

**THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
MINUTES OF THE
STRATEGIC PLANNING COMMITTEE MEETING
February 19, 2014**

The Illinois State Toll Highway Authority held a Strategic Planning Committee Meeting on Wednesday, February 19, 2014 at approximately 10:30 a.m. at the Central Administration Building in Downers Grove, Illinois.

Committee Chair Weisner asked Assistant Board Secretary Robert Baren to call the roll. Those Directors present and absent were as follows:

Committee Members Present:

Committee Chair Tom Weisner

Director James Sweeney

Chair Paula Wolff, ex officio (by audio conference)

Committee Member Absent:

Director Earl Dotson Jr.

Staff present for all or portions of the meeting:

Kristi Lafleur (Executive Director)

Michael Stone (Chief of Staff)

David Goldberg (General Counsel)

Paul Kovacs (Chief Engineer)

Rocco Zuccherro (Deputy Chief of Engineering for Planning)

Mr. Baren indicated there was a quorum present and Board Chair Paula Wolff would like to participate in the Strategic Planning Committee meeting by audio conference. The reason cited for the audio conference

was due to a family emergency, which is an approved reason for audio conference participation. General Counsel David Goldberg requested a motion pursuant to Section 7 of the Open Meetings Act to approve Chair Wolff to participate in the Strategic Planning Committee meeting by conference call. Director Sweeney made the motion to approve; seconded by Committee Chair Weisner. The motion was approved unanimously.

PUBLIC COMMENT

Committee Chair Weisner called the meeting to order and opened the floor for public comments. No public comment was offered.

CHAIR – STRATEGIC PLANNING

Committee Chair Weisner called for a motion for the approval of December 11, 2014 Strategic Planning Committee meeting minutes. Director Sweeney made the motion to approve; seconded by Committee Chair Weisner. The motion was approved unanimously.

EXECUTIVE DIRECTOR

Executive Director Kristi Lafleur provided an update to the Committee on the legislation allowing the Illinois Department of Transportation to have Design-Build authority. The Tollway is negotiating to be included in the legislation as a time and cost savings measure. Executive Director Lafleur provided information on the benefits of the Design-Build authority.

There was discussion on the process by which this authority would be approved. The Committee expressed its support of the Tollway pursuing approval of this legislation.

Executive Director Lafleur then introduced Deputy Chief of Engineering for Planning Rocco Zuccherro to provide the status on the Committee's

work plan and update on ongoing matters as shown in the [attached presentation](#).

Highlights of the presentation included updates on the 2014-2015 Committee Work Plan Overview and the Jane Addams Memorial Tollway (I-90) Active Traffic Management.

Mr. Zucchero proceeded to provide an overview of each of the key goals along with the proposed timetable for completion.

Committee Chair Weisner commented that two key goals of the work plan, the Elgin O'Hare Western Access Project aesthetics and the Environmental and Sustainability Policy (INVEST), can successfully combine aesthetics and sustainability as demonstrated in projects such as storm water management and rainwater gardens. Executive Director Lafleur stated that within the timetable required to complete the project on schedule, opportunities to effectively combine goals will be explored.

Committee Chair Weisner stated that the plans for local contributions should be kept a priority for the Elgin O'Hare Western Access and the Illinois Route 53/120 projects.

There was discussion on the timing for the freight plan update as there are several agencies currently updating their policies.

Director Sweeney asked about interstate tolling of freight customers who do not have an I-PASS when there are no manual tolling lanes. Mr. Zucchero provided the current payment options available for freight customers in those situations. He added that these issues will be addressed in the business rules that are under development.

Discussion continued on the I-PASS saturation rate of vehicles utilizing the various corridors and the costs associated with the different tolling options. Executive Director Lafleur provided further information on the plans for customer education in project areas that will no longer have a cash payment option.

Discussion took place on the evolution of tolling technology and how the Tollway plans to explore different technology options as the new back office system is put into place. Executive Director Lafleur commented that because new tolling technology is primarily customer focused, the merged the Customer Service and Strategic Planning Committees would be an ideal venue for this discussion.

Committee Chair Weisner then introduced Chief Engineer Paul Kovacs to present on Active Traffic Management on the Jane Addams Memorial Tollway (I-90) as [shown in the attached presentation](#).

Highlights of the presentation include providing real-time information to alert drivers to incidents, alternate routes and advisory speeds as well as help facilitate the flow of traffic for emergency vehicles. Mr. Kovacs also provided information on similar systems nationwide and the resulting impact on traffic management.

Executive Director Lafleur noted that while there are plans for a preferential bus lane, in the event that traffic congestion came to a critical point, the preferential lane could accommodate both bus and passenger vehicles. Mr. Kovacs provided further information on the capacity of the dynamic messaging lanes to manage traffic congestion.

There was further discussion on the flexibility of the Active Traffic Management system during snow events and the process by which the information would be communicated to drivers.

Director Sweeney asked about the accommodation of buses on the Kennedy (I-90) to Barrington road. Mr. Zucchero and Mr. Kovacs both provided further information on the plans for the area.

Committee Chair Weisner commented on the cost savings in maintenance patrol costs due to the efficiencies realized when the Active Traffic Management is implemented. Mr. Kovacs responded maintenance staff will be reallocated to other roadway assignments, enhancing customer service and safety.

Director Sweeney asked about the cost benefit of the Active Traffic Management. Mr. Kovacs provided information about the benefits including improved mobility (three to seven percent increase in average throughput during congested periods in Europe); enhanced roadway safety (three to 30 percent decrease in primary incidents and 40 to 50 percent decrease in secondary incidents); and lastly facilitating transit by managing the use of Pace buses on the shoulders.

Discussion occurred on the integration of Pace bus service on the Tollway including the use of the Ventra fare payment system.

A brief video was shown to demonstrate aspects of Active Traffic Management.

