Fourth Quarter 2012 Performance Measures Report

Hampton **R**oads
Transportation **O**perations **C**enter

Hampton Roads TOC

FOURTH QUARTER REPORT 2012

Hampton Roads TOC

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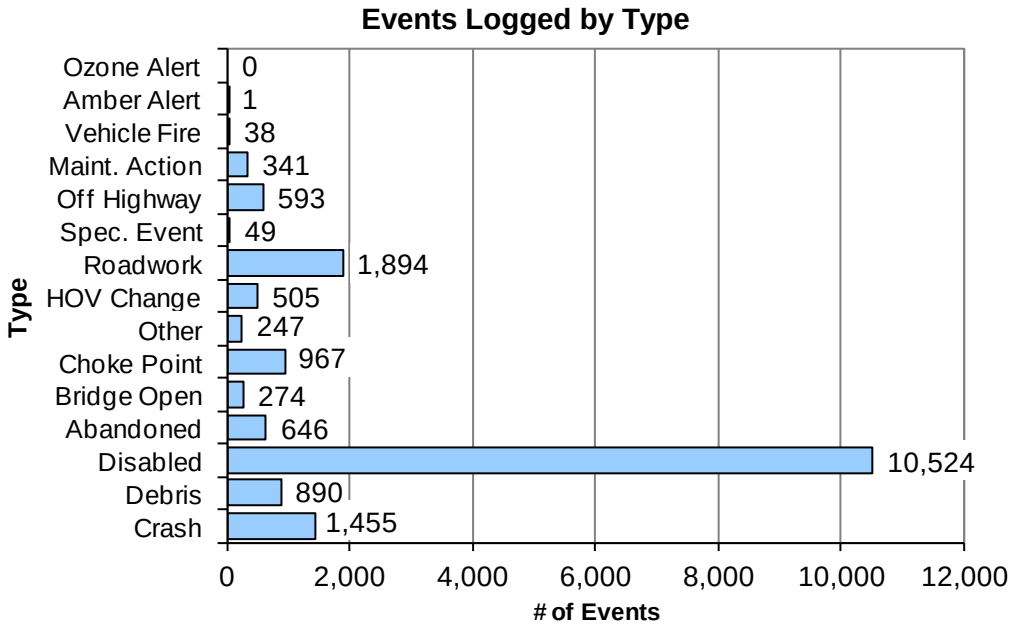
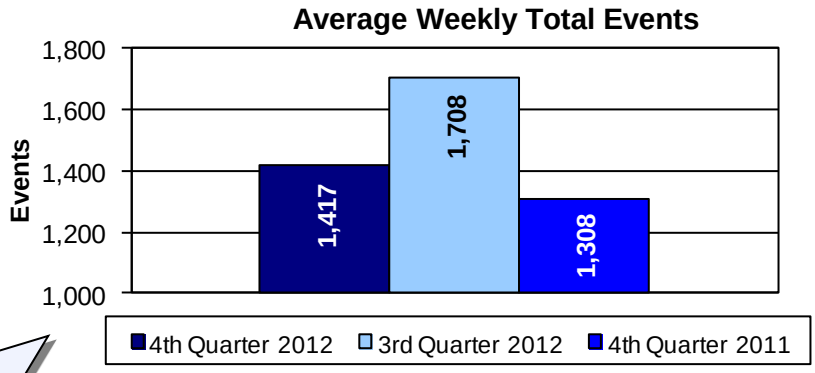
Control Room

