

Transit With Bikesharing: Overview of Practice and Potential APTA Sustainability August 6, 2012

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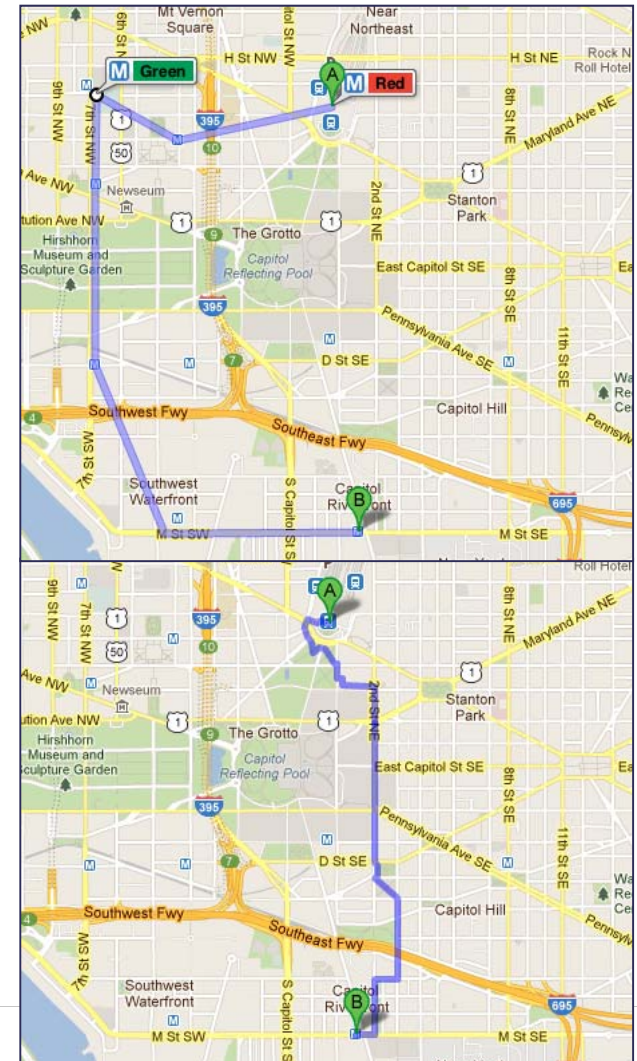
Avoiding Waits and Deviations

- No waiting for a vehicle (ideally)
- Washington DC's Union Station
 - Most common 2011 origin/ destination for bikeshare trips to/from USDOT bikeshare station*
 - For commuter rail/ Amtrak riders, avoids two transfers to/on Metrorail
 - Avoids \$2.15 in subway fare each way**
 - Peak period six minute predicted time savings each way***

*Capital Bikeshare 2011 data presented at JDLand.com

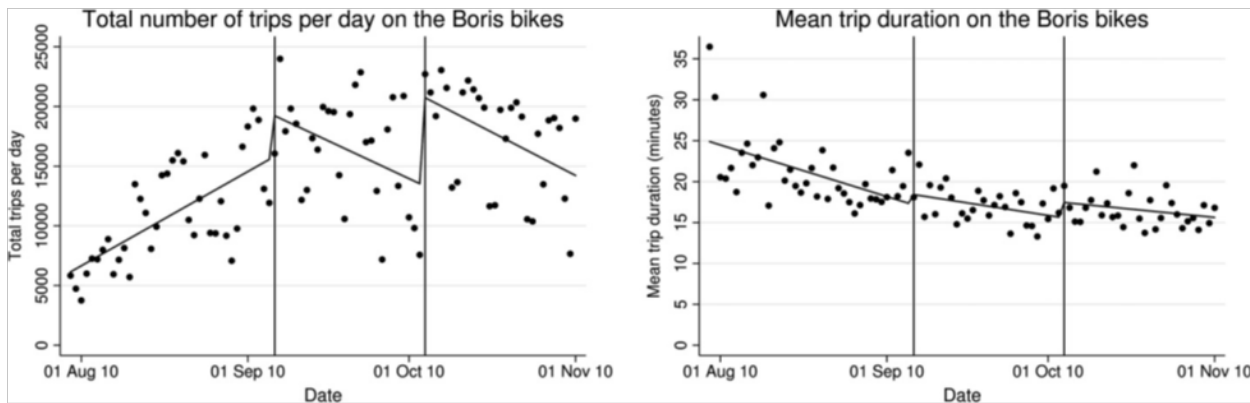
**Peak-of-the-peak non-discounted fare only, does not account for CaBi membership costs

