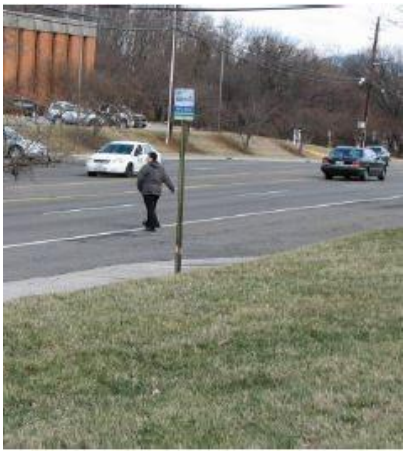
Roanoke Valley Area
METROPOLITAN PLANNING ORGANIZATION

Staffed by the REGIONALcommission

PERFORMANCE MEASURES REPORT

Roanoke Valley Area Metropolitan Planning Organization
October 2013



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BACKGROUND

This report is being generated as part of a statewide effort among Transportation Management Area Metropolitan Planning Organizations (TMA MPO) to track common performance measures to evaluate the region's transportation system against its transportation goals and standards and contribute to the Statewide Transportation Plan. The Roanoke Valley Area Metropolitan Planning Organization (RVAMPO), as a new TMA MPO, is now required by the state to track regional performance measures. RVAMPO will be eligible for funding through sources only available to TMA MPOs and receipt of those funds is contingent upon the MPO's development, and the Commonwealth Transportation Board's approval, of the regional performance measures.

Regional performance measures fall under the following categories:

- Congestion Reduction
- Safety
- Bicycle and Pedestrian Facility Usage
- Transit Usage
- HOV Usage
- Jobs-to-Housing Ratio
- Job and Housing Access to Pedestrian Facilities
- Air Quality
- Movement of Freight

Due to the lack of data for the southwest portion of the state, not all performance measures requested by the State are applicable to the Roanoke area particularly in the categories of congestion reduction and air quality. Such performance measures may be added in the future if data becomes available. A master list of all performance measures tracked by RVAMPO is included on the following page.

In the 2012 Annual Performance Measures Report, performance measures were gathered for localities in the Planning District Commission and the MPO. The Counties of Alleghany and Craig and the City of Covington had been included but will be removed from this report because they are not within the MPO area, which is the focus of this report. Additionally, the Counties of Bedford and Montgomery were not included in the 2012 report. With the change in MPO status to a Transportation Management Area (TMA), they will now be included along with the other MPO localities.

It should be noted that, in addition to data collection for all of the cities of Roanoke, Salem and the Town of Vinton, data is also collected for the localities which are only partially in the MPO area. Those localities are: Bedford, Botetourt, Montgomery and Roanoke Counties.

REGIONAL PERFORMANCE MEASURES FOR THE ROANOKE VALLEY AREA MPO							
	Performance Measure	**Data Requirements**	**Data Source**	**Level of Data Collection**	**Desired Trend**	**Preferred Reporting Format**	**Frequency of Update**
1.0 Congestion Reduction							
1.1	Total Miles of Bicycle Lanes	Location and miles of bike lanes striped in the past year.	Local governments and VDOT	MPO localities	Upwards	Table	Annual
1.2	Total Miles of Paved Shoulders	Location and miles of paved shoulders added in the past year.	Local governments and VDOT	MPO localities	Upwards	Table	Annual
1.3	Total Miles of Wide Travel Lanes	Location and miles of wide travel lanes created in the past year.	Local governments and VDOT	MPO localities	Upwards	Table	Annual
1.4	Total Miles of Signed Bicycle Routes	Location and miles of signed bike routes installed in the past year.	Local governments and VDOT	MPO localities	Upwards	Table	Annual
1.5	Total Number of Share the Road Signs	Location and number of share the road signs installed in the past year.	Local governments and VDOT	MPO localities	Upwards	Table	Annual
1.6	Total Number of Sharrows	Location and number of sharrows painted in the past year.	Local governments and VDOT	MPO localities	Upwards	Table	Annual
1.7	Total Number of Bicycle Racks	Location and number of newly added bike racks in the past year.	Local governments and VDOT	MPO localities	Upwards	Table	Annual
2.0 Safety							
2.1	Number of Highway Fatalities and Fatality Rate per 100 million VMT	Number of Fatalities on Highways and VMT	DMV & VDOT	MPO localities	Downwards	Table and Bar Chart	Annual
2.2	Number of Highway Crashes and Crash Rate per 100 million VMT	Number of crashes on Highways and VMT	DMV & VDOT	MPO localities	Downwards	Table and Bar Chart	Annual
2.3	Number of Transit Crashes	Number of transit fatalities and crashes	DRPT	System	Downwards	Table and Bar Chart	Annual
2.3	Annual Transit Collisions	Number of Collisions per Passenger Miles Travelled (PMT)	FTA	System	Downwards	Table	Annual
2.4	Annual Transit Injuries	Number of injuries per 100 million PMT	FTA	System	Downwards	Table	Annual

REGIONAL PERFORMANCE MEASURES FOR THE ROANOKE VALLEY AREA MPO							
	Performance Measure	**Data Requirements**	**Data Source**	**Level of Data Collection**	**Desired Trend**	**Preferred Reporting Format**	**Frequency of Update**
1.0 Congestion Reduction							
2.5	Annual Transit Fatalities	Number of fatalities per 100 million PMT	FTA	System	Downward (If 0 fatalities then Steady)	Table	Annual
2.6	Annual Aviation Crashes	Number of aviation crashes	NTSB Aviation Database, DOAV	MPO localities	Downwards	Table	Annual
2.7	Annual Aviation Fatalities	Number of aviation fatalities	NTSB Aviation Database, DOAV	MPO localities	Downward (If 0 fatalities then Steady)	Table	Annual
2.8	Annual Bicycle Crashes	Number of bicycle crashes	DMV	MPO localities	Downwards	Table	Annual
2.9	Annual Bicycle Injuries	Number of bicycle injuries	DMV	MPO localities	Downwards	Table	Annual
2.10	Annual Bicycle Fatalities	Number of bicycle fatalities	DMV	MPO localities	Downward (If 0 fatalities then Steady)	Table	Annual
2.11	Annual Pedestrian Injuries	Number of pedestrian injuries	DMV	MPO localities	Downwards	Table	Annual
2.12	Annual Pedestrian Fatalities	Number of pedestrian fatalities	DMV	MPO localities	Downward (If 0 fatalities then Steady)	Table	Annual
3.0 Bicycle and Pedestrian Facility Usage							
3.1	Number of bicyclists by location	Number of bicyclists by location	Roanoke Valley Area MPO Annual National Bike and Pedestrian Documentation Project	By location	Upwards	Table	Annual
3.2	Number of pedestrians by location	Number of pedestrians by location	Roanoke Valley Area MPO Annual National Bike and Pedestrian Documentation Project	By location	Upwards	Table	Annual
3.3	Number of greenway users by location	Number of greenway users by location	Roanoke Valley Area MPO	By location	Upwards	Table	Annual
3.4	Number of Bicycle Friendly Businesses	Number of Bicycle Friendly Businesses	RideSolutions	MPO localities	Upwards	Table	Annual