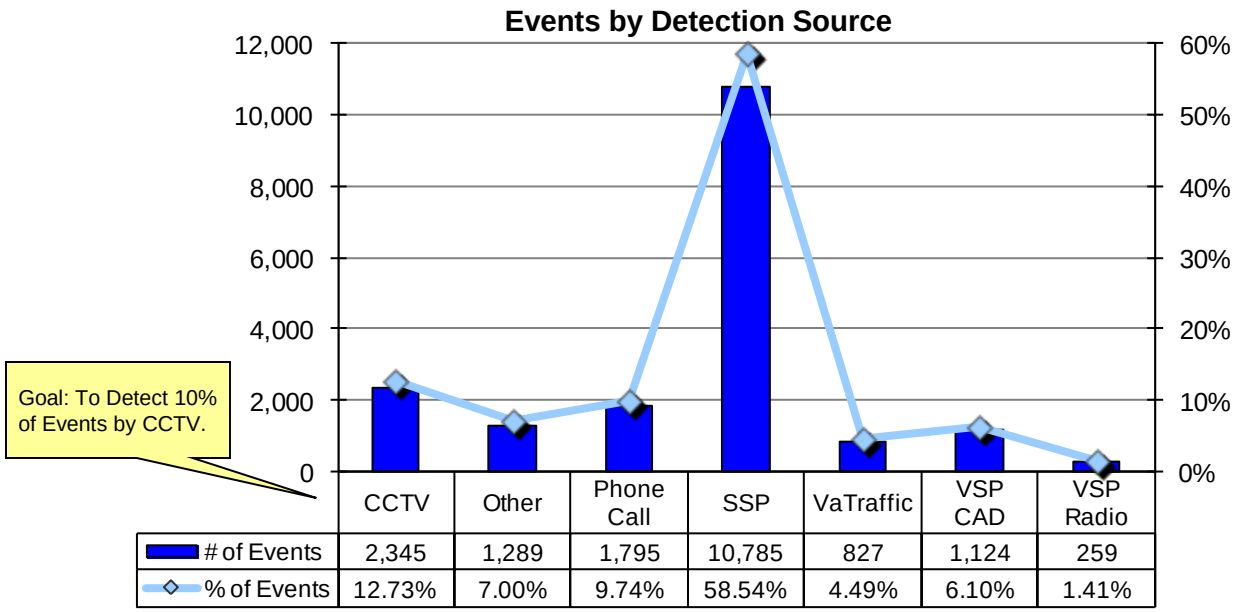


This graph enumerates event counts for the fourth quarter of 2012 and shows the value for each type: Ozone Alert, Amber Alert, Vehicle Fire, Maintenance Action, Off Highway, Special Event (i.e. motorcade), Roadwork, HOV Change (manual change to the HOV system from the control center), Other (i.e. police emergency), Choke Point (managing tunnel congestion), Bridge Opening, Abandoned Vehicle, Disabled Vehicle, Debris (ladder, mattress, animals, etc.) and Crash.
The event type Disabled Vehicle made up 57% of the 18,424 total events logged by the HRTOC Control Room in the fourth quarter.



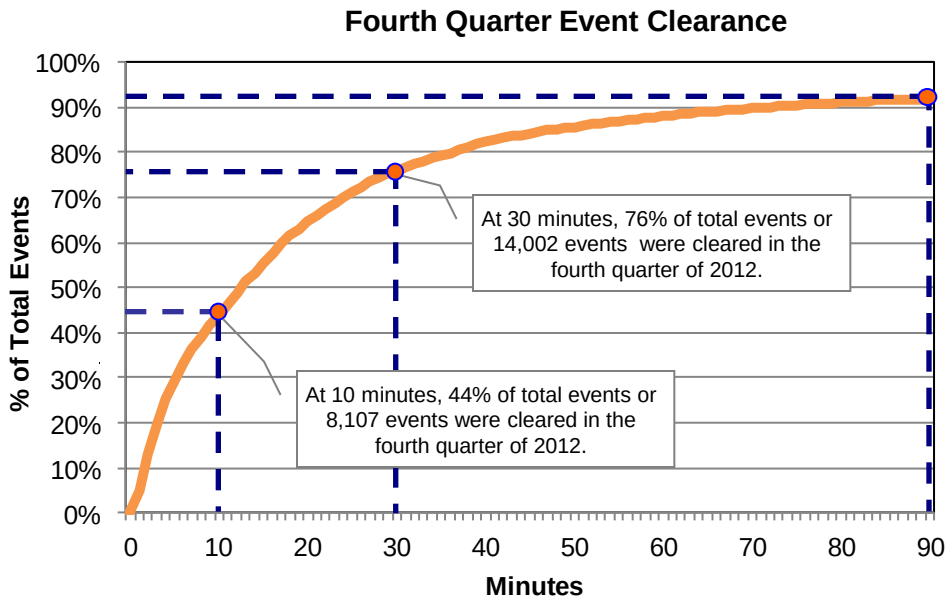
Shown above are the weekly averages for events logged by the Control Room for the fourth quarter of 2012, the third quarter of 2012, and the fourth quarter of 2011.
The fourth quarter of 2012 average of 1,417 events per week was down 17% from the third quarter of 2012, but up 8% from the fourth quarter 2011 weekly average.

Control Room (Continued)



	CCTV	Other	Phone Call	SSP	VaTraffic	VSP CAD	VSP Radio
# of Events	2,345	1,289	1,795	10,785	827	1,124	259
% of Events	12.73%	7.00%	9.74%	58.54%	4.49%	6.10%	1.41%

This graph provides a tally of the fourth quarter 2012 events, broken down by their detection source: CCTV [Closed Circuit Television], Other [used for events generated in-house including HOV Change and Maintenance Action, etc], Phone Call [Local Police/Sheriff, Citizen Call, Contractor Call, VDOT Field Staff], SSP [Safety Service Patrol], VaTraffic [Virginia Traffic Information Management System] and Virginia State Police [VSP Radio or Computer Aided Dispatch]. Percents of total events logged are included.



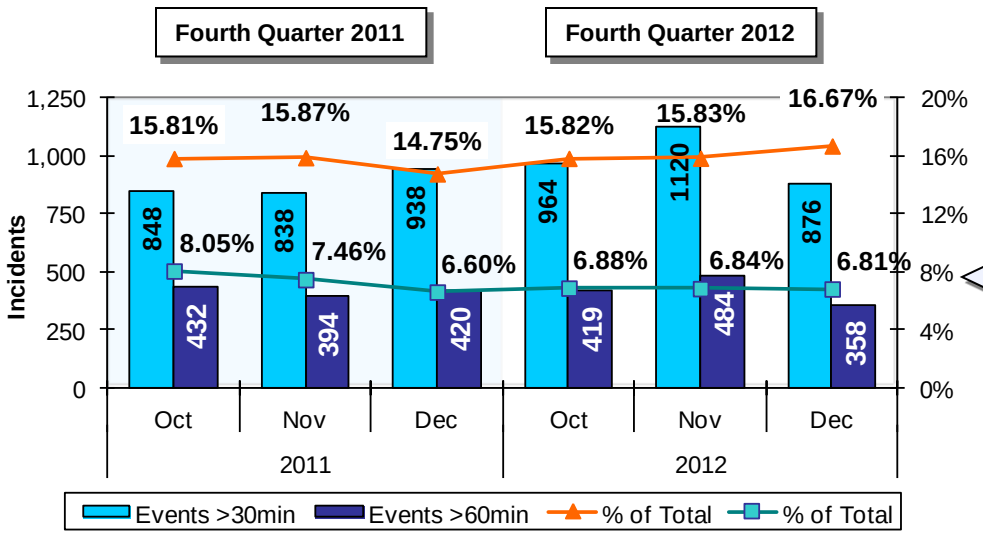
Of the 18,424 events logged by the Hampton Roads Transportation Operations Center in the fourth quarter of 2012, 92% (16,905 events) were cleared within 90 minutes of verification.