Committee Chair Weisner asked about the capacity of the Tollway's fiber optic network to accommodate additional volume. **Paul Kovacs**

responded that the Tollway's fiber optic network currently accommodates additional usage by third parties with revenue paid to the Tollway and he will provide further detailed information.

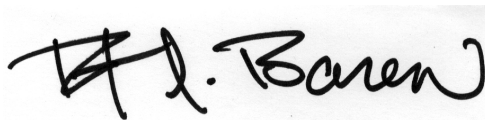
Director Sweeney asked if the current gantry system will be added onto for Active Traffic Management or will it be rebuilt. Mr. Kovacs and Mr. Zucchero responded the gantry system has the basic structure in place and provided further details on the design and implementation of Active Traffic Management.

There was discussion on additional corridors being explored for Active Traffic Management.

The committee expressed their support for the plan and implementation of the Active Traffic Management system on the Tollway system.

There being no further business, Committee Chair Weisner requested a motion to adjourn. Director Sweeney moved to adjourn; seconded by Committee Chair Weisner. The motion was approved unanimously.

The meeting was adjourned at approximately 11:30 a.m.



Minutes taken by: _____

Robert Baren
Assistant Board Secretary
Illinois State Toll Highway Authority



Strategic Planning Committee

February 19, 2014

Agenda

- ▶ **2014-15 Work Plan Overview**
- ▶ **Jane Addams Memorial Tollway (I-90) Active Traffic Management**



2014-15 Committee Work Plan

Key Decisions	Decision-Making Timeframe		
	1-6 Months	6-12 Months	12 Months +
I-90 Active Traffic Management	X		
Regional tolling partnership and role	X		
Elgin O’Hare Western Access Project aesthetics	X		
Environmental and Sustainability Policy (INVEST)	X		
Illinois Route 53/120 Study Interim Report	X		
Tolling Business Rules and Policies (SPC/CSC joint meeting)		X	
Freight plan update		X	
Non-tolled ramp review		X	
Illinois Route 53/120 BRAC recommendations		X	
Innovative financing options		X	
Transit planning and land use evaluation			X
Expanded use of oases			X
Supplemental revenue generation (land, towers, utilities, etc.)			X



Active Traffic Management on Jane Addams Memorial Tollway (I-90)

I-90 Rebuilding and Widening Project Goals

- ▶ **Improve mobility and reduce congestion**
- ▶ **Deliver a 21st century, state-of-the-art corridor linking Rockford to O'Hare**
- ▶ **Accommodate transit options for the first time in the agency's history**
- ▶ **Feature flexible infrastructure to add new "smart" features as needed**
- ▶ **Incorporate the latest technologies available to enhance roadway safety**

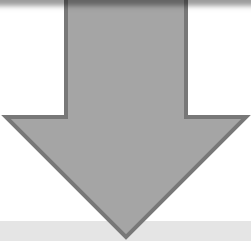


I-90 Corridor Planning Team

Participants

- ▶ Illinois State Police
- ▶ Tollway maintenance and traffic operations, planning and engineering
- ▶ PACE
- ▶ Traffic Engineer CDM Smith
- ▶ I-90 consultant team

Collaborative Process

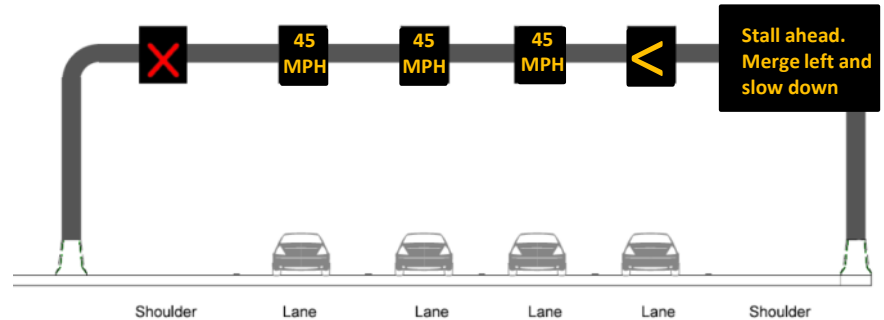
A large, solid grey arrow points downwards from the 'Collaborative Process' header to the recommendation text.

Team recommends active traffic management (ATM) on I-90 from Barrington Road to the Kennedy Expressway

What is Active Traffic Management (ATM)?

- ▶ **High-tech gantries placed every half mile that provide real-time information to alert drivers to:**
 - Nature and status of traffic incidents ahead
 - Ability to drive in the shoulder lanes
 - Advisory speeds
 - Proposed alternate routes
 - Real-time lane closures and traffic pattern changes

- ▶ **Helps facilitate the flow of cars to allow emergency vehicles to safely navigate the roadways and reach the incident scene more quickly**



Who Else is Using ATM?

Europe: multiple locations since 1970



Netherlands



Germany



England



Seattle: I-5 and others completed in 2010

Minneapolis: I-35W completed in 2010 and I-94 completed in 2012

Planning stages:

- Georgia
- Oakland area: I-80
- Virginia: I-66 to be completed in 2015

ATM With Bus in Preferential Lane

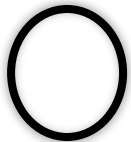
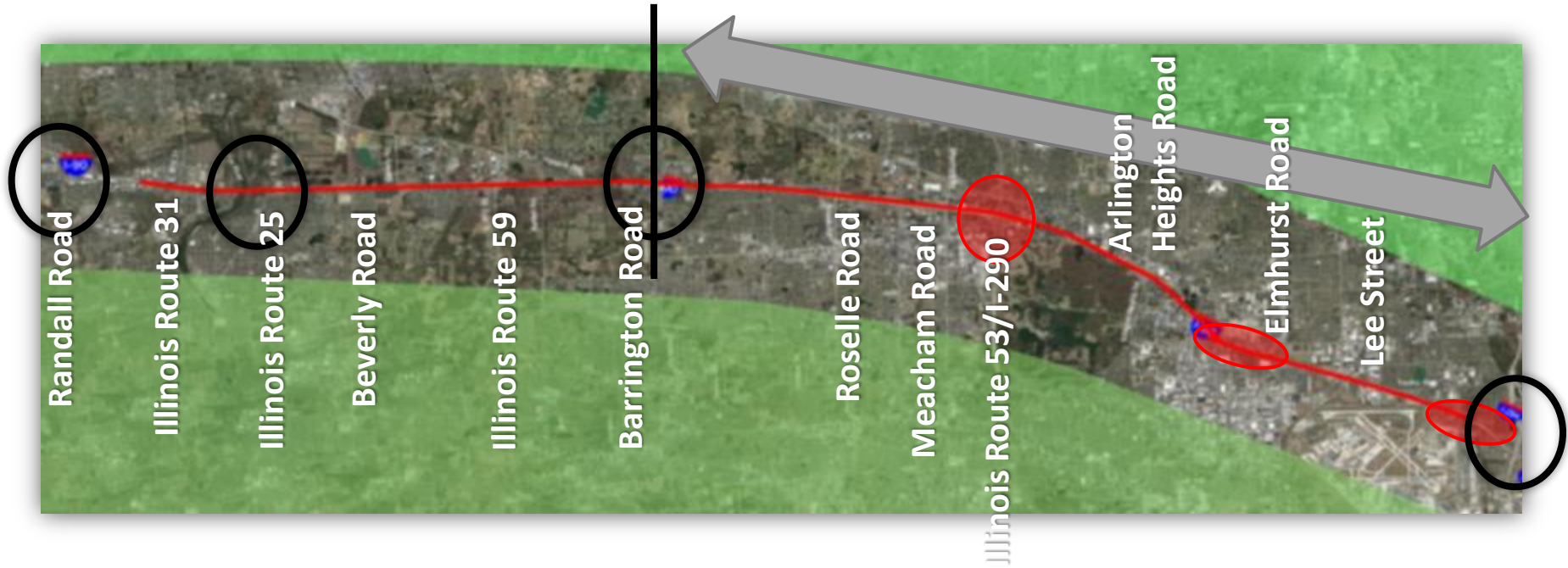


Why Kennedy Expressway to Barrington Road?



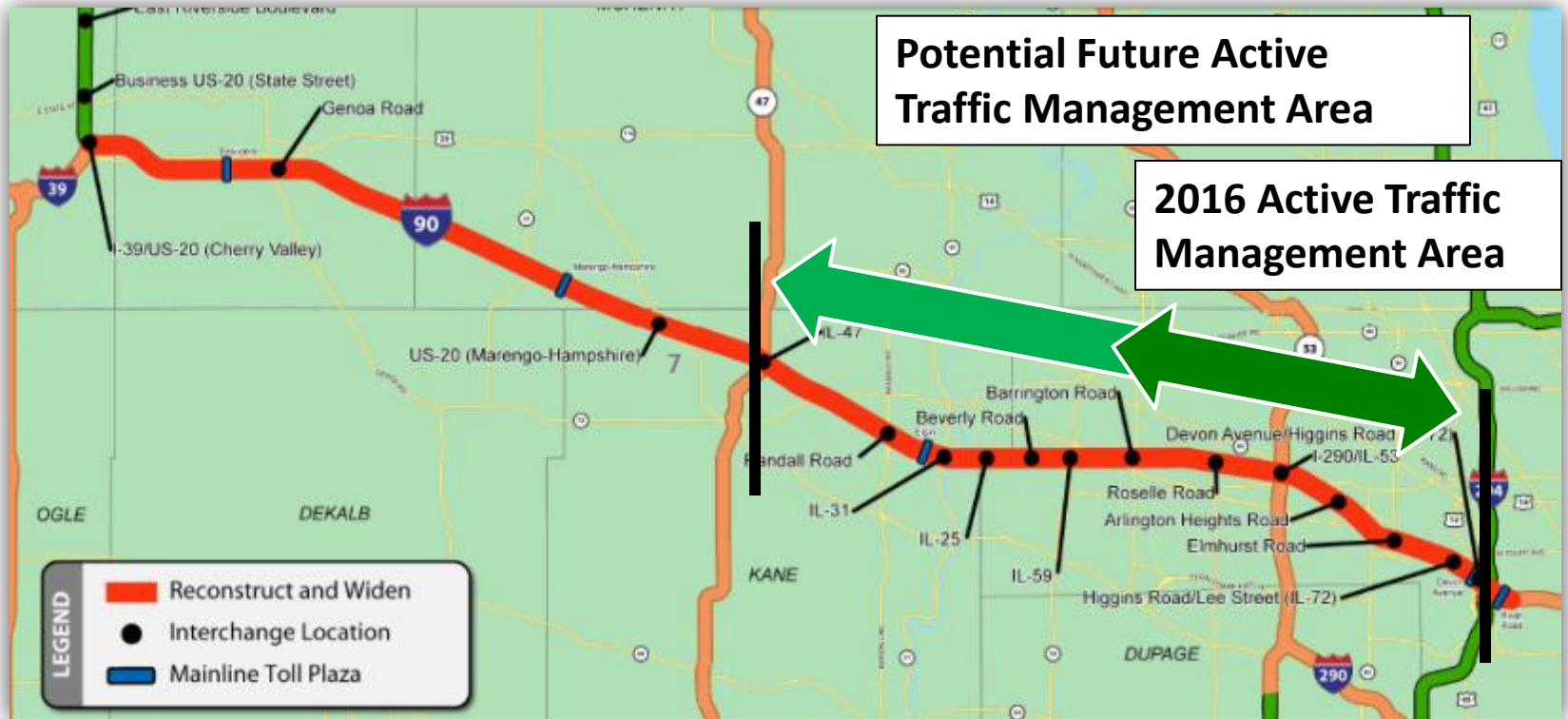
 Congested areas

Why Kennedy Expressway to Barrington Road?