REGIONAL PERFORMANCE MEASURES FOR THE ROANOKE VALLEY AREA MPO							
	Performance Measure	**Data Requirements**	**Data Source**	**Level of Data Collection**	**Desired Trend**	**Preferred Reporting Format**	**Frequency of Update**
4.0 Transit Usage							
4.1	Annual Unlinked Passenger Transit Trips	# of transit trips	DRPT	System	Upwards	Table	Annual
4.2	Annual Unlinked Passenger Transit Trips Per Capita	# of transit trips and service area population	DRPT	System	Upwards	Table and Bar Graph	Annual
4.3	Annual Vehicle Revenue Miles	Transit Revenue Miles as reported by service provider	DRPT	System	Upwards	Table	Annual
4.4	Annual Vehicle Revenue Miles per Capita	Revenue miles and service area population	DRPT	System	Upwards	Table and Bar Graph	Annual
4.5	Annual Passenger Miles Traveled	Transit Passenger Miles	DRPT	System	Upwards	Table	Annual
4.6	Annual Passenger Miles Traveled per Capita	Transit Passenger Miles and service area population	DRPT	System	Upwards	Table and Bar Graph	Annual
4.7	Annual Smart Way Connector Bus Ridership	# of Smart Way Connector Bus Boardings	Greater Roanoke Transit Company	System	Upwards	Table	Annual
5.0 HOV Usage							
5.1	# of Park and Ride Lots and Spaces	Number of P-n-R lots and spaces	VDOT	MPO localities	Upwards	Table and Line Chart Graph	LRTP Update
5.2	# of members in Ride Solutions program	# of members in Ride Solutions program	RideSolutions	System	Upwards	Table	Annual
6.0 Jobs-to-Housing Ratio							
6.1	Ratio of jobs to households at the regional & jurisdictional levels	Jobs and Housing census data	Bureau of Economic Analysis for # of jobs; ACS Table S2501 Occupancy Characteristics of Households	By locality for MPO	Steady	Table and Line Chart Graph	LRTP Update
6.2	Regional Linear Jobs-Households Dissimilarity index (0.0 to1.0) *	Number of Jobs/ Households	Bureau of Economic Analysis for # of jobs; ACS Table S2501 Occupancy Characteristics of Households	By locality for MPO	Below 0.5	Table	LRTP Update
6.3	Ratio of jobs to work force	Number of Jobs/ Civilian Labor Force	Bureau of Economic Analysis for # of jobs; Virginia Workforce Connection for labor market data (http://www.vawc.virginia.gov/analyzer/default.asp)	By locality for MPO	Upwards	Table	Annual
6.4	Inter and Intra regional commuting data	Commuting pattern data; % of workers working in the County in which they live	Census Journey to Work data from the Bureau of Economic Analysis	MPO	Upwards	Table or Map at MPO level	LRTP Update
6.5	Mean Travel Time to Work	Commuting pattern data from Census	ACS; Table S0802. Means of Transportation to Work	MPO	Downwards	Table or GIS Map by locality for MPO	Annual
	* VRTC Study "Feasibility of Using Jobs/Housing Balance in Virginia Statewide Planning www.virginiadot.org/vtrc/main/online_reports/pdf/11-r1.pdf p. 26						

REGIONAL PERFORMANCE MEASURES FOR THE ROANOKE VALLEY AREA MPO							
	Performance Measure	**Data Requirements**	**Data Source**	**Level of Data Collection**	**Desired Trend**	**Preferred Reporting Format**	**Frequency of Update**
7.0 Job and Housing Access to Transit							
7.1	% of population and/or households in TAZs served by transit	Transit GIS layer and % of households in TAZ's served by transit	TAZ Model Data and Transit GIS shapefiles	MPO Urban Areas	Upwards	GIS Map by TAZ	LRTP Update
7.2	% of employment in TAZs served by transit	Transit GIS layer and % of workers in TAZ's served by transit	TAZ Model Data and Transit GIS shapefiles	MPO Urban Areas	Upwards	GIS Map by TAZ	LRTP Update
8.0 Job and Housing Access to Pedestrian Facilities							
8.1	# and % of residents who walk to work	Population and number who walk to work	Census (ACS) Journey to Work data	MPO Localities (Census Data)	Upwards	Table	LRTP Update
9.0 Air Quality							
9.1	Annual # of Days when Ozone Levels were Above 8-Hour Standard	# of days Ozone levels are above 8-hour standard	DEQ	MPO	Downwards	Table and Bar Graph	Annual
10.0 Movement of Freight							
10.1	Truck and Rail Mode Share, by value	Value of freight by mode share	Census Commodity Flow Data or Transearch data via VDOT Statewide License	MPO or as available	Upwards	Table and Bar Graph	As available
10.2	Truck and Rail Mode Share, by tons	Tonnage of freight by mode share	Census Commodity Flow Data or Transearch data via VDOT Statewide License	MPO or as available	Upwards	Table and Bar Graph	As available
Annual Performance Measures will be prepared by October 15th of each year and will be placed on the MPOs web-site, which will then be linked to the State's Annual							

1.0 CONGESTION REDUCTION

1.1 Total Miles of Bike Lanes

Locality	2012
City of Roanoke	10.6
Roanoke County	2.5
Town of Vinton	1.1
Total Miles of Bicycle Lanes	**14.2**

Data Source:
Bikeway Plan for the Roanoke Valley Area MPO - 2012 Update, Table 3.1 Bicycle Lane Locations and Miileage
http://www.rvarc.org/bike/RVAMPO-BikewayPlan-2012Update.pdf

