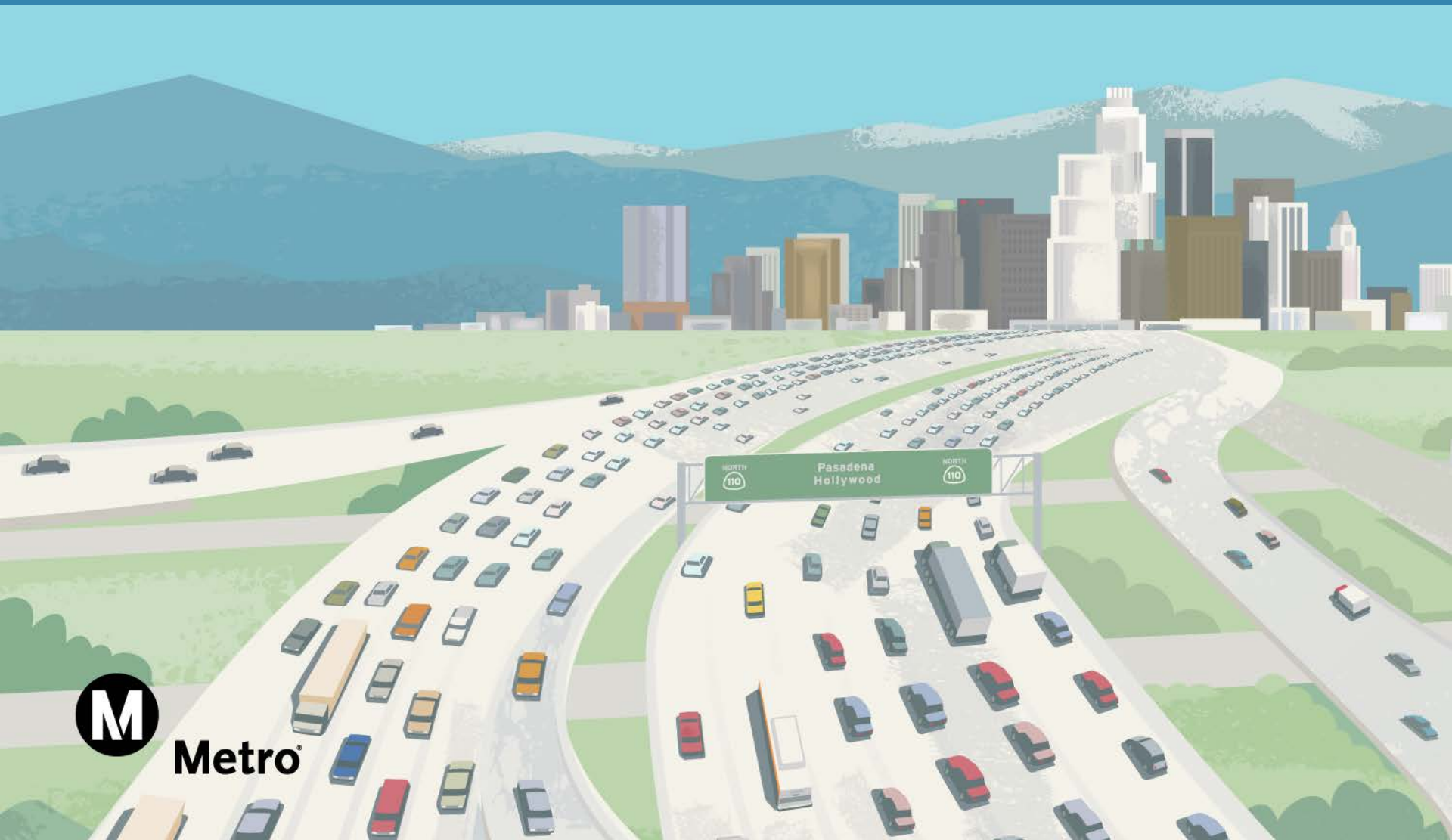


Metro ExpressLanes: It's About Time

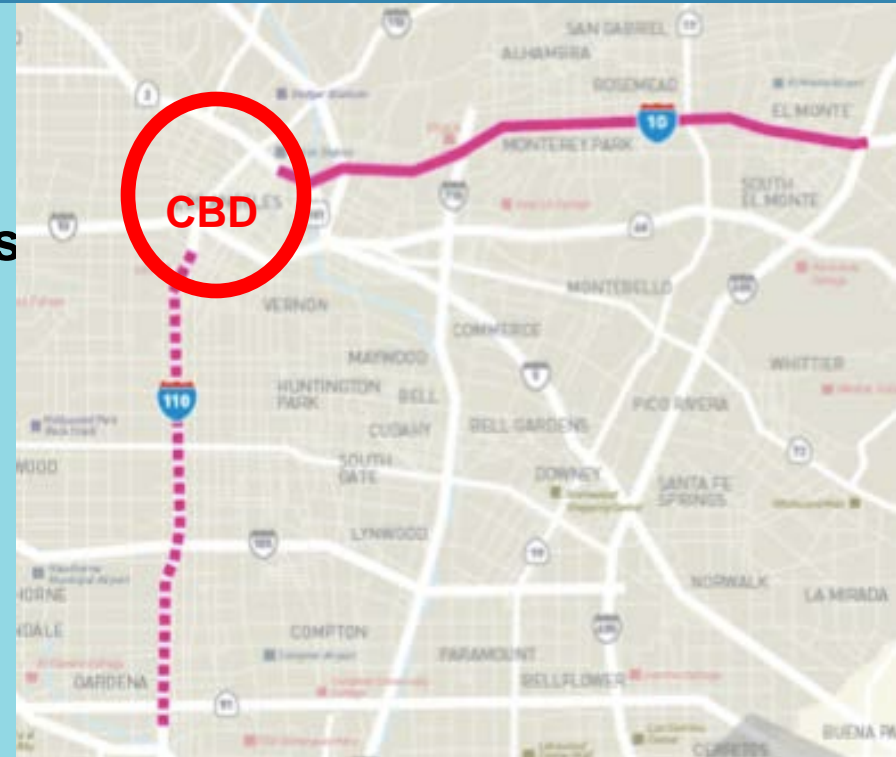
December 15, 2011



Metro

Congestion Reduction Demonstration Program

- > **Converts 25 miles of existing HOV lanes to Metro ExpressLanes**
- > **\$274 Million Program Budget includes a \$210 million federal grant**
- > **Expands Transit Service on I-10 and I-110 Corridors**
- > **Introduces Congestion Pricing to Manage Traffic Demand**



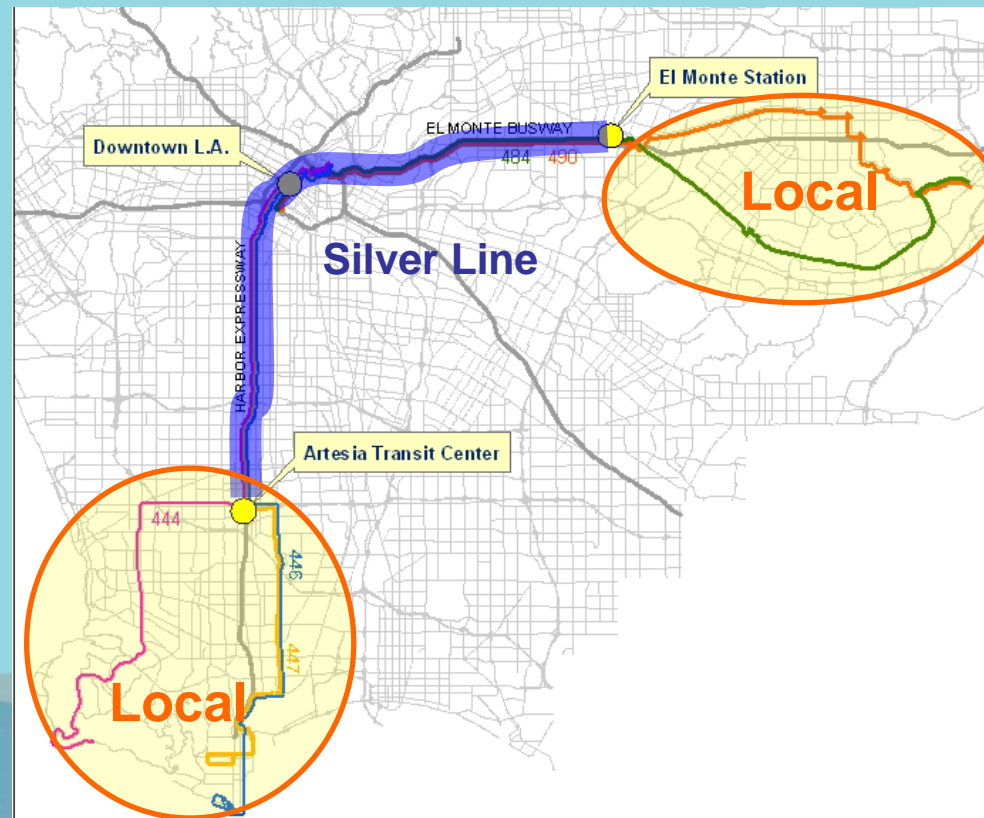
Metro

2011 Year in Review

- > January – Notice to Proceed to DBOM Contractor (ExpressLanes)
- > May – Promotional Agreement with Automobile Club of So Cal

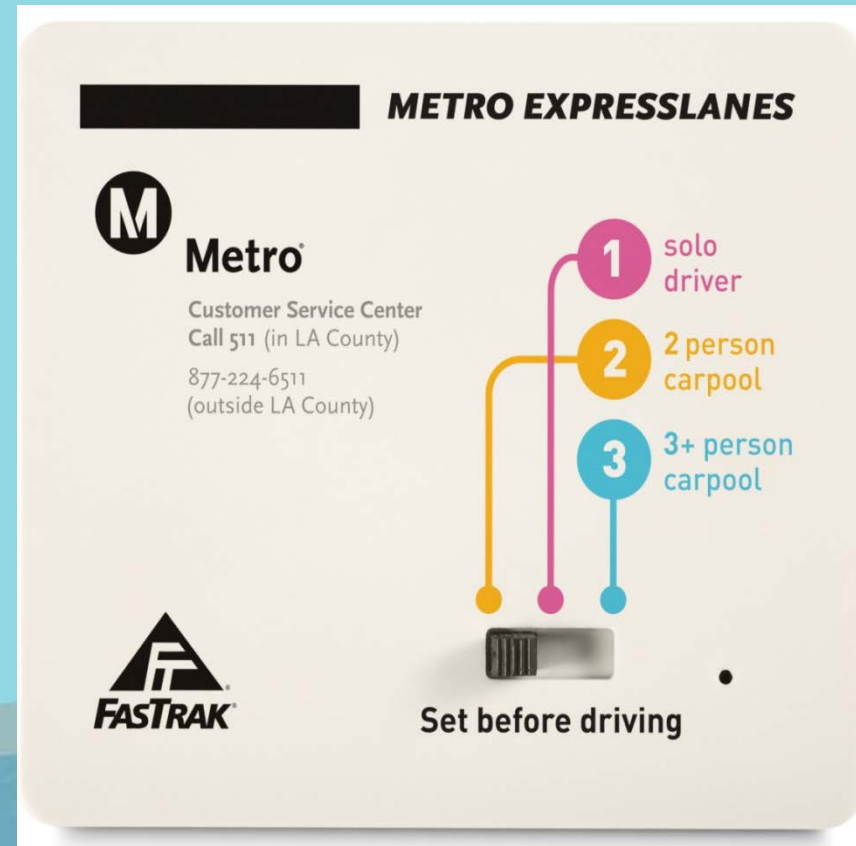


- > June – Launch of Phase I Enhanced Silver Line BRT Service on I-110 (Ridership has increased 39%)

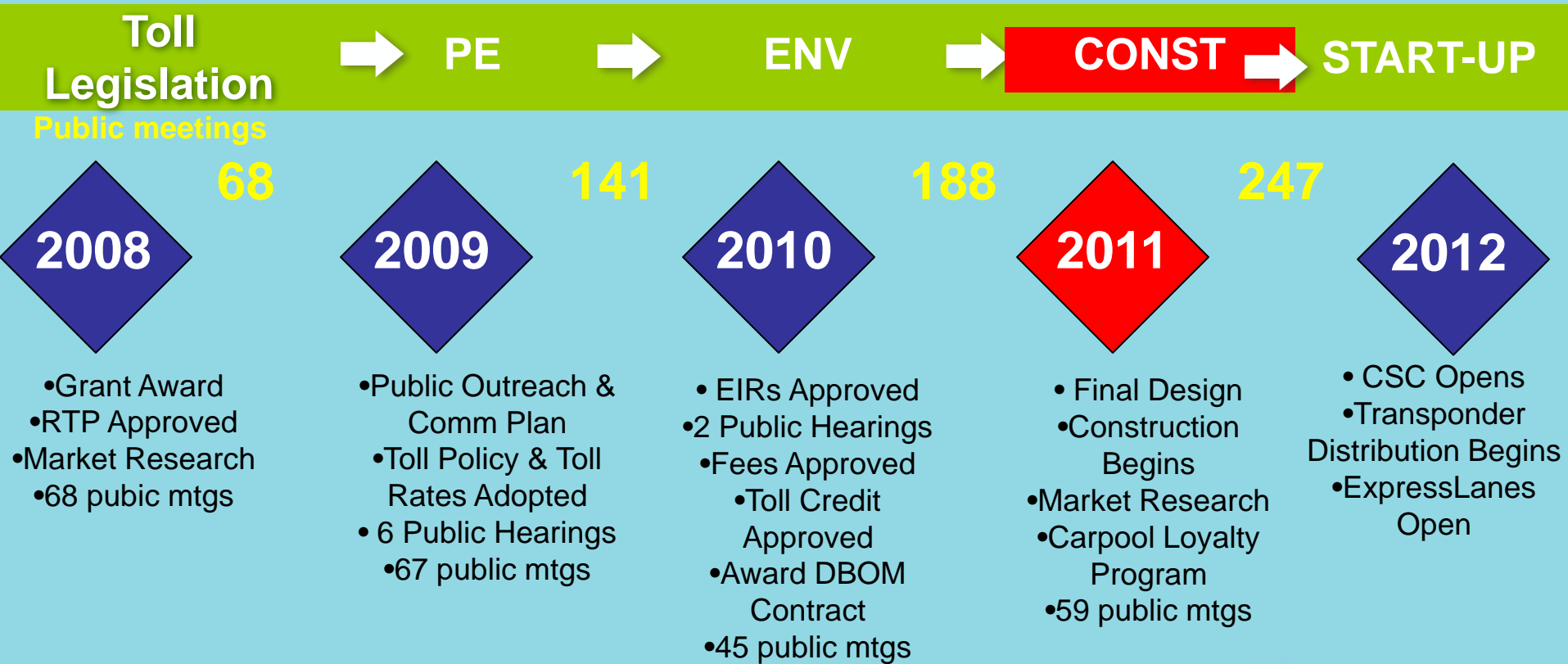


2011 Year in Review (cont'd)

- > July – Metro ExpressLanes Groundbreaking
- > September – ExpressPark Notice to Proceed
- > Sep – Dec – Market Research (9 Focus Groups)
- > December – Carpool/Vanpool Loyalty Program
- > December – Roadside Toll Collection System Factory Acceptance Tests