Of the approximately 1,500 events that lasted more than 90 minutes, the top event types were:
Roadwork - 41%
Choke Point - 29%
Accidents - 8%

Control Room (Continued)

Events Greater Than 30 and 60 Minutes

By month and by percentage of total events that month



This graph compares the fourth quarter 2011 and 2012 events which lasted more than 30 minutes and events which lasted more than 60 minutes in duration.
Percentages of total events logged are included.
The Q4 2012 average percentage of events greater than 30 minutes increased by 0.6% from the 2011 average and the events greater than 60 minutes average decreased by 0.5%.

Incidents *are defined as unplanned events adversely impacting traffic flow such as crashes, debris removed, disabled vehicles and abandoned vehicles. Incidents often involve a Safety Service Patrol (SSP) response.*

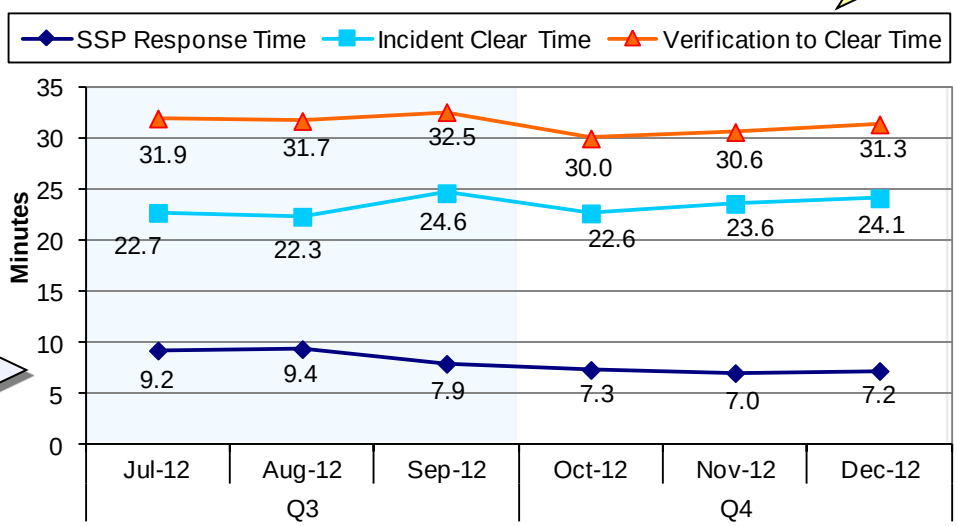
Events *include the above defined Incidents, planned events (i.e. Roadwork), and special events (i.e. Amber Alerts).*

This line graph shows the average SSP Response time - duration from the time an incident is verified to when a SSP truck arrives on scene; the average Incident Clear Time - duration from SSP arrival until the incident is cleared or the SSP is relieved by an outside agency; and the total amount of time from initial verification to clearance for Q3 and Q4 2012.
In Q4 the average SSP response time decreased by over a minute and incident clear time remained constant, causing the average incident duration to decrease from 32 minutes in Q3 to 31 minutes in Q4.

Average Incident Duration*

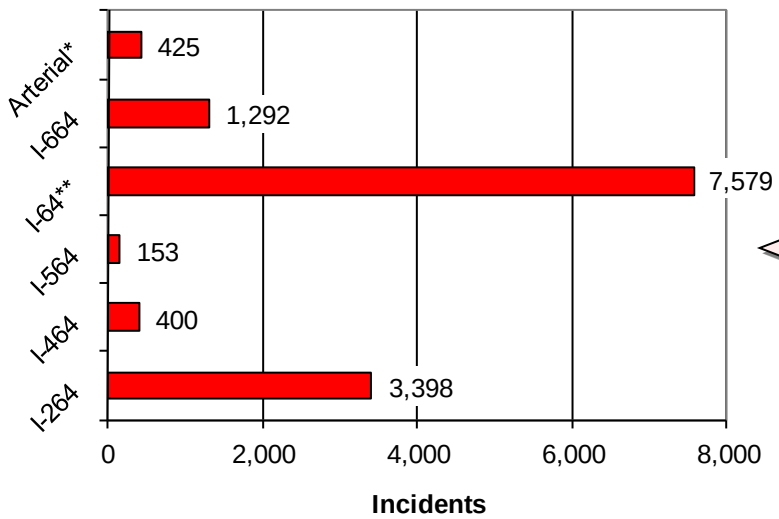
*Only includes incidents with a SSP response, where SSP was not the detection source because this generally forces response time to be zero

Goal: Average 26 Minutes



Safety Service Patrol

Number of SSP Responses by Roadway



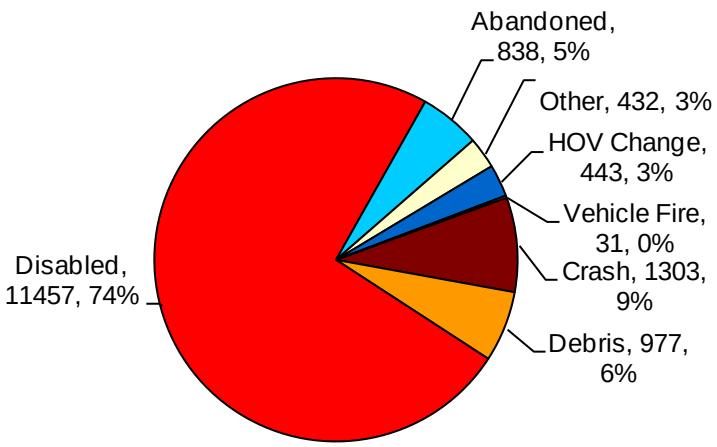
This graph shows the number of SSP responses for each roadway monitored by the HRTOC. Also included are responses on arterial roads, bridges and tunnels.
This information can be used to plan future patrol areas and staffing levels.

