



Park & Ride Lot Investment Strategies

September 24, 2014

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Evolution of TDM program

P&R Lots, SRTS, Bike/Ped

- Pre-2011 – Main focus was maintaining P&R inventory
 - Secondary – Review Right of Way residual parcel requests
- 2011 – Decision to initiate more formal TDM program
- 2011 – Kicked off P&R Lot Inventory and Usage Study
 - Comprehensive update to inventory
 - Compiled P&R recommendations for new locations
 - Improved website
- 2013 Governor’s press release
 - Focused on new website
- FY-14 Commissioner’s Business Plan
 - Develop a commuter Park & Ride investment strategy for each construction district to guide funding for demand-management strategies to address congestion in Virginia by June 30, 2014

Park & Ride Lot Investment Strategies

- Compiled lot recommendations from 2011 P&R study
 - 2011 study compiled recommendations from plans developed by MPO / PDCs, localities, DRPT, VDOT, etc.
- Vetted list through district planners and MPO/PDCs
 - Sept/Oct 2013 – VDOT district coordination with MPO/PDCs
- Developed methodology based on best practices and peer reviews of other DOTs during the 2011 P&R study
- Richmond District served as the pilot district to develop and test methodology to evaluate and rank P&R recommendations

Investment Strategy Development Process

- Compiled recommendations from 2011 P&R Study
- Created spreadsheet to compile all recommendations with evaluations and data ranking
- Expanded information for each recommendation
 - Description
 - Lat / Long
 - Type of project (new, enhancement, expansion)
- Removed duplicate recommendations
 - Recommendations came from multiple sources
 - I.e. Richmond district started with over 200 recommendations; down to **39** to be evaluated and ranked
- Collected ranking and evaluation data
 - Planning data from Statewide Planning System (SPS)
 - On The Map (US Census, 2011)

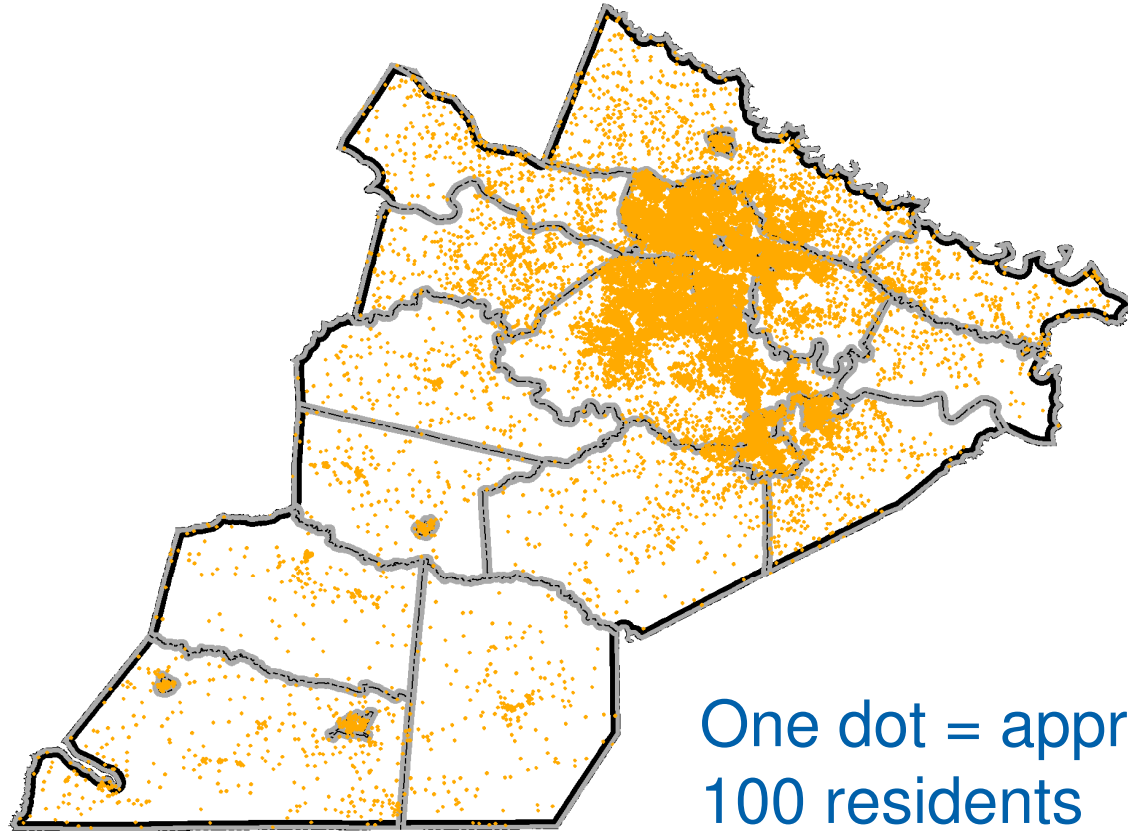
Methodology – Evaluating Need for P&R Lots

Priority Investment Areas (PIA)

- Areas identified as in need of P&R lots due to convergence of:
 - **Census population density** – maps customized for each district – used to identify concentrations of people
 - **Volume per hour along SPS routes** – used to identify major commute routes
 - **Location of existing lots** – color coded by occupancy
- Recommendation does not have to be in a PIA area to rank high – but it will get extra points in priority assessment

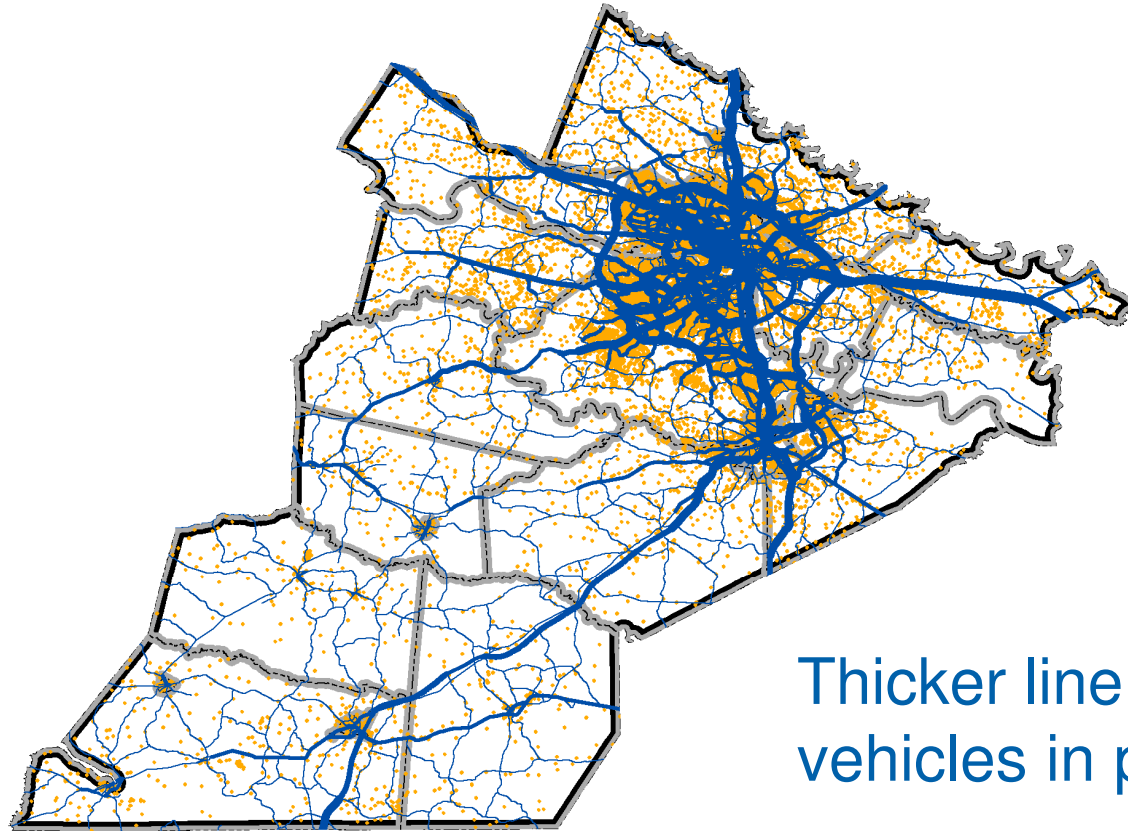
Layer 1 – 2010 Census Population Density

