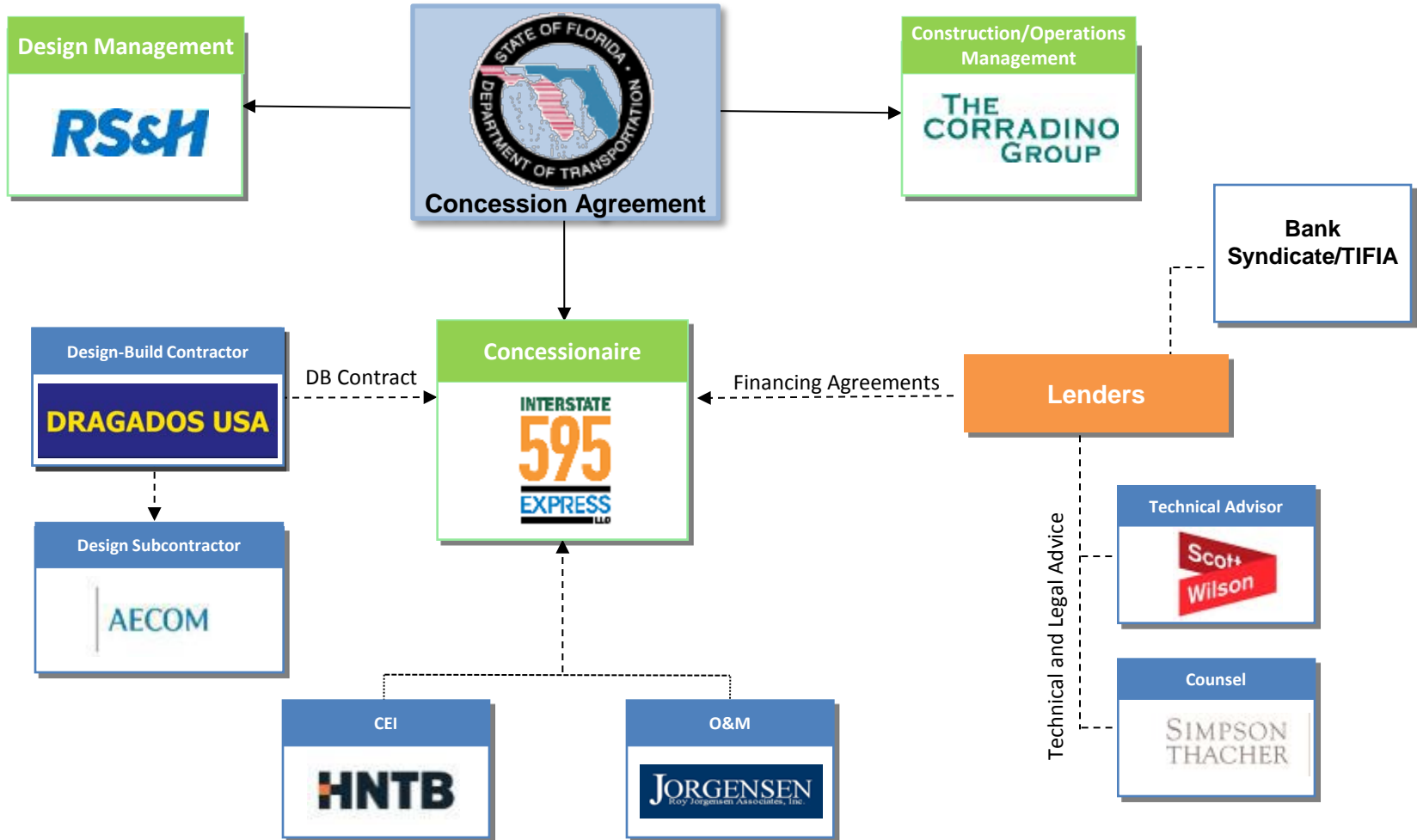
I-595 from I-75/Sawgrass Expressway Interchange to west of the I-95 Interchange and Florida's Turnpike from Griffin Road to Peters Road

# PROJECT COMPONENTS



- Three reversible express lanes
  - Direct connection to Florida's Turnpike
  - Open Road Tolling
- SR 84 continuous connections
- Florida's Turnpike Interchange
- Broward County greenway
- Ramp improvements
  - Auxiliary lanes
  - Braided ramps
  - Bypass bridges
- Sound barrier walls