Program Milestones & Schedule



Lessons Learned

- **A 'Political Champion is a must**
- **Engage the public early in the process and often throughout project development**
- **A multi-modal approach increases public acceptance**
- **Address equity issues early in the planning process**
- **Ensure schedule deadlines take into consideration the complexity of the project elements**
- **Make certain appropriate staffing and resources are assigned from inception/approval of project**

2012+ Future Steps in Congestion Pricing

- > **Regional (4-county) HOT Lane Network & Cordon Pricing Action Plan (Value Pricing Program)**
 - **Regional HOT Lane Network: Los Angeles, Riverside, San Bernardino and Orange Counties**
 - **Cordon Pricing Study: City of Los Angeles**

- > **I-405 HOT Lane Feasibility Study**
 - **From Orange/Los Angeles County Line to LAX**

For More Information

> www.metro.net/expresslanes --> Transponder Interest Form

> Follow us on 
twitter.com/expresslanes

> 511

> Like us on 
facebook.com/expresslanes



SF *park*

CIRCLE LESS, LIVE MORE

Demonstrating a new approach to parking management

Duration	Price Per Hour
9AM – 12AM	\$2.50
12AM – 3PM	\$3.50
3PM – 6PM	\$2.00



Scope

Shift in goals: from revenue to policy

- Use parking management to achieve transportation goals
- Congestion/trip demand, transit, economic competitiveness, safety, greenhouse gas emissions

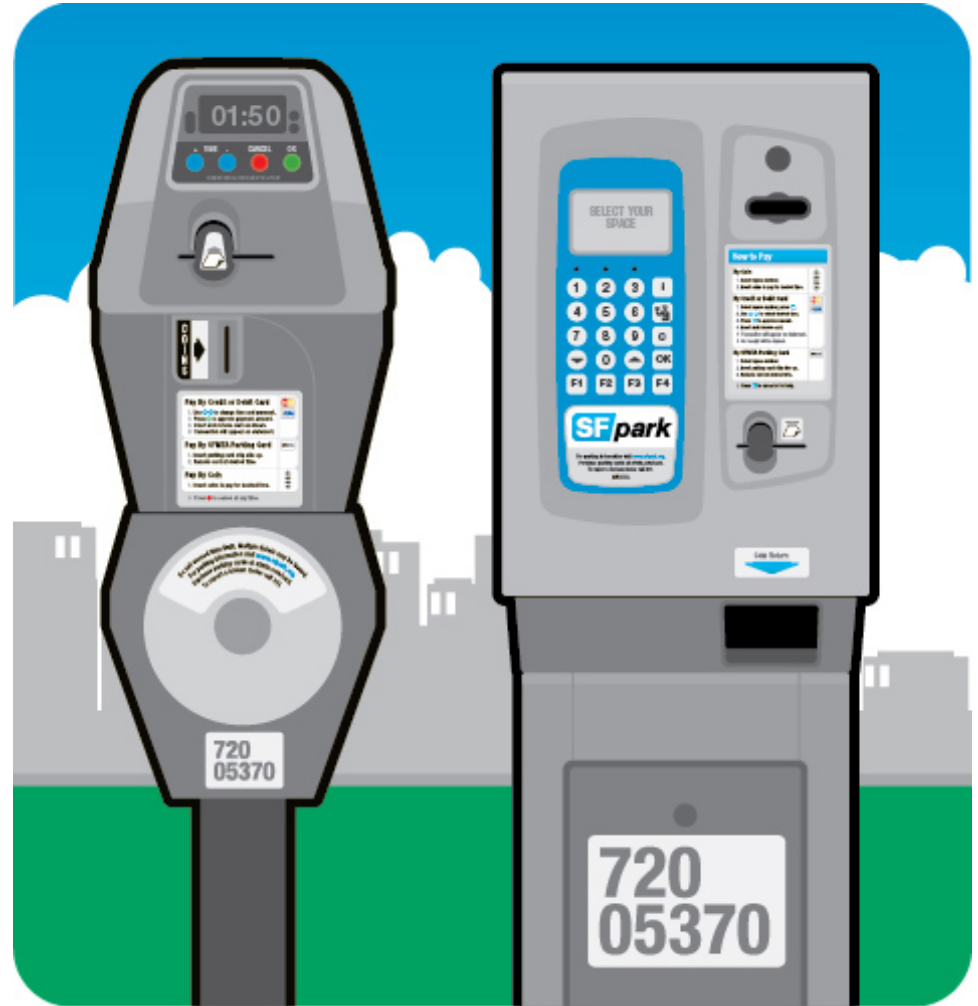
Pilot project scope

- Two years
- 8 pilot areas
- 7,000 metered spaces (25%)
- 12,250 garage spaces (75%)



Milestones for 2010

- Parking sensors installed
- Parking meters installed



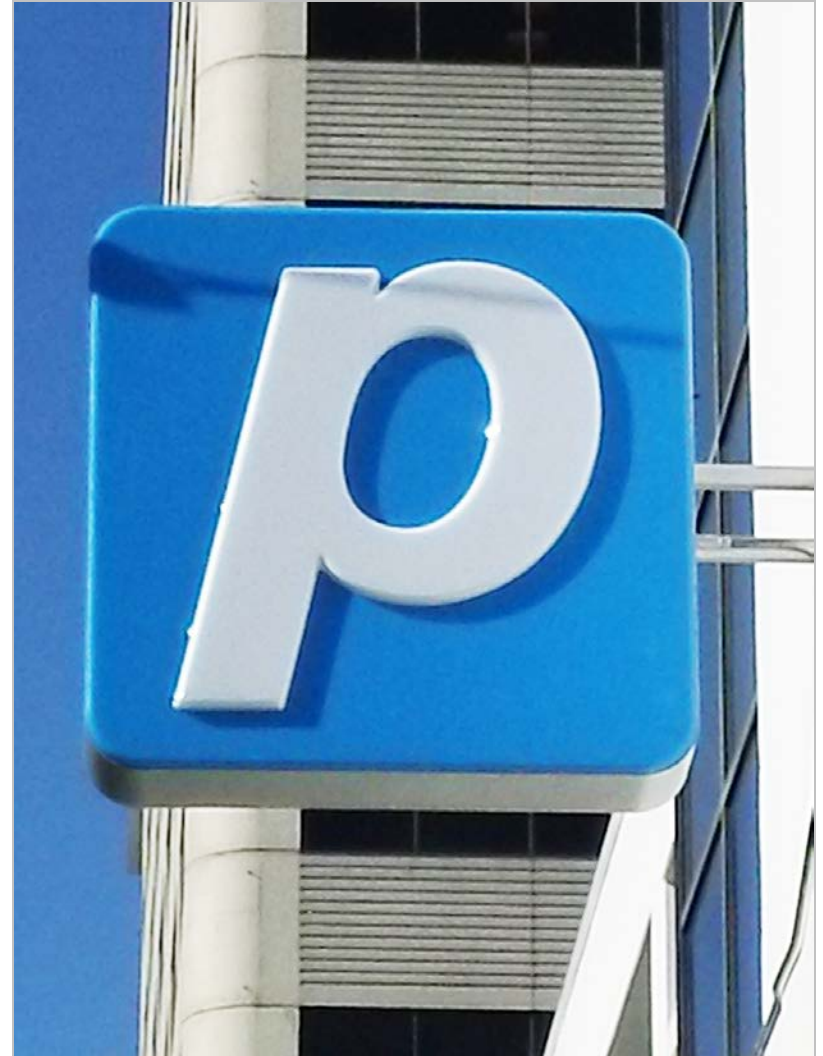
Milestones for 2011

April

- City/SFMTA employee parking
- Garage upgrade
- Time limits extended
- Real-time data feed released
- Formal start of demonstration

July—December

- Develop data warehouse
- Three demand responsive rate changes (on- and off-street)
- Garage wayfinding signage
- Initial revenue evaluation