Identifying PIAs



Layer 2 – Road Volume Per Hour

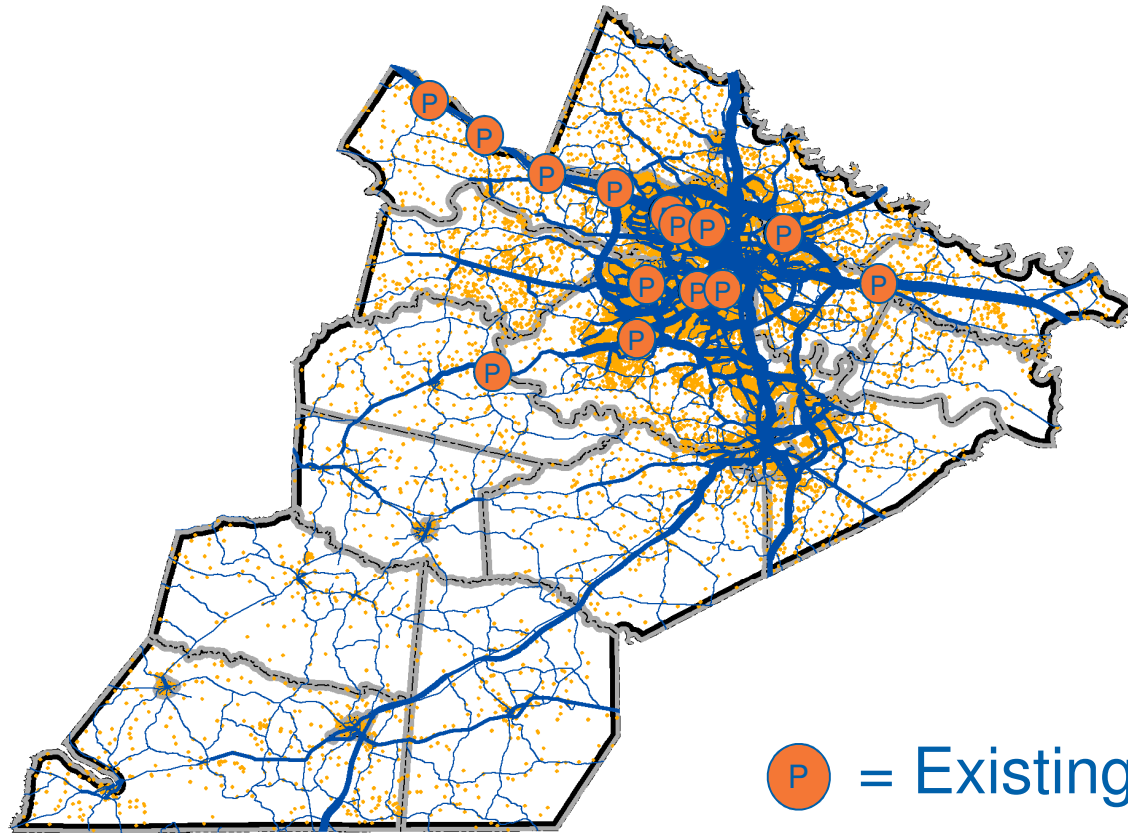
Identifying PIAs



Thicker line = more vehicles in peak hour

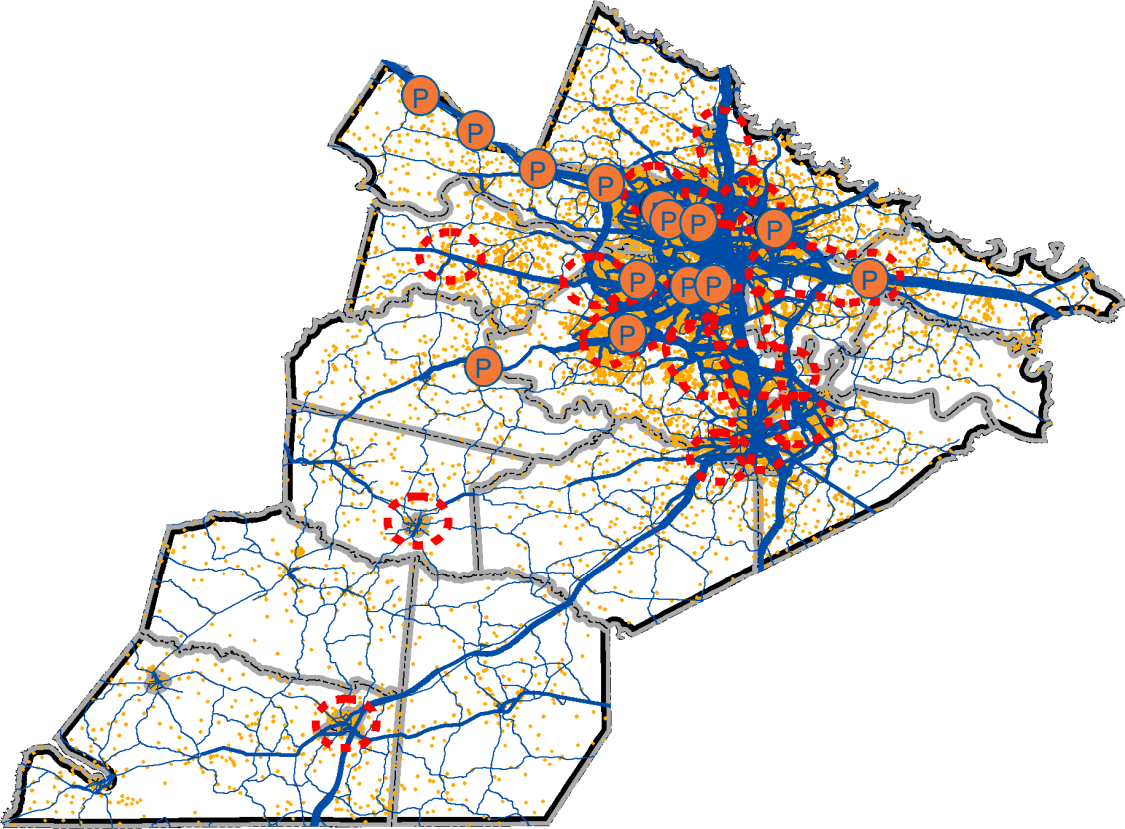
Layer 3 – Existing P&R Lots

Identifying PIAs

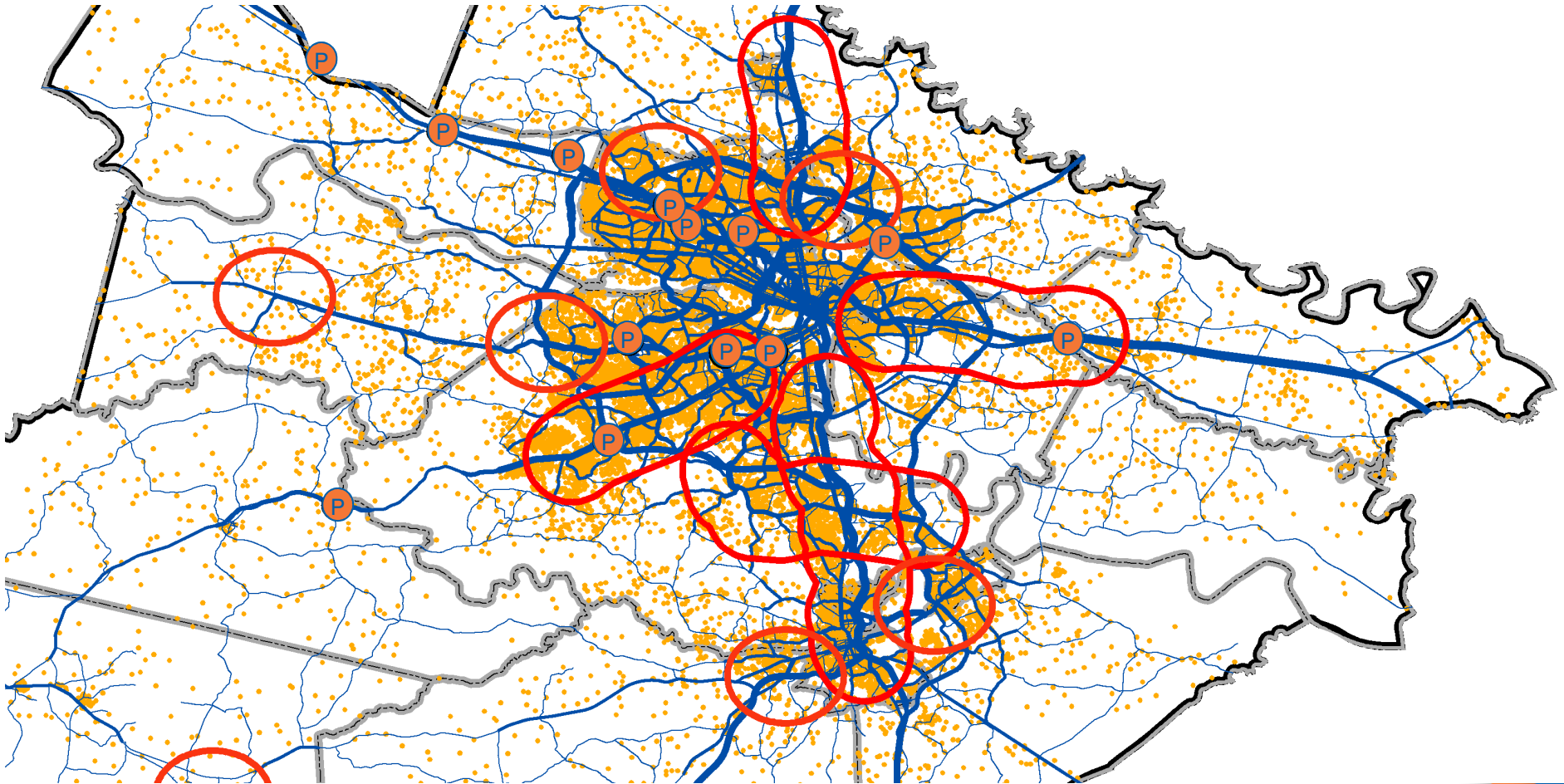


Identify Areas of Convergence

Identifying PIAs



Priority Investment Areas (PIA)



Recs in PIAs = higher weight in priority assessment

Performance Measures

Data Collection

- SPS (ADT, LOS, Route/Corridor served)
- On The Map (U.S. Census)
 - Number of workers within 3 miles of recommendation
 - Number/percent of workers within 3 miles of recommendation who travel outside 3-mile area for work
 - Number /percent of workers within 3 miles of recommendation who travel greater than 25 miles for work (50 miles for Bristol, Culpeper and Salem districts)

P&R Recommendations

Rec ID #	District	Description of Project	Latitude	Longitude	Major Route(s) Served	ADT (Route Served)	LOS (Route Served)	OTM - Total All Jobs	OTM - Less Than 10 miles	OTM - 10-24 miles	OTM - 25-50 miles	OTM - Greater than 50 miles	# Workers (w/in 3 mi radius)	# Workers Travel OUTSIDE Area for Work
111	RIC-12	Richmond Add a new lot at/near VA-106 & I-64, original rec from MPO CLRP. Only existing lot nearby is located at 33/60 & 249 with 37 spaces.	37.504272	-77.085470	64/60/33	71568	F	1833	252	848	354	379	1833	1809
112	RIC-13	Richmond Add new lot at/near I-64 & VA-155, original rec is from MPO's CLRP.	37.495378	-77.023466	64/60	73916	D	655	110	319	202	24	655	637
113	RIC-14	Richmond Add new lot at/near I-95 & US-54, original rec is from MPO's CLRP.	37.759014	-77.461737	95/1/301	114314	B	3631	1670	1583	321	57	3631	2870
114	RIC-15	Richmond Add new lot at/near I-95 & VA-150, original rec is from MPO CLRP.	37.445485	-77.442213	95/1/150/895	125379	E	11439	5953	3420	244	1822	11439	10957
115	RIC-17	Richmond Add new lot on I-64 near Goochland, original rec is from MPO CLRP. Land currently owned by VDOT will only accommodate 50-	37.664300	-77.655200	64/288/250	108839	E	11701	5761	4045	348	1547	11701	10782