# I-595 TEAM ORGANIZATION



# PROJECT HIGHLIGHTS

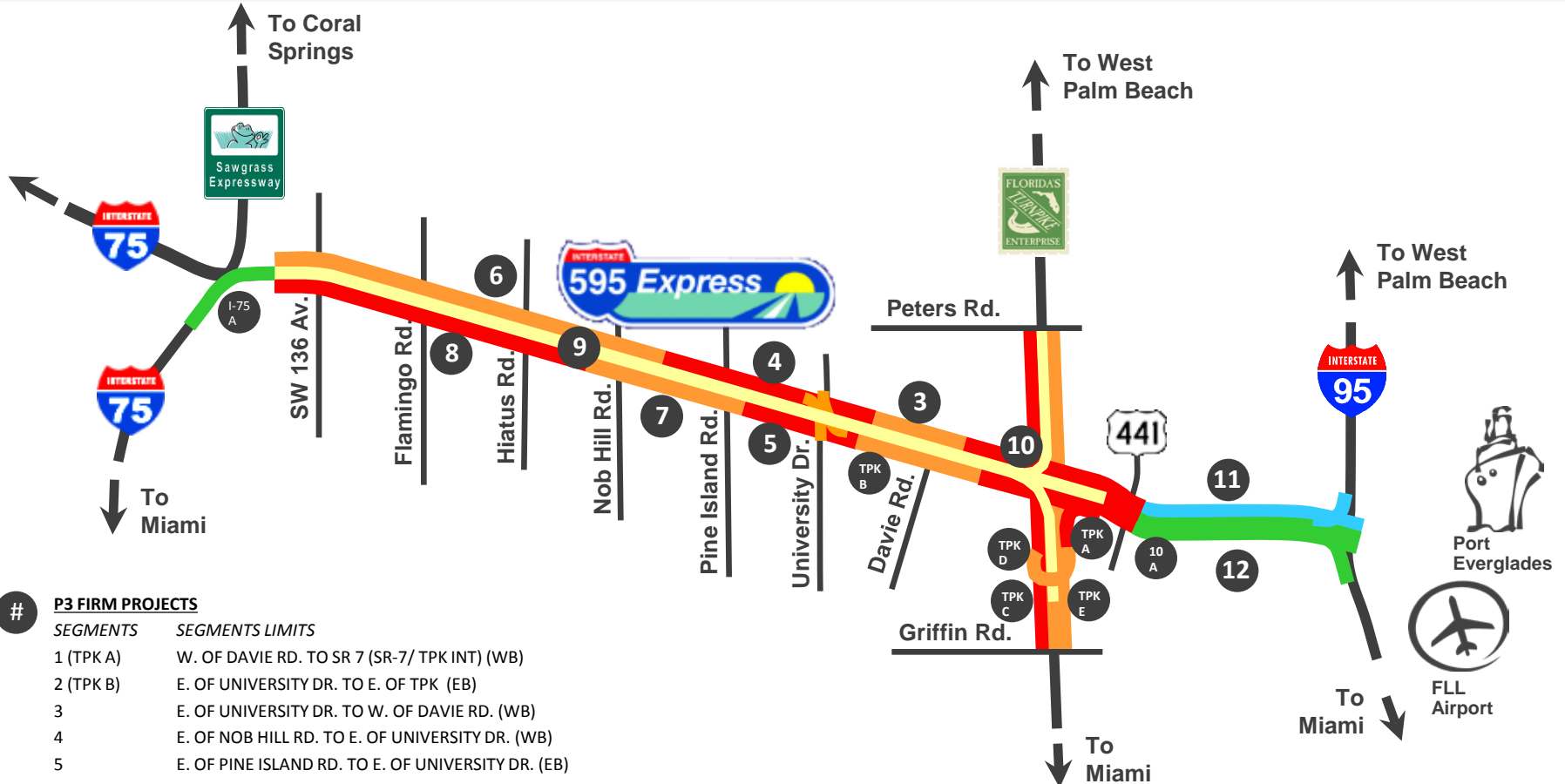


- Reuse of existing infrastructure
  - Third level ramp P salvaged
  - Third level ramp N lifted and lengthened
  - Tamp T-1 widened
  - Salvage of existing cross-road bridges
- Minimization of R/W impacts
- Minimization of utility impacts
- Bid price was \$200 million below FDOT engineers estimate
- Less than 1% FDOT added work during construction
- Construction complete with zero claims

- Encourages innovation
- Advances project delivery
- Can provide significant cost savings
- Allows appropriate risk transfer
- Creates jobs and stimulates the economy
- Provides for performance-based O&M



# INITIAL PROJECT PHASING



**# P3 FIRM PROJECTS**

SEGMENTS	SEGMENTS LIMITS
1 (TPK A)	W. OF DAVIE RD. TO SR 7 (SR-7/ TPK INT) (WB)
2 (TPK B)	E. OF UNIVERSITY DR. TO E. OF TPK (EB)
3	E. OF UNIVERSITY DR. TO W. OF DAVIE RD. (WB)
4	E. OF NOB HILL RD. TO E. OF UNIVERSITY DR. (WB)
5	E. OF PINE ISLAND RD. TO E. OF UNIVERSITY DR. (EB)
6	W. OF SW 136 AVE TO E. OF NOB HILL RD. (WB)
7	W. OF NOB HILL RD. TO E. OF PINE ISLAND RD. (EB)
8	W. OF SW 136 AVE. TO W. OF NOB HILL RD. (EB)
9	REVERSIBLE LANES FROM W. OF SW 136TH AVE. TO E. OF SR 7
10	DIRECT CONN. (EAST) FROM REV. LANES TO TPK MEDIAN N. & S. OF I-595
10A	SEGMENTS 11 & 12 INTERIM IMPROVEMENTS TO ACCOMMODATE REV. LANES (EAST)
TPKC	TPK FROM I-595 TO GRIFFIN RD. AND SB ON-RAMP (SB)
TPKD	TPK SB FLYOVER RAMP TO I-595
TPKE	TPK FROM GRIFFIN RD. TO I-595 (NB)

**# PROJECTS BY OTHERS**

SEGMENTS	SEGMENTS LIMITS
11	SR 7 TO I-95 (WB)
12	E. OF TPK TO I-95 (EB)
I-75 A	DIRECT CONN. (WEST) FROM REV. LANES TO I-75 MEDIAN SOUTH OF I-595

# HOW DID P3 ADVANCE I-595?

- Accelerated the schedule
  - Advanced noise wall construction
  - Provided capacity improvements a minimum of 15 years sooner than the initial (conventional) plan
  - Reduced MOT duration impacting public and businesses
- Provided finance mechanism for funding shortfall

	CONSTRUCTION YEARS														
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
PROJECTS 1 THRU 10A CURRENT ANTICIPATED PLAN															
PROJECTS 1 THRU 10A PUBLIC-PRIVATE PARTNERSHIP (P3)															

Projects 1 thru 6 & 8

UNFUNDED Projects 7, 9, 10, & 10A

Projects 1 thru 10A

# PROJECT SCHEDULE

- Execution of agreement: March 3, 2009
- NTP 2 (take over O&M): July 31, 2009
- Major construction begin: February 26, 2010
- Open Express lanes: March 26, 2014
- Substantial completion: March 26, 2014
- Final acceptance: September 5, 2014
- Construction (\$1.2 billion) completed on schedule in 49 months
- Project completed with zero days added to original schedule (no weather days or holidays permitted per contract)