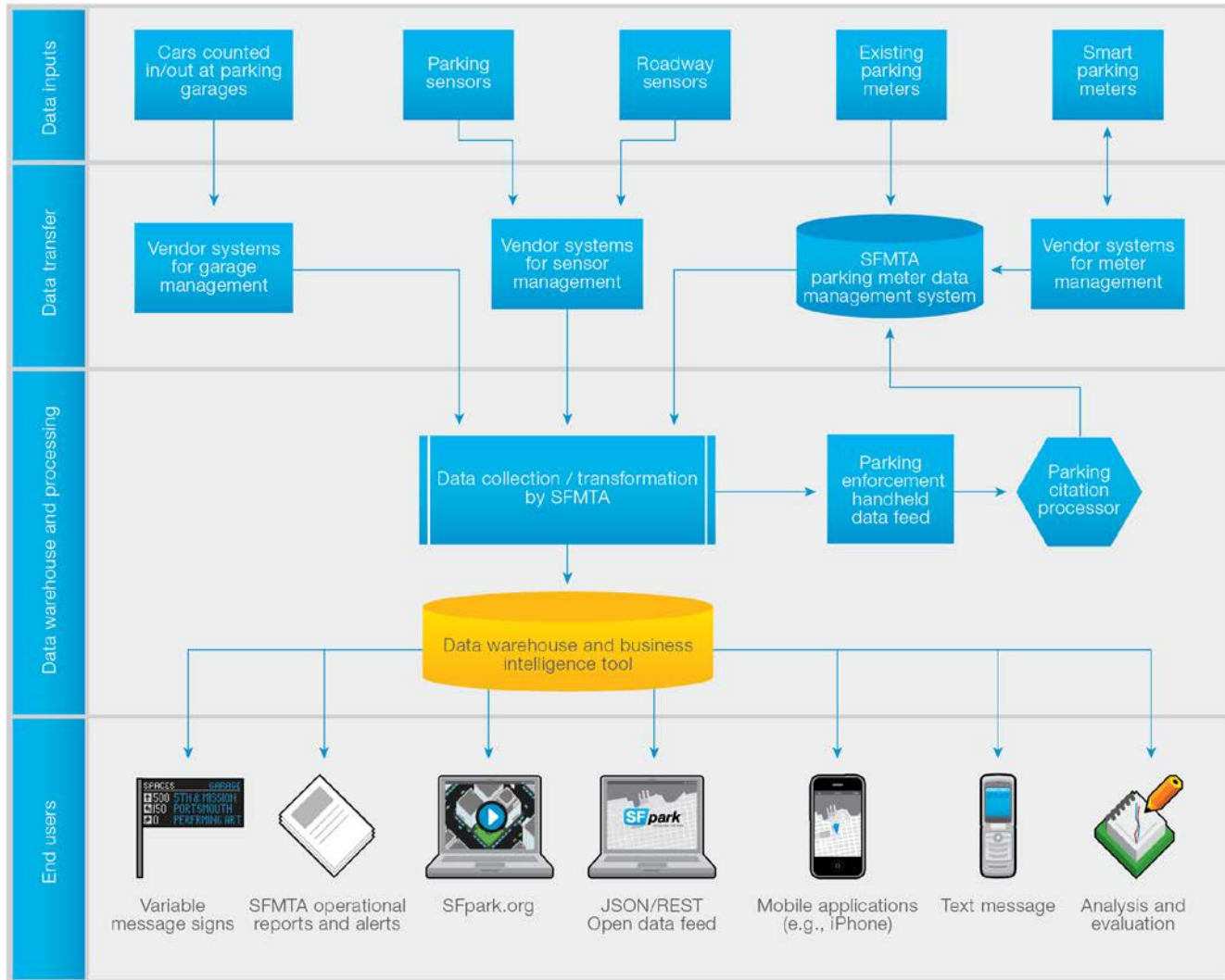
Managing employee parking



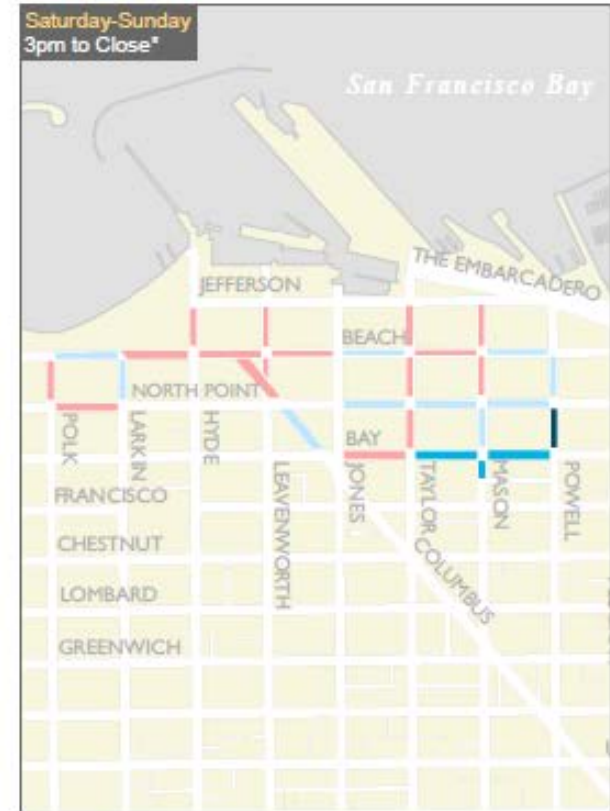
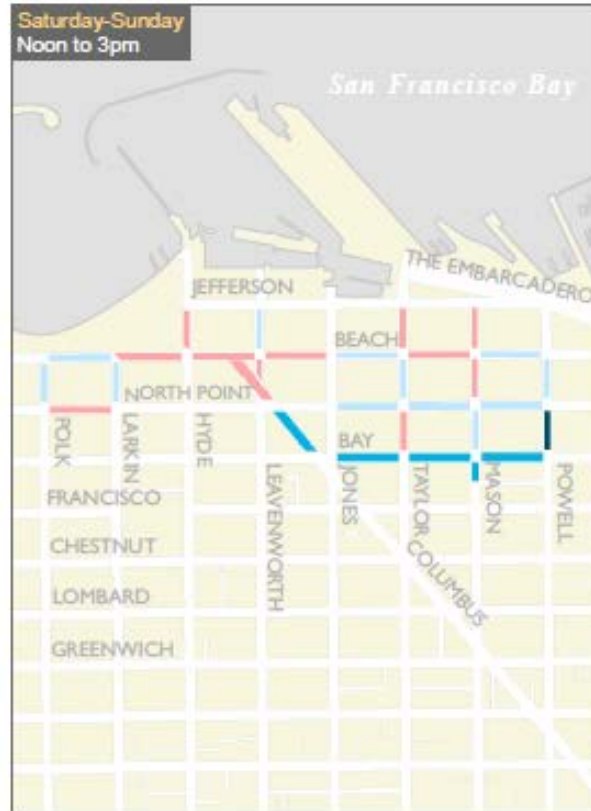
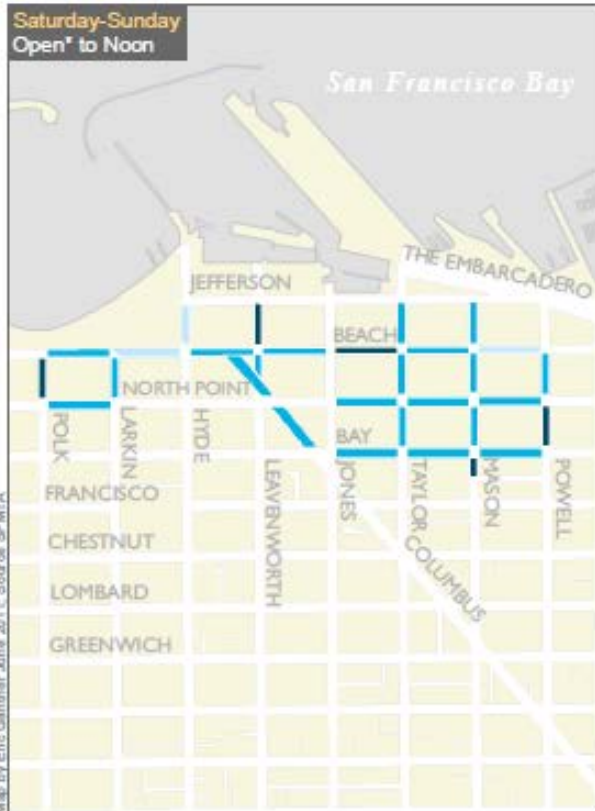
Project launch



Data management and analytics



Demand responsive rate adjustments



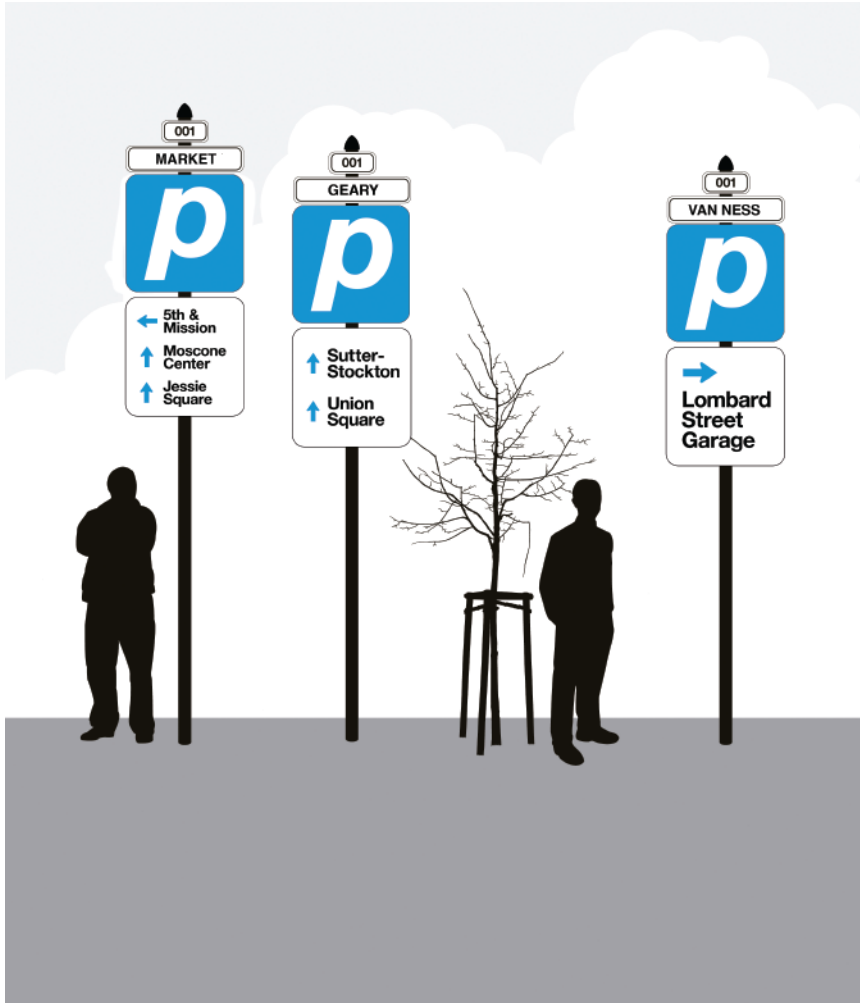
Map by Eric Cantor June 2011. Source SFMTA

Demand responsive rate adjustments

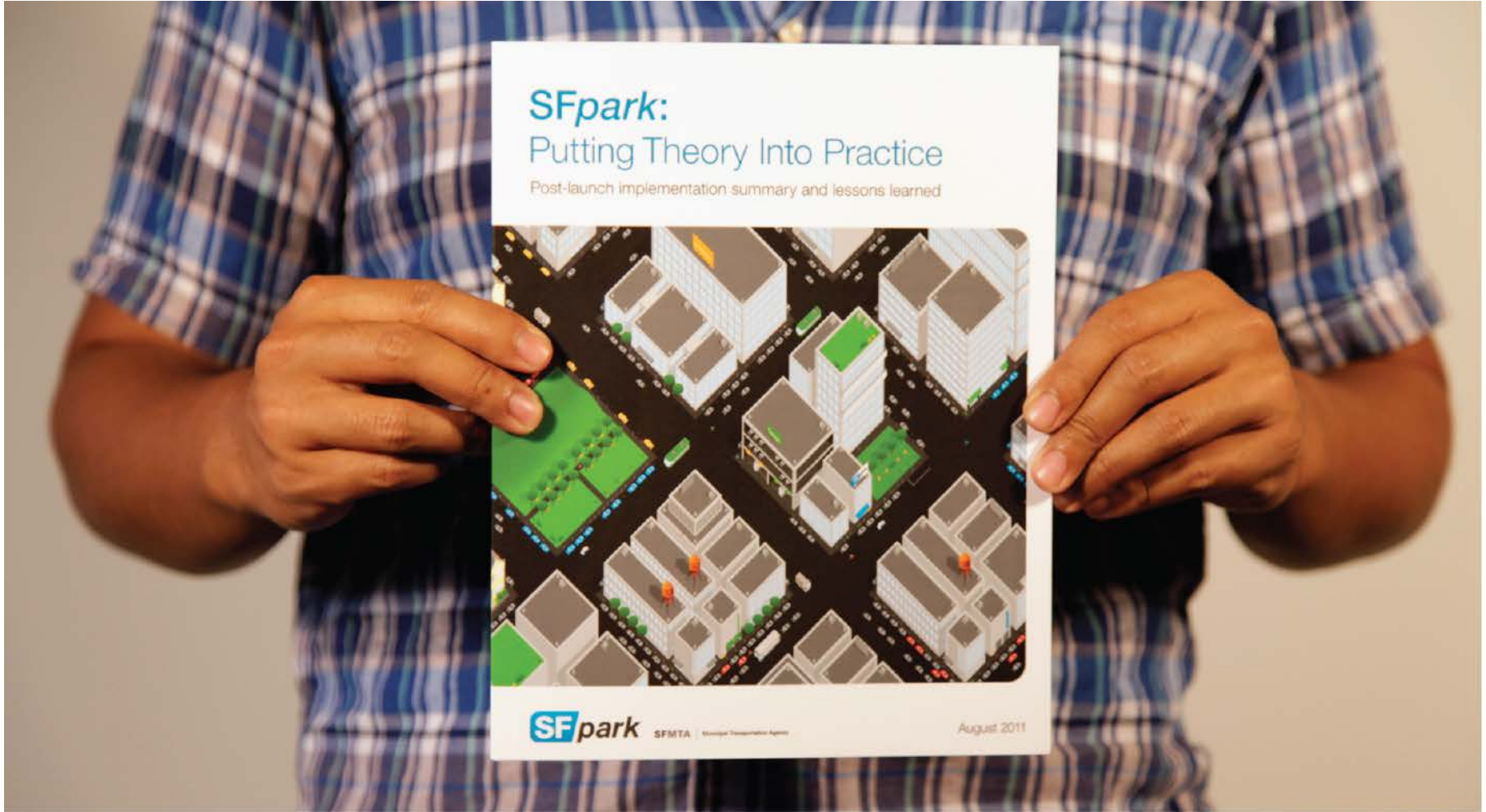
Rate changes by metered hours

	1 st rate change	2 nd rate change	3 rd rate change
Up \$0.25/hr	26%	25%	27%
No change	42%	37%	38%
Down \$0.25/hr	28%	30%	29%
Down \$0.50/hr	4%	7%	6%

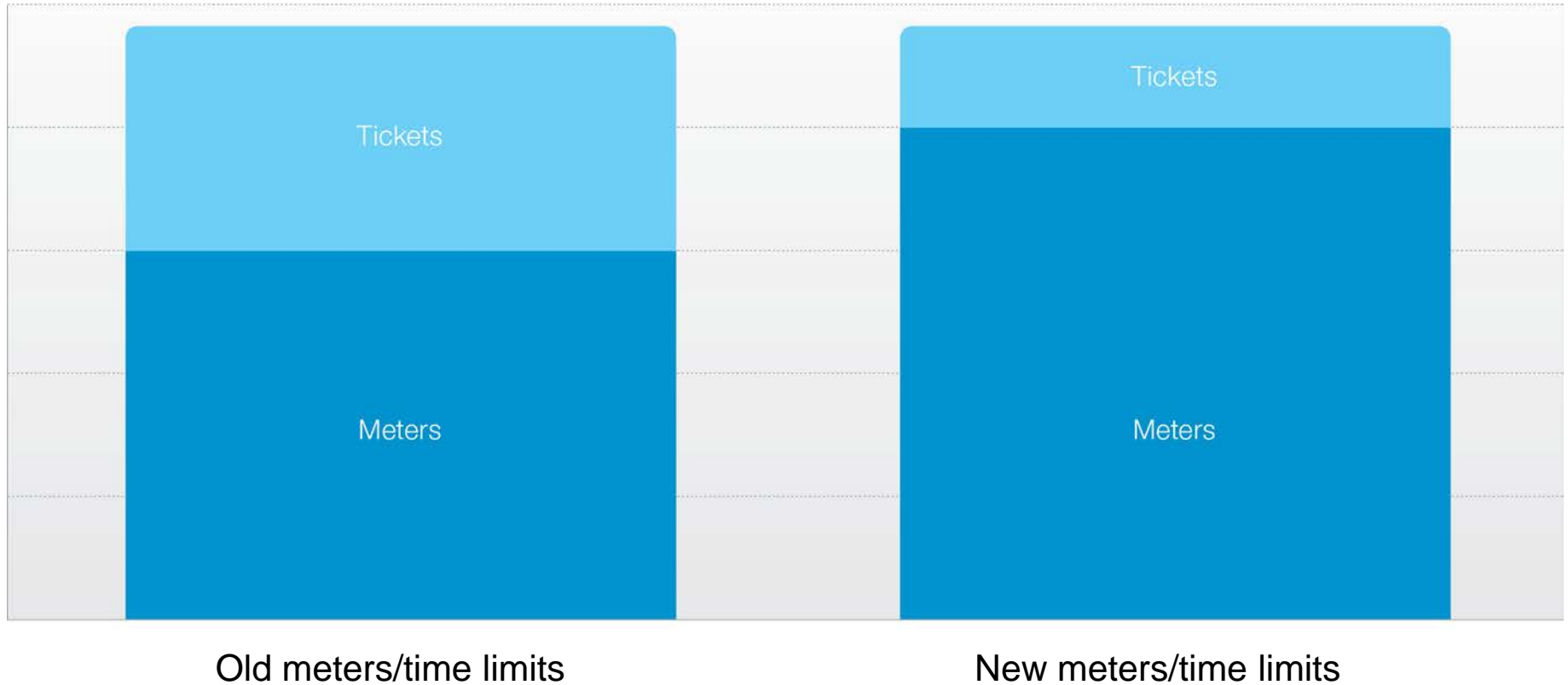
Garage wayfinding + advertising



Sharing lessons learned



Initial revenue evaluation (new meters/time limits)



Old meters/time limits

New meters/time limits

What's next

Winter through Spring 2012

- Roll out pay by phone (citywide)
- Continue to develop business intelligence tool
- Continue to improve and document business processes

Spring through Fall 2012

- Initiate variable message signs
- Evaluate pilot projects
- Accelerate sharing and dissemination of lessons learned
- Develop proposal for expanding SFpark citywide
- Release RFPs

High level lessons learned

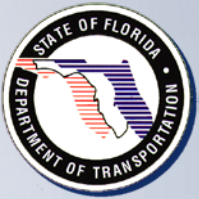
- Focus on availability (not turnover)
- Shifting how people think about parking takes time
 - Extensive outreach
 - Branding is useful
- Having a transparent, rules-based, and data-driven approach helps
- SFpark is essentially a complex IT undertaking
- Parking equipment is not plug and play