116	RIC-18	Richmond Install sidewalks and streetscaping (lot is on Rte 60 / 33, near I-64, Bottom's Bridge, New Kent)	37.514420	-77.198940	64/60/33	73916	C	3247	589	2244	260	154	3247	3166
117	RIC-20	Richmond Construct park & ride lot (VA-360 & I-295)	37.607100	-77.365700	95/360/1/64	33852	C	17666	9433	5314	729	2190	17666	16048
118	RIC-21	Richmond Construct park & ride lot (near US 60 & S Laburnum Ave)	37.518700	-77.368000	64/60	73916	D	22031	11379	6257	500	3895	22031	19152
119	RIC-22	Richmond Construct park & ride lot (Route 5/New Market Rd & S Laburnum Ave)	37.466220	-77.383100	5/895	7685	C	6037	3503	2235	87	194	6037	5866
120	RIC-23	Richmond Construct park & ride lot (US 10 & I-95) Add new lot at I-95 & Route 10, estimated 250 spaces, Rec is from CLRP	37.354100	-77.403900	95/10	107761	D	14180	4955	5649	565	3011	14180	13175
121	RIC-27	Richmond Construct park & ride lot (95 @ 802/Lewistown Rd)	37.720800	-77.446300	95/295	129984	D	7372	4011	2757	452	152	7372	6476
122	RIC-30	Richmond Construct park & ride lot (just west of 288 on Rte 60)	37.512020	-77.696200	60/288	68580	E	8749	3076	4440	203	1030	8749	8349
123	RIC-32	Richmond Obtain park & ride agreement at existing Food Lion - Install park & ride signs (Rte 360 @ Rte 627/Cheatham's Rd, Amelia)	37.364640	-77.937330	360	66227	E	749	165	251	289	44	749	664
124	RIC-33	Richmond Construct park & ride lot (Rte 60/Anderson Hwy & Rte 522/Maidens Rd/Emanuel Church Rd, Powhatan)	37.555780	-77.940700	60/522	61463	E	1087	242	533	302	10	1087	965
125	RIC-35	Richmond Construct park & ride lot (I-64 & Rte 250/W Broad St, Short Pump, near Whole Foods parking lot) (Rec is also similar to one in Transit Plan)	37.648046	-77.601334	64/250/288	108839	E	36074	19901	9873	1025	5275	36074	29788
126	RIC-36	Richmond Construct park & ride lot (I-85 & Rte 460 / 1, west of Petersburg)	37.187500	-77.490800	85/95/460	52311	C	9288	3597	2507	1356	1828	9288	8557