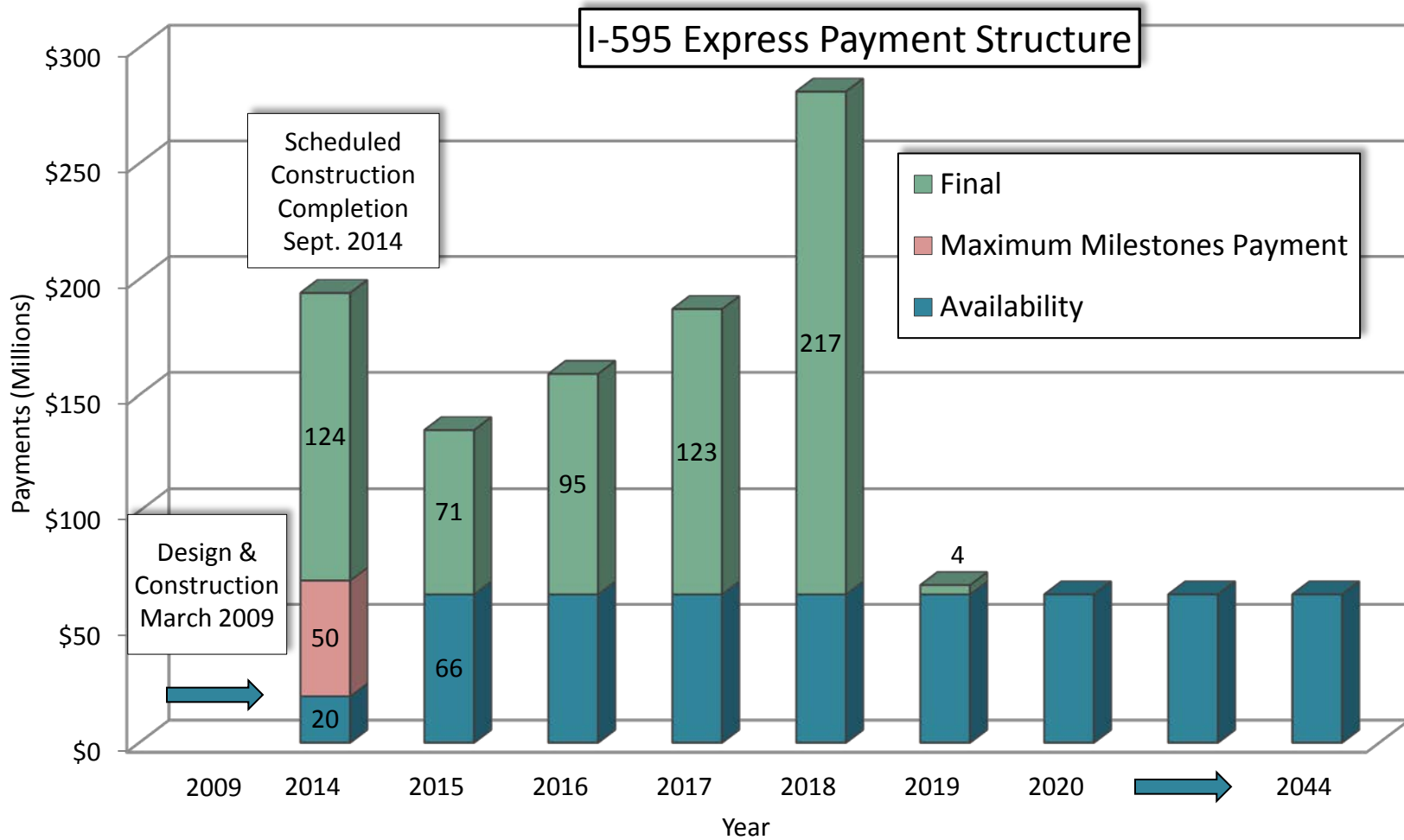
## COST BENEFITS OF P3

- Encourages innovation and reuse of existing infrastructure
- Encourages long-term quality
- Allows economy of scale
- Provides fixed cost for design and construction
- Provides fixed cost for long-term O&M
- Includes renewal and hand-back requirements
- Provides financial mechanism to fund shortfall in agencies work program

## SUCCESS OF 595 EXPRESS P3

- No payments made until the road was substantially complete and open to the public
- Less than 1% FDOT added work during construction
- Construction complete with zero claims
- Project finished on original schedule

# PAYMENTS TO CONCESSIONAIRE



# APPROPRIATE RISK ALLOCATION

Risk Category	Risk Allocation		
	FDOT	Concessionaire	Shared
Political	X		
Financial		X	
Traffic & Revenue	X		
Right-of-Way	X		
Permits/Government Approvals			X
Utilities			X
Procurement	X		
Construction		X	
Operations & Maintenance		X	
Hand-Back		X	
Force Majeure			X
Change in Law	X		
Contamination			X
Geotechnical		X	

# ECONOMIC BENEFIT

- Employed over 2,000 people per month directly on the project
- Pumped over \$18 million per month into local economy
- Contracted with over 275 local companies
- Over 11% of the construction cost awarded to disadvantaged business enterprises
- Graduated 164 trainees in the construction trades