In the fourth quarter of 2012 SSP assists on I-64 made up 60% of the total 15,481 assists.

*Includes Western Freeway (Route 164) responses & responses on I-64 between mile marker 220 and 227 (VDOT Richmond District)
** I-64 responses include SSP responses for the event type HOV Change

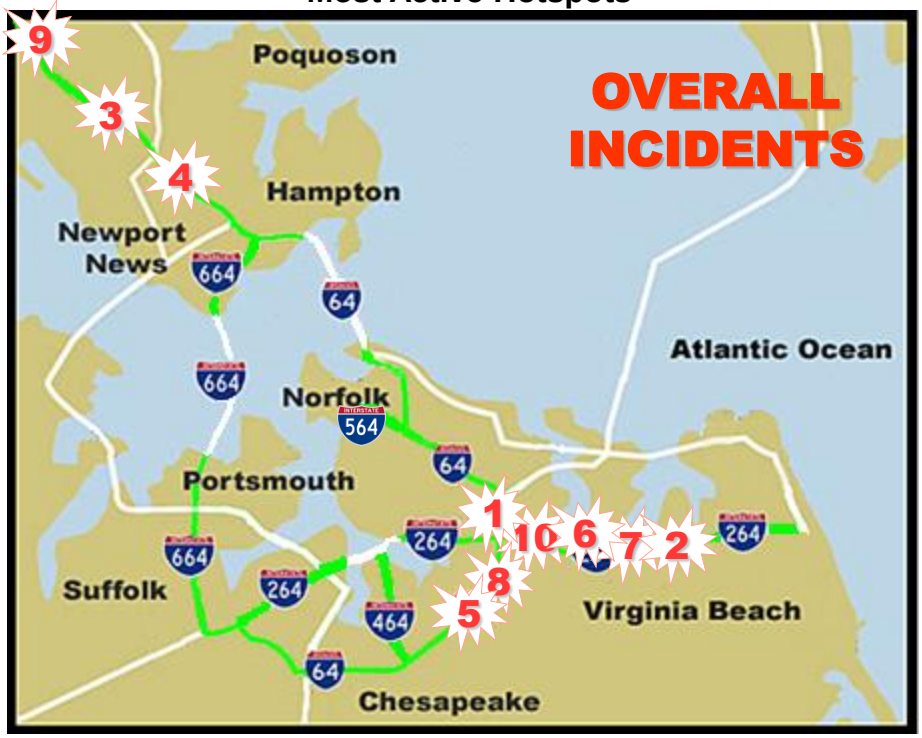
SSP Responses by Type

This pie chart shows the values for the types of SSP responses. Types include Disabled Vehicles, Abandoned Vehicles, Other (i.e. traffic control for police activity), HOV Change (confirming sign and gate changes), Vehicle Fire, Crash and Debris (i.e. ladders or animals in roadway).
This information is used for forecasting SSP vehicle equipment, future staffing requirements and short and long term consumable material (flares, batteries) needs.



Safety Service Patrol (Continued)

Most Active Hotspots



Ranking	Code	Location	# at Location	% of Total Incidents	Last Q Rank
1	64-11	64 / 264 Interchange - Northampton Blvd	682	5.05%	1
2	264-20	Independence Blvd - Rosemont Rd	574	4.25%	3
3	64-36	Jefferson Ave - Fort Eustis Blvd	490	3.63%	2
4	64-33	Hampton Roads Center Pkwy - J Clyde Morris Blvd	474	3.51%	4
5	64-08	Greenbrier Pkwy - Indian River Rd	393	2.91%	5
6	264-18	Newtown Rd - Witchduck Rd	383	2.83%	7
7	264-19	Witchduck Rd - Independence Blvd	340	2.52%	9
8	64-09	Indian River Rd - Twin Bridges	335	2.48%	8
9	64-38	Yorktown Rd - Rte 199	309	2.29%	6
10	264-17	64 / 264 Interchange - Newtown Rd	309	2.29%	12
		TOTAL INCIDENTS	13,515	31.74%	

This table and accompanying map depict the highest overall incident occurrence locations for October 1, 2012 through December 30, 2012. The Hampton Roads area has been divided into 104 geographic locations. The incident types included to make up the overall most active spots include abandoned vehicles, vehicles involved in crashes, debris removed from the roadway, as well as responses to disabled vehicles. Also included in the table are the rankings of locations for the third quarter of 2012 (Last Q). The knowledge of active incident locations, as well as the comparison to previous active locations, will allow management to detect emerging patterns and plan SSP staffing and routes in relation to those areas requiring the most attention. The areas of roadway with SSP coverage are highlighted on the map in green.