1.2 Total Miles of Paved Shoulders

Locality	Segment	Length (in Miles) 2012
Roanoke County	Electric Rd. from Brambleton Ave. to Corporate Limits	6.41
Roanoke County	Catawba Valley Rd. from Electric Rd. to MPO Study Area Boundary	0.99
City of Roanoke	Shenandoah Ave. from 30th St. to Westside	2.12
Total Miles of Paved Shoulders		**9.53**

Data Source:
Roanoke Valley-Alleghany Regional Commission

1.3 Total Miles of Wide Travel Lanes

Locality	Segment	Length (in Miles) 2012
Roanoke County	Catawba Valley Rd. from Electric Rd. to MPO Study Area Boundary	0.99
City of Roanoke	Brandon Ave. from Peters Creek Ext. to Edgewood St	1.19
City of Roanoke	Shenandoah Ave. from Westside to Peters Creek Rd.	0.50
Total Miles of Wide Travel Lanes		**2.70**

Data Source:
Roanoke Valley-Alleghany Regional Commission

1.4 Total Miles of Signed Bike Routes

Locality	Segment	Length (in Miles) 2012
City of Roanoke	Tinker Creek Greenway	1.89
City of Roanoke	Brandon Avenue	2.04
City of Roanoke	Edgewood Street	1.25
City of Roanoke	Maiden Lane	4.78
City of Roanoke	Shenandoah Avenue	8.13
City of Salem	Salem Signed Bicycle Route	11.10
Total Miles of Signed Bike Routes		**29.19**

Data Source:
Roanoke Valley-Alleghany Regional Commission

1.5 Total Number of Share the Road signs

Street	Number	Locality	Year Installed
Brandon Avenue	4	City of Roanoke	2008
Catawba Valley Rd./311	1	Roanoke County	2009
Peters Creek Extension	8	City of Roanoke	2008
Plantation Road	6	City of Roanoke	2008
Shenandoah Avenue	3	City of Roanoke	2010
US 220/Franklin Road	1	City of Roanoke	2008
US 220/Franklin Road	1	City of Roanoke	2009
Wildwood Road	1	Roanoke County/VDOT	2005
Williamson Road	6	City of Roanoke	2008
Total Number of Share the Road Signs	**31**		

Data Source:
Bikeway Plan for the Roanoke Valley Area MPO - 2012 Update, Table 3.3 Share the Road Sign Locations http://www.rvarc.org/bike/RVAMPO-BikewayPlan-2012Update.pdf

1.6 Total Number of Sharrows

Locality	Street	Direction	Location	Year Installed
City of Roanoke	2nd	North	Church – signed bike route	2011
City of Roanoke	Church	West	Market – signed bike route	2011
City of Roanoke	Church	West	1st – signed bike route	2011
City of Roanoke	Colonial	East	26th – terminus of Colonial bike lane	2011
City of Roanoke	Colonial	West	Winding Way – terminus of Colonial bike lane	2011
City of Roanoke	Memorial/13th	West	Cleveland – terminus of Memorial bike lane	2011
City of Roanoke	Memorial	West	Cambridge – terminus of Memorial bike lane	2011
City of Roanoke	Walnut	East	Mill Mountain Greenway/Belleview	2011
City of Roanoke	Williamson	South	Shenandoah & Salem – signed bike route	2011
Total Number of Sharrows	**9**			

Data Source:
Bikeway Plan for the Roanoke Valley Area MPO - 2012 Update, Table 3.4 Shared Lane Marking (Sharrow) Locations
http://www.rvarc.org/bike/RVAMPO-BikewayPlan-2012Update.pdf

1.7 Total Number of Bicycle Racks

Locality	Number of Racks 2012
City of Roanoke	51
City of Salem	6
Roanoke County	13
Town of Vinton	1
Total Number of Bicycle Racks in MPO	**71***

**This number denotes all public and private bicycle racks.*

Data Source:
Source: Bikeway Plan for the Roanoke Valley Area MPO - 2012 Update, Table 3.10 RVAMPO Bicycle Rack Locations
http://www.rvarc.org/bike/RVAMPO-BikewayPlan-2012Update.pdf

2.0 SAFETY

2.1 Number of Highway Fatalities

Locality	Highway Fatalities in 2011	Highway Fatalities in 2012
Bedford County	10	21
Botetourt County	6	9
Montgomery County	6	11
City of Roanoke	5	4
Roanoke County	13	11
City of Salem	0	0
Total MPO	**40**	**56**

Fatality Rate per 100 Million VMT

Locality	Fatalities per 100 million VMT 2011	Fatalities per 100 million VMT 2012
Bedford County	605	1,282
Botetourt County	321	484
Montgomery County	344	590
City of Roanoke	235	194
Roanoke County	570	481
City of Salem	0	0
Total MPO	**395**	**552**

Data Sources:
Fatalities: http://www.dmv.state.va.us/webdoc/safety/crash_data/crash_facts/crash_facts_12.pdf
Vehicle Miles Traveled (VMT):
http://www.virginiadot.org/info/resources/Traffic_2012/VMTReport_1200_2012.pdf

2.2 Number of Highway Crashes

Locality	Highway Crashes in 2011	Highway Crashes in 2012
Bedford County	882	834
Botetourt County	648	652
Montgomery County	1,573	1,784
City of Roanoke	1,849	2,197
Roanoke County	1,191	1,273
City of Salem	493	522
Total MPO	**6,636**	**7,262**

Crash Rate per 100 Million VMT

Locality	Crashes per 100 million VMT (2011)	Crashes per 100 million VMT (2012)
Bedford County	53,324	50,917
Botetourt County	34,622	35,089
Montgomery County	90,262	95,762
City of Roanoke	86,878	106,688
Roanoke County	52,226	55,672
City of Salem	111,740	117,139
Total MPO	**65,584**	**71,543**

Data Sources:
Crashes: http://www.dmv.state.va.us/webdoc/safety/crash_data/crash_facts/crash_facts_12.pdf
Vehicle Miles Traveled (VMT):
http://www.virginiadot.org/info/resources/Traffic_2012/VMTReport_1200_2012.pdf

2.3 Annual Transit Collisions
2.4 Annual Transit Injuries
2.5 Annual Transit Fatalities

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
# of Collisions per 100 million PMT	13	0	0	0	0	10	0	0	0	17	19
Total Injuries per 100 million PMT	13	77	22	11	186	97	86	107	107	103	56
Total Fatalities per 100 million PMT	0	0	0	0	0	0	0	0	0	0	0