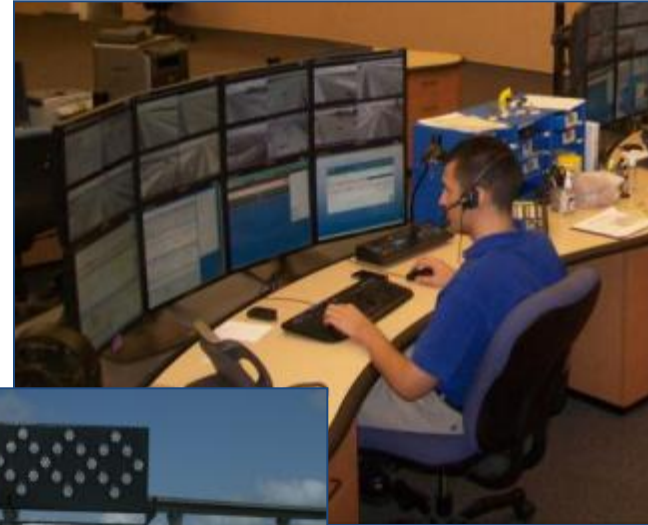


# EXPRESS LANES

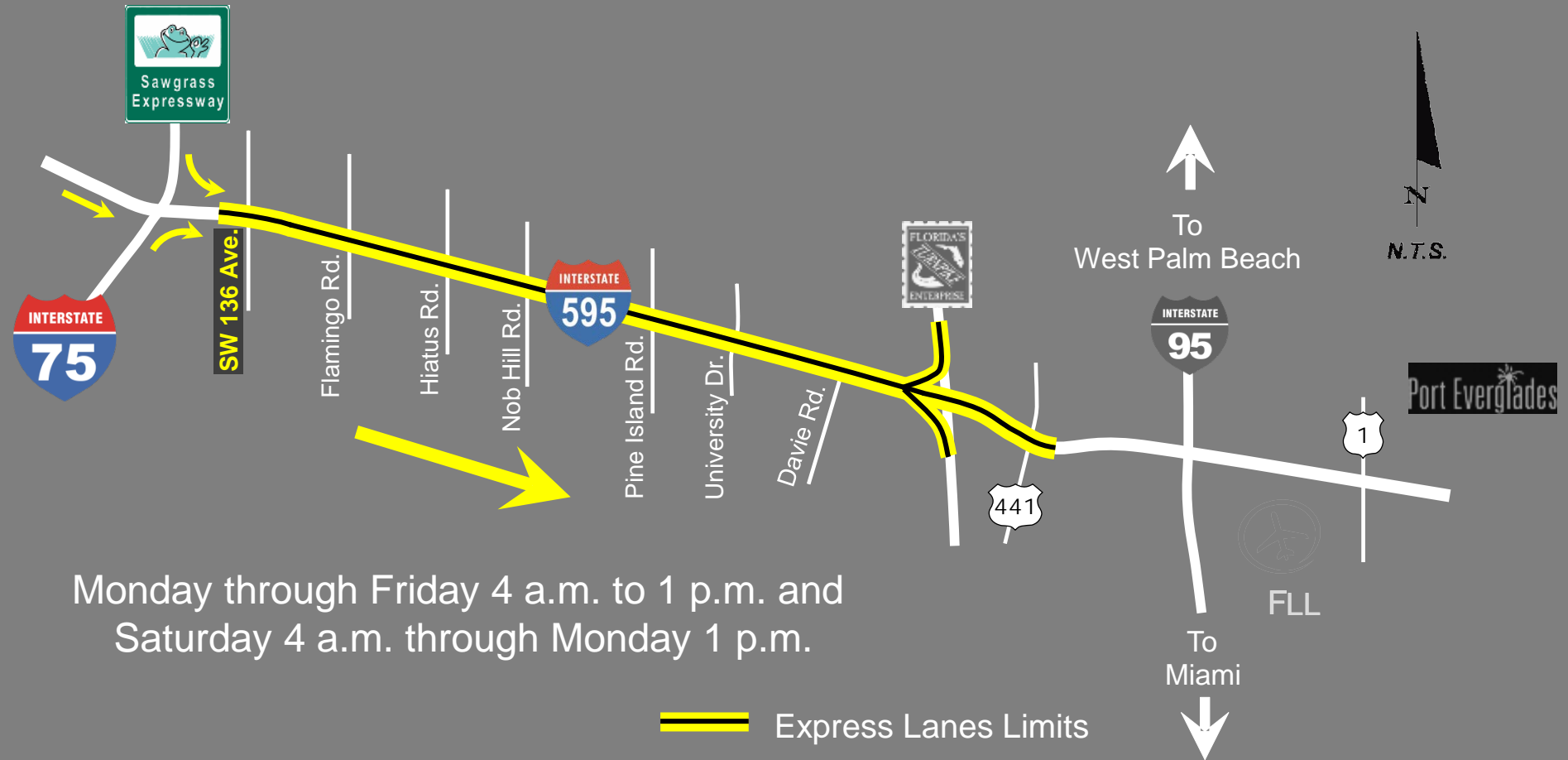
- All motor vehicle types are allowed to use the I-595 Express lanes
- All users are charged a toll in the I-595 Express lanes



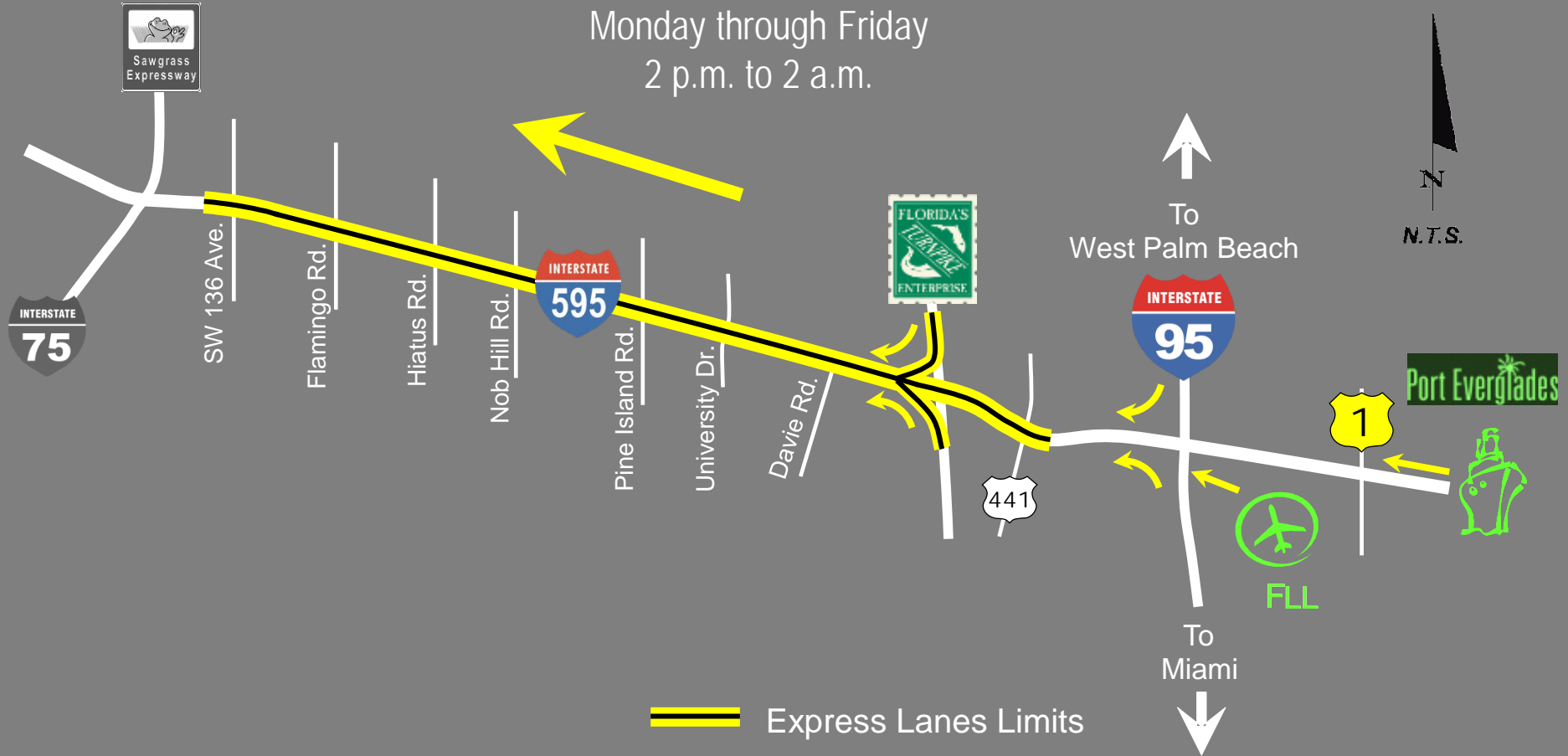
- Performance based O&M
  - Payment adjustments
  - Non-compliance points
- Higher level of service to users
- Added traffic management center operations 24/7 – 365 days
  - CCTV monitoring
  - Road rangers 24/7
  - Rapid incident scene clearance
  - Severe incident response vehicles