Data from Census OnTheMap tool

Rec ID #	District	Description of Project	OTM - Less Than 10 miles	OTM - 10-24 miles	OTM - 25-50 miles	OTM - Greater than 50 miles	# Workers (w/in 3 mi radius)	# Workers TRAVEL OUTSIDE Area for Work	OTM - # Living in the Selection Area but Employed Outside	% Workers Travel OUTSIDE Area for Work	Total Workers Travel >= 25 mi	% Workers Travel >= 25 mi	OTM - Top Destination	OTM - Top Destination Count	ADT (Rot Served)
111	RIC-12	Richmond Add a new lot at/near VA-106 & I-64, original rec from MPO CLRP. Only existing lot nearby is located at 33/60 & 249 with 37 spaces.	252	848	354	379	1833	1809	1809	98.69%	733	40.52%	City of Richmond	257	71568
112	RIC-13	Richmond Add new lot at/near I-64 & VA-155, original rec is from MPO's CLRP.	110	319	202	24	655	637	637	97.25%	226	35.48%	City of Richmond	94	73916
113	RIC-14	Richmond Add new lot at/near I-95 & US-54, original rec is from MPO's CLRP.	1670	1583	321	57	3631	2870	2870	79.04%	378	13.17%	Town of Ashland	700	114314
114	RIC-15	Richmond Add new lot at/near I-95 & VA-150, original rec is from MPO CLRP.	5953	3420	244	1822	11439	10957	10957	95.79%	2066	18.86%	City of Richmond	2896	125376
115	RIC-17	Richmond Add new lot on I-64 near Goochland, original rec is from MPO CLRP. Land currently owned by VDOT will only accommodate 50-100 spaces.	5761	4045	348	1547	11701	10782	10782	92.15%	1895	17.58%	City of Richmond	2364	108835
116	RIC-18	Richmond Install sidewalks and streetscaping (lot is on Rte 60 / 33, near I-64, Bottom's Bridge, New Kent)	589	2244	260	154	3247	3166	3166	97.51%	414	13.08%	City of Richmond	678	73916
117	RIC-20	Richmond Construct park & ride lot (VA 360 & I-295)	9433	5314	729	2190	17666	16048	16048	90.84%	2919	18.19%	City of Richmond	3630	33852
118	RIC-21	Richmond Construct park & ride lot (near US 60 & S Laburnum Ave)	11379	6257	500	3895	22031	19152	19152	86.93%	4395	22.95%	City of Richmond	5652	73916
119	RIC-22	Richmond Construct park & ride lot (Route 5/New Market Rd & S Laburnum Ave)	3503	2235	87	194	6037	5866	5866	97.17%	281	4.79%	City of Richmond	1951	7685
120	RIC-23	Richmond Construct park & ride lot (US 10 & I-95) Add new lot at I-95 & Route 10, estimated 250 spaces, Rec is from CLRP	4955	5649	565	3011	14180	13175		92.91%	3576	27.14%	City of Richmond	2026	107761
121	RIC-27	Richmond Construct park & ride lot (95 @ 802/Lewistown Rd)	4011	2757	452	152	7372	6476	6476	87.85%	604	9.33%	City of Richmond	7372	129984
122	RIC-30	Richmond Construct park & ride lot (just west of 288 on Rte 60)	3076	4440	203	1030	8749	8349	8349	95.43%	1233	14.77%	City of Richmond	8749	68580
123	RIC-32	Richmond Obtain park & ride agreement at existing Food Lion - Install park & ride signs (Rte 360 @ Rte 627/Cheatham Rd, Amelia)	165	251	289	44	749	664	664	88.65%	333	50.15%	City of Richmond	112	66227
124	RIC-33	Richmond Construct park & ride lot (Rte 60/Anderson Hwy & Rte 522/Maidens Rd/Emanuel Church Rd, Powhatan)	242	533	302	10	1087	965	965	88.78%	312	32.33%	City of Richmond	148	61463
125	RIC-35	Richmond Construct park & ride lot (I-64 & Rte 250/W Broad St, Short Pump, near Whole Foods parking lot) (Rec is also similar to one in Transit Plan)	19901	9873	1025	5275	36074	29788	29788	82.57%	6300	21.15%	City of Richmond	7300	108835
126	RIC-36	Richmond Construct park & ride lot (I-85 & Rte 460 / 1, west of Petersburg)	3597	2507	1356	1828	9288	8557	8557	92.13%	3184	37.21%	City of Petersburg	1281	52311

ON THE MAP

([HTTP://ONTHEMAP.CES.CENSUS.GOV/](http://onthemap.ces.census.gov/))

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[Read New Data Notice \(6/6/2013\)](#)

Search

Search

Search All Names

Import Geography

- Import from KML
- Import from SHP
- Import from GPS

Load .OTM File

Click the "Load" button below to load a .OTM file.

Load

Scale: 100 km, 50 mi

Coordinates: -79.82049, 38.70298



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Selection Preview: Confirm Selection
Confirm and Add Advanced Selection

Help?

Drawing Tools

Navigation

Draw Polygon (Freehand)

Draw Line

Draw Point(s)

Edit Drawn Shape

Clear Selection

Add Layer Selection

No Selected Layer

Add Buffer to Selection

Do Not Buffer

Simple/Ring
Radius: 3 miles

Donut
Inside Radius: miles
Outside Radius: miles

Plume
Start Radius: miles
End Radius: miles

Import Geography

Import from KML
Import from SHP
Import from GPS

Previous Shapes

Selection Area

Selection Area
Freehand Drawing buffered 3.00 miles
Selection Area: 28,261 Sq. Mi
Census Blocks: 547

Perform Analysis on Selection Area

Change Selection Area
Add Advanced Selection

2 km
1 mi

-77.46424, 37.33155

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Selection Preview: Confirm Selection
 Confirm and Add Advanced Selection

Help?

Drawing Tools

Navigation

Draw Polygon (Freehand)

Draw Line

Draw Point(s)

Edit Drawn Shape

Clear Selection

Add Layer Selection

No Selected Layer

Add Buffer to Selection

Do Not Buffer

Simple/Ring
 Radius: 3

Donut
 Inside Radius:
 Outside Radius:

Plume
 Start Radius:
 End Radius:

Import Geography

Import from KML
 Import from SHP
 Import from GPS

Previous Shapes

Selection Area

Analysis Settings

Distance/Direction Analysis in 2011 by All Jobs

Home/Work Area
 Determines whether the selection area is analyzed on where workers live ("Home") or where workers are employed ("Work").
 Home
 Work

Analysis Type
 Determines the type of results that will be generated for the selected area.

Area Profile
 Labor Market Segment:
 All Workers

Area Comparison
 Areas to Compare:
 Places (Cities, CDPs, etc.)
 Labor Market Segment:
 All Workers

Distance/Direction

Destination
 Destination Type:
 Places (Cities, CDPs, etc.)

Inflow/Outflow
 Note: Home/Work choice does not affect results

Year
 Determines the year(s) of data that will be processed in the analysis.

2011
 2010
 2009
 2008
 2007
 2006
 2005
 2004
 2003
 2002

Job Type
 Determines the scope of jobs that will be processed in the analysis.

All Jobs
 Primary Jobs
 All Private Jobs
 Private Primary Jobs

Cancel Go!

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Distance/Direction Analysis

Home to Work

Start Base Map Selection Results

Save Load Feedback Previous Extent Hide Tabs Hide Chart/Report

Display Settings

Labor Market Segment: All Workers

Year: 2011

Map Controls

Color Key

- Thermal Overlay
- Point Overlay
- Selection Outline

Identify Zoom to Selection

Clear Overlays Animate Overlays

Report/Map Outputs

- Detailed Report
- Export Geography
- Print Chart/Map

Legends

- 5 - 66 Jobs/Sq.Mile
- 67 - 251 Jobs/Sq.Mile
- 252 - 559 Jobs/Sq.Mile
- 560 - 991 Jobs/Sq.Mile
- 992 - 1,546 Jobs/Sq.Mile
- 1 - 5 Jobs
- 6 - 33 Jobs
- 34 - 109 Jobs
- 110 - 259 Jobs
- 260 - 505 Jobs
- Analysis Selection