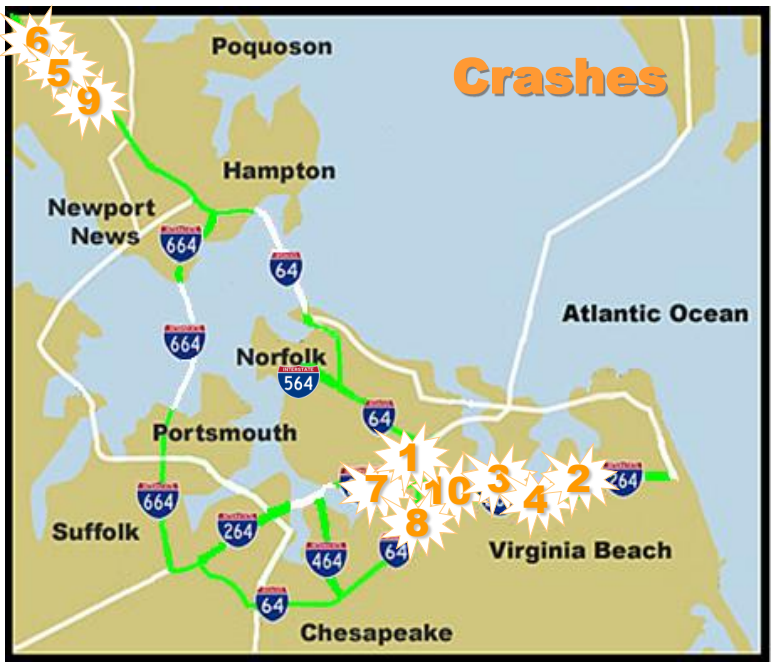
The charts that follow contain similar information that has been separated into the four incident types (abandoned, crashes, debris and disabled).

Safety Service Patrol (Continued)

Most Active Hotspots (Continued)

Ranking	Location	# at Location	% of Total Abandoned	Last Q Rank
1	64-36	36	5.57%	1
2	64-33	25	3.87%	2
3	664-04	24	3.72%	26
4	64-38	22	3.41%	4
5	64-30	20	3.10%	9
6	64-08	18	2.79%	3
7	64-11	18	2.79%	6
8	264-22	18	2.79%	40
9	64-32	17	2.63%	10
10	264-20	16	2.48%	7
TOTAL ABANDONED		646	33.13%	

Ranking	Code	Location
1	64-36	Jefferson Ave - Fort Eustis Blvd
2	64-33	Hampton Roads Center Pkwy - J Clyde Morris Blvd
3	664-04	Dock Landing Rd - Portsmouth Blvd
4	64-38	Yorktown Rd - Rte 199
5	64-30	64 / 664 Interchange - Mercury Blvd
6	64-08	Greenbrier Pkwy - Indian River Rd
7	64-11	64 / 264 Interchange - Northampton Blvd
8	264-22	Lynnhaven Pkwy - Laskin Rd
9	64-32	Magruder Blvd - Hampton Roads Center Pkwy
10	264-20	Independence Blvd - Rosemont Rd



Ranking	Location	# at Location	% of Total Accidents	Last Q Rank
1	64-11	98	6.74%	2
2	264-20	57	3.92%	7
3	264-18	49	3.37%	4
4	264-19	47	3.23%	8
5	64-37	44	3.02%	5
6	64-38	40	2.75%	1
7	264-16	38	2.61%	10
8	64-09	35	2.41%	20
9	64-36	34	2.34%	3
10	264-17	34	2.34%	6
TOTAL ACCIDENTS		1,455	32.71%	

Ranking	Code	Location
1	64-11	64 / 264 Interchange - Northampton Blvd
2	264-20	Independence Blvd - Rosemont Rd
3	264-18	Newtown Rd - Witchduck Rd
4	264-19	Witchduck Rd - Independence Blvd
5	64-37	Fort Eustis Blvd - Yorktown Rd
6	64-38	Yorktown Rd - Rte 199
7	264-16	Military Hwy - 64 / 264 Interchange
8	64-09	Indian River Rd - Twin Bridges
9	64-36	Jefferson Ave - Fort Eustis Blvd
10	264-17	64 / 264 Interchange - Newtown Rd

Safety Service Patrol (Continued)

Most Active Hotspots (Continued)

Ranking	Location	# at Location	% of Total Debris	Last Q Rank
1	264-20	38	4.27%	1
2	Midtown	34	3.82%	3
3	64-11	29	3.26%	12
4	264-08	29	3.26%	23
5	64-30	26	2.92%	9
6	264-22	23	2.58%	7
7	264-17	23	2.58%	37
8	64-33	22	2.47%	4
9	64-08	22	2.47%	5
10	64-36	22	2.47%	6
TOTAL DEBRIS		890	30.11%	

Ranking	Code	Location
1	264-20	Independence Blvd - Rosemont Rd
2	Midtown	Inside the Midtown Tunnel
3	64-11	64 / 264 Interchange - Northampton Blvd
4	264-08	Downtown Tunnel (inside tunnel)
5	64-30	64 / 664 Interchange - Mercury Blvd
6	264-22	Lynnhaven Pkwy - Laskin Rd
7	264-17	64 / 264 Interchange - Newtown Rd
8	64-33	Hampton Roads Center Pkwy - J Clyde Morris Blvd
9	64-08	Greenbrier Pkwy - Indian River Rd
10	64-36	Jefferson Ave - Fort Eustis Blvd

Ranking	Location	# at Location	% of Total Disabled	Last Q Rank
1	64-11	537	5.10%	1
2	264-20	463	4.40%	2
3	64-33	401	3.81%	4
4	64-36	398	3.78%	3
5	64-08	325	3.09%	5
6	264-18	307	2.92%	6
7	64-09	274	2.60%	8
8	264-19	264	2.51%	10
9	64-10	239	2.27%	12
10	264-17	239	2.27%	19
TOTAL DISABLED		10,524	32.75%	