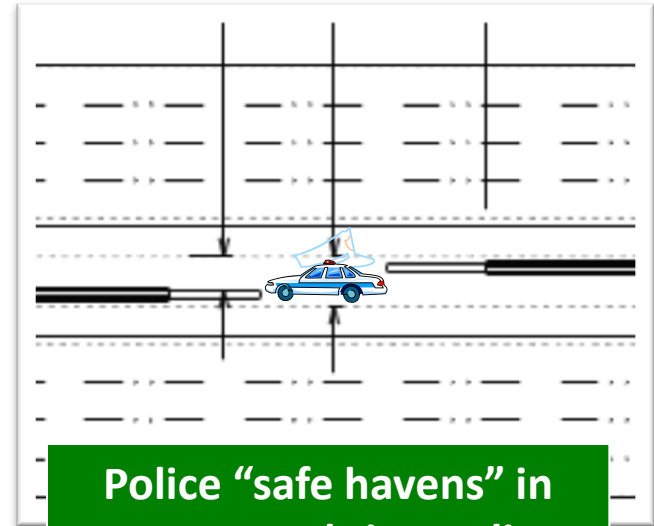


Park & Ride Location

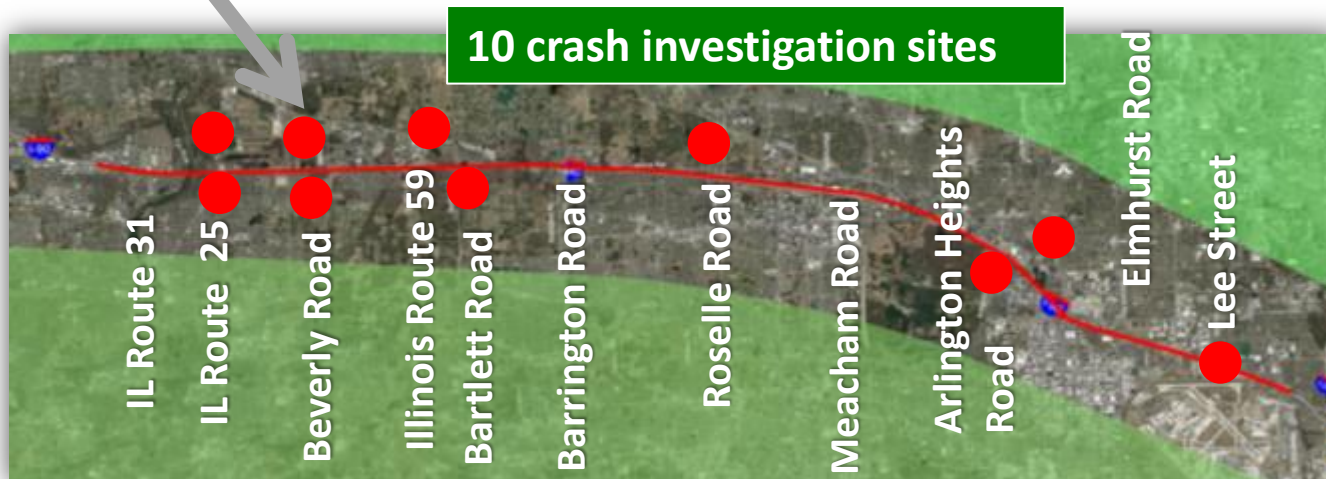
Active Traffic Management Area



What About Illinois State Police?



Police “safe havens” in turn-arounds in median



Capital and Maintenance and Operations Costs

Cost	Item
\$17.84 million	28 gantries from Barrington Road to the Kennedy Expressway
\$436,800	Annual maintenance costs
<u>\$321,000</u>	Annual operations costs
\$757,800*	Total annual M and O cost

*Offset by \$532,800 in reduced I-90 maintenance patrol costs reassigned to other functions offering improved efficiencies in scheduled and routine maintenance

Benefits

▶ **Improves mobility**

- ▶ 3 to 7 percent increase in average throughput during congested periods (Europe)
- ▶ 3 to 22 percent increase in overall capacity (Europe)

▶ **Enhances roadway safety**

- ▶ 3 to 30 percent decrease in primary incidents (WashDOT - 11 percent)
- ▶ 40 to 50 percent decrease in secondary incidents