Data Source:
http://www.ntdprogram.gov/ntdprogram/data.htm
NTD Database website – Access NTD Data - Safety & Security Data – Safety & Security Time Series; Transit Data for Demand Response and Motor Bus (Fixed-Route) Combined

2.6 Annual Aviation Crashes
2.7 Annual Aviation Fatalities

	2010	2011	2012
Annual Aviation Crashes	1	0	2
Annual Aviation Fatalities	1	0	0

Data Source:
FAA Accident Database & Synopses, http://www.ntsb.gov/aviationquery/index.aspx

2.8 Annual Bicycle Crashes

Locality	2008	2009	2010	2011	2012
Bedford County	0	0	3	2	0
Botetourt County	2	0	2	2	3
Montgomery County	16	17	17	14	21
City of Roanoke	9	14	14	12	18
Roanoke County	3	1	0	0	1
City of Salem	3	2	3	4	8
Total Bicycle Crashes	**33**	**34**	**39**	**34**	**51**

Data Source:
Virginia DMV website – Virginia Bicycle Crashes by Jurisdiction Calendar Years 2008-2012, http://www.dmvnow.com/safety/crash_data/bicycle/pdf/crash_juris.pdf

2.9 Annual Bicycle Injuries

Locality	2008	2009	2010	2011	2012
Bedford County	0	0	5	2	0
Botetourt County	2	0	1	2	3
Montgomery County	16	15	17	12	21
City of Roanoke	9	13	14	12	17
Roanoke County	3	1	0	0	1
City of Salem	3	2	2	4	8
Total Bicycle Injuries	**33**	**31**	**39**	**32**	**50**

Data Source:
Virginia DMV website – Virginia Bicycle Injuries in Crashes by jurisdiction Calendar Years 2008-2012, http://www.dmvnow.com/safety/crash_data/bicycle/pdf/injury_juris.pdf.

2.10 Annual Bicycle Fatalities

Locality	2008	2009	2010	2011	2012
Bedford County	0	0	0	0	0
Botetourt County	0	0	1	0	0
Montgomery County	0	1	0	0	0
City of Roanoke	0	0	0	0	0
Roanoke County	0	0	0	0	0
City of Salem	0	0	0	0	0
Total Bicycle Fatalities	**0**	**1**	**1**	**0**	**0**

Data Source:
Virginia DMV website – Virginia Bicycle Fatalities in Crashes by Jurisdiction Calendar Years 208-2012, http://www.dmvnow.com/safety/crash_data/bicycle/pdf/fatality_juris.pdf.

2.11 Annual Pedestrian Injuries

Locality	2008	2009	2010	2011	2012
Bedford County	4	3	4	3	3
Botetourt County	1	0	2	2	1
Montgomery County	29	9	24	23	20
City of Roanoke	18	19	30	29	48
Roanoke County	5	4	3	3	5
City of Salem	11	8	7	10	9
Total Pedestrian Injuries	**68**	**43**	**70**	**70**	**86**

Data Source:
Virginia DMV website – Pedestrian Injuries in Crashes by Jurisdiction Calendar Years 2008-2012, http://www.dmvnow.com/safety/crash_data/pedestrian/pdf/injury_juris.pdf.

2.12 Annual Pedestrian Fatalities

Locality	2008	2009	2010	2011	2012
Bedford County	0	0	0	1	0
Botetourt County	1	0	0	0	0
Montgomery County	1	2	0	0	1
City of Roanoke	2	1	1	1	0
Roanoke County	3	1	1	1	2
City of Salem	1	0	1	0	0
Total Pedestrian Facilities	**8**	**4**	**3**	**3**	**3**

Data Source:
Virginia DMV website – Pedestrian Fatalities in Crashes by Jurisdiction Calendar Years 2008-2012, http://www.dmvnow.com/safety/crash_data/pedestrian/pdf/fatality_juris.pdf.

3.0 BICYCLE AND PEDESTRIAN FACILITY USAGE

3.1 Number of Bicyclists by Location

Location	2012
Memorial Avenue, Wasena Road., Roanoke Avenue, Roanoke River Greenway	160
10th Street and Shenandoah Avenue	11
Colonial Avenue and Overland Drive	2
Peters Creek Extension, Shenandoah Avenue	1
Gus Nicks Boulevard, King Street, Vale/Dell	3
Grandin Road, Brandon Avenue	33
13th Street, Tayloe Street	21
5th Street, Luck Avenue	14
Patterson Avenue, 13th Street	20
Ferdinand Avenue, 10th Street	14
Brandon Avenue, Edgewood Street, Mud Lick Road	30
Williamson Road, Campbell Avenue	15
Plantation Road, Preston Avenue, Columbia Avenue	5
Brambleton Avenue, Spring Road	21
10th Street, Syracuse Avenue, Lick Run Greenway	13
Brandon Avenue, Franklin Road, McClanahan Street	9
Jefferson Street, Walnut Avenue	16
Franklin Road, Elm Avenue	5
Grandin Road, Garst Mill Road	11
Total Bicyclists by Location	**404**

Note: Two-Day Count Average

Data Source: National Bicycle and Pedestrian Documentation Project – 2012 City of Roanoke, VA, Table 10 NBPD 2012 Bicycle and Pedestrian Counts
http://www.rvarc.org/bike/CityofRoanoke-2012-NBPD-ProjectSummary.pdf

3.2 Number of Pedestrians by Location

Location	2012
Memorial Avenue, Wasena Road., Roanoke Avenue, Roanoke River Greenway	43
10th Street and Shenandoah Avenue	18
Colonial Avenue and Overland Drive	2
Peters Creek Extension, Shenandoah Avenue	2
Gus Nicks Boulevard, King Street, Vale/Dell	5
Grandin Road, Brandon Avenue	52
13th Street, Tayloe Street	16
5th Street, Luck Avenue	42
Patterson Avenue, 13th Street	185
Ferdinand Avenue, 10th Street	28
Brandon Avenue, Edgewood Street, Mud Lick Road	9
Williamson Road, Campbell Avenue	167
Plantation Road, Preston Avenue, Columbia Avenue	14
Brambleton Avenue, Spring Road	6
10th Street, Syracuse Avenue, Lick Run Greenway	123
Brandon Avenue, Franklin Road, McClanahan Street	18
Jefferson Street, Walnut Avenue	38
Franklin Road, Elm Avenue	15
Grandin Road, Garst Mill Road	2
Total Pedestrians by Location	**785**