Thank you

Jay Primus

jay.primus@sfmta.com

SFMTA



95 EXPRESS



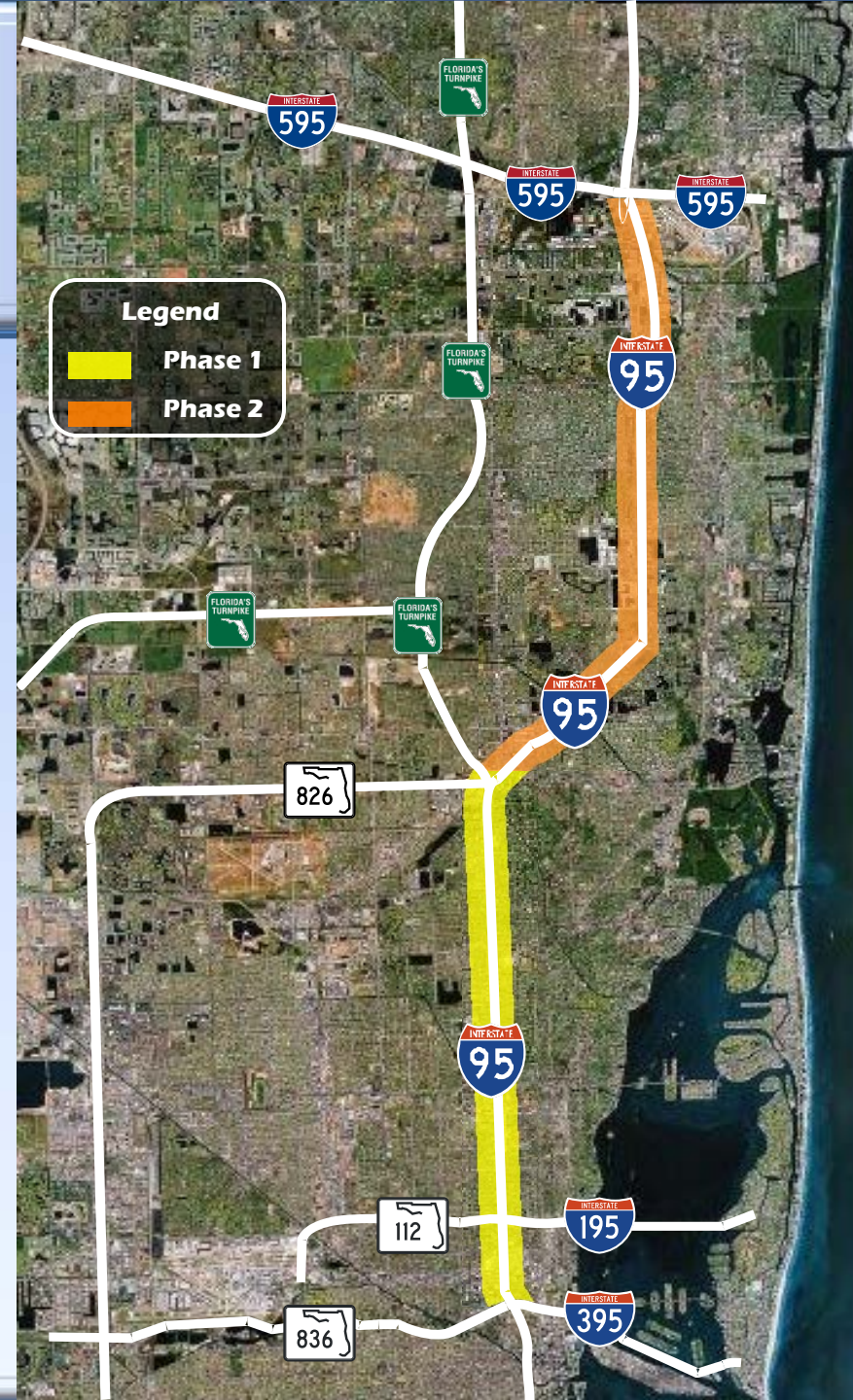
95 Express Lanes Program

UPA/CRD Project Update

December 15, 2011

95 Express Project Scope

- ❖ Intended for long-distance trips connecting regional facilities Miami to Ft. Lauderdale
- ❖ 1 HOV lane → 2 Express lanes
- ❖ Congestion-priced tolls
- ❖ Improved ITS monitoring and incident management capabilities
- ❖ Eliminate Bottlenecks
- ❖ Ramp Metering
- ❖ Bus Rapid Transit
- ❖ Carpool Registration
 - Effective in Reducing Trips
 - Unique to the Project



FY'11 Performance

Operational Analysis - Speed

- ❖ Average AM Peak Period Speeds (Southbound)
 - 2008 HOV – 20 MPH; GPL – 15 MPH
 - 2011 EL – 62 MPH; GPL – 50 MPH
- ❖ Average PM Peak Period Speeds (Northbound)
 - 2008 HOV – 18 MPH; GPL – 18 MPH
 - 2011 EL – 56 MPH; GPL – 41 MPH
- ❖ EL Travel Time Savings (vs. HOV)
 - 15.0 mins. (SB)
 - 16.5 mins. (NB)



FY'11 Performance

Operational Analysis - Overview

❖ Peak Period Benefits

- SB – 13 MPH; NB – 15 MPH
- Person Throughput ↑

❖ Volume / Trips

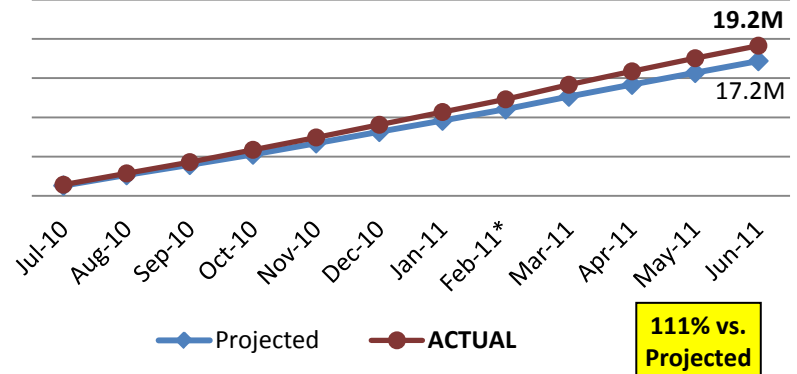
- 21% Increase over FY'10
- 1.6 Million per Month
- 111% vs. Projected

❖ Revenue

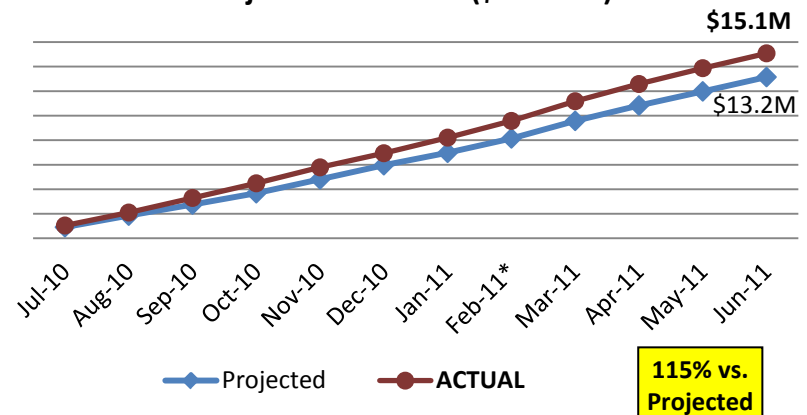
- \$1.3 Million per Month
- 115% vs. Projected



FY 2011 Cumulative Monthly EL Traffic Volume
Projected vs. Actual (Millions)

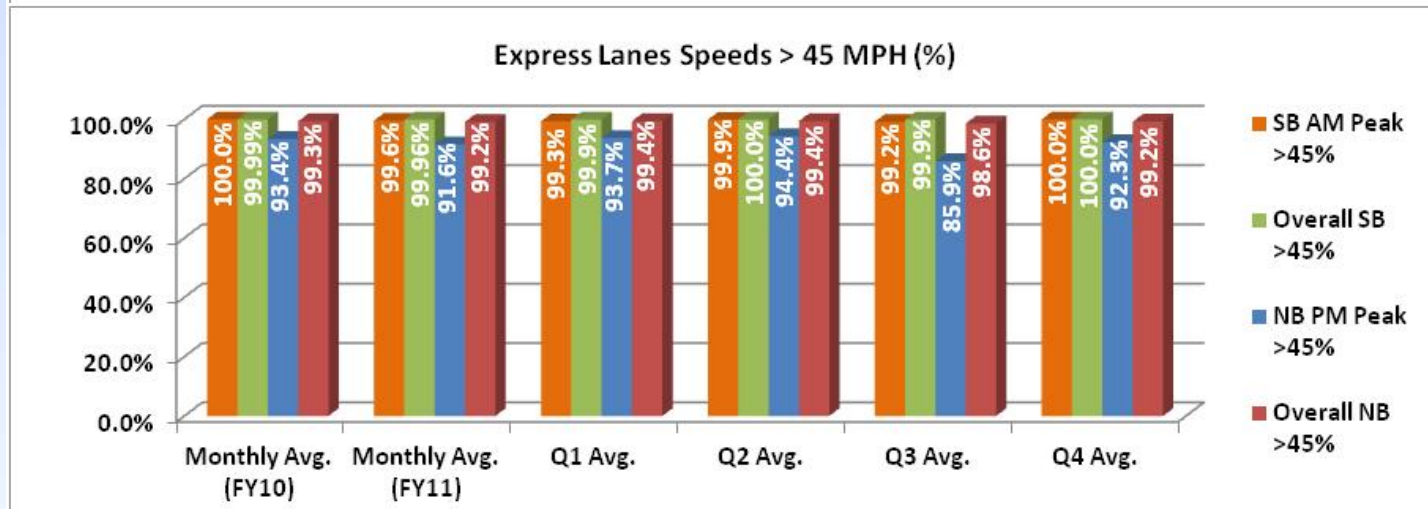
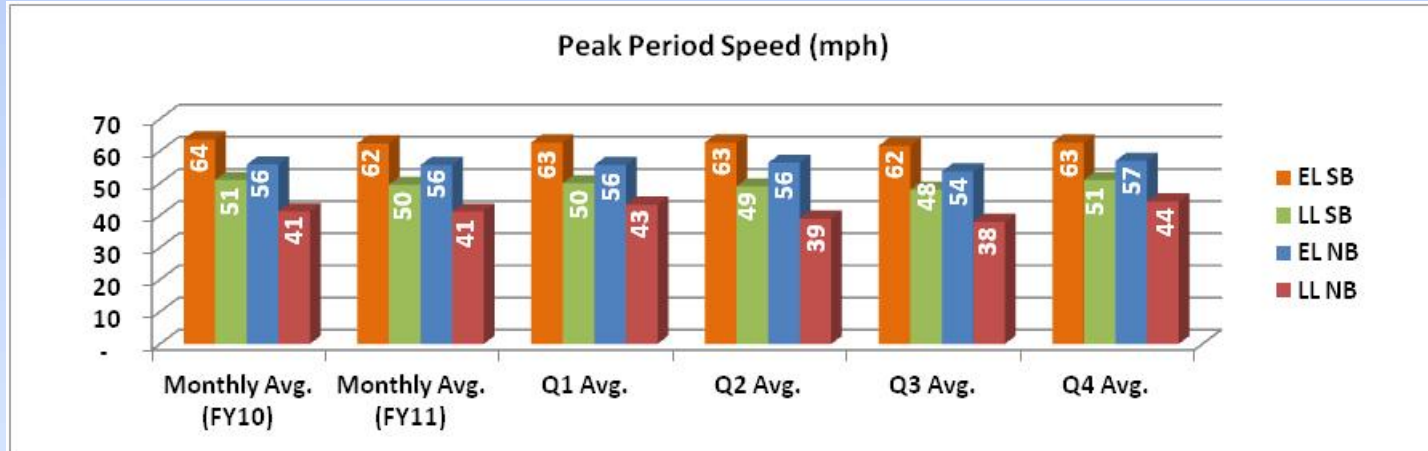


FY 2011 Cumulative Monthly EL Revenue
Projected vs. Actual (\$Millions)



FY'11 Performance

Operational Analysis - Overview



FY'11 Performance Tolls



❖ Range: \$0.25 - \$7.10*

❖ Daily Averages

- Weekday: \$1.00 (SB); \$1.05 (NB)
- Peak Period: \$1.70 (SB); \$2.25 (NB)
- Max. Toll: \$4.25 (SB); \$6.45 (NB)
- Weekend: \$ 0.25

\$7.10 Max (Oct. '10)

❖ 85%: ≤ \$2.10 95%: ≤ \$2.75

❖ Average Toll per Mile

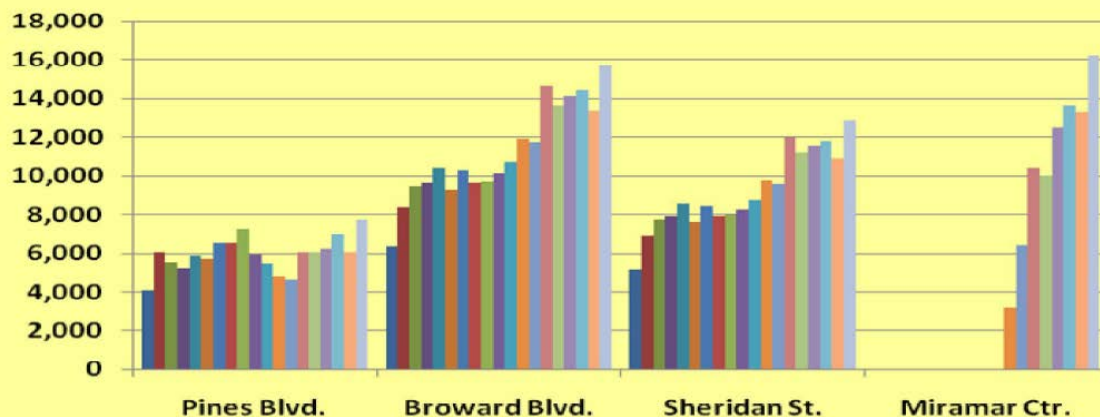
- \$0.10 (SB); \$0.11 (NB) – Overall
- \$0.21 (SB); \$0.28 (NB) – Peak Period

FY'11 Performance

Transit

- ❖ January 2010, new 95 Express Bus Rapid Transit routes were introduced providing cross county “one seat” service.
- ❖ 95 Express transit ridership continues to grow even after the MULs have been established.
 - Feb 2008 average daily boardings (pre-MUL): 1,746
 - Feb 2010 average daily boardings (MUL Phase 1A/1B opening): 2,638
 - June 2011 average daily boardings: 4,286 +145% Increase

Monthly Total Boardings by Route 2-10 thru 8- 11



FY'11 Performance Customer Satisfaction

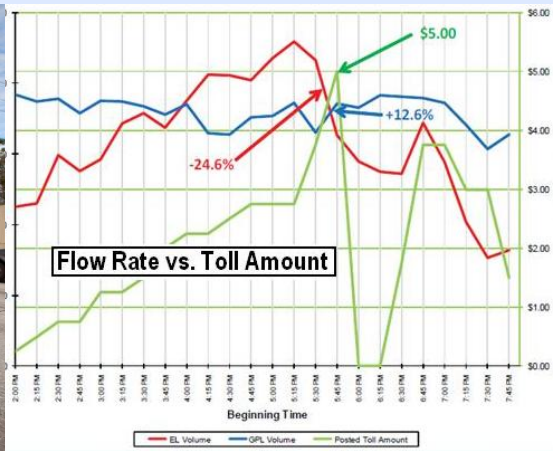


❖ What are Customers Saying?