▶ **Facilitates transit**

- ▶ Tollway will manage the use of Pace bus on shoulder

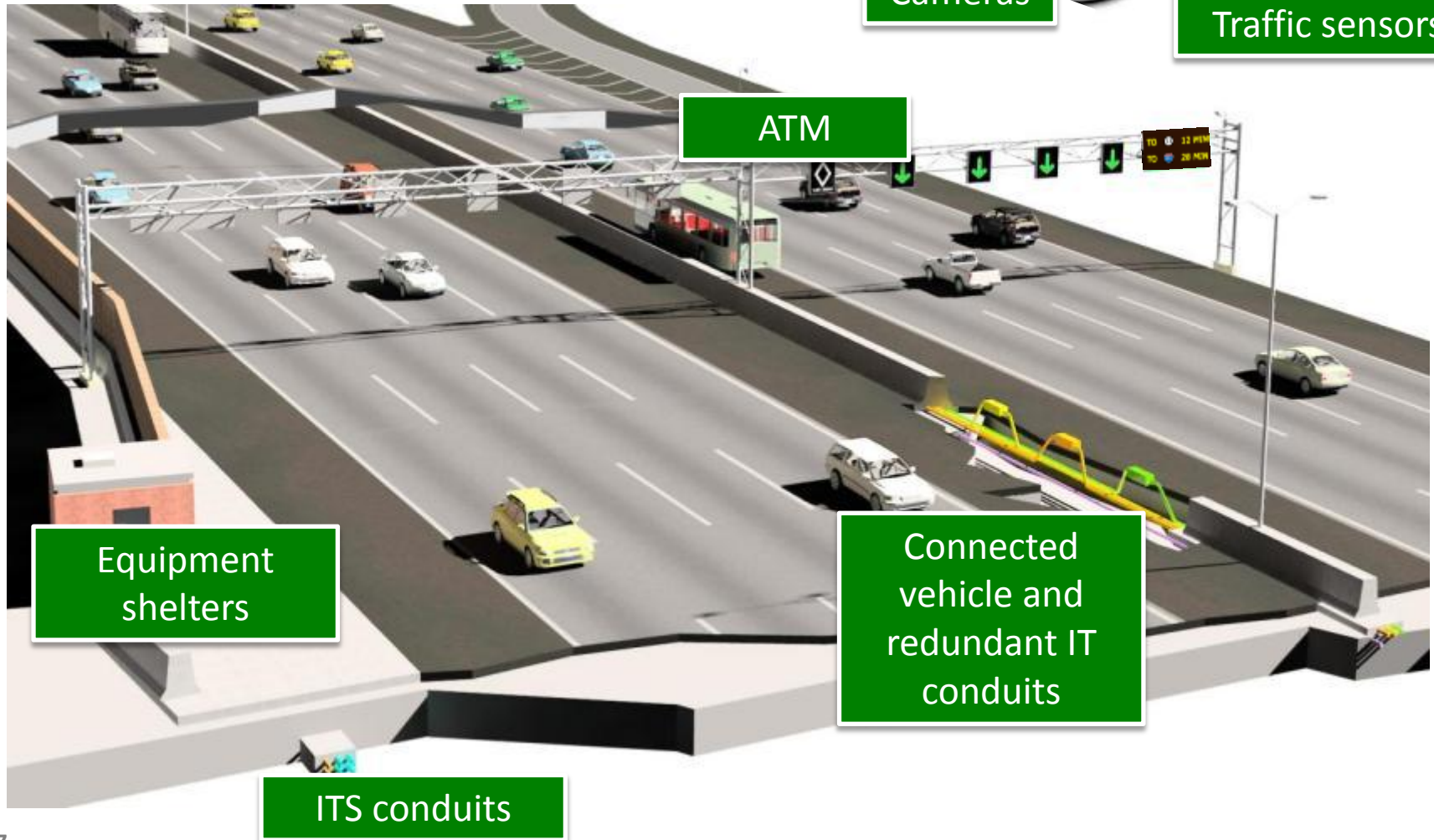
Final “Smart” Corridor Vision



Cameras



Traffic sensors



ATM

Equipment shelters

Connected vehicle and redundant IT conduits

ITS conduits

Next Steps

- ▶ **Gather input and feedback from Committee and Board**
- ▶ **Finalize gantry design – March 2014**
- ▶ **Implementation – 2015 and 2016**
- ▶ **Launch – late 2016**



Questions?



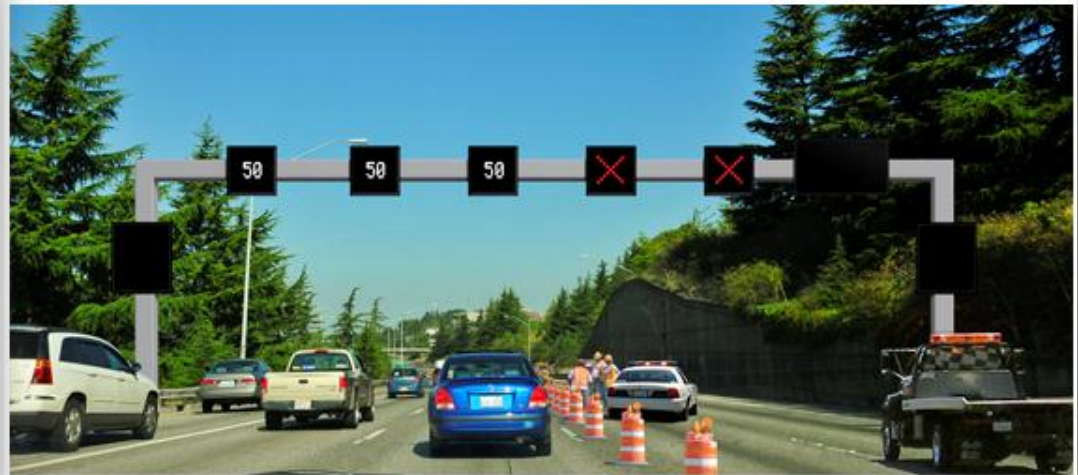
Appendix

Resources

- ▶ **Who else uses ATM?**
- ▶ **Aesthetic options**
- ▶ **Shoulder options**
- ▶ **Corridor Planning Council**
- ▶ **Cost breakdown**