Note: Two-Day Count Average

Data Source: National Bicycle and Pedestrian Documentation Project – 2012 City of Roanoke, VA, Table 10 NBPD 2012 Bicycle and Pedestrian Counts
http://www.rvarc.org/bike/CityofRoanoke-2012-NBPD-ProjectSummary.pdf

3.3 Number of Greenway Users by Location

Greenway	2012
Carvins Cove Four Gorges Trail	12,732
Lick Run Greenway at 10th	19,906
Lick Run Greenway Valley View	10,447
Mill Mountain Greenway	12,748
Murray Run Greenway Trail	16,177
Roanoke River Greenway 17th Street	37,603
Roanoke River Greenway Moyers Complex	40,162
Roanoke River Greenway Rivers Edge	227,900
Tinker Creek Greenway at Underhill	28,535
Total Greenway Users	**406,210**

Data Source:
Roanoke Valley-Alleghany Regional Commission - Regional Greenway and Trail User Count Program - Monthly Counts 2010-2013
http://www.rvarc.org/bike/RVARC-GreenwayCounts2010-2013.pdf

3.4 Number of Bicycle Friendly Businesses

Business	Locality	Year Applied	Employees
Roanoke Valley-Alleghany Regional Commission	City of Roanoke	2008	12
Sharebike.org	City of Roanoke	2010	5
East Coasters Bike Shop, Inc.	City of Roanoke	2011	15
Carilion Clinic - Riverside	City of Roanoke	2012	500
Roanoke Regional Partnership	City of Roanoke	2012	6

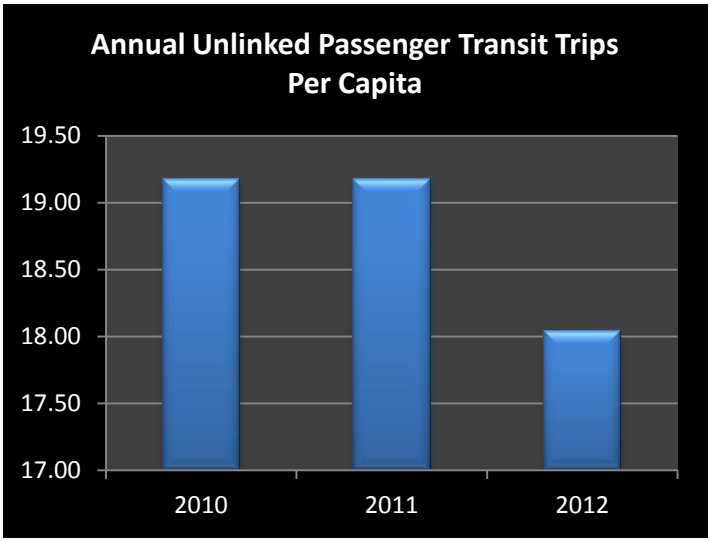
Data Source: The League of American Bicyclists – Bicycle Friendly Businesses, Current Bicycle Friendly Businesses Spring 2013.
http://www.bikeleague.org/sites/lab.huang.radicaldesigns.org/files/bfb_master_list_web_fall_2013.pdf

4.0 TRANSIT USAGE

4.1 Annual Unlinked Passenger Transit Trips

	2010	2011
Annual Unlinked Passenger Transit Trips per Capita	**19.18**	**18.03**
Unlinked Passenger Transit Trips – Valley Metro	2,440,846	2,291,101
Unlinked Passenger Transit Trips - RADAR	50,896	52,135
Annual Unlinked Passenger Transit Trips	**2,491,742**	**2,343,236**

4.2 Annual Unlinked Passenger Transit Trips Per Capita



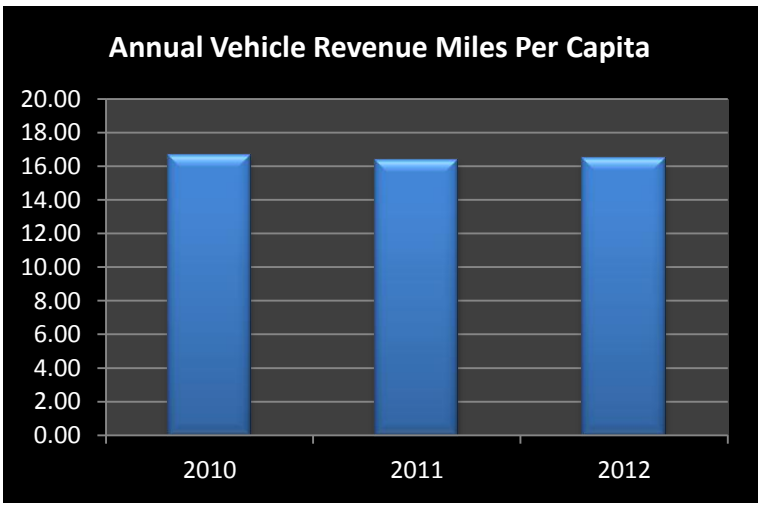
	2010	2011
2010 Service Area population (City of Salem, City of Roanoke, Town of Vinton)	129,932	129,932
Annual Unlinked Passenger Transit Trips per Capita	**19.18**	**18.03**

Data Sources:
NTD Database website – Annual Databases – RY 2011 Data Tables – Transit Operating Statistics: Service Supply and Consumed
http://www.ntdprogram.gov/ntdprogram/pubs/dt/2011/excel/DataTables.htm.
Population data from 2010 Census http://www.census.gov/2010census/data/.

4.3 Annual Vehicle Revenue Miles

	2010	2011
Annual Vehicle Revenue Miles per Capita	**16.37**	**16.46**
Vehicle Revenue Miles – Valley Metro	1,559,061	1,551,608
Vehicle Revenue Miles - RADAR	568,269	586,668
Annual Vehicle Revenue Miles	**2,127,330**	**2,138,276**

4.4 Annual Vehicle Revenue Miles Per Capita



	2010	2011
2010 Service Area population (City of Salem, City of Roanoke, Town of Vinton)	129,932	129,932
Annual Vehicle Revenue Miles per Capita	**16.37**	**16.46**