***Google Maps predicted travel time difference between modes at peak time period



Service interruptions

- Capital Bikeshare bridges Metrorail service outages
 - Oct 2010 weekend shutdowns*
- BorisBikes and London Underground strike**



*Greater Greater Washington, Oct 2010, <http://greatergreaterwashington.org/post/7521/take-cabi-during-this-weekends-metro-trackwork/>

**Fuller, D., Sahlqvist, S., Cummins, S., Ogilvie, D. The impact of public transportation strikes on use of a bicycle share program in London: Interrupted time series design. 2012, *Preventive Medicine* 54, 74–76

Sustainable Operating Cost Recovery

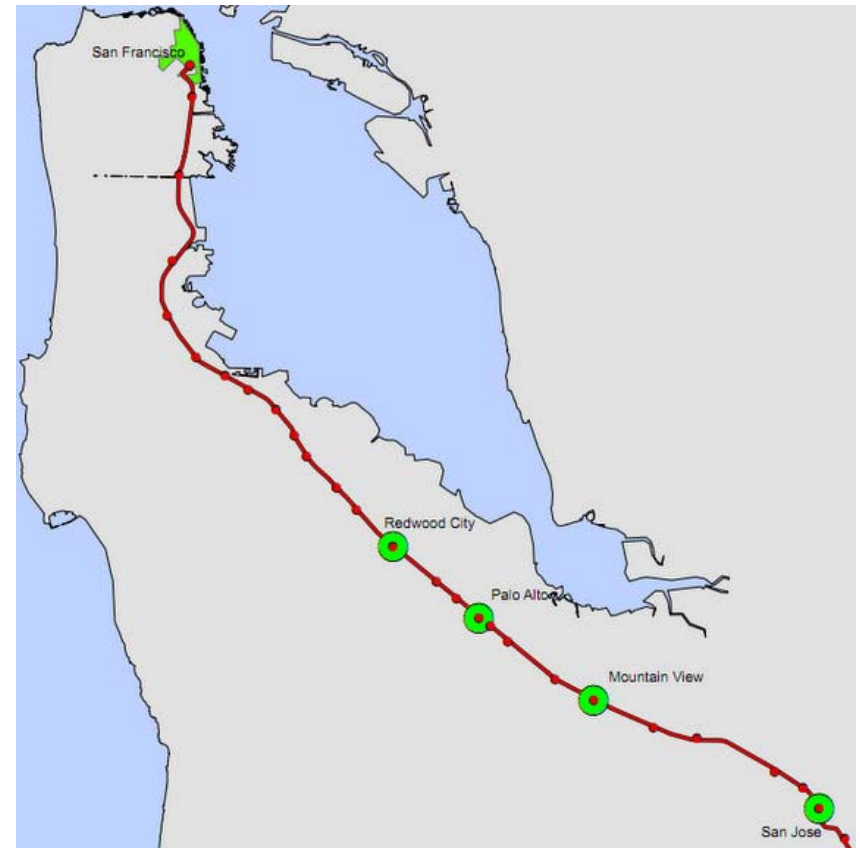
System	Cost Recovery
Capital Bikeshare (DC)	120%*
Capital Bikeshare (VA)	53%*
B-Cycle Denver	Approx 100%**
Nice Ride Minneapolis	Approaching 100%**