# I-595 EXPRESS LANES LIMITS

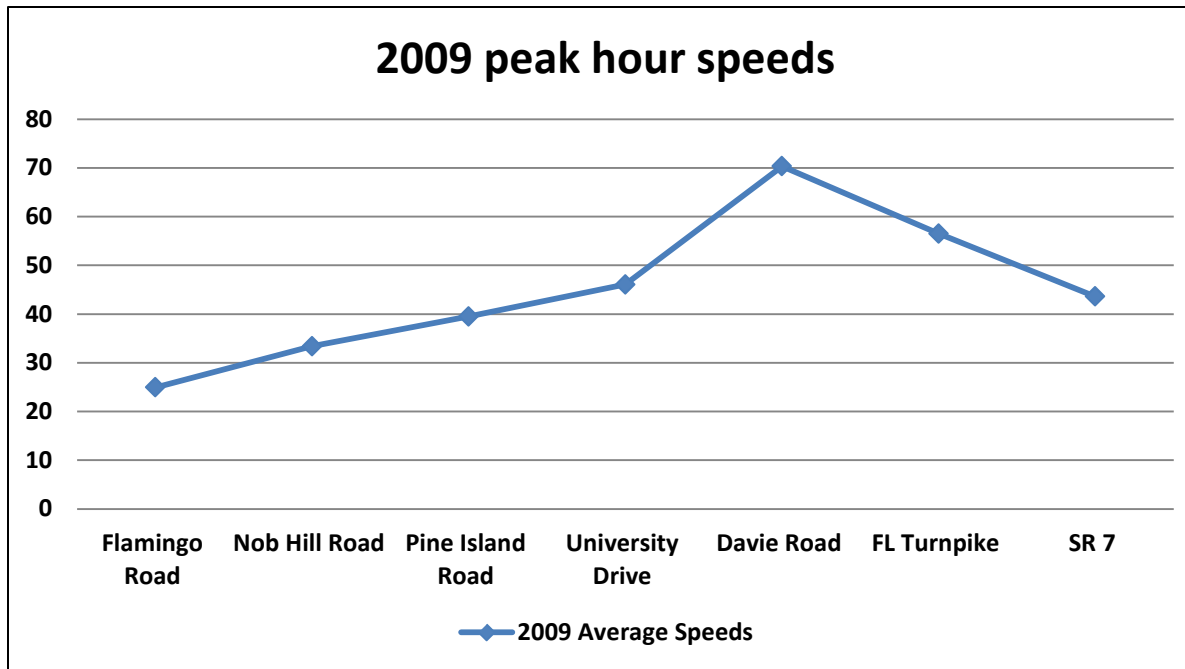


# I-595 EXPRESS LANES LIMITS



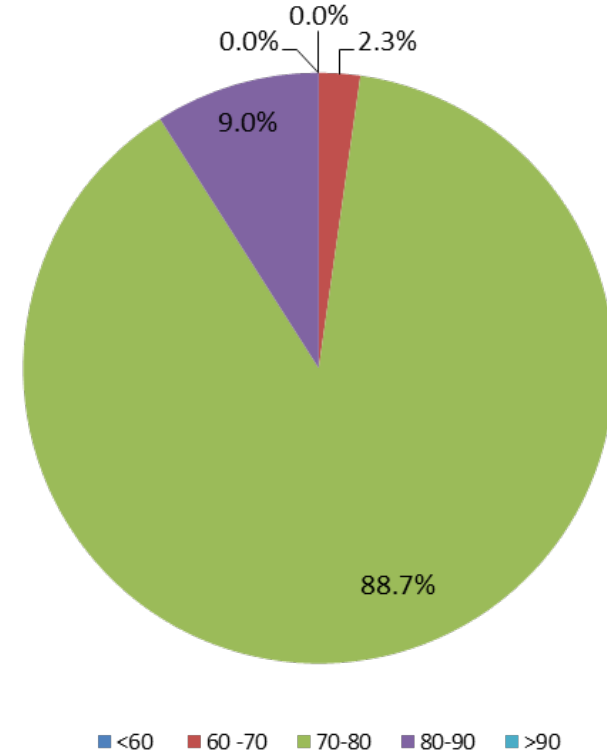
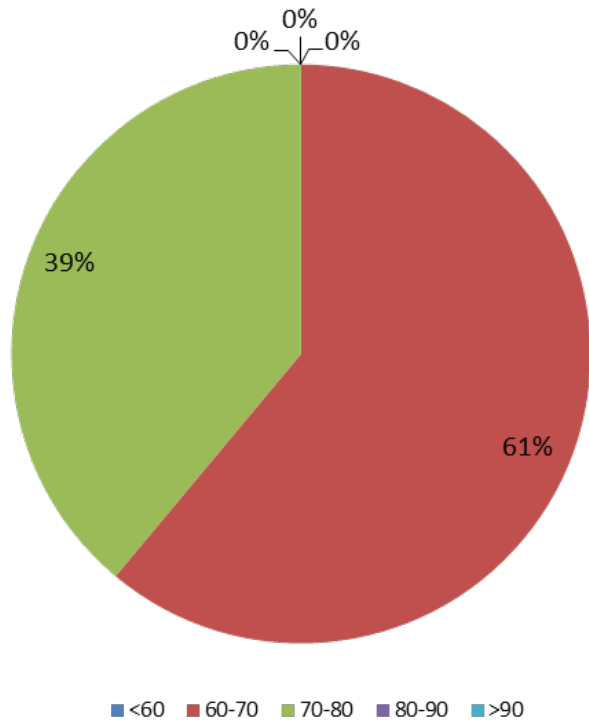
## ROADWAY AVERAGE SPEED