- Satisfaction Rating of 90% or Higher
 - Width of Lanes
 - Lane Separators
 - Entry and Exit Points
 - Signage and Display of Tolls
- 72% of Users Feel 95 Express Offers a More Reliable Trip
- 57% Expansion of 95 Express Lanes in Palm Beach County
- 49% Want Express Lanes Expanded on other highways in South Florida

95 Express Lessons Learned

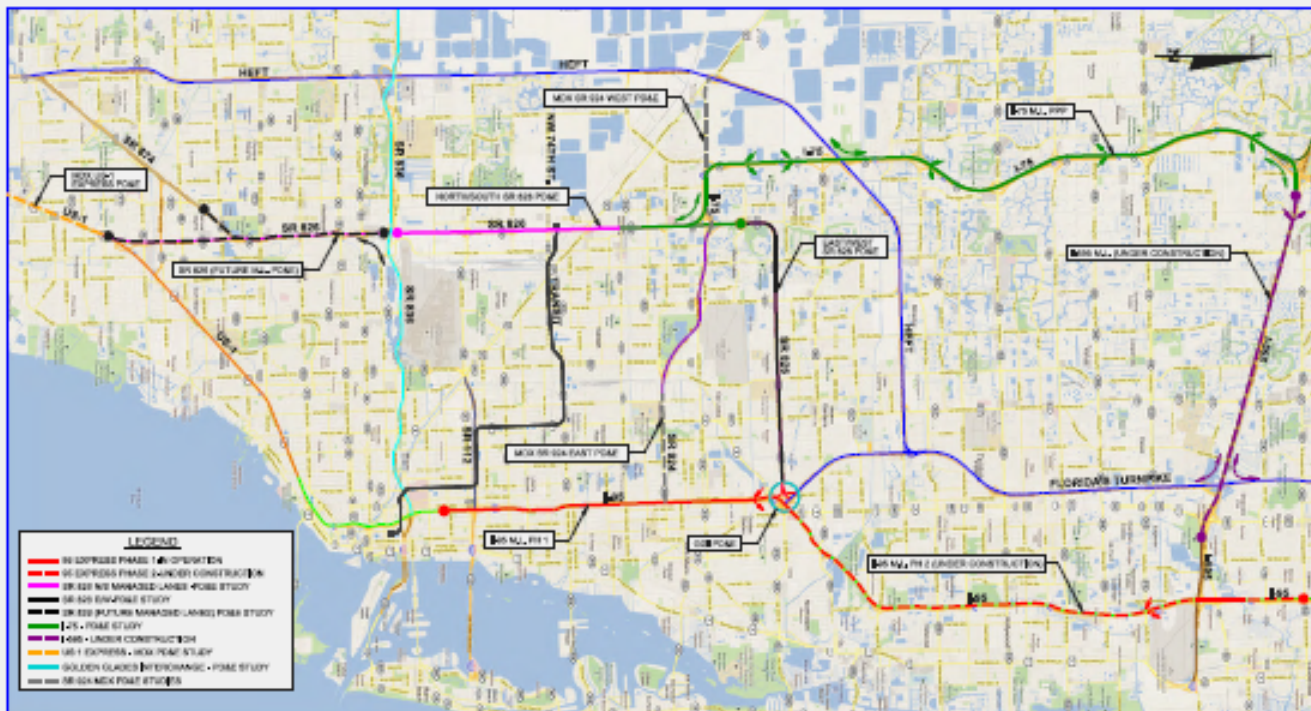
- ❖ Sell reliability not speed alone.
 - Work with media and customers.
- ❖ When in doubt - more pavement
 - Incident management and enforcement
- ❖ Optimizing performance
 - Constant vigilance - good & bad
 - Automate control and QA/QC – but keep the “human” element!
- ❖ Think network first if possible
- ❖ Data Requests



Express Lanes Future

- ❖ 95 Express Optimization

- ❖ Other Initiatives - South Florida Managed Lanes Network



SOUTH FLORIDA MANAGED LANES NETWORK

- ❖ Regional Concept for Transportation Operations - VPPP

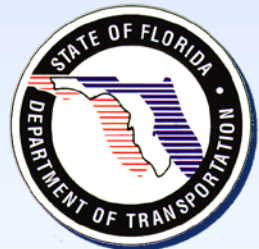
- ❖ Exclusive Statewide Toll Lane Action Plan

Questions?

Thank you!

Rory Santana, P.E., PTOE
FDOT District Six ITS Manager
Rory.Santana@fdot.state.fl.us

For more information go to 95express.com



Atlanta's CRD Update

FHWA Webinar

**Presented by: Patrick Vu, PE
State Road and Tollway Authority
December 15, 2011**



PEACH PASS

Keep Moving.™

I-85 Express Lanes Overview

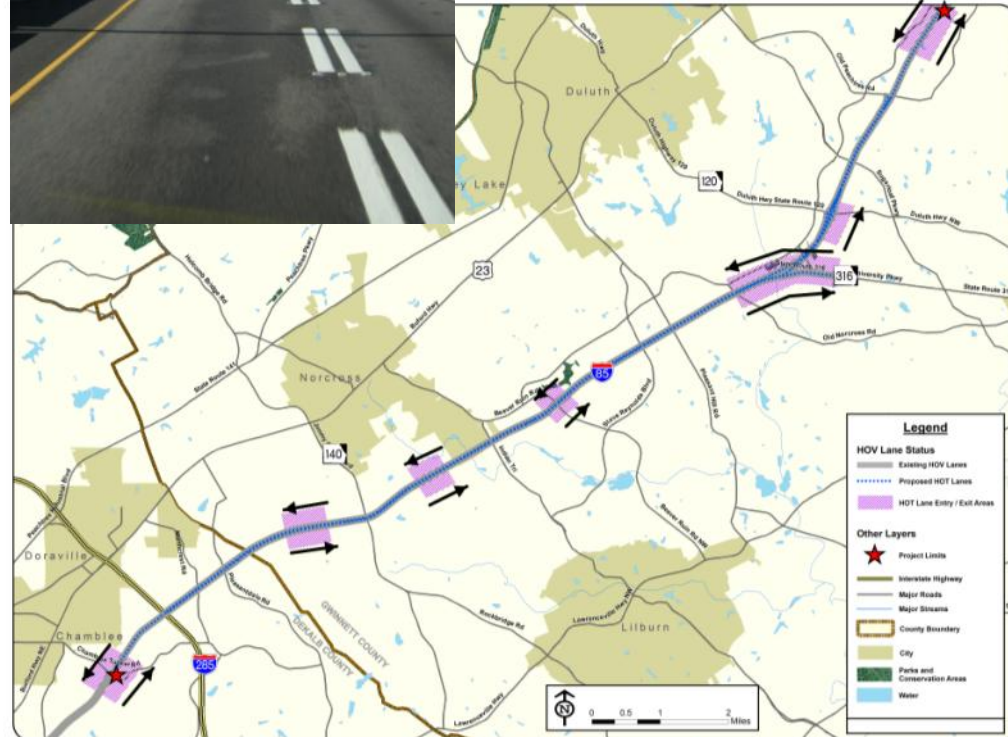
- Goal: Provide more reliable travel times and commuting choices
- I-85 Express Lanes, \$60 million
 - ~16 miles long, from Chamblee Tucker near I-285 to Old Peachtree Road
 - Existing HOV2+ lane conversion to HOT3+
 - Opened September 30, 2011
- Regional transit improvements, \$122 million
 - New Xpress Park and Ride Lots including 3 along I-85
 - New Xpress commuter coach
- Total cost \$182 million, with USDOT contributing \$110 million

I-85 HOV Conditions



I-85 Express Lane Corridor

- 1 lane in each direction, non barrier separated
- Dynamically priced to maximize vehicle throughput
- All vehicles must register and have a Peach Pass transponder
- Toll Exempt vehicles:
 - Vehicles with 3 or more occupants
 - Over-the-road buses
 - On-call emergency vehicles
 - Motorcycles
 - Vehicles with alternative-fuel vehicles (AFVs) license plates
- Single driver and 2 person carpools pay a toll
- Vehicles with more than 6 wheels are prohibited
- 24/7 operations



Rules of the Road

Toll Rates:

- Toll rates sign show min and max rate
- Customers locked into toll rates on sign seen when entering Express Lanes

Violations:

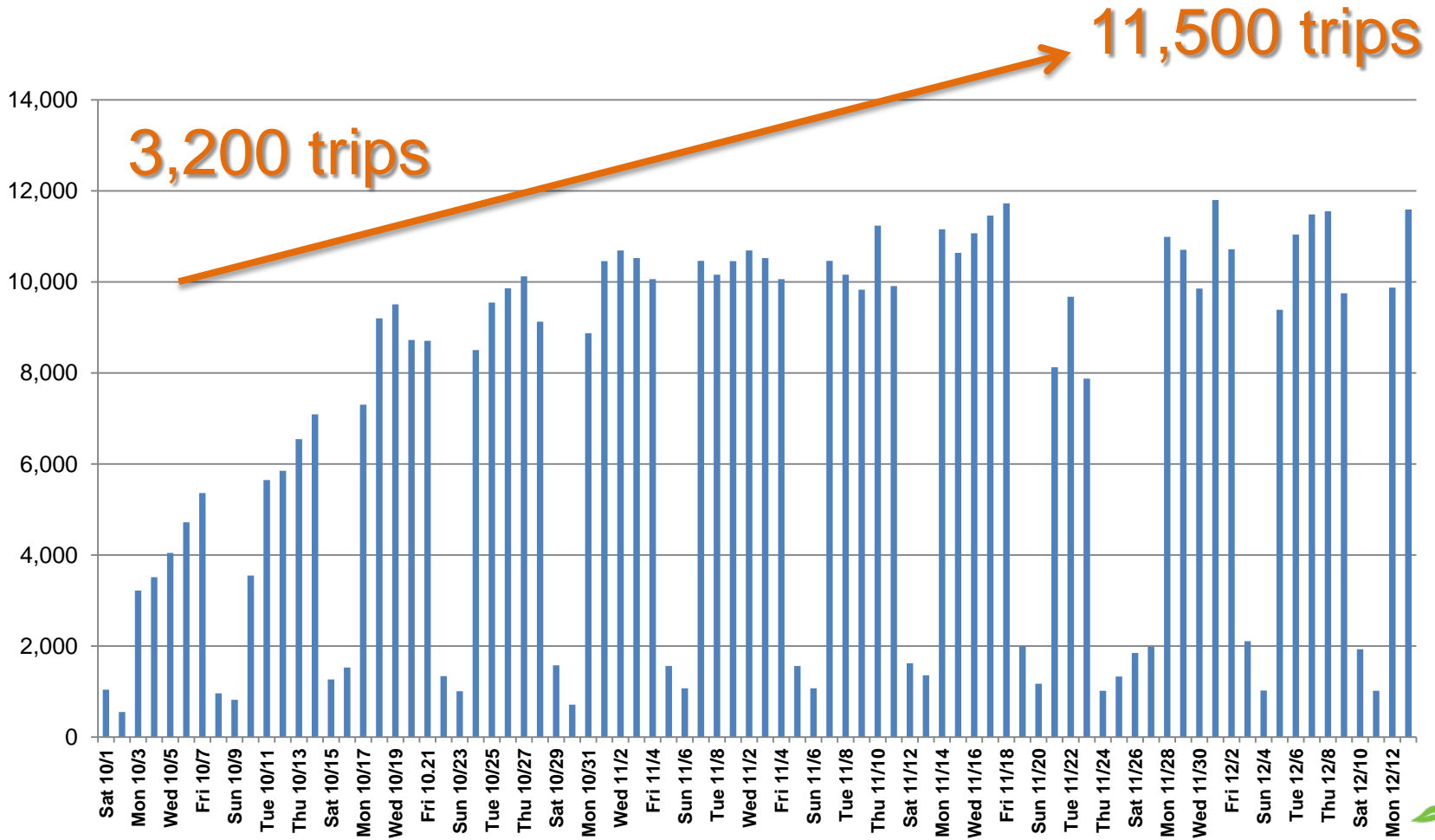
- Crossing the solid, double white line
- Using the Express Lanes without a Peach Pass/Cruise Card transponder
- Occupancy (vehicle does not meet the appropriate number of occupants for toll-free access)

Penalties:

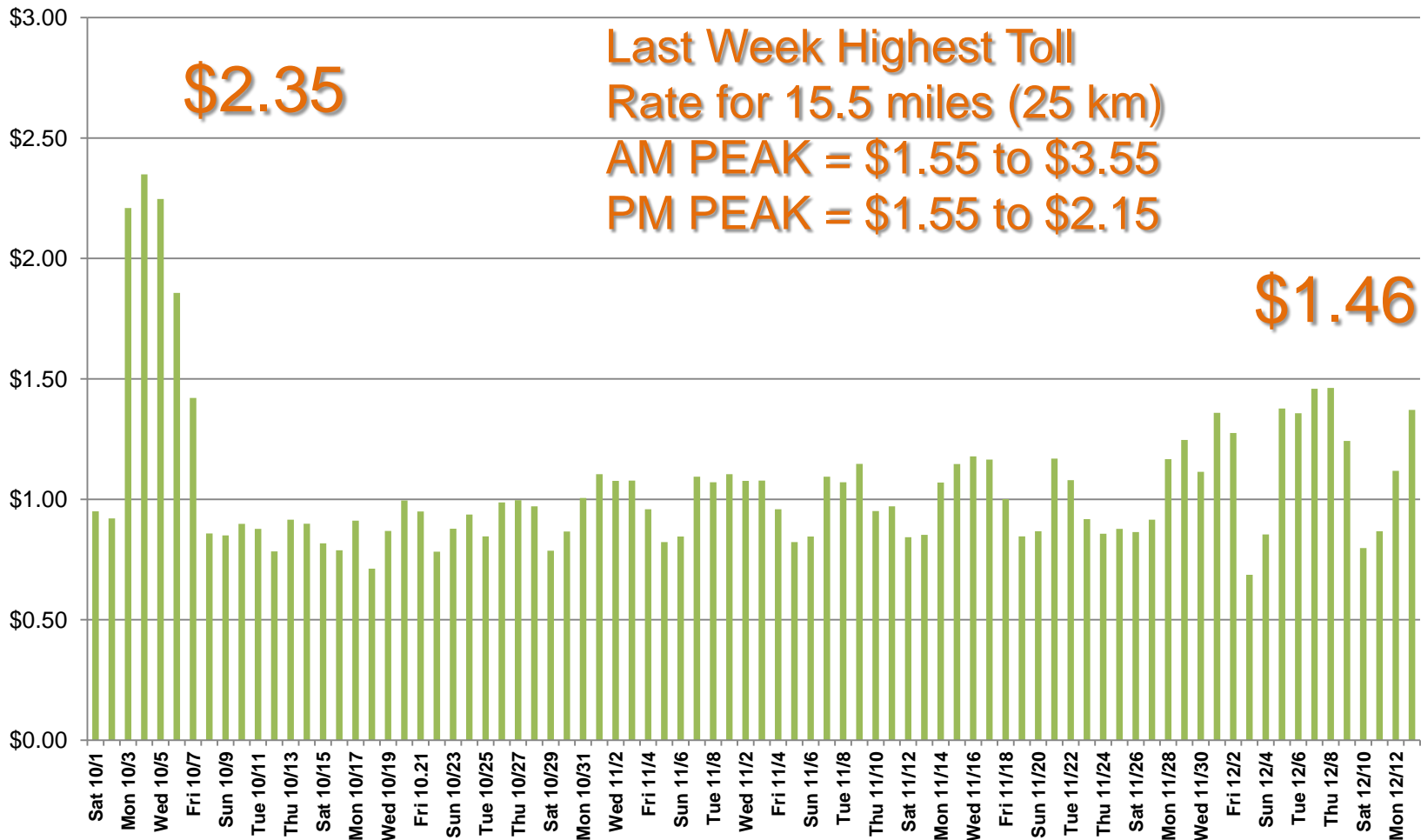
- SRTA toll violation = \$25 + toll amount
- May also be issued citation by law enforcement