Analysis Settings

Change Settings

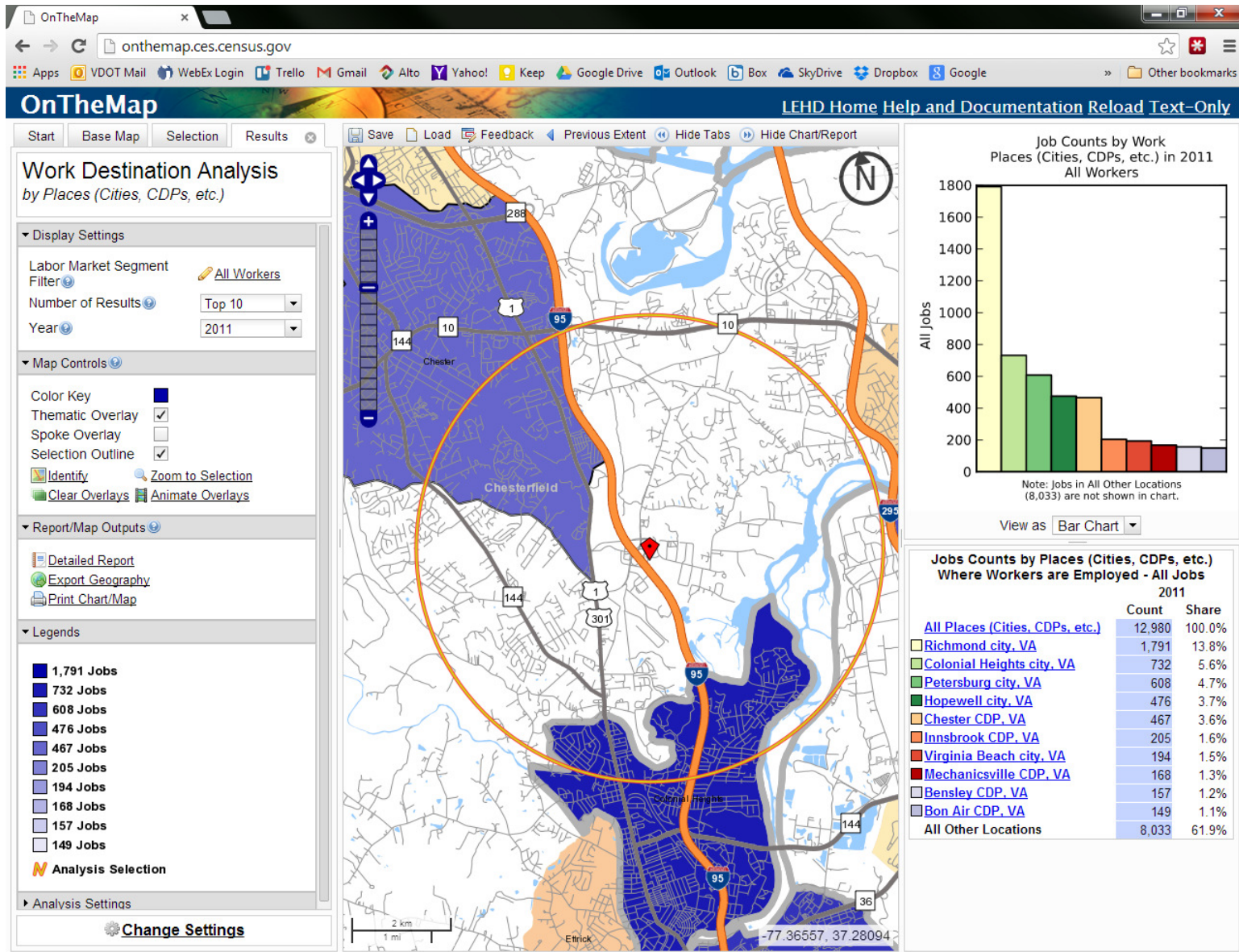
Job Counts by Distance/Direction in 2011
All Workers

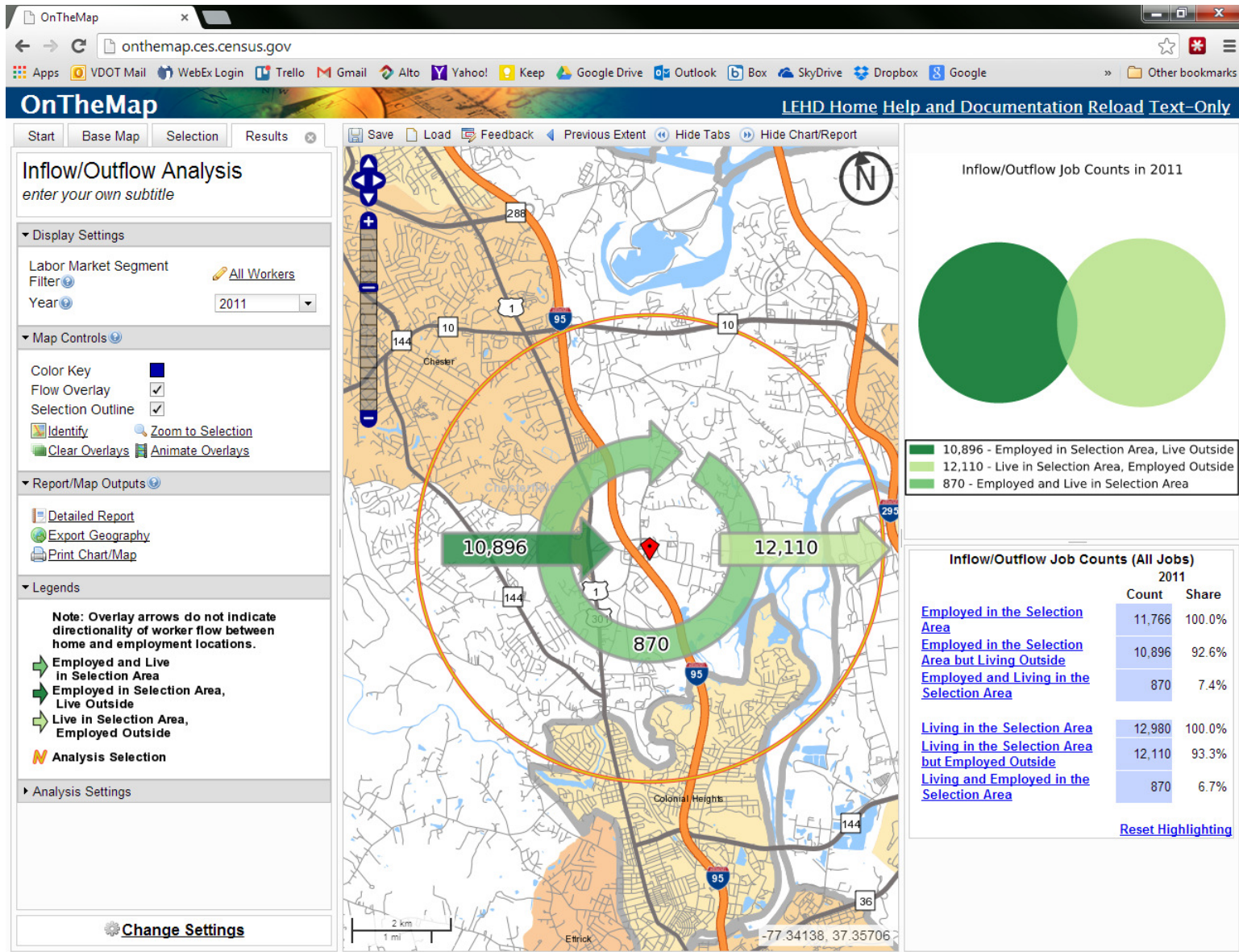
View as Radar Chart

Jobs by Distance - Home Census Block to Work
Census Block

	2011	
	Count	Share
Total All Jobs	12,980	100.0%
Less than 10 miles	5,031	38.8%
10 to 24 miles	4,629	35.7%
25 to 50 miles	815	6.3%
Greater than 50 miles	2,505	19.3%