2009  
44.9 MPH



Average speeds show are the 8am to 9am average for the month of August

# AFTER 595 EXPRESS (2015)

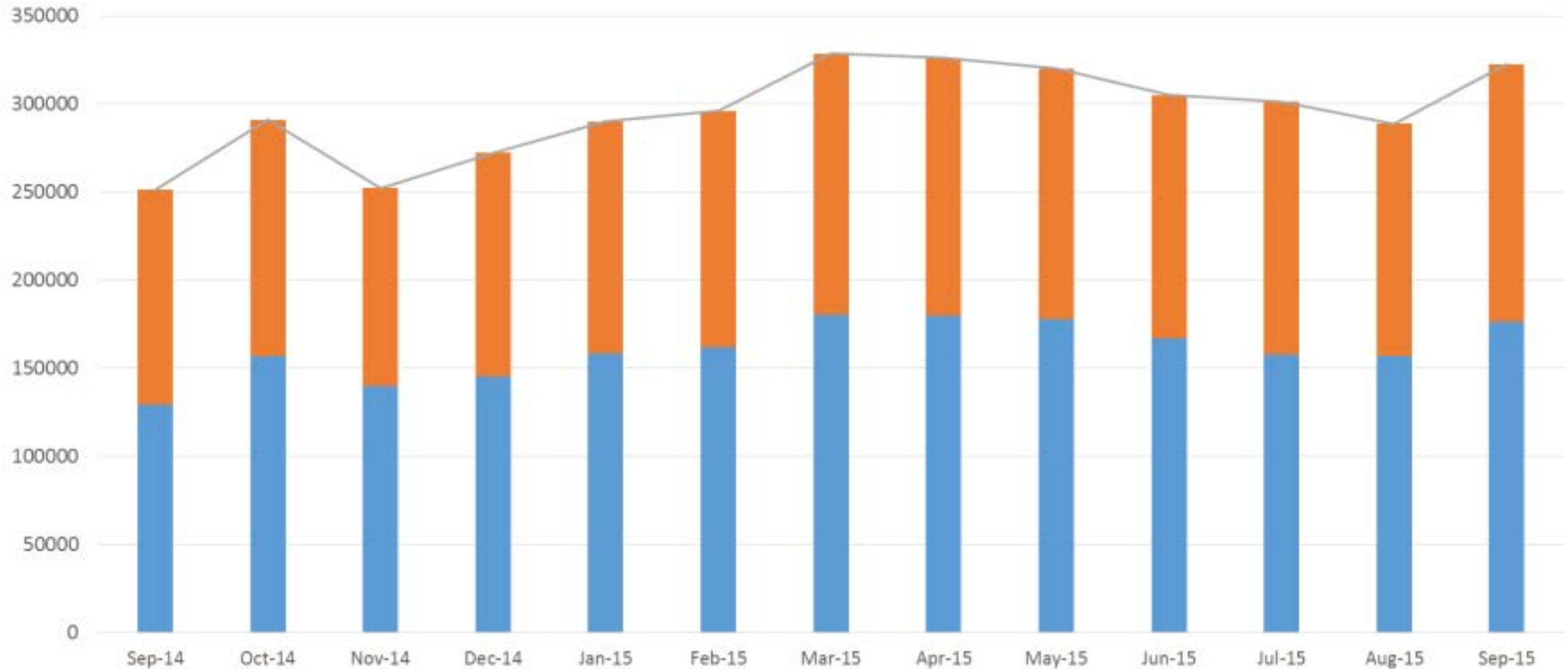


- 2015 Speed Distribution for I-595
  - 61% between 60-70 mph
  - 39% between 70-80 mph
  - 0% lower than 60 mph or over 80 mph

- 2015 Speed Distribution for Express Lanes
  - 88.7% between 70-80 mph
  - 9.0% between 80-90 mph
  - 2.3% between 60-70 mph
  - 0% lower than 60 mph or higher than 90 mph