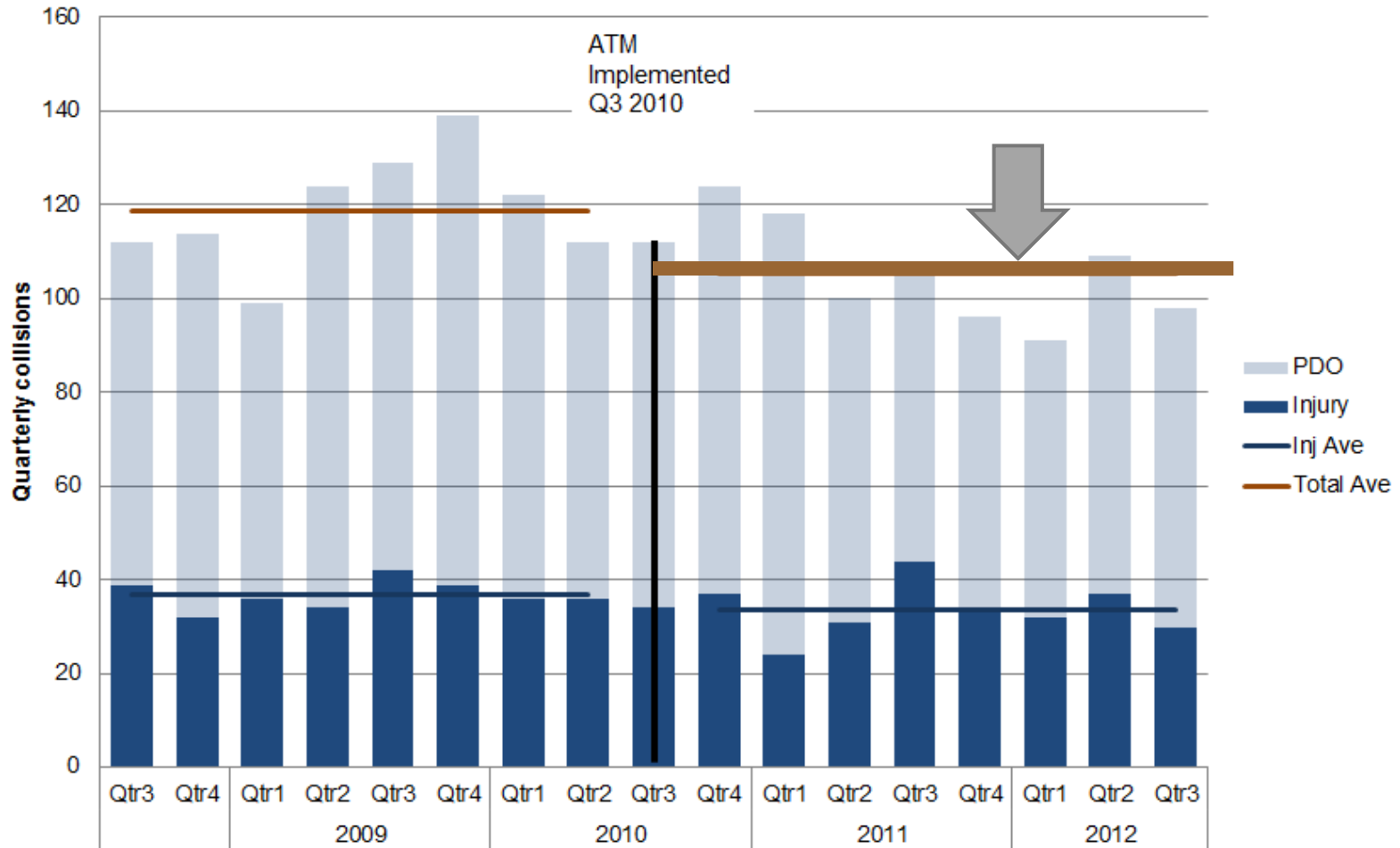
Who Else is Using ATM?