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Assigning Points

Rec ID #	District	Description of Project	ADT (Route Served)	LOS (Route Served)	Total Workers Travel >/= 25 mi	% Workers Travel >/= 25 mi	Inside Priority Investment Area? (Y/N)	Associate w/ Project? (Y/N)	No Cost Land Available? (Y/N)	VDOT-owned Land? (Y/N)	VDOT Support (Y/N)	Local Support? (Y/N)	MPO/PDC Support (Y/N)	Weighted Score
111	RIC-12	Richmond Add a new lot at/near VA-106 & I-64, original rec from MPO CLRP. Only existing lot nearby is located at 33/60 & 249 with 37 spaces.	0.378	1	0.27	0.891	1		0	0	0	0	0	9.914
112	RIC-13	Richmond Add new lot at/near I-64 & VA-155, original rec is from MPO's CLRP.	0.405	0.6	0.054	0.81	1		0	0	0	0	0	9.141
113	RIC-14	Richmond Add new lot at/near I-95 & US-54, original rec is from MPO's CLRP.	0.837	0.2	0.162	0.189	1		0	0	0	0	0	7.099
114	RIC-15	Richmond Add new lot at/near I-95 & VA-150, original rec is from MPO CLRP.	0.864	0.8	0.378	0.486	1		0	0	0	0	0	9.73
115	RIC-17	Richmond Add new lot on I-64 near Goochland, original rec is from MPO CLRP. Land currently owned by VDOT will only accommodate 50-	0.756	0.8	0.351	0.405	0		1	1	0	0	0	5.326
116	RIC-18	Richmond Install sidewalks and streetscaping (lot is on Rte 60 / 33, near I-64, Bottom's Bridge, New Kent)	0.405	0.4	0.189	0.162	1		1	0	1	0	0	6.797
117	RIC-20	Richmond Construct park & ride lot (VA 360 & I-295)	0.108	0.4	0.567	0.432	0		0	0	0	0	0	3.014
118	RIC-21	Richmond Construct park & ride lot (near US 60 & S Laburnum Ave)	0.405	0.6	0.837	0.675	1		0	0	0	0	0	8.25
119	RIC-22	Richmond Construct park & ride lot (Route 5/New Market Rd & S Laburnum Ave)	0	0.4	0.081	0.027	1		0	0	0	0	0	6.905
120	RIC-23	Richmond Construct park & ride lot (US 10 & I-95) Add new lot at I-95 & Route 10, estimated 250 spaces, Rec is from CLRP	0.729	0.6	0.729	0.702	1		0	0	0	0	0	9.627
121	RIC-27	Richmond Construct park & ride lot (95 @ 802/Lewistown Rd)	0.945	0.6	0.243	0.054	1		0	0	0	0	0	8.277
122	RIC-30	Richmond Construct park & ride lot (just west of 288 on Rte 60)	0.324	0.8	0.297	0.297	1		0	0	0	0	0	8.461
123	RIC-32	Richmond Obtain park & ride agreement at existing Food Lion - Install park & ride signs (Rte 360 @ Rte 627/Cheatham Rd, Amelia)	0.297	0.8	0.135	1	0		1	0	0	0	0	4.328
124	RIC-33	Richmond Construct park & ride lot (Rte 60/Anderson Hwy & Rte 522/Maidens Rd/Emanuel Church Rd, Powhatan)	0.27	0.8	0.108	0.783	1		0	0	0	0	0	8.407
125	RIC-35	Richmond Construct park & ride lot (I-64 & Rte 250/W Broad St, Short Pump, near Whole Foods parking lot) (Rec is also similar to one in Transit Plan)	0.756	0.8	0.945	0.621	0		0	0	0	0	0	5.245
126	RIC-36	Richmond Construct park & ride lot (I-85 & Rte 460 / 1, west of Petersburg)	0.243	0.4	0.594	0.837	1		0	0	0	0	0	8.228

Pilot Study – Analysis: Weighting the Measures

- Average Daily Traffic (ADT)
 - Weighted by 2
- Current Day Level of Service (LOS)
 - Weighted by 2
- # workers travel outside area, > than 25 mi
 - Weighted by 2
- % workers travel outside area, > 25 mi
 - Weighted by 1
- Inside PIA
 - Weighted by 3



Hampton Roads District Park & Ride Investment Strategy



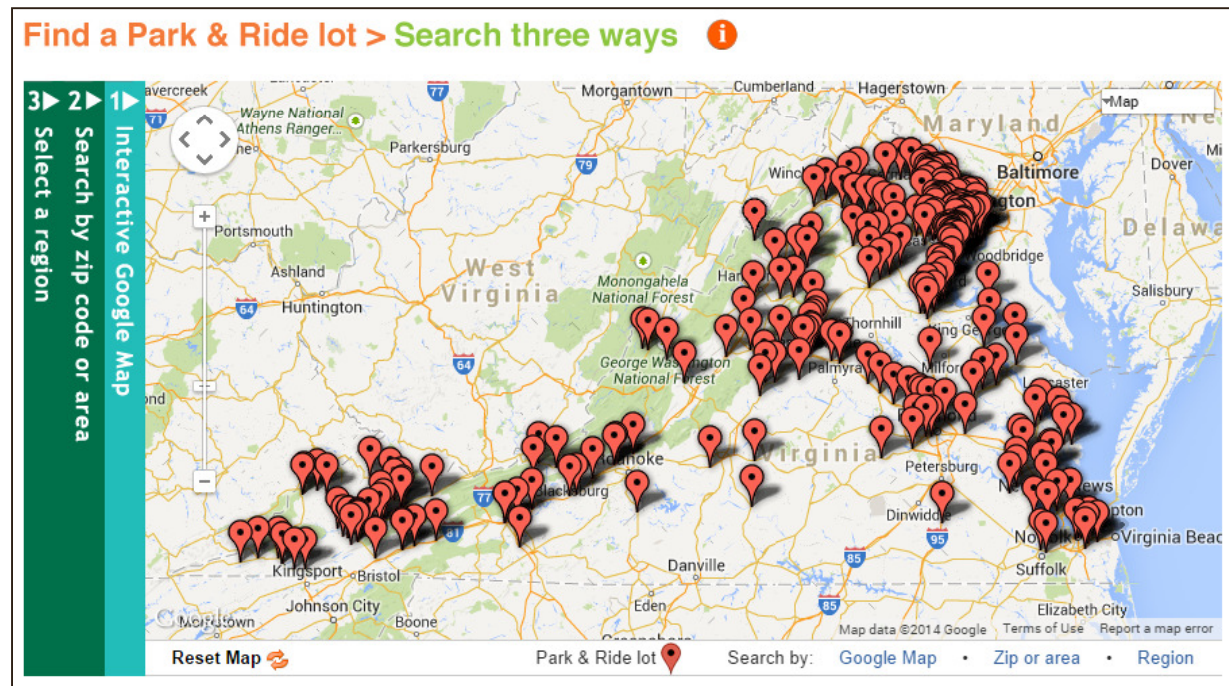
Hampton Roads District Priority Projects

Technical Ranking	Technical Score	Rec ID	Jurisdiction	Description of Project	Cost Estimate*
1	9.140	HR-9	City of Virginia Beach	P&R lot expansion to add 100 spaces at the existing P&R lot along Indian River Road near I-64.	\$ 1,000,000
2	8.855	HR-8	City of Virginia Beach	P&R lot expansion to add 50 spaces at the existing P&R lot near Independence Boulevard at Holland Road.	\$ 1,000,000
3	8.711	HR-10	City of Chesapeake	P&R lot expansion to lease 150 spaces at the existing P&R lot at Greenbrier Mall near I-64 Exit 289.	\$ 1,500,000
4	7.268	HR-6	City of Newport News	P&R lot enhancement to repave existing P&R lot along Old Courthouse Way near US 60 (Warwick Boulevard).	\$ 2,650,000
5	6.956	HR-11	City of Chesapeake	Lease 100 space P&R lot along Route 337 (Portsmouth Boulevard) near I-664 Exit 11.	\$ 1,000,000
6	6.441	HR-12	City of Chesapeake	Construct or lease a new 250 space P&R lot along <u>Hanbury Road</u> near Route 168.	\$ 2,500,000
7	5.842	HR-7	City of Newport News	Lease a 50 space P&R lot along US 17 near US 60 (Warwick Boulevard).	\$ 500,000
8	4.496	HR-5	City of Newport News	P&R lot expansion to add 50 spaces to the existing P&R lot along Route 238 near I-64.	\$ 500,000
9	3.884	HR-3	City of Portsmouth	Repave and enhance existing P&R lot at Court Street near I-264 Exit 7.	\$ 1,500,000
10	3.883	HR-1	James City County	P&R lot enhancement to repave existing P&R lot along Route 607 (Croaker Road) near I-64 Exit 231.	\$ 700,000