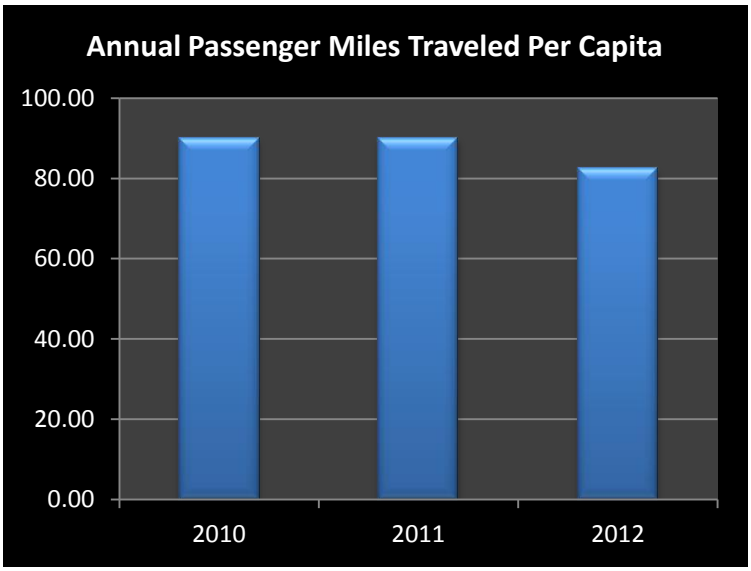
Data Sources:
NTD Database website – Access NTD Data - Safety & Security Data – Safety & Security Time Series http://www.ntdprogram.gov/ntdprogram/data.htm
Population data from 2010 Census http://2010.census.gov/2010census/data/

4.5 Annual Passenger Miles Traveled

	2010	2011
Annual Passenger Miles Traveled per Capita	**90.04**	**82.62**
Passenger Miles Traveled – Valley Metro	11,130,258	10,195,399
Passenger Miles Traveled - RADAR	568,269	539,674
Annual Passenger Miles Traveled	**11,698,527**	**10,735,073**

Data Sources:
NTD Database website – Access NTD Data - Safety & Security Data – Safety & Security Time Series http://www.ntdprogram.gov/ntdprogram/data.htm

4.6 Annual Passenger Miles Traveled Per Capita



	2010	2011
2010 Service Area population (City of Salem, City of Roanoke, Town of Vinton)	129,932	129,932
Annual Passenger Miles Traveled per Capita	**90.04**	**82.62**

Data Sources:
NTD Database website – Access NTD Data - Safety & Security Data – Safety & Security Time Series http://www.ntdprogram.gov/ntdprogram/data.htm
Population data from 2010 Census http://2010.census.gov/2010census/data/

4.7 Annual Smart Way Connector Bus Ridership

	2011	2012
Annual Smart Way Connector Bus Ridership	4,855*	14,235

**Smart Way Connector service began on July 19, 2011.*

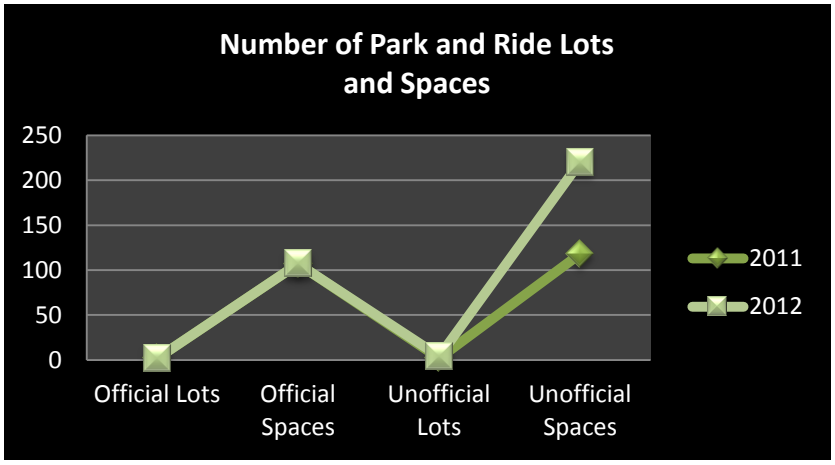
Data Source:
Smart Way Connector Data received from Valley Metro.

5.0 HOV USAGE

5.1 Number of Park and Ride Lots and Spaces

	2011	2012
Total official lots	2	2
Total official spaces	107	107
Total unofficial lots	2	4
Total unofficial spaces	118	220

Category	Park and Ride Lot Name	Spaces
Official	I-81 Exit 140	92
Official	I-81 Exit 150	15
Unofficial	Food Lion (Orange Avenue)	20
Unofficial	K-Mart Parking Lot (460 BUS, N. Franklin & Laurel Sts.)	82
Unofficial	Orange Market	44
Unofficial	Waldron Park	74



Data Source:
RideSolutions website: http://ridesolutions.org/commuters/carpool/regional-park-rides/#prmap.

5.2 Number of Members in Ride Solutions Program

	2011	2012
Members in RIDE Solutions	2,260	1,685*

**Note: the decrease in membership from 2011 to 2012 was due to updating the RIDE Solutions database, to remove unused or dormant accounts. The 2012 number reflects active accounts.*

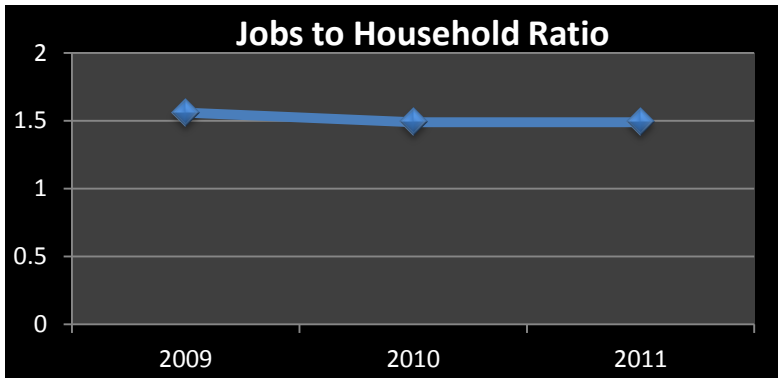
Data Source:
RIDE Solutions member database.