Ranking	Code	Location
1	64-11	64 / 264 Interchange - Northampton Blvd
2	264-20	Independence Blvd - Rosemont Rd
3	64-33	Hampton Roads Center Pkwy - J Clyde Morris Blvd
4	64-36	Jefferson Ave - Fort Eustis Blvd
5	64-08	Greenbrier Pkwy - Indian River Rd
6	264-18	Newtown Rd - Witchduck Rd
7	64-09	Indian River Rd - Twin Bridges
8	264-19	Witchduck Rd - Independence Blvd
9	64-10	Twin Bridges (Norfolk Side) - 64 / 264 Interchange
10	264-17	64 / 264 Interchange - Newtown Rd

Projects

Current Projects

Project Description	Start Date	Status	Estimated Completion Date
DMS Retrofit - Phase 2 (37 signs)	Sep-11	In Progress - 30 original signs complete, addition of 7 more - process has begun	Jun-13
DMS Retrofit - Phase 3 (36 signs)	Feb-13	Signs have been selected to be completed under O&M contract	Sep-13
VA-164 Power	Dec-12	New ITS equipment has been deployed, but needs power	Outside Vendor

Upcoming Projects

Project Description	Status
Video Wall Upgrade to High Definition	Awaiting Materials
I-264 Lane Control System	In Engineering - Target to go to AD Apr. 2013
HRTOC Alternate Control Room Upgrade	In Engineering - Target to go to AD Jun. 2013
HRTOC Parking Expansion	AD Complete, Target to Award Feb. 2013
HRTOC Campus Drainage Enhancements	Survey In Progress, Working Towards AD
Communications Upgrade Design	In Design
Mercury Blvd. ITS Expansion	In Design
Lightfoot ITS Expansion	In Design

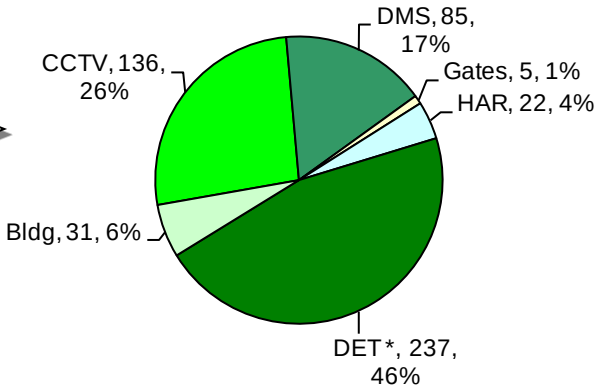
Recently Completed Projects

Project Description	Complete
Integrated Radio System for HRTOC Control Room	Mar-12
HAR - Frequency Switch	May-12
Detector Upgrades	Sep-12
DMS Retrofit - Phase 1 (44 signs)	Dec-12
VA-164 ITS Deployment	Dec-12
ITS Communications Upgrade - Phase 1	Dec-12

Field Maintenance

Number of PM Tasks by Equipment Type

This chart shows the preventive maintenance (PM) tasks completed during the fourth quarter of 2012 for the 4 major equipment types and HRTOC facility buildings. Additional PM tasks not shown in the chart include those related to safety inspections and hub buildings, etc.
This information helps management allocate PM resources (equipment) and keep to the established preventive maintenance schedule.

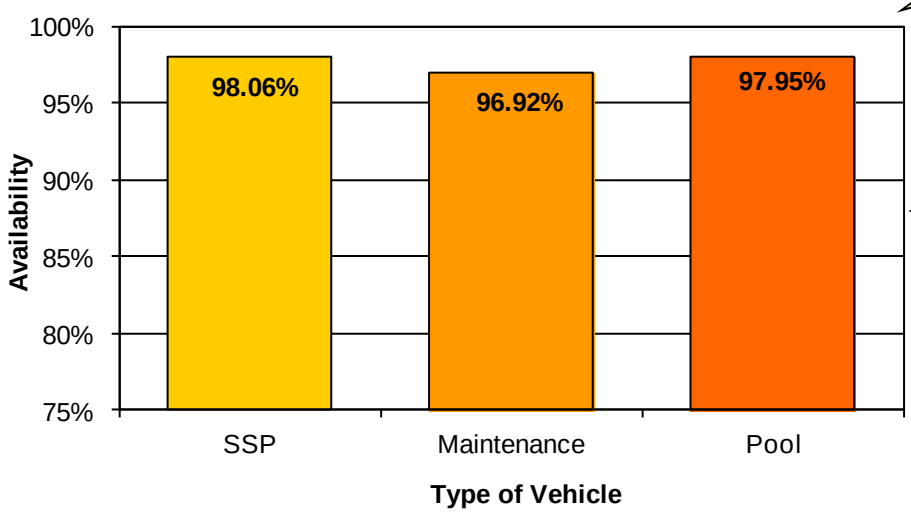


* DET refers to maintenance for detector cabinets.