* Planning level cost estimates assumes \$10,000 per parking space

Estimating Benefits

- What does Park & Ride infrastructure yield in terms of benefits?
- Individual impact of a parking space, or individual lot is relatively small – with respect to travel delay or VMT reduction
- As a statewide network, the cumulative impacts are much greater – sum of the parts – difficult to calculate



Estimating Benefits – Focus on the User

- What about the benefits to the lot users? – this is where the substantial and compelling benefits of P&R investment can be found
- Census On The Map data provides a good framework of data to begin estimating user benefit – from this dataset, we have:
 - Number of workers within 3 mile radius – user market
 - Break down of the distance they travel to work – provided in range

OTM -Total All Jobs	OTM - Less Than 10 miles	OTM - 10-24 miles	OTM - 25-50 miles	OTM - Greater than 50 miles	Number of Spaces (approx.)
11946	9313	619	541	1473	100



Estimating Benefits – The Methodology

A	B	C	D	E	F
OTM -Total All Jobs	OTM - Less Than 10 miles	OTM - 10-24 miles	OTM - 25-50 miles	OTM - Greater than 50 miles	Number of Spaces (approx.)
11946	9313	619	541	1473	100

- Base – calculate Average Commute Length
 - Math - $((B * (\text{range mid-point})) + (C * \text{mid-point}) + (D * \text{mid-point}) + (E * (\text{lower limit} + 10))) / A$
 - So for dataset above = $((9313 * 5) + (C * 17.5) + (D * 37.5) + (E * 60)) / 11946 = 13.9$ miles
- Calculate Total Annual Cost Savings for lot
 - Assumptions
 - 75% of recommended spaces will be used (statewide average)
 - 250 usage days per year
 - \$.55 cent per mile cost – federal reimbursement rate
 - Math - $(\text{Number of Spaces} * 0.75) * (\text{Average Commute Length} * 2 * 250) * 0.55$
 - So for dataset above = $(100 * .75) * (13.9 * 2 * 250) * (.55) = \$286,714$

Estimating Benefits – The Methodology

A	B	C	D	E	F
OTM - Total All Jobs	OTM - Less Than 10 miles	OTM - 10-24 miles	OTM - 25-50 miles	OTM - Greater than 50 miles	Number of Spaces (approx.)
11946	9313	619	541	1473	100

- Calculate Average Annual User Benefit
 - Assumption = Average individual is only using lot $\frac{3}{4}$ of time
 - Math - $(\text{Average Commute Length} * 2 * 250 * 0.75) * \0.55
 - So for dataset above = $(13.9 * 2 * 250 * 0.75) * \$0.55 = \$2,867$
- Calculate Annual Vehicle Miles Traveled (VMT) reduction
 - Math - $(\text{Number of Spaces} * 0.75) * (\text{Average Commute Length} * 2 * 250)$
 - So for dataset above = $(100 * 0.75) * (13.9 * 2 * 250) = 521,299$ vehicle miles of travel eliminated
- Working on method to estimate air quality benefits – reduction in:
 - Carbon Dioxide
 - Particulates
 - NOx

Executive Briefing Sheet

- Purpose is to provide a summary of critical information for each recommendation
- Information provided:
 - Project Description
 - Evaluation measures
 - Commuter information
 - Mapping
 - Planning cost estimate
 - Potential benefit to state/network and lot users



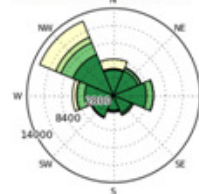
Hampton Roads District Park & Ride Investment Strategy



Indian River Road at I-64; Exit 286

Major Corridors Served: I-64/US 13
 Jurisdiction: City of Virginia Beach
 Improvement Type: Expansion
 Recommendation ID: HR-9
 Technical Score (Ranking): 9.140 (1st)

Commute Compass *



Land Available	District Support	Local Support	MPO Support	PDC Support
✓	✓	✓	✓	✓

PROJECT DESCRIPTION

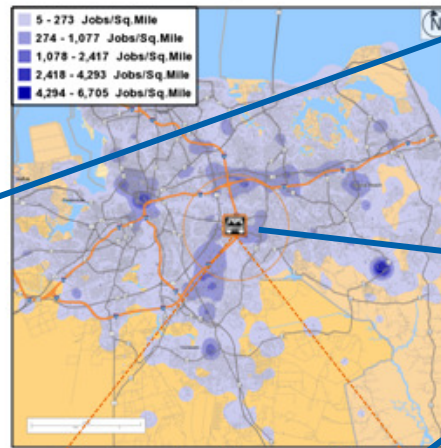
P&R lot expansion to add 100 spaces at the existing P&R lot along Indian River Road near I-64 Exit 286

COMMUTER/ROADWAY DEMAND

ADT (Route Served): 186,939
 LOS (Route Served): F
 Workers within 3 mile radius: 46,787
 % Workers traveling outside 3 mile radius: 85%
 % Workers traveling outside 25 mile radius: 16%

TRANSPORTATION NETWORK BENEFIT

Number of Spaces: 100
 Inside Priority Investment Area: Corridor
 Annual VMT Reduction: 505,028 miles
 Total Annual Cost Savings: \$ 277,765



*Job Counts by Distance/Direction conducted in 2011, <http://onlinemap.ces.census.gov/>



Cost/Benefits	
Planning Estimate	\$ 1,000,000
Annual Cost Savings All Users	\$278,000
Annual Savings Per User	\$2,800
Annual VMT Reduction	505,000