I-85 Express Lanes Daily Trips

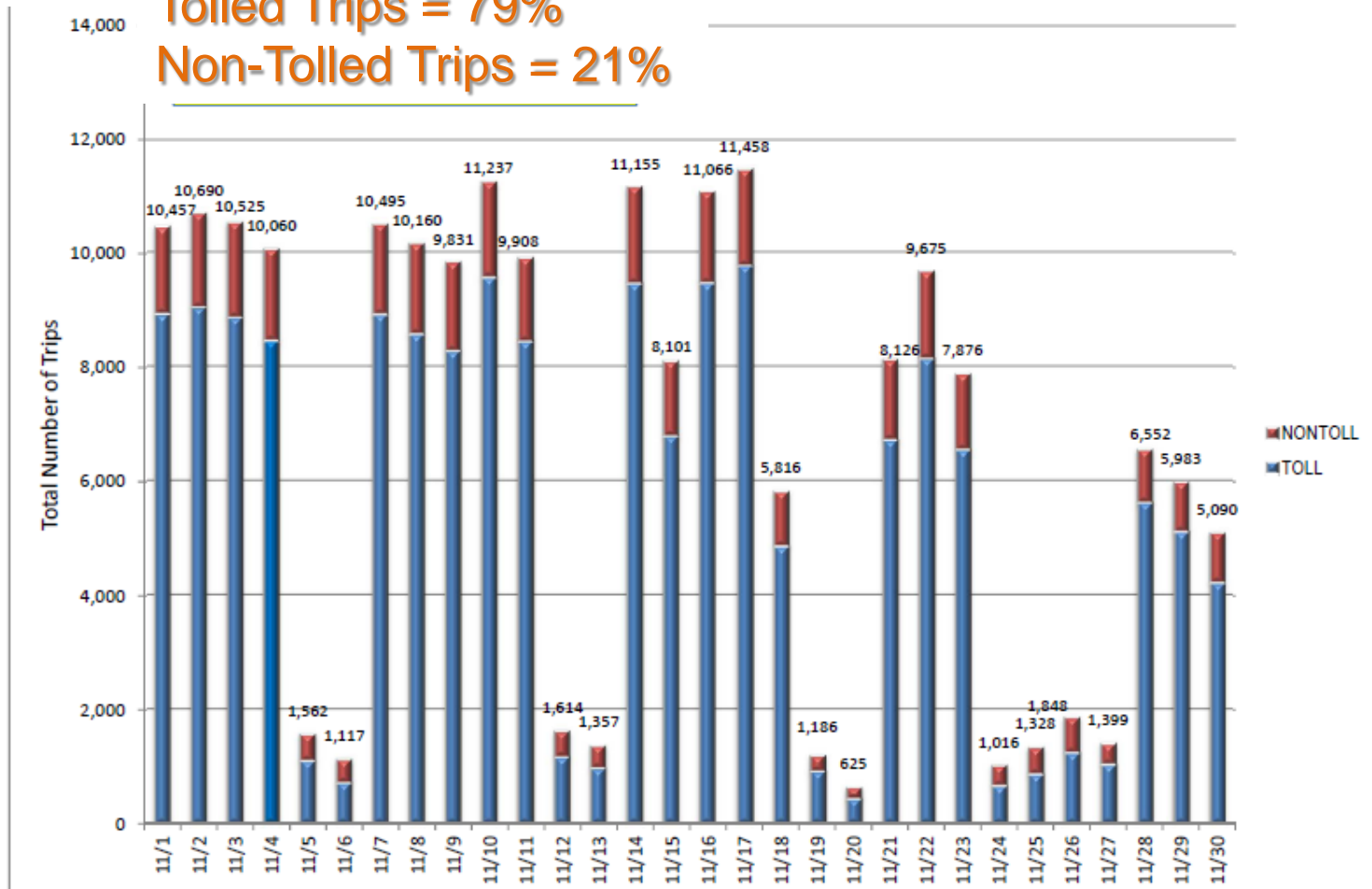


I-85 Express Lanes Average Fare



I-85 Express Lanes Non-tolled vs Tolled Customers

November
 Tolled Trips = 79%
 Non-Tolled Trips = 21%



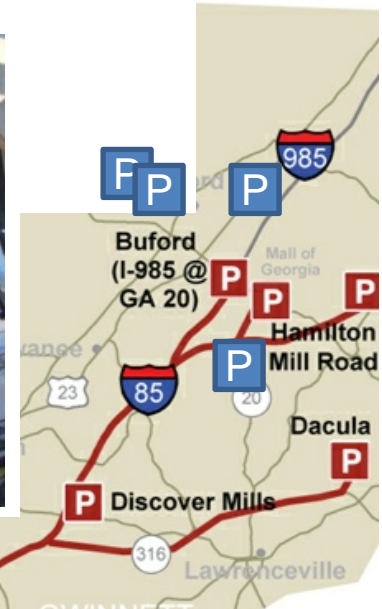
Express Lanes Lessons

- Anticipate/expect traffic pattern changes
- Pricing implementation insight
- Incident response
- Collection of key performance metrics
- Message coordination and addressing public response



CRD Transit Projects

- I-85 North HOV to HOT
 - Add 36 coaches on 5 routes
 - Add 2,200 parking spaces in 4 park and ride lots
- Remainder of Region
 - Added 45 coaches on 9 new routes
 - Added 5,000 parking spaces in 8 park and ride lots
 - New operating facilities



I-85 Hot Lanes Weekly Transit Boardings

	Route	101	102	103	410	411	412	413	416	Total
	Sponsor	GCT	GCT	GCT	GRTA	GRTA / CRD	GRTA	GRTA / CRD	GRTA / CRD	
	Park and Ride	I-985/ GA 20	Indian Trail	Discover Mills	Discover Mills	Hamilton Mill	Discover Mills	Hamilton Mill	Dacula	
	Destination	Downtown	Downtown	Downtown	Lindbergh	Midtown	Mid town	Downtown	Downtown	
Week of	Sept 12-16	2912	1378	5797	702	1370	2667	455	502	15,783
	Sept 19-23	2767	1433	5977	728	1381	2597	511	487	15,881
	Sept 26-30	2803	1289	5744	744	1305	2656	474	493	15,508
	Oct 3-7	2906	1406	5913	831	1474	2846	506	529	16,411

	Destination				Route Sponsor		
	Total	Downtown	Midtown	Lindbergh	GCT	GRTA	GRTA /CRD
Sept Average	15,724	11,007	3,992	725	10,033	3,365	2,326
Oct 3-7	16,411	11,260	4,320	831	10,225	3,677	2,509
Change	+4.4%	+2.3%	+8.2%	+14.7%	+1.0%	+9.3%	+7.9%



QUESTIONS?

More information:

<http://www.georgiatolls.com/programs/i-85-express-lanes/>
<http://www.dot.state.ga.us/travelingingeorgia/expresslanes/I85ExpressLanes/Pages/default.aspx>

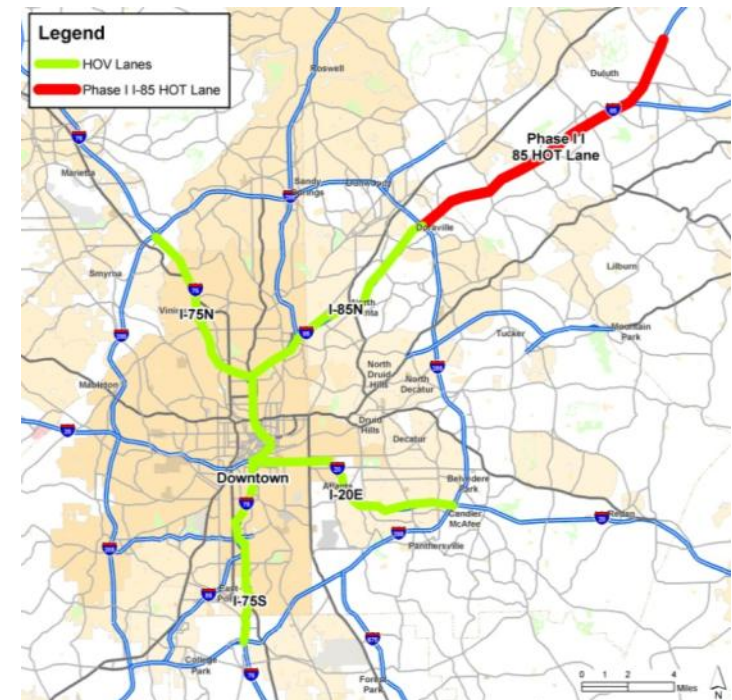
Patrick Vu

patrickvu@georgiatolls.com



Atlanta Congestion Reduction Demonstration

- USDOT Congestion Reduction Demonstration Program Grant awarded on November 21, 2008
- HOV2+ to HOT3+ conversion of I-85 (@16miles)
- 36 new commuter coaches, 2 park and rides
- Total cost \$182 million, with USDOT contributing \$110 million
 - Public outreach
 - Tolling system development and construction
 - Transit improvements



Minnesota's Urban Partnership Agreement 2011 Update

Kenneth R. Buckeye, AICP
Minnesota Department of Transportation

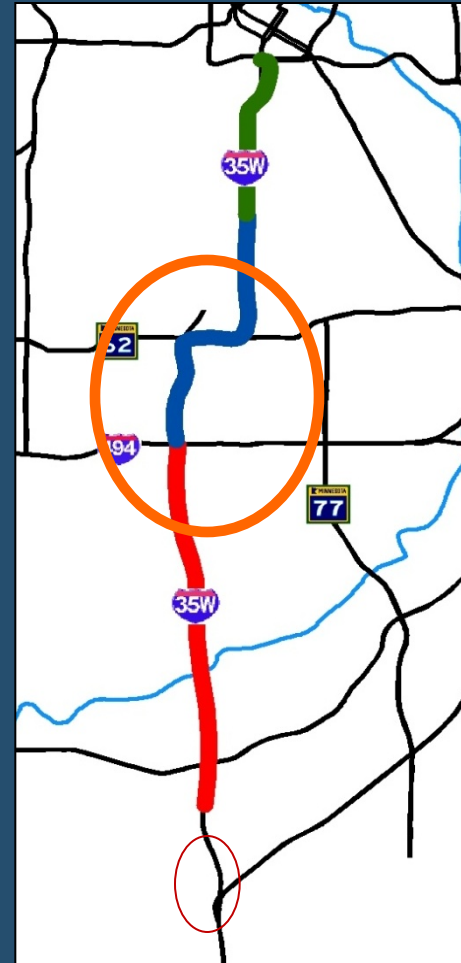


Minnesota's UPA Project Summary

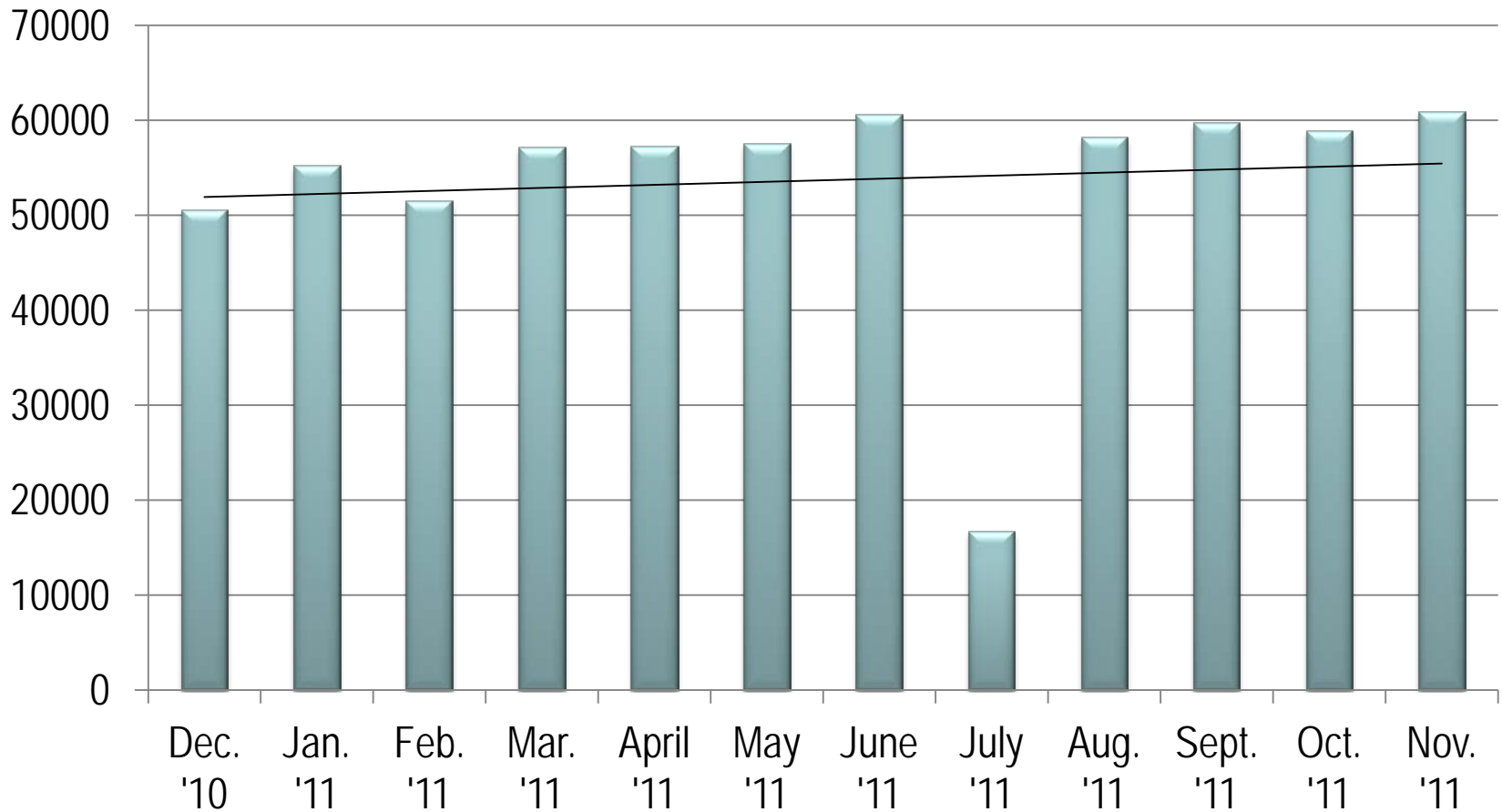
- Combined \$133 M in Federal funds, with \$50.2 M in State Funds
- Funded 24 different projects and initiatives
 - Tolling
 - Transit
 - Technology
 - Telecommuting