# 595 EXPRESS TRAFFIC

595 EXPRESS LANE MONTHLY TRAFFIC VOLUMES

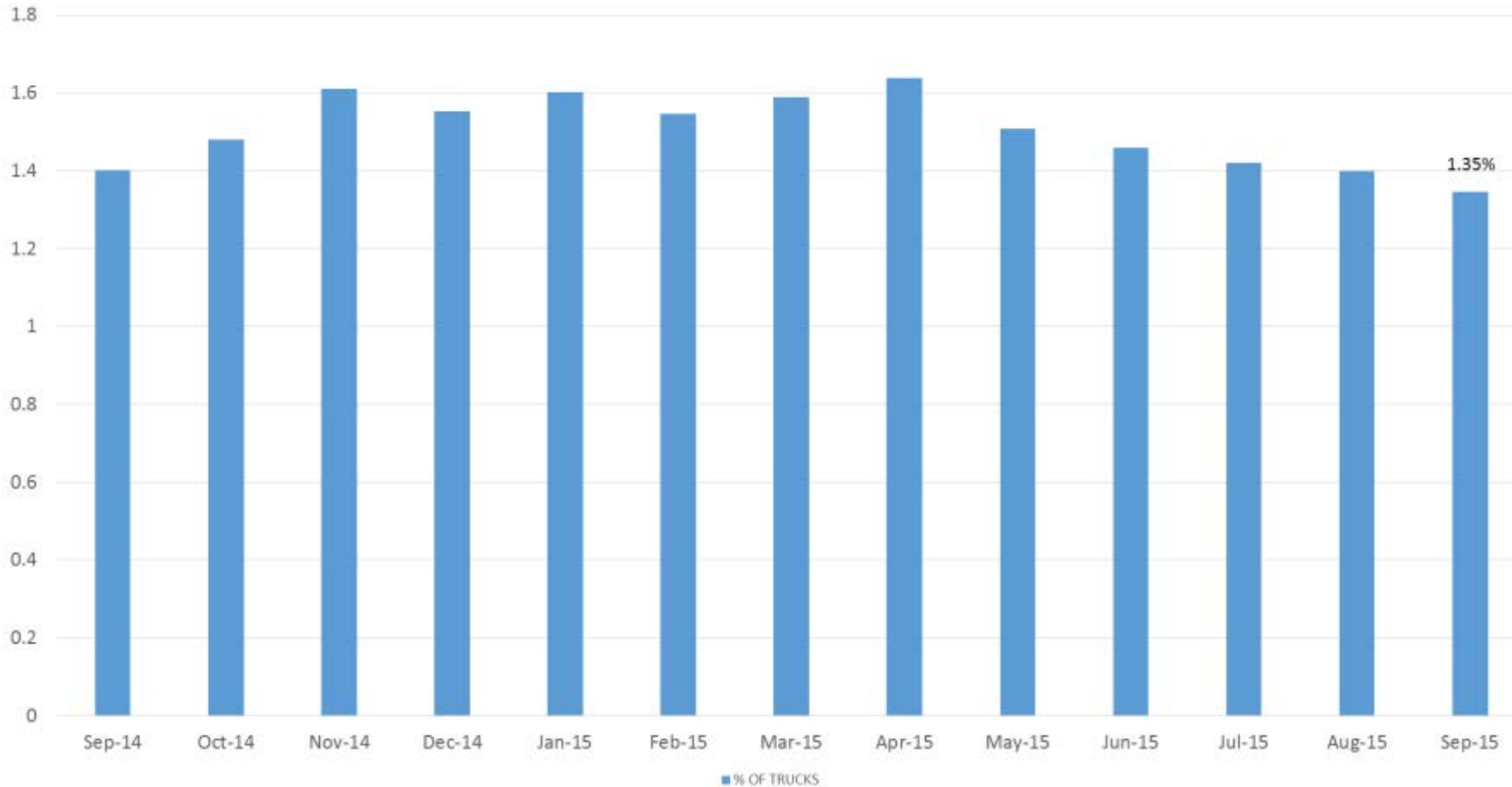


	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15
WB-VOLUME	121840	134351	112303	127210	131633	134379	148191	146232	142322	138333	143387	131773	146114
EB-VOLUME	129429	156750	140013	145225	158341	161635	180489	179936	177726	166721	158070	157008	176593
TOTAL-VOL	251269	291101	252316	272435	289974	296014	328680	326168	320048	305054	301457	288781	322707