*DeMaio, P. "Capital Bikeshare Striving to Become Financially Self-Sufficient," *The Bike-Sharing Blog*, <http://bike-sharing.blogspot.com/2012/02/capital-bikeshare-striving-to-become.html>

**Virginia Tech Studio Class, "Capital Bikeshare Study: A Closer Look at Casual Users and Operations," Jan 2012, <http://ralphbu.files.wordpress.com/2012/01/vt-bike-share-study-final3.pdf>

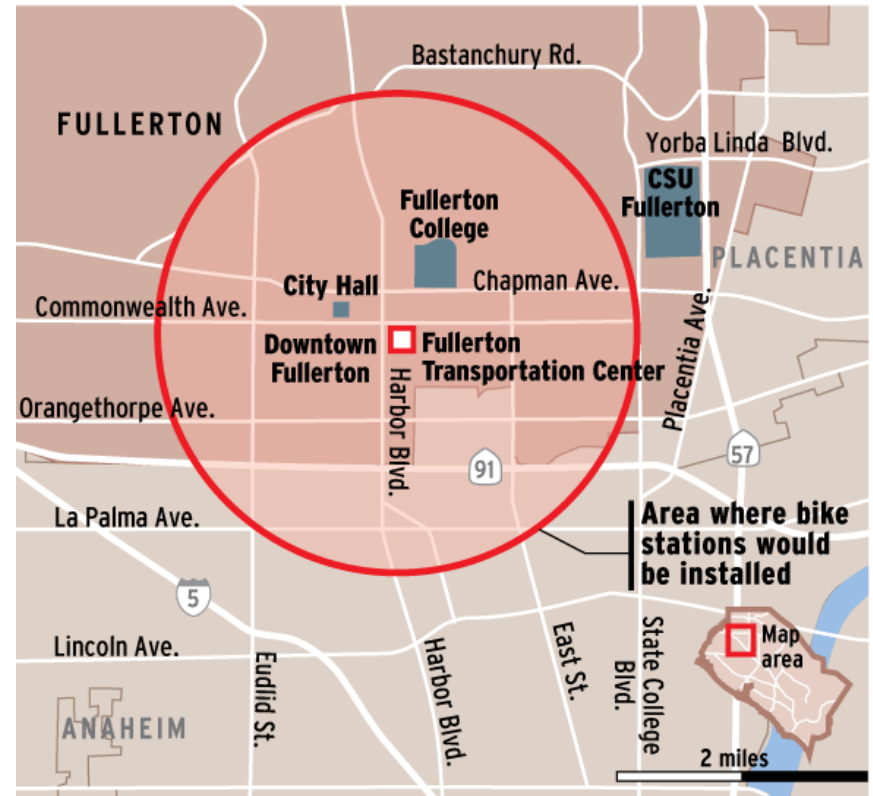
Station Co-location

- San Francisco Bay Area
- Fall 2012
- Nodes of system separated by 50 miles, connected by Caltrain
- <http://www.baaqmd.gov/Divisions/Administration/RFP-RFQ/Open-RFP-RFQ.aspx>



Station Co-location

- Orange County Transportation Authority
- Funded by FTA Bus Livability Program grant
- 15 stations, 150 bikes oriented around Metrolink in Fullerton