I-35W HOV to HOT Managed Corridor

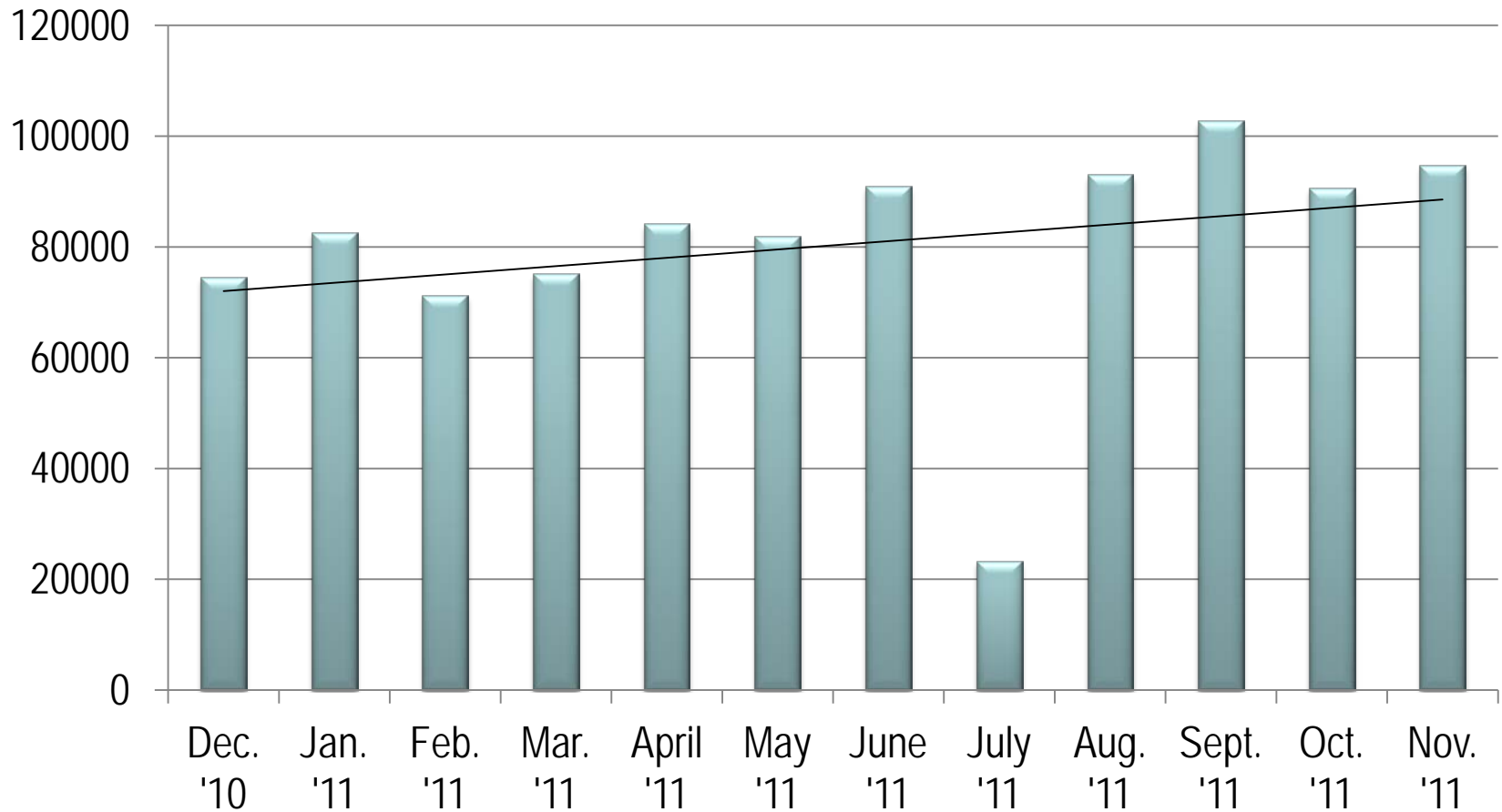
- Existing HOV Lane extended/
converted to HOT Lane
 - Extend existing HOV through system interchange
 - Widen HOT lane to add buffer
 - Added tolling and lane management technology
 - Modified signing and striping
- Priced Dynamic Shoulder Lane (PDSL)
- HOT Lane now complete through the I-35W / Crosstown project
- Two mile MnPASS extension



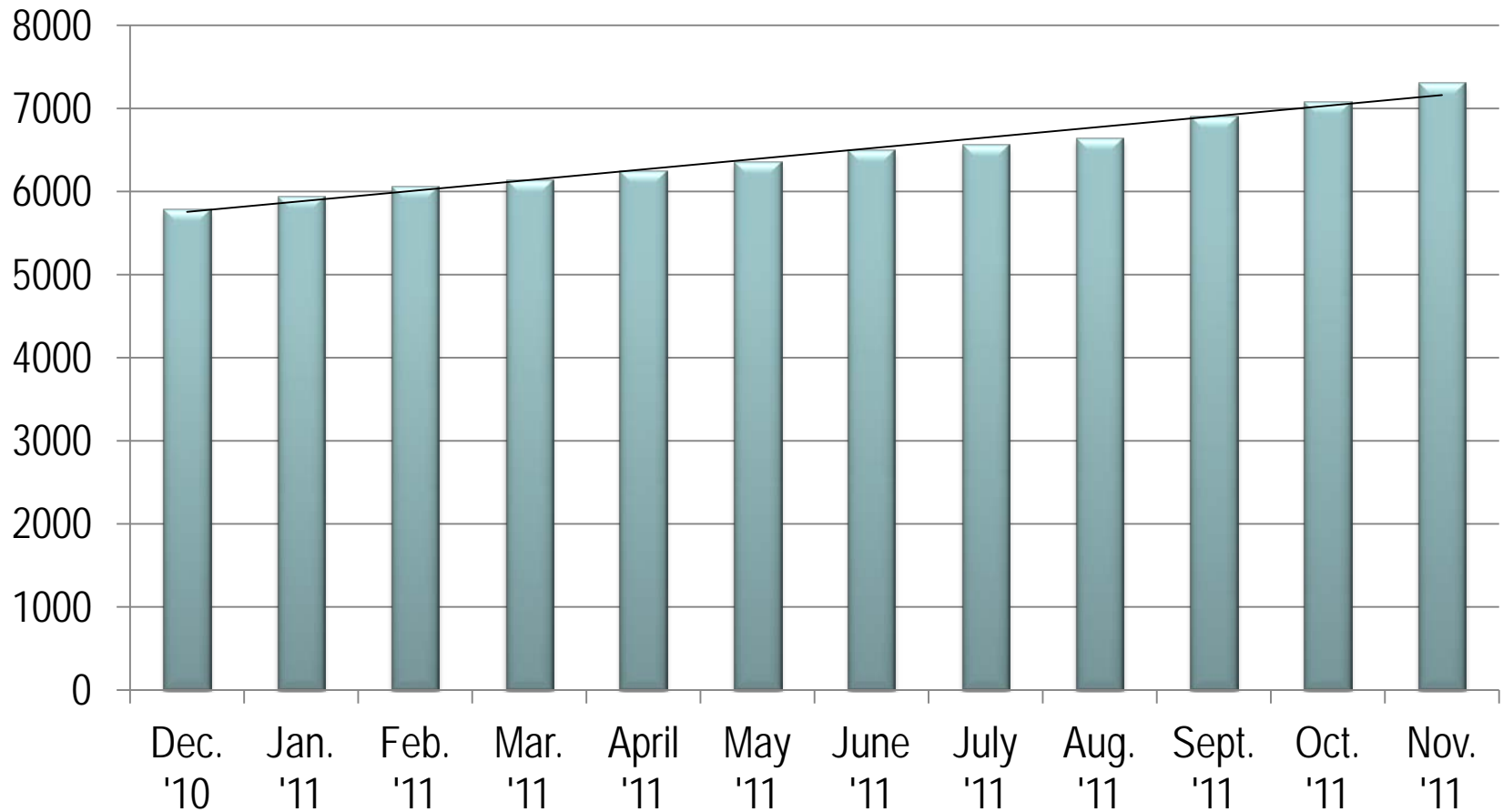
Tolled Trips on I-35W MnPASS Lanes



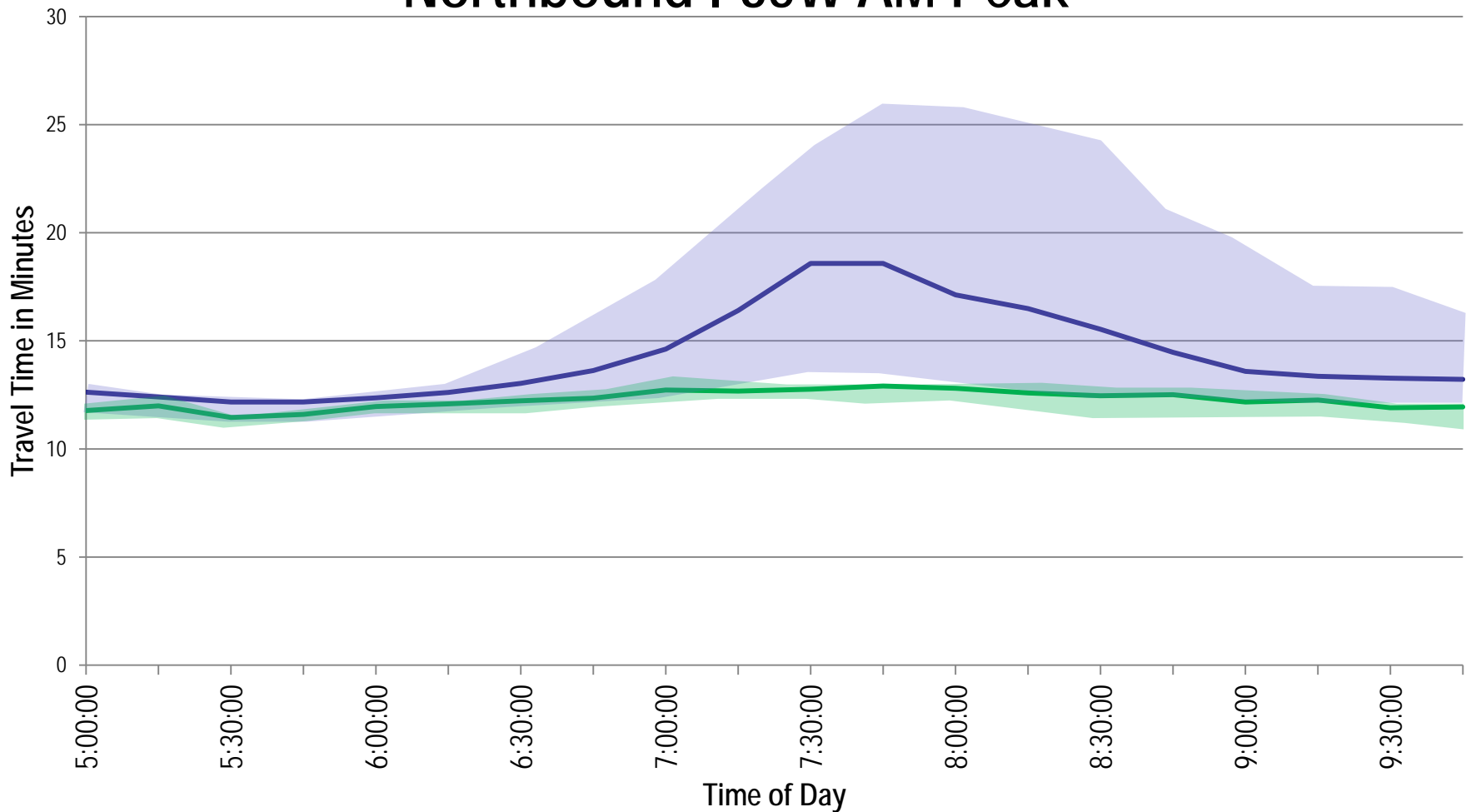
Toll Revenue on I-35W MnPASS Lanes



I-35W MnPASS Customer Accounts



Travel Time Reliability: Northbound I-35W AM Peak



— Average Travel Time in General Purpose Lanes

— Average Travel Time in MnPASS Express Lane

■ General Purpose Lane Travel Time Variability

■ MnPASS Express Lane Travel Time Variability

I-35W MnPASS Results

- 2500-3000 MnPASS users per day prior to Crosstown opening; 500-750 use PDSL
- 7500 new transponders holders in I-35W corridor
 - About 60 new-account holders sign up for 35W per week
- 20-25 % of total customers are MnPASS
 - < 8% violation rate
- Average toll is \$1.49: Tolls range from \$0.25-8.00
- Almost 2000 new transponder holders in I-394 corridor as well

Transit

- MARQ2 Express Routes
 - 18 percent increase in ridership (4300 new riders)
 - Significantly enhanced customer experience
 - Time savings are substantial (5-10 minutes)
 - Operating speeds have increased substantially
- Park and ride spaces occupied
 - 1484 spaces added at four park and ride facilities
 - 45 percent of capacity filled on average