Fleet and Asset Management

HRTOC Vehicle Average Availabilities

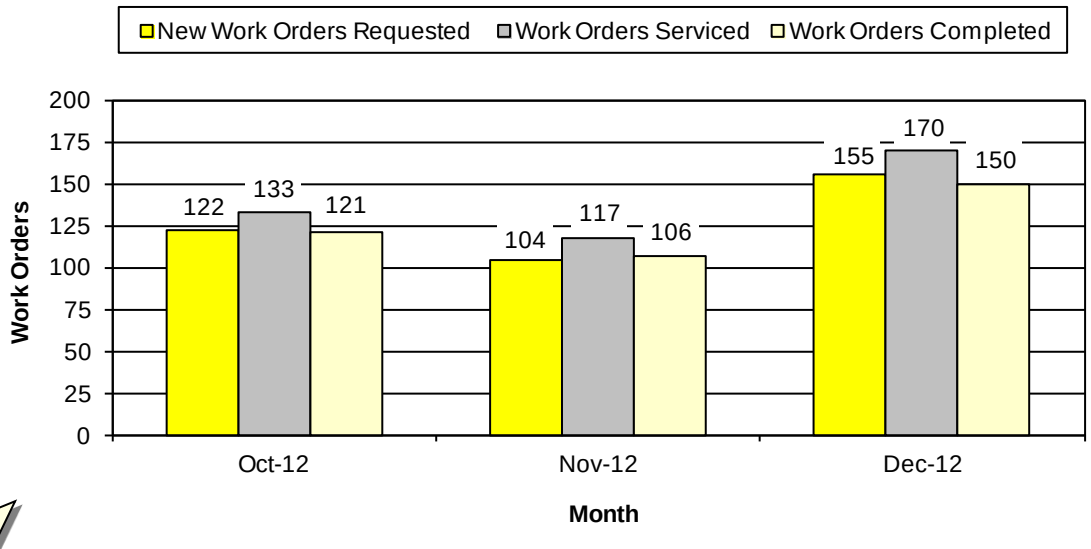
Goal: To Maintain 100% Availability for all Vehicle Types.



These three bars show what percentage of the 100 total SSP, Maintenance and Pool vehicles were available for use during the fourth quarter of 2012.
These numbers measure fleet service effort and success rates.

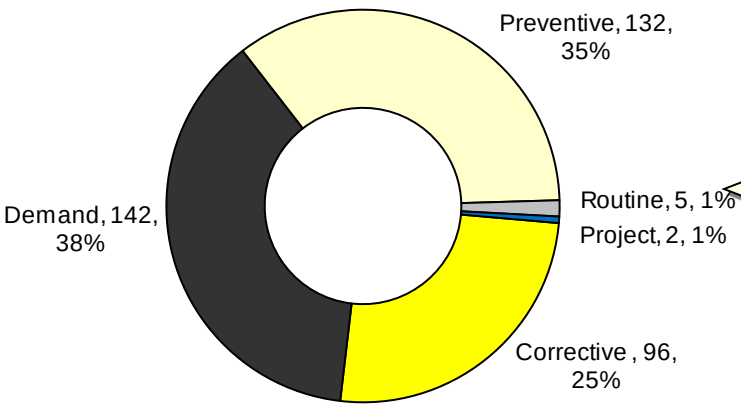
Information Technology

Work Orders Submitted to/Serviced by IT



The above bar graph shows the number of work orders requested, serviced and completed by the IT Department by month for the fourth quarter of 2012. The quarterly totals for all three work order counts decreased from Q3 when they were at their highest point since reporting began in 2006.
The majority of the 377 completed work orders were requests related to 'Applications' including installing, modifying, uninstalling and resolving issues with software.
This metric helps track IT Department workloads, in support of staff/resource allocation and scheduling.

IT Facility Maintenance Activity

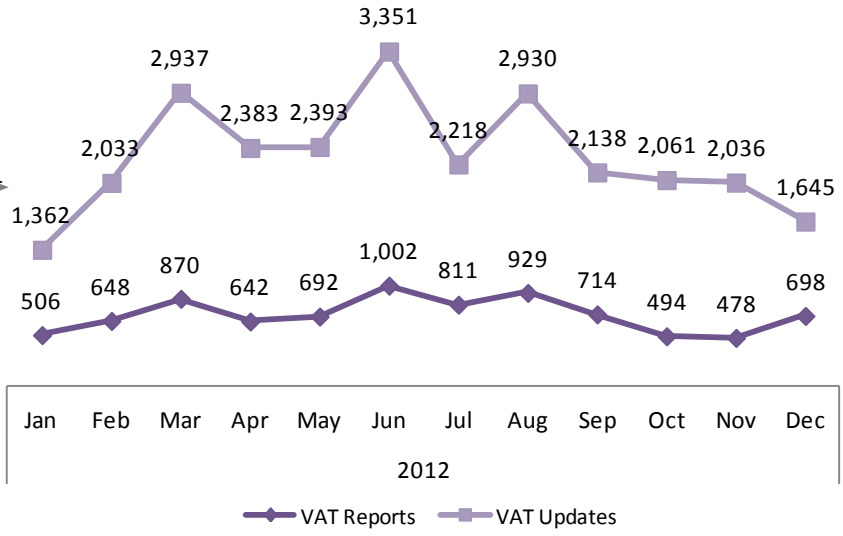


This donut graph shows IT Department tasks completed during Q4 for work types: corrective - "My printer is not working, please fix it"; demand – "I need a new printer"; preventive – regular PM on a schedule; and routine – a replacement printer every three years, for example.
The breakout supports management in the allocation of staff, equipment and budget resources at the HRTOC.