EB-VOLUME WB-VOLUME TOTAL-VOL

# 595 EXPRESS TRUCK USE

595 EXPRESS MONTHLY TRUCK VOLUMES

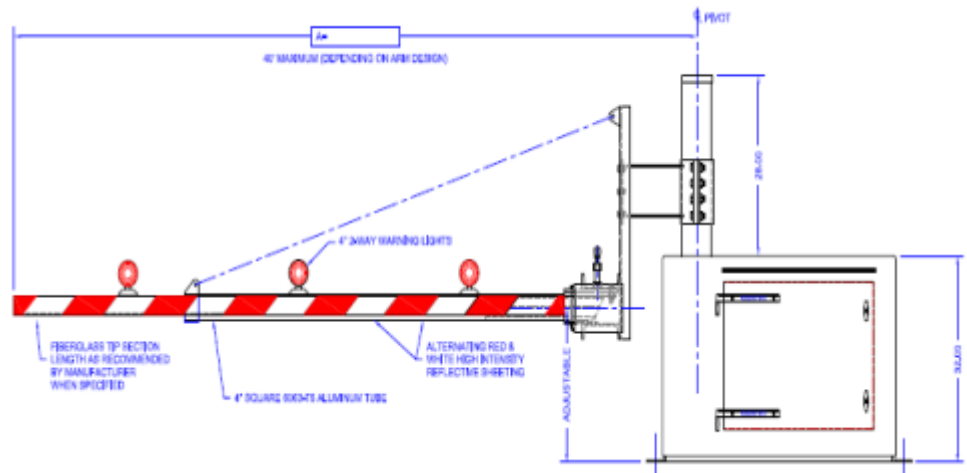




# I-595 WARNING AND BARRIER GATES FOR REVERSIBLE RAMPS

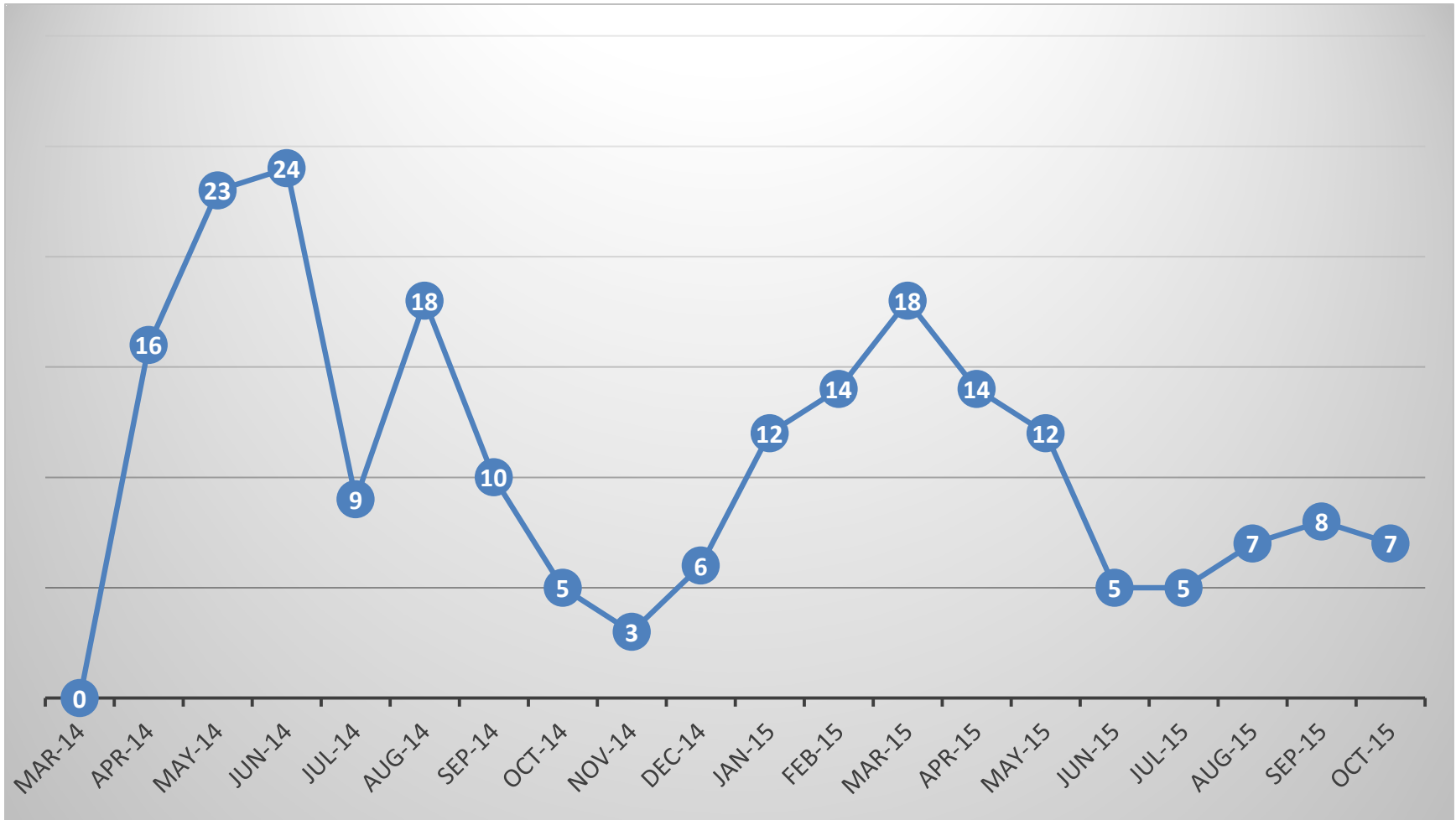


5 Barrier Gate



34 Warning Gates

# I-595 WARNING GATE HIT HISTORY



# I-595 WARNING GATES FOR REVERSIBLE RAMPS

- 1. Shortening the length of the first warning gates:** Originally, warning gates covered the entire width of the travel lanes. Gates were shortened by 18" on May 24<sup>th</sup>, 2014.
- 2. Second shortening of the warning gates at Ramp R-3:** Despite the first shortening, vehicles continued to hit the warning gates of Ramp R-3. Gates were further shortened, to a length of no less than the middle point of the lane on June 16<sup>th</sup>, 2014.
- 3. Additional Improvements to Ramp R-3 were considered:** Re-striping of Ramp R-3 was implemented in August 2014.
- 4. Change of banners of the warning gates:** The color and the reflectivity of the original banners were improved by changing the color and the material. The new banners were implemented in September 2014.



# I-595 BARRIER GATES FOR REVERSIBLE RAMPS



5 Barrier Gates



2 Barrier Gate hits  
since opening.

No vehicles have  
gotten past the  
barrier gate.

## Longitudinal Sliding Gates

- 42 foot-wide opening
- Opened from the Traffic Management Center or manually



Shoulder Closure Gates

## Emergency Access Gates

- There are five throughout the corridor
- Provide emergency vehicles access into the Express Lanes (three in the westbound direction, two in the eastbound direction)

# MAJOR RISC EVENTS





[www.595express.info](http://www.595express.info)

*Questions?*



595 EXPRESS

Centennial  
**FDOT**  
1915 ★ 2015



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# Questions & Input

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Submit a question using the chat box



Or



Dial \*1 to call in your question by phone



Innovative Program Delivery

# Build America Transportation Investment Center (BATIC)

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**Mark Sullivan**  
***FHWA-OIPD***

# Build America Transportation Investment Center (BATIC)

About BATIC Team

We know BATIC can't solve all our infrastructure problems.



We have **BILLIONS of dollars** of infrastructure needs and better access to technical assistance and credit programs can't fill that void alone.

But we also know that BATIC has already been a key driver for the funding and acceleration of infrastructure projects over the past year and its impact will increase with its continued momentum.



transportation.gov/batic



Read the BATIC Blue Book.

The Build America Transportation Investment Center serves as the single point of contact and coordination for states, municipalities and project sponsors looking to utilize federal transportation expertise, apply for federal transportation credit programs and explore ways to access private capital in public private partnerships.

Submit Feedback >

The Build America Transportation Investment Center serves as the single point of contact and coordination for states, municipalities and project sponsors looking to utilize federal transportation expertise, apply for federal transportation credit programs and explore ways to access private capital in public private partnerships.

## BATIC's Mission is to:

**EXPAND**

The use of federal transportation credit programs such as TIFIA and RRIF.

**INNOVATE**

New approaches to project development processes and funding challenges and institutionalize technology and best practice across credit programs and modal teams.

**DELIVER**

Streamlined technical and financial assistance to accelerate project delivery.

**BATIC**  
INSTITUTE  
— AN —  
**AASHTO**  
CENTER FOR EXCELLENCE

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### In the Spotlight

#### Goethals Bridge Replacement

- Eagle Project
- SH 130 (Segments 5-6)
- View all BATIC Project Highlights
- Technical Assistance



The \$1.5 billion Goethals Bridge Replacement Project involves the construction of a new bridge to replace the aging, existing Goethals Bridge...

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### SH 130 (Segments 5-6)

[View all BATIC Project Highlights](#)

[Technical Assistance](#)

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# Questions & Input

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# Upcoming Webinars

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## **Joint DOT/FHWA Major Project Webinar**

Tuesday, May 10<sup>th</sup>

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

## **Quarterly Major Project Webinar (FHWA)**

Tuesday, February 2<sup>nd</sup>

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

Recordings available at: [http://www.fhwa.dot.gov/ipd/project\\_delivery/training/](http://www.fhwa.dot.gov/ipd/project_delivery/training/)

Contact LaToya at [latoya.johnson@dot.gov](mailto:latoya.johnson@dot.gov) or 202-366-0479  
if you have topic ideas for upcoming webinars



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