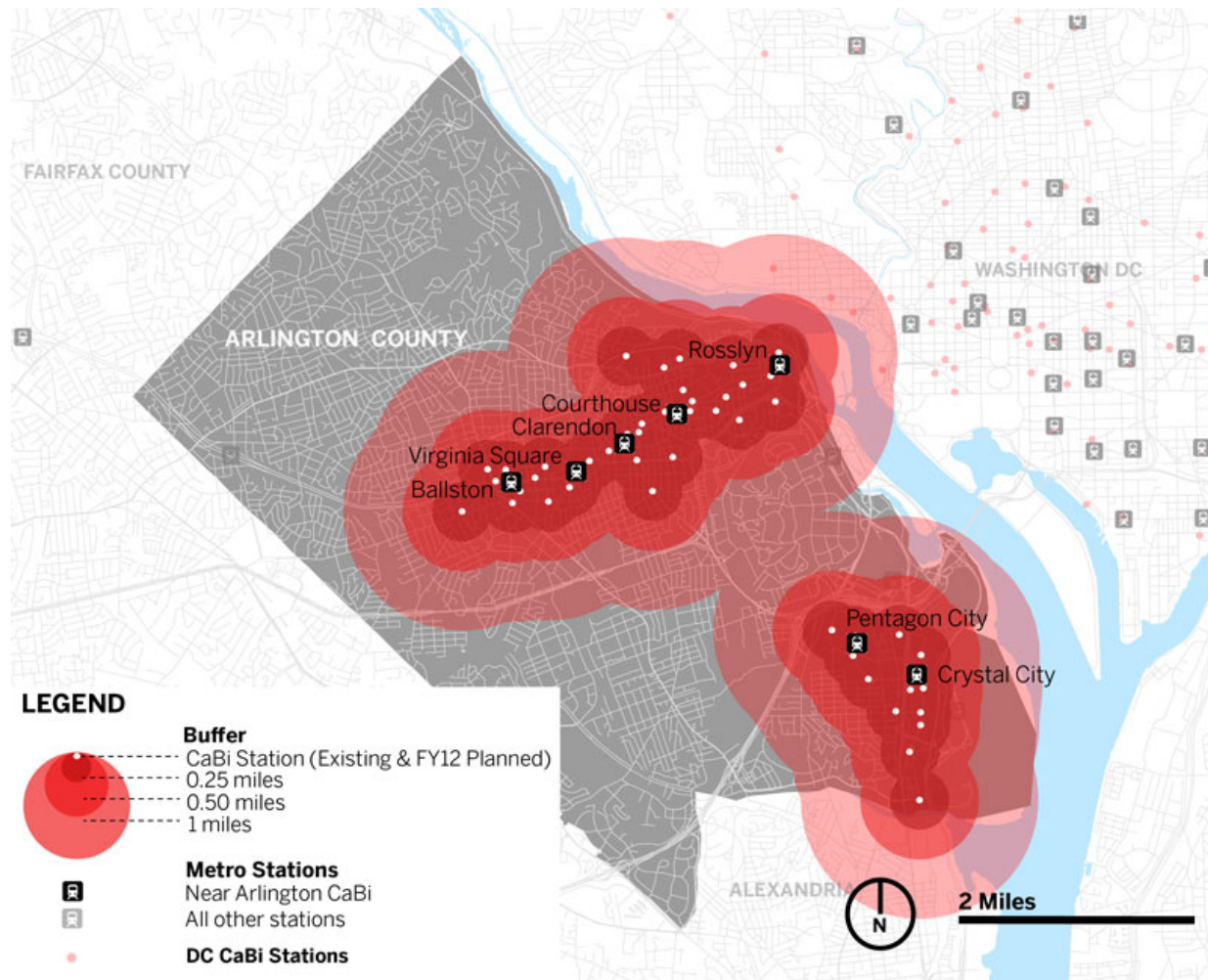


The Register

Graphic: The Orange County Register, Jan 26th, 2012,

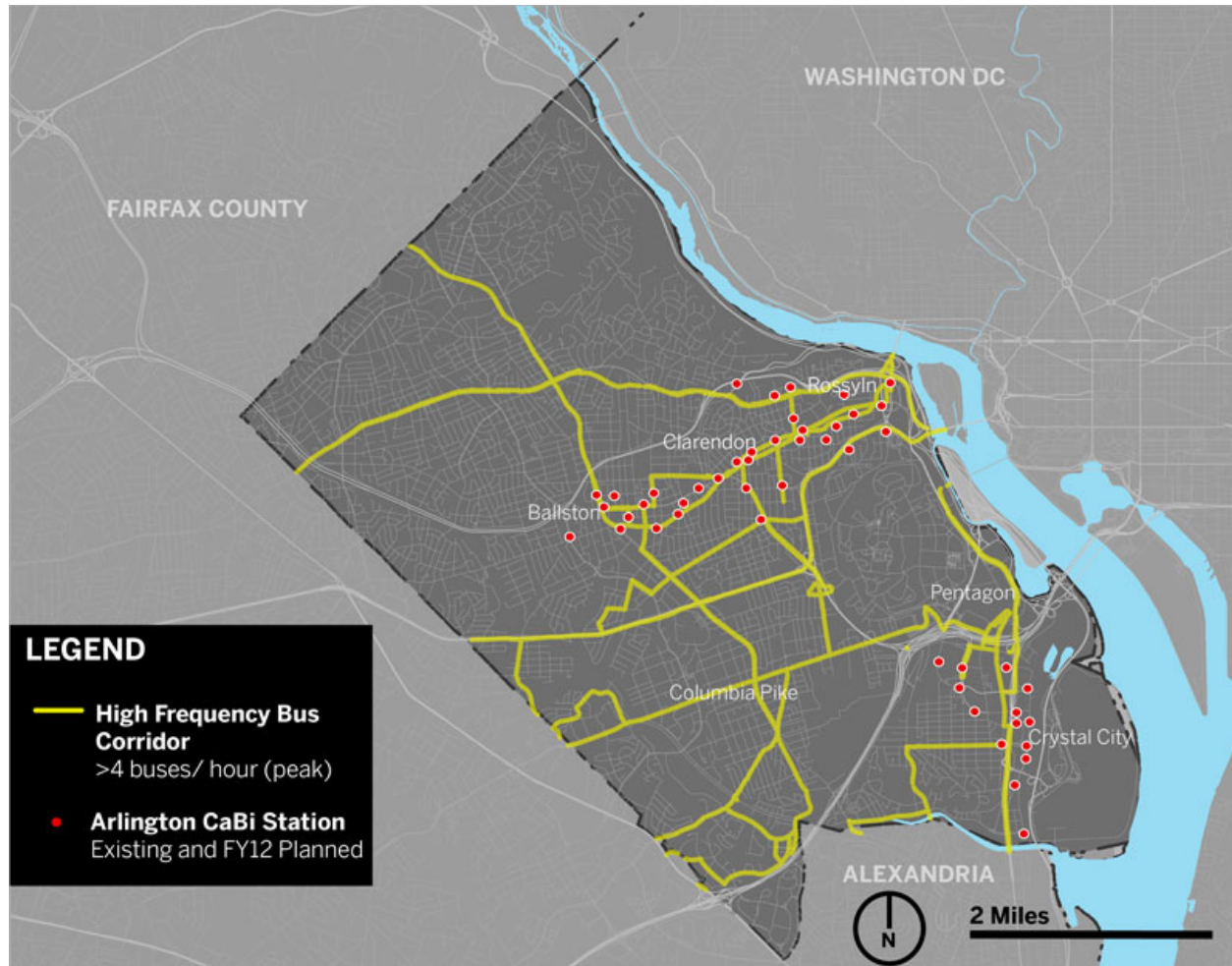
<http://www.ocregister.com/articles/bike-337515-program-octa.html?graphics>

Arlington - Connecting to Metrorail



<http://www.bikearlington.com/pages/bikesharing/arlington-bikeshare-transit-development-plan/map-gallery/>

Arlington - Connecting to Buslines



<http://www.bikearlington.com/pages/bikesharing/arlington-bikeshare-transit-development-plan/map-gallery/>

System Co-Branding and Mapping

“Common liveries and ‘branding’ for vehicles, stops, maps, and timetables help passengers appreciate that a public transport system really does work as a network...”