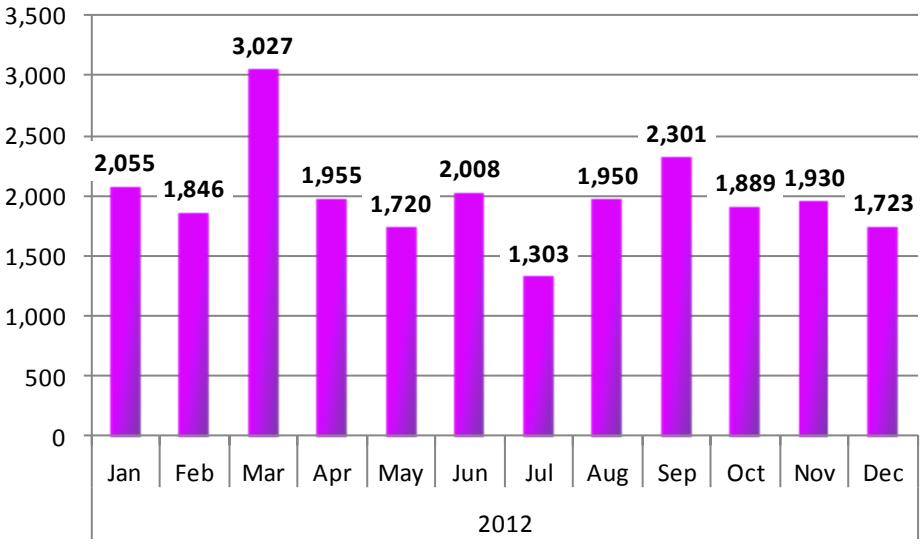
Public Information

The information entered by HRTOC Control Room Operators into VaTraffic feeds the 511 system. 511 is a resource for motorists that includes real-time traffic conditions, route planning, and information about alternative travel methods. There are several ways to access the information— dialing 511 from any landline or cell phone, logging onto the web at 511virginia.org and the 511 mobile application. Keeping VaTraffic updated enables motorists to make informed travel decisions. As events progress HRTOC Operators enter updates into VaTraffic including changes to lane closures, incident clearance, and congestion delays.

VaTraffic Reports & Updates



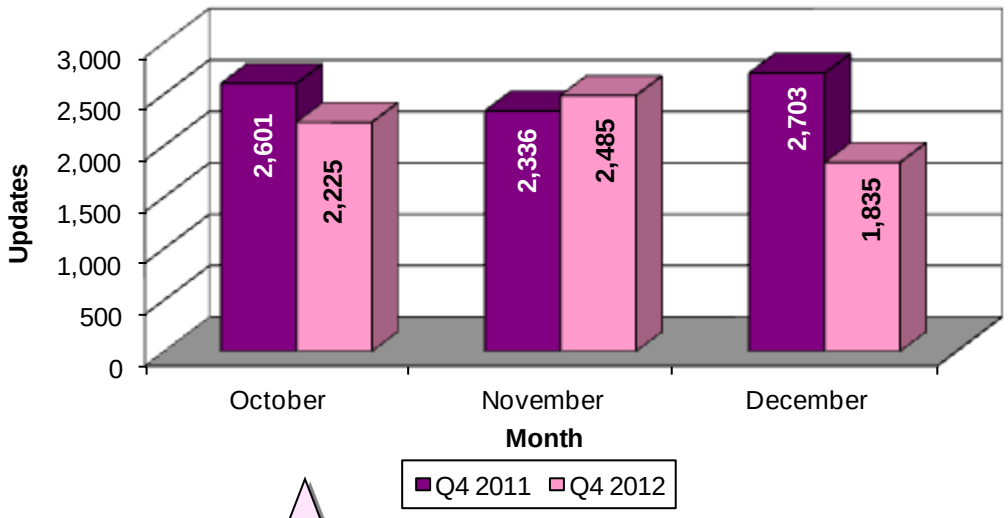
Hampton Roads Lane Closure Counts



The HRTOC began using LCAMS (Lane Closure Advisory and Management System) in 2011. LCAMS is a program that allows users in Hampton Roads to quickly add and modify planned lane closures as well as determine if a lane closure conflicts with any existing entries. Information entered in LCAMS is used to generate the weekly Hampton Roads Area Lane Closure Forecast that is posted on the VDOT website. Prior to LCAMS lane closures had to be manually reviewed one at a time to check for conflicts and then entered in the weekly Hampton Roads Area Lane Closure Forecast.

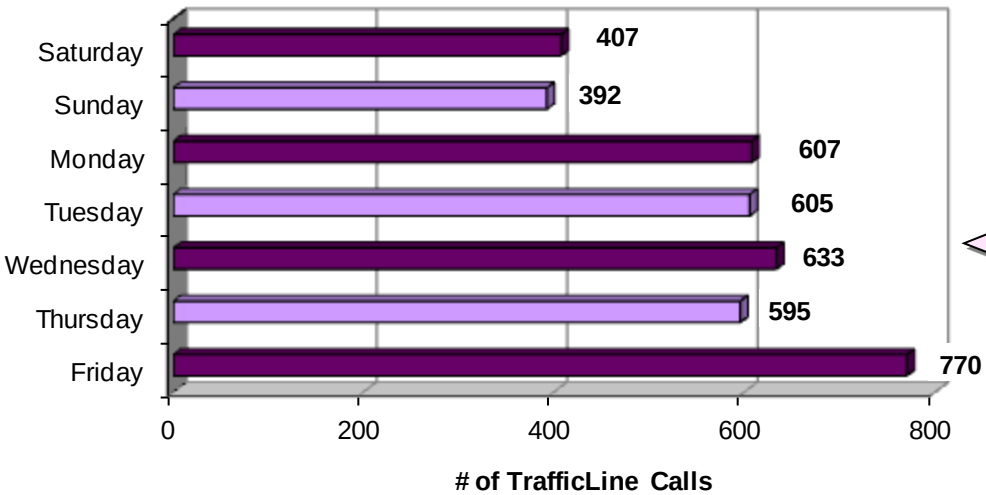
Public Information

Highway Advisory Radio Updates



In order to advise the public of current traffic conditions on Hampton Roads highways the Highway Advisory Radio (HAR) messages are updated throughout the day. The above graph tallies the number of events that had an associated HAR message during the fourth quarters of 2011 and 2012, by month. An average day during the fourth quarter of 2012 registered 72 events with associated HAR messages, a decrease from the same period of 2011. The decrease is most likely due to the decrease in the event types Bridge Open, Choke Point and Roadwork from Q4 2011. These 3 event types are most often associated with HAR messages.