6.0 JOBS-TO-HOUSING RATIO

6.1 Ratio of Jobs to Households at the Regional and Jurisdictional Levels

Locality	Jobs 2009	Households 2009	**Ratio 2009**	Jobs 2010	Households 2010	**Ratio 2010**	Jobs 2011	Households 2011	**Ratio 2011**
Botetourt County	15,980	12,672	**1.26**	15,300	12,918	**1.18**	15,563	12,789	**1.22**
City of Roanoke	75,762	42,187	**1.80**	74,772	42,833	**1.75**	74,851	42,892	**1.75**
Roanoke County and City of Salem	80,539	47,141	**1.71**	79,343	47,723	**1.68**	79,664	47,919	**1.66**
Total MPO*	**172,281**	**102,000**	**1.69**	**169,415**	**103,474**	**1.64**	**170,078**	**103,600**	**1.64**

**The data for Montgomery and Bedford Counties was excluded from this table because it included the Cities of Radford and Bedford respectively.*



Data Sources:
Employment - Bureau of Economic Analysis, CA25N Total full-time and part-time employment by NAICS industry, Total employment (number of jobs) in 2011.
Households – ACS Survey 2006-2011, B11016 Household Type by Household Size

6.2 Regional Linear Jobs-Households Dissimilarity Index (0.0 to 1.0)

Locality	Jobs (W)	Households (B)	Dissimilarity Index
Botetourt County	15,563	12,789	0.0097
City of Roanoke	74,851	42,892	0.0222
Roanoke County and City of Salem	79,664	47,919	0.0152
Total MPO	**170,078**	**103,600**	**0.0471**

**The data for Montgomery and Bedford Counties was excluded from this table because it included the Cities of Radford and Bedford respectively.*

Data Sources:
Employment - Bureau of Economic Analysis, CA25N Total full-time and part-time employment by NAICS industry, Total employment (number of jobs) in 2011.
Households – ACS Survey 2006-2011, B11016 Household Type by Household Size

Dissimilarity Index equation: $\frac{1}{2}\sum_{i=1}^{N}\left|\frac{b_i}{B}-\frac{w_i}{W}\right|$

6.3 Ratio of Jobs to Work Force

Locality	2011 Jobs	2011 Civilian Labor Force	Ratio of Jobs to Labor Force
Botetourt County	15.563	17,404	0.89
City of Roanoke	79,664	47,754	1.67
Roanoke County and City of Salem	19,944	61,686	0.32
Total MPO	**115,171**	**126,844**	**0.90**

**The data for Montgomery and Bedford Counties was excluded from this table because it included the Cities of Radford and Bedford respectively.*

Data Sources:
Employment - Bureau of Economic Analysis, CA25N Total full-time and part-time employment by NAICS industry, Total employment (number of jobs) in 2011.
Civilian Labor Force – Virginia Workforce Connection, Labor Force Employment and Unemployment (LAUS) data.

6.4 Inter and Intra Regional Commuting Data

The table below indicates the percentage of residents working in the locality in which they live.

Locality	1970	1980	1990	2000
Botetourt County	38%	36%	31%	35%
City of Roanoke	74%	72%	69%	63%
Roanoke County and City of Salem	42%	45%	49%	53%

**Note: There was no information available for Bedford County. Montgomery County was not counted because the data included the City of Radford.*

Data Source:
Bureau of Economic Analysis

*Supplemental Data**

Locality	Live and Work in the Same Jurisdiction 2011	
	Number	Percent
Bedford County	4,279	16
Botetourt County	2,779	31
Montgomery County	19,234	60
City of Roanoke	17,875	43
Roanoke County	9,155	22
City of Salem	3,050	33

**This data is supplemental and is obtained and measured through unemployment claims and surveys in cooperation with the Census Bureau and the Virginia Employment Commission.*

Data Source:
U.S. Census Bureau – OnTheMap Application and LEHD Origin-Destination Employment Statistics, 2011. http://onthemap.ces.census.gov/.

6.5 Mean Travel Time to Work

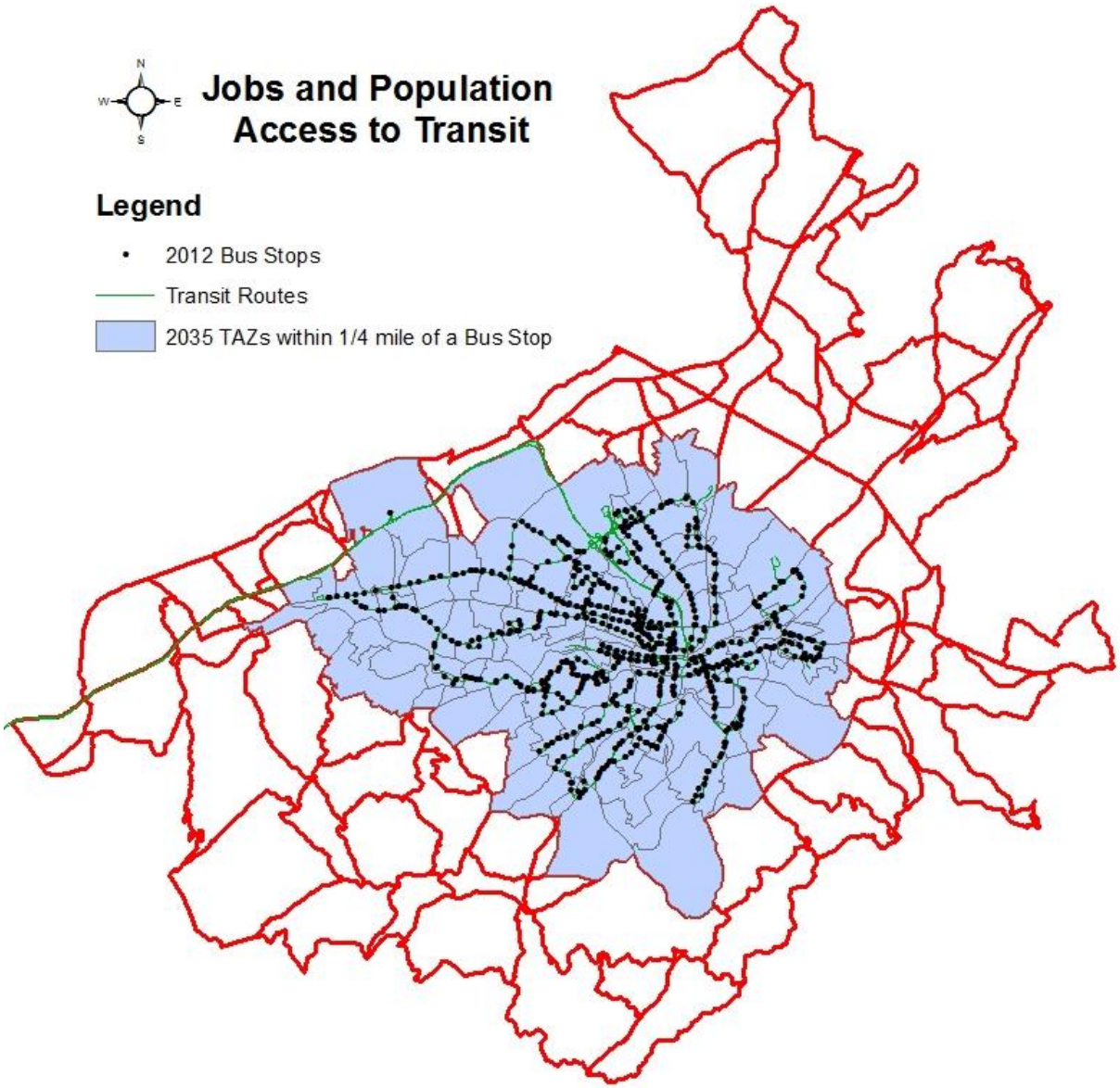
Locality	2005-2009 ACS Estimate (minutes)	2006-2010 ACS Estimate (minutes)	2011 ACS Estimate (minutes)
Bedford County	26.2	30.6	Not Available
Botetourt County	Not Available	Not Available	Not Available
Montgomery County	17.8	Not Available	Not Available
City of Roanoke	18.2	18.8	17.7
Roanoke County	20.4	21.3	Not Available
City of Salem	17.7	Not Available	Not Available