--Paul Mees, *Transport for Suburbia*

- Very few systems worldwide share branding with counterpart transit system
- Sponsorship/advertising is a further obstacle
- Ad swaps (Denver Bicycle and RTD)
- Maps and Apps could be shared (Boston pursuing)



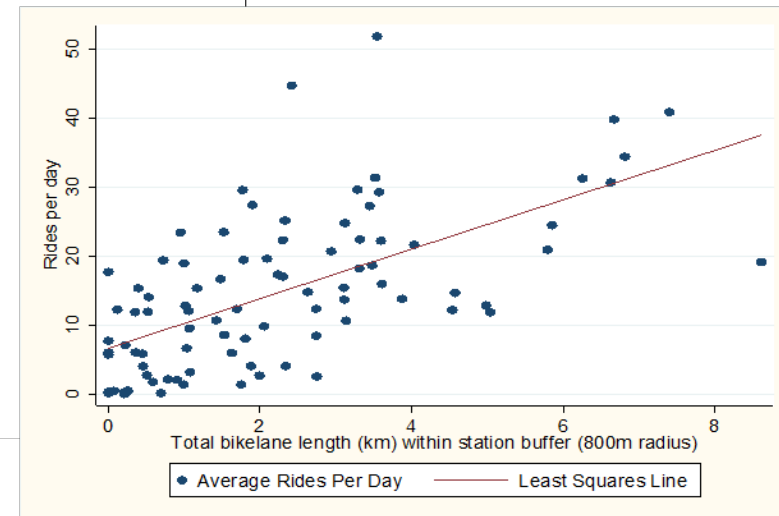
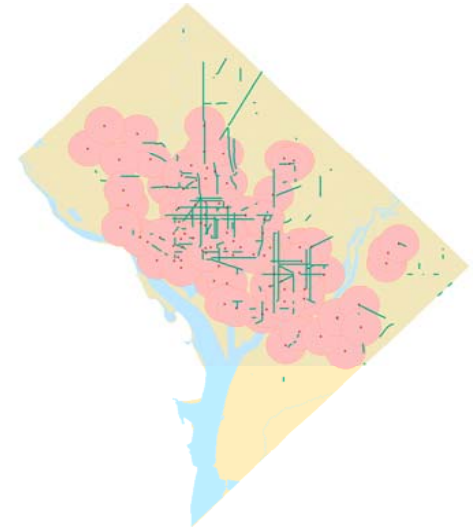
All pictures courtesy of godcgo.com

Bike Travel Facilities Near Stations

- Important for bike/transit integration generally
- Especially important for bikeshare
 - Generally less experienced riders
 - Slower heavier bicycles
- Demonstrated correlation between bikeshare and bike lanes*
- FTA Catchment Policy
- New Multimodal Level of Service in Highway Capacity Manual

*Buck, D., and Buehler, R., 2012. *Bike Lanes and Other Determinants of Capital Bikeshare Trips*. 91th

Transportation Research Board Annual Meeting, #12-3539



Equitable Access to Bikeshare

- Assisting targeted populations
 - Security deposit assistance
 - Installment payments
 - Station siting
- Rockville (Montgomery County, MD)
 - JARC grant
 - Suburban system near trunk-line transit

Common Farecard

- Allow seamless transfers between transit/bikeshare
- Stated desire for common account #s in San Francisco Bay Area, interest expressed in Washington DC and NYC
- Hardware, institutional, and taxation obstacles



All pictures courtesy of Santa Clara Valley Transportation Authority, vta.org

Roundtrip Workday Rentals

- Lets user take bike to work in morning, return to same station in evening
- Expands destinations to those without bikeshare docks
- OV-fiets (Netherlands)
 - 85,000 members, 230 stations, 5000 bikes
 - €10 annual fee, + €3 for 24 hrs use*
- Brompton Dock
 - Folding bikes from lockers
 - €50 annual fee **