I-5 sign bridge locations



I-5 and others in Seattle – Washington DOT Complete: August 2010

Washington DOT Crash Reduction



30 Years in Europe

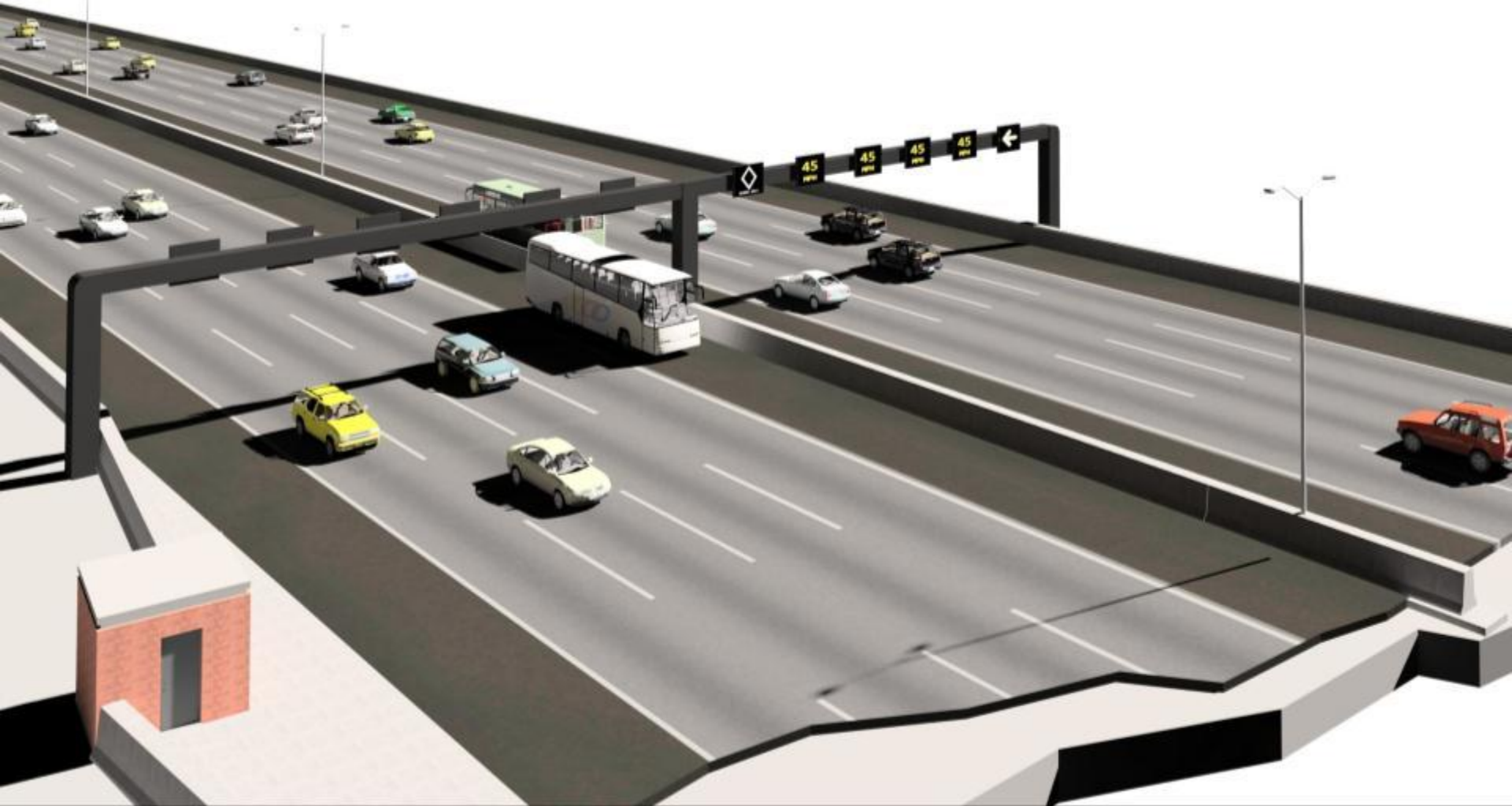
Benefits realized in Europe

- ▶ An increase in average throughput for congested periods of 3 to 7 percent
- ▶ An increase in overall capacity of 3 to 22 percent
- ▶ A decrease in primary incidents of 3 to 30 percent
- ▶ A decrease in secondary incidents of 40 to 50 percent
- ▶ An overall harmonization of speeds during congested periods (reduces emissions - NOx in Netherlands saw a 20 to 30 percent decrease)
- ▶ Decreased headways and more uniform driver behavior
- ▶ An increase in trip reliability
- ▶ The ability to delay the onset of freeway breakdown

Benchmarking Study (FHWA)

- ▶ Denmark
- ▶ England
- ▶ Germany
- ▶ Netherlands

Aesthetic Options: Monotube



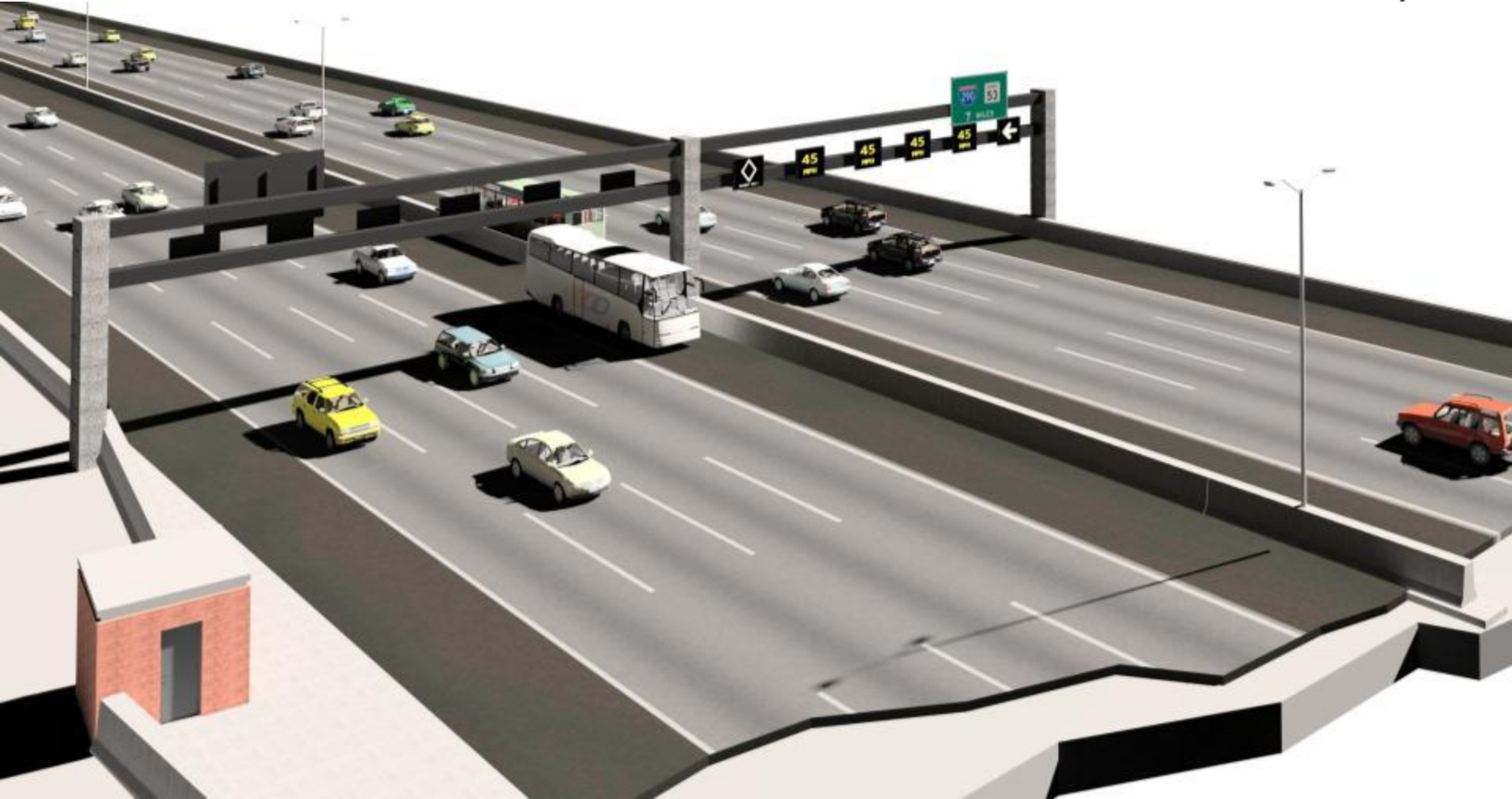
Aesthetic Options:

Monotube With Guidesigns



Aesthetic Options:

Precast With Monotubes



Bus on Shoulder Management Options



I-55



Source: FHWA
MnDOT

Emergency Refuge Areas/Parking



Source: FHWA
Shoulder Use with Emergency Refuge Area
Massachusetts



Source: FHWA
Shoulder Use with Emergency Refuge Area
Great Britain

Bus on Shoulder (BOS)



Source: FHWA -- BOS in Minneapolis

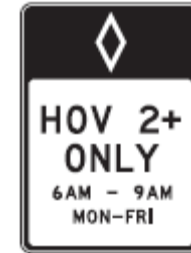


Source: PACE
BOS operations on I-55

High Occupancy Vehicle (HOV) Lane



Source: FHWA – HOV lane on I-405, Orange County, California



Source: VDOT
Example of HOV Lanes in Virginia

Managed Lane



Source: FHWA

Illustration of Priced Dynamic Shoulder Lane (PDSL) on I-35W – Minneapolis, Minnesota

General Purpose Lane



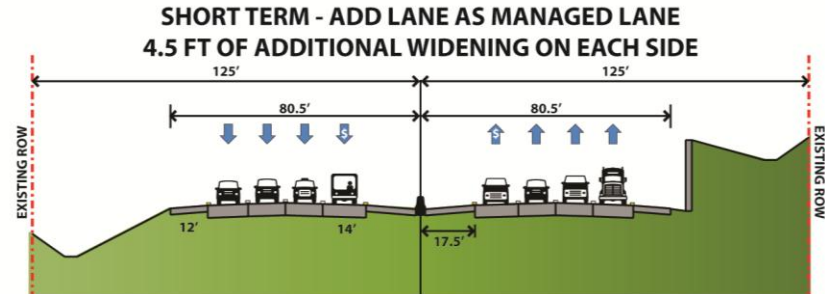
Source: FHWA
I-66 in Virginia



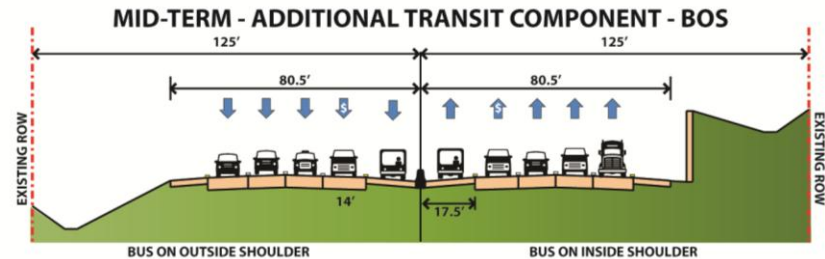
Source: FHWA
Germany

Short- to Long-Term Corridor Evolution

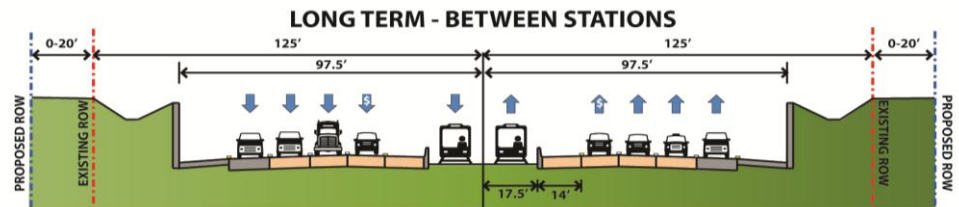
▶ Short-Term:
managed lane



▶ Mid-Term:
bus on shoulder service



▶ Long-Term (between stations):
median for fixed guideway transit.



Maintenance and Operations Costs

Additional Annual Maintenance and Operations costs:

Item	Cost (per Gantry per year)	Total Cost per Year (Assume 28 gantries)
Additional Inspection Cost (GEC)	\$600	\$16,800
Maintenance for Lane - Use Control Signals	\$ 15,000	\$ 420,000
Total Maintenance		\$436,800
Additional Staff (3)		\$ 216,000
Utilities (Lane-use Control Signals)	\$ 3,750	\$105,000
Total Operations		\$321,000
Total Annual Operations And Maintenance Cost		\$ 757,800

Offset by reduction of Zero Patrol
Operation on I-90 @\$532,800/year

Capital Costs

Capital Costs for ATM

Expenditures	2014	2015	2016	TOTAL
Current		\$21,637,250	\$13,667,510	\$35,304,762
Proposed	<p>\$225,000 West gantry foundations (8 @ \$28,125) in median (Elgin Plaza to IL 47)</p> <p>\$945,000 East gantry foundations (27 @ \$35,000) in retaining walls (Kennedy to Elgin Toll) 9 of these are from Barrington to Elgin Toll Plaza at a cost of \$315,000.</p>	<p>\$2,800,000 East Corridor gantries 28 gantries @ \$100,000 each</p>	<p>\$1,025,000 East corridor gantry foundations in median (Kennedy Expwy to Elgin Toll) (41 @ \$25,000)</p> <p>\$12,320,000 East Corridor ATM equipment installation 28 ATM installations @ \$440,000 each</p> <p>\$200,000 Contingency release for DCM to prepare design plans</p> <p>\$325,000 East corridor gantry foundations in median (Barrington to Elgin Toll) (13 @ \$25,000)</p>	\$17,840,000
Total Proposed	\$1,170,000	\$2,800,000	\$13,870,000	\$17,840,000



Active Traffic Management Jane Addams Memorial Tollway (I-90)

February 27, 2014



Thank You