Data Source:
American Community Survey (ACS) Estimates, Table S0802.

7.0 JOB AND HOUSING ACCESS TO TRANSIT

7.1 Percent of population and/or households in TAZs served by transit
7.2 Percent of employment in TAZs served by transit

Data Year	% of Population in TAZs served by Transit	% of Employment in TAZs served by Transit
2005	66%	82%



Data Sources:
2035 TAZs and associated 2005 estimates of population and employment.
2012 Valley Metro fixed-route and Smart Way Bus Stops

8.0 JOB AND HOUSING ACCESS TO PEDESTRIAN FACILITIES

8.1 Number and Percent of Residents Who Walk to Work

Locality	# of Residents who Walk to Work		Total # of Workers 16 Years and Over		% of Workers who Walk to Work	
	2010	**2011**	**2010**	**2011**	**2010**	**2011**
Bedford County	226	235	32,451	32,485	0.70%	0.72%
Botetourt County	111	67	16,102	16,364	0.70%	0.40%
Montgomery County	1,846	1,898	42,730	43,513	4.32%	4.36%
City of Roanoke	922	874	43,849	44,094	2.10%	1.98%
Roanoke County	619	585	46,456	45,826	1.33%	1.35%
City of Salem	499	494	11,528	11,595	4.32%	4.30%
Total MPO	**4,223**	**4,153**	**193,116**	**193,877**	**2.18%**	**2.14%**

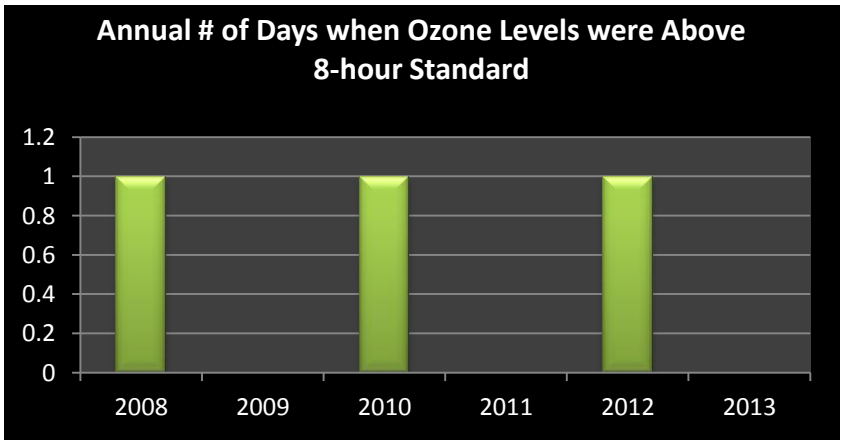
Data Source: 2007-2011 American Community Survey 5-Year Estimates, Table B08301.

9.0 AIR QUALITY

9.1 Annual Number of Days when Ozone Levels Were Above the 8-Hour Standard

Year	# days above 8-hour standard
2008	1
2009	0
2010	1
2011	0
2012	1
2013*	0

**No exceedances to date in 2013.*



Data Source:
Department of Environmental Quality -
http://www.deq.virginia.gov/Programs/Air/AirQualityForecasting/Eighthourozoneexceedances.aspx.

10.0 MOVEMENT OF FEIGHT

10.1 Truck and Rail Mode Share, by Value

Origin Location	Truck	Rail
Bedford County	$7,135,051,088	$183,704
Botetourt County	$915,736,229	$13,061,615
Montgomery County	$2,911,552,479	$144,610
Roanoke County	$7,402,847,256	$69,863
City of Roanoke	$15,625,412,933	$1,645,909
City of Salem	$15,920,228,318	$3,025,520
Total Value in 2004	**$49,910,828,303**	**$18,131,221**

Destination Location	Truck	Rail
Bedford County	$3,261,476,793	$12,505,796
Botetourt County	$4,983,794,770	$9,278,637
Montgomery County	$5,725,409,793	$20,832,612
Roanoke County	$2,127,568,295	$18,134,007
City of Roanoke	$7,894,637,680	$19,015,654
City of Salem	$4,129,808,893	$10,683,020
Total Value in 2004	**$28,122,696,224**	**$90,449,726**

Data Sources:
2007 Global Insight Inc. Transearch 2004 Virginia Freight Flows.

10.2 Truck and Rail Mode Share, by Tons

Origin Location	Truck	Rail
Bedford County	1,885,091	209
Botetourt County	1,696,893	12,115
Roanoke County	3,261,429	288
Montgomery County	4,104,445	316
City of Roanoke	6,134,111	1,871
City of Salem	2,252,915	1,169
Total Value in 2004	19,334,884	15,968

Destination Location	Truck	Rail
Bedford County	2,801,871	7,263
Botetourt County	2,402,830	9,985
Montgomery County	5,359,526	42,770
Roanoke County	2,038,500	18,633
City of Roanoke	4,959,179	11,370
City of Salem	1,386,790	7,816
Total Value in 2004	18,948,696	97,837

Data Sources:
2007 Global Insight Inc. Transearch 2004 Virginia Freight Flows.