*<http://www.aviewfromthecyclepath.com/2011/03/bike-share-dutch-way.html>

** <http://www.bromptondock.co.uk/>





Example

- Montpellier, FR (Mediterranean coast)
- 50 stations, operated by and co-branded with transit authority
- 1500 bikes, 800K rides in 2008*
- Free day-use by transit pass holders, fully integrated fare system
- Bikeshare rentals also available
- Leisure bikes at beach/country stations for tourist package use
- Along with other measures, 10-year transit rides increased 2.4 times**

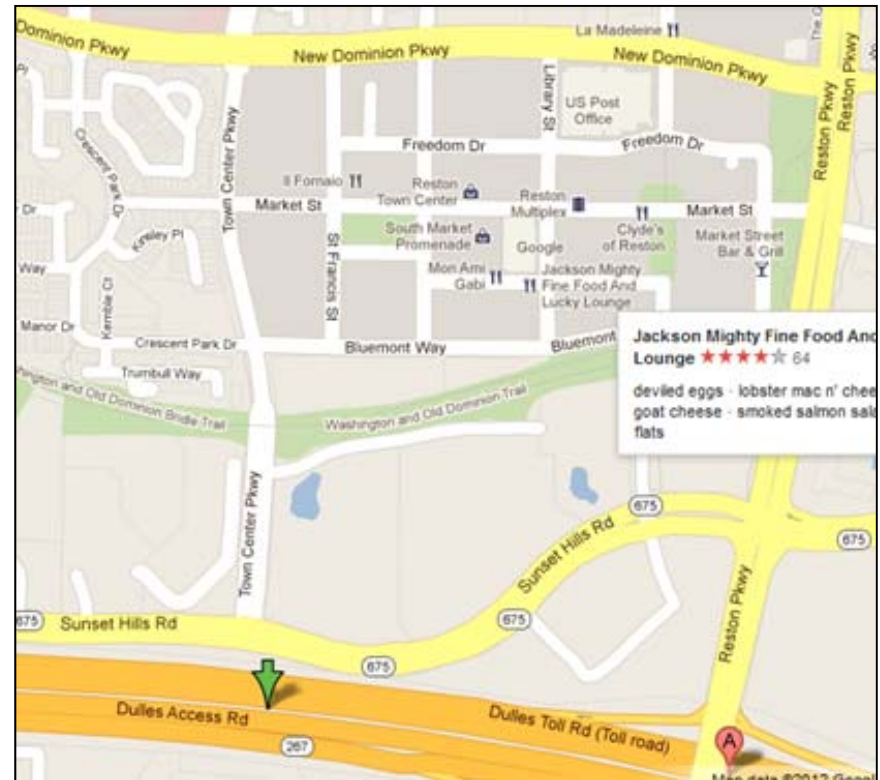


*Veolia Transport webpage, "Bike Hire and Car Sharing," accessed 2/28/12, <http://www.transdevplc.co.uk/our-expertise.jsp?expertisID=7>

**Le Tourneur, Marc. "Parking management and new mobility services key to increasing ridership for public transport operators." *Public Transport International*, Jan/Feb 2012.

Connecting Moderate-Distance Transit to Dense Communities

- Silver Line Metro station to be located in median of toll-road
- Reston Town Center compact development nearly half-mile to the north
- No parking at transit station



Dynamic Bikeshare Supply?

TRANSIT

- Various Transit ITS research programs with demand response goal
 - ICM
 - IDTO
- Information shared among operators and patrons to improve travel time and reliability

BIKESHARING

- Information already used real-time by users through website and smartphones before/during trips
- Use of predictive analytics in system balance operations coming

Integrate transit-oriented bikeshare into transit demand response plans?

Please Share Your Thoughts and Ideas With Me

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- FTA – <http://www.fta.dot.gov/bikesandtransit>
 - Includes FAQs on SAFETEA-LU funding, Bike/Ped catchment policy
- NACTO -- http://nacto.org/bike_share/
- PBIC -- <http://www.bicyclinginfo.org/promote/bikeshare.cfm>
- CUTR -- <http://www.cutr.usf.edu/index.shtml>