Basic info and technical ranking

Distance, Volume and Direction of Travel

Project Description and performance measures

Location map

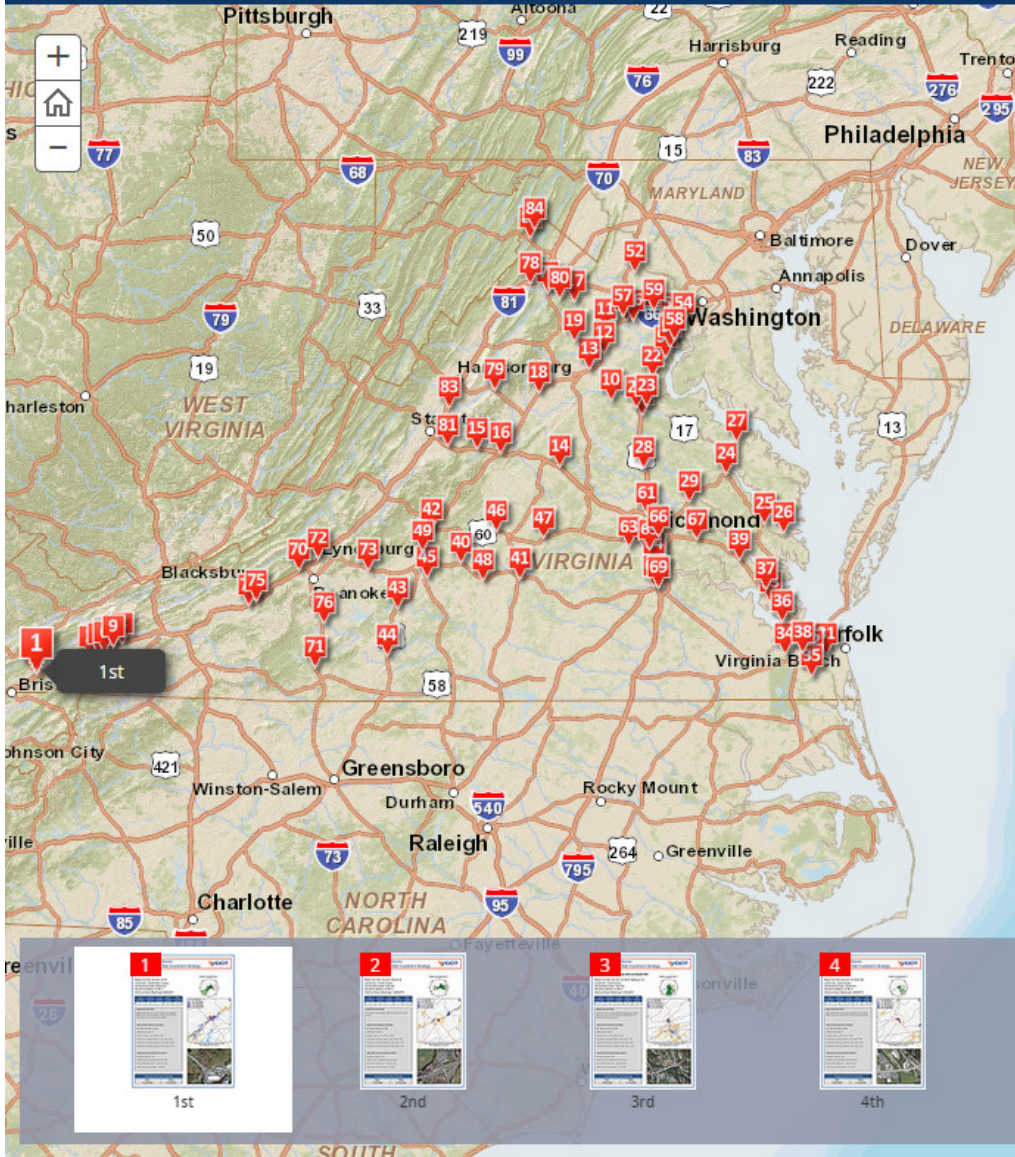
Aerial photo


Schedule and estimate TBD




VDOT Park & Ride Investment Strategy

An overview map of the technical score rankings of park & ride recommendations. Click on marker to view project sheet and data. Marker numbers are for reference and do not reflect priority order for funding.





Bristol District Park & Ride Investment Strategy



US 19 at Russell Road

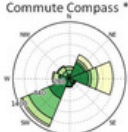
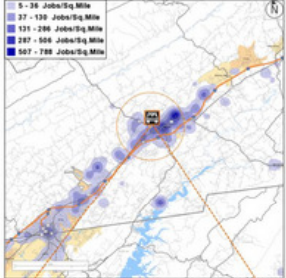
Major Corridors Served: US 19
 Jurisdiction: Washington County
 Improvement Type: Expansion
 Recommendation ID: BRI-3
 Technical Score (Ranking): 8.825 (1st)

Land Available	District Support	Local Support	MPO Support	PDC Support
✓	✓	-	✓	✓

PROJECT DESCRIPTION
 P&R lot expansion to increase capacity and upgrade lighting at the existing P&R lot along US 19 near the intersection of US 19 and Russell Road.

COMMUTER/ROADWAY DEMAND
 ADT (Route Served): 41,022
 LOS (Route Served): D
 Workers within 3 mile radius: 4,536
 % Workers traveling outside 3 mile radius: 69%
 % Workers traveling outside 25 mile radius: 45%
 % Workers traveling outside 50 mile radius: 21%

TRANSPORTATION NETWORK BENEFIT
 Number of Spaces*: 20
 Inside Priority Investment Area: Corridor
 Annual VMT Reduction*: 155,713 miles
 Annual Cost Savings*: \$ 85,642

*Job Counts by Distance/Direction conducted in 2011.
<http://vdotmapinfo.vdot.gov/>

1st

Planning Level Cost Estimate	
Low	High
\$ 200,000	\$ 300,000

P&R lot expansion to add 20 spaces and upgrade lighting at the existing P&R lot along US 19 near the intersection of US 19 and Russell Road.



Review and Input

1. Coordinated with MPO/PDC on analysis and ranking – led by districts
 - Formal MPO/PDC action was not required
2. Briefed Deputy Commissioner, DAC, PIM, RA's, etc.
3. Stakeholder input
 - P&R Advisory Committee
 - VDOT webpage
4. Study completed June, 2014

Continuing efforts:

- Presentations
- Project funding
 - SYIP
 - RSTP and/or CMAQ
 - Agreements
 - ROW Residuals
- P&R lot count program
 - Utilization
- Improved P&R lot tool
 - Plan to use this tool annually to incorporate P&R projects into SYIP process, working with Districts, MPO/PDCs and TDM stakeholders

Questions / Comments / Discussion

Additional Information

P&R Website link:

<http://www.virginiadot.org/travel/parkride/home.asp>

Investment Strategies Link:

<http://www.arcgis.com/apps/MapTour/index.html?appid=e1350a00284e46428a535a18d4451aaf>

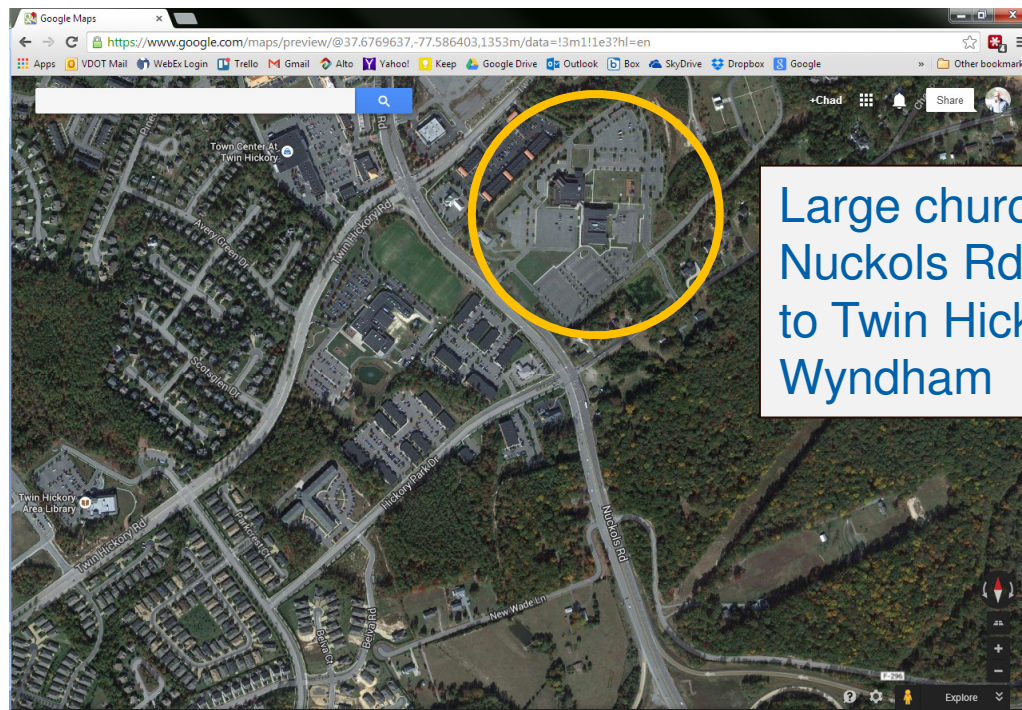
Thank you!

Liz McAdory - VDOT, TMPD
804-786-3092



Funding - Linking to the SYIP

- Leverage residue parcels to develop low-costs P&R lots
- Scoping for large projects – include P&R improvement as part of Maintenance of Traffic (MOT) plan, i.e. Springfield Interchange
- Partner with MPOs to solicit RSTP and/or CMAQ funding
- Public/Private Partnerships/Lease agreements
 - Consistent agreements and process



Large church lot off
Nuckols Rd adjacent
to Twin Hickory and
Wyndham