BRT Integration In I-35 W Corridor



Technology

- Bus arrival electronic messaging
- Park and ride availability
- Lane guidance systems on buses for use on Highway 77 Bus Only Shoulders
- Intelligent lane control signals
 - Driver safety advisories
 - Speed limit advisories
- Arterial signal coordination

eWorkPlace

- 48 Employers: 4212 employees
- 55 minutes of time saved per teleworker per week
- \$1,500 saved annually per teleworker
- 5000 peak period trips saved on I-35 and I-394 each week
- 155,000 VMT saved each week
- 8.2 million pounds of CO2 saved annually
- 92% of employees believe productivity improved or remained unchanged
- eWorkPlace brand and services will be continued through TMO partnerships

UPA Lessons Learned

- Strong commitment from all agencies at all levels
- Deployment and operation – fewer meetings more doing
- Clear decision-making authority and assignment of responsibilities helped ensure timely project delivery
- The amount of federal funds, and the threat of losing those funds, were clearly drivers
- Real and meaningful deadlines created motivation – no one wanted to let the team down

UPA Lessons Learned

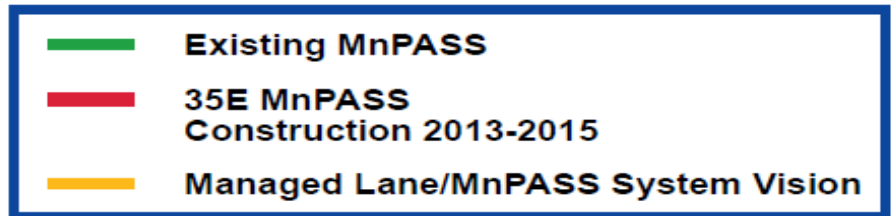
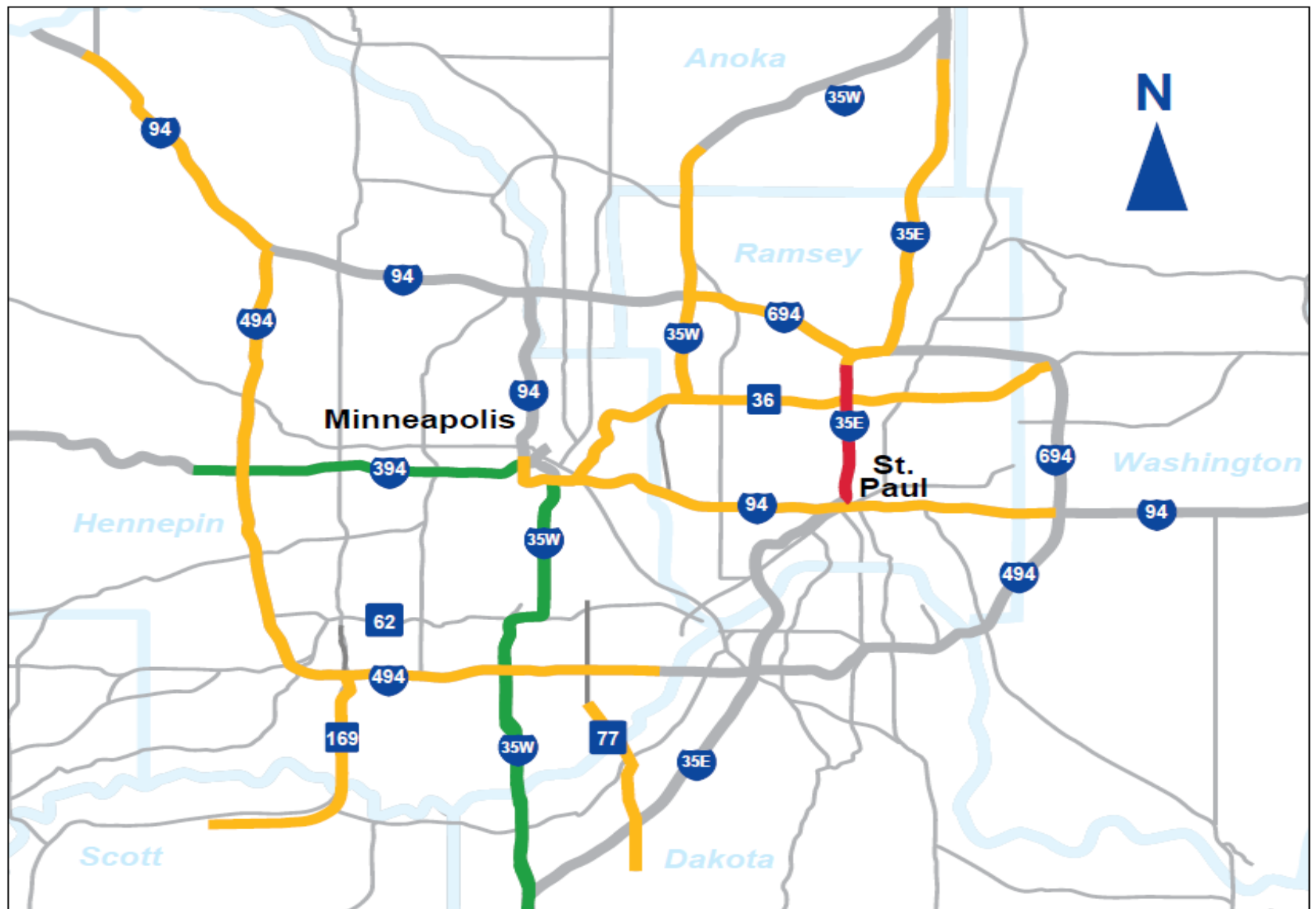
- Multimodal solutions work
 - Simple solutions (bus bypass lane)
 - Major projects (MARQ 2, MnPASS)
 - Technology and telecommuting
- Good planning doesn't just sit on the shelf – it prepares you for opportunities
- Learning on I-35W managed lanes is directly transferable to other corridors
- Must continue to market strategies and performance

UPA Lessons Learned

- Public supports optional toll lanes if shown the benefits:
 - A low cost and sustainable congestion free alternative
 - Added capacity and performance when capacity is most needed
 - Strong transit community support has emerged
 - Offers choice, time savings and guaranteed trip time reliability for commuters

What's Next?

- Transfer managed lane experience
 - Implementing managed lanes and shoulders on I-94 in 2011
 - Study underway on I-35W north
 - Studying MnPASS lane using movable barrier on major river crossing (Highway 77)
- Transit
- Technology
- eWorkPlace continues with U of M and TMO's
- All existing HOV lanes converted to HOT
 - More dynamic shoulders under consideration
 - MnPASS Phase II Study prioritizing system expansion areas
 - I-35E
 - Highway 36



Questions and More Information

Visit

www.mnpass.org

Or

www.dot.state.mn.us/upa

or Contact:

kenneth.buckeye@state.mn.us

Lake Washington Urban Partnership

Patty Rubstello, PE

Director, Toll Systems Development & Engineering

Dave Dye

Deputy Secretary

Paula Hammond

Secretary of Transportation

Steve Reinmuth

Chief of Staff

Lake Washington Urban Partnership Agreement



- \$154.5 million federal grant to apply these innovative approaches to reduce congestion in the SR 520 corridor
 - **Tolling** – time of day pricing of existing facility to encourage travel at off-peak hours and reduce trips
 - **Technology** – variable speed limits, lane control and real time driver info
 - **Transit** – added over 130 new daily bus trips increasing service by 20 percent
 - **TDM** – educational efforts with employers, van/carpools
- Partners:
 - Puget Sound Regional Council
 - King County
 - Federal Highway Administration
 - Federal Transit Administration

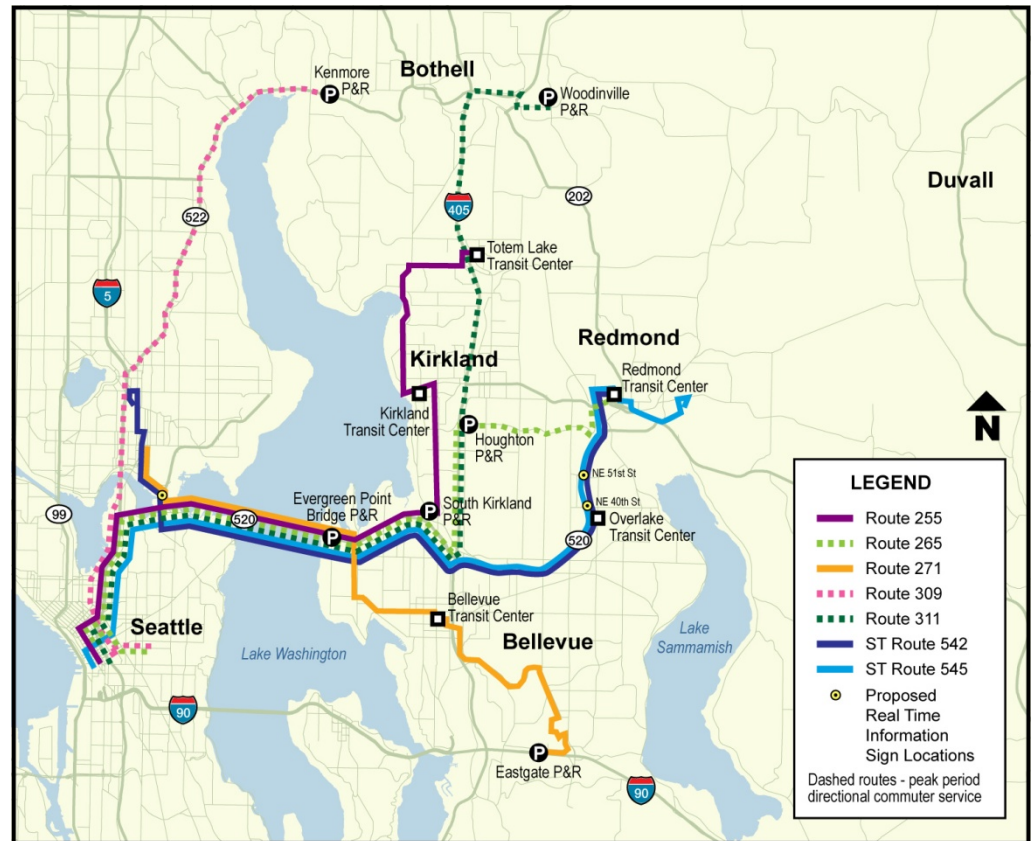
TDM: expanding travel options



- Employer programs take time and best if you have a carrot/stick
 - Incentives
 - Tolling
- Know the situation from all aspects
 - P&R Lot capacity
 - Amenities
- Telework programs are the hardest to get started
 - Employer
 - Employee
- How do you measurement effectiveness?

Transit: Enhanced Bus Service

- As the schedule for tolling slipped, it made it difficult to manage when the additional service could be implemented
- With additional service added to SR 520, ridership has grown faster here than on other corridors



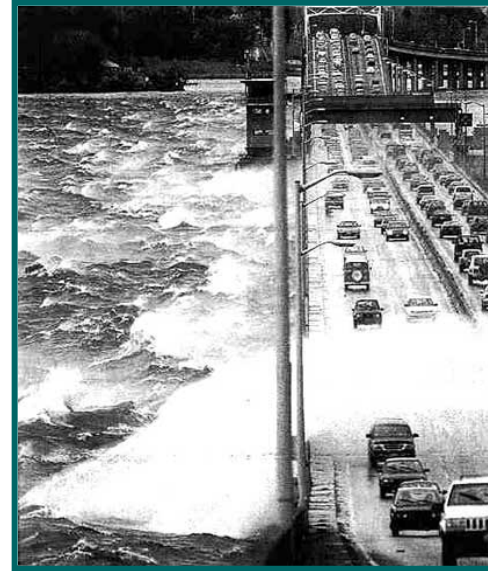
Technology: Smarter Highways



- Lack of standards
 - Coordinate early with FHWA on sign messages
- Standard Operating Procedures
 - Spend time to think beyond the normal situations
- Test procedures
 - Plan ahead
- Education – Lots of it!
 - Media
 - Video
 - Variable speed limits

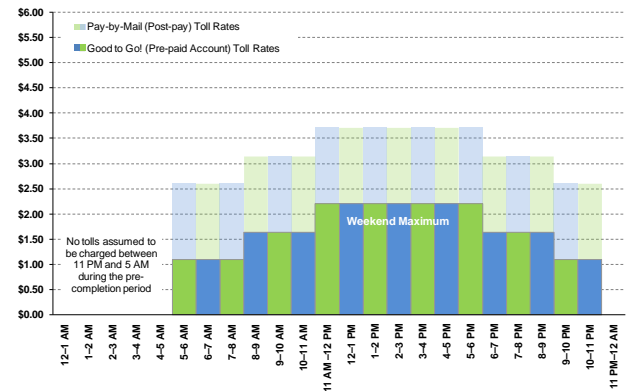
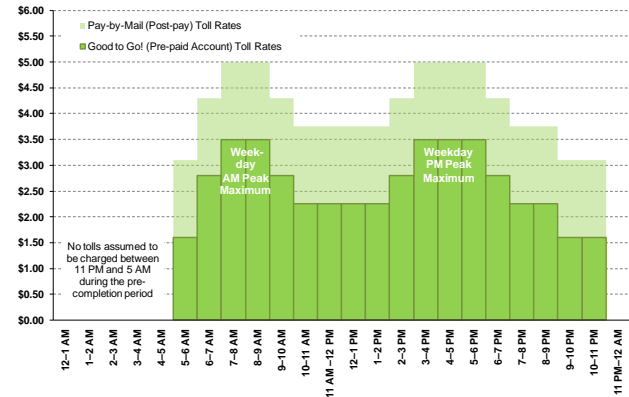
Tolling: SR 520 bridge

- Having something to sell
 - Vulnerable Floating Bridge
- Tolling an existing facility
 - History is helpful
 - What no Toll Booths?
- Forecasting Driver behavior
 - Diversion
 - Value of Time



Tolling: SR 520 bridge cont.

- Before you locate where you will toll, think long and hard about the physical environment
- Schedule was too aggressive
- TEST & TEST & TEST
- Education
 - No Toll Booths – Really!
 - Pay by Mail (Toll Bills)
 - Time of Day Pricing
 - Multiple types of Passes



What's next in Washington state?

- December 29, 2011: Tolling begins on the SR 520 bridge
- Evaluation and monitoring
- Influence of SR 520 tolling on future tolling the region



For more information please contact:

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Project Web Page & Toll Web Page

<http://www.wsdot.wa.gov/Projects/LkWaMgt/>

<http://www.wsdot.wa.gov/Tolling/520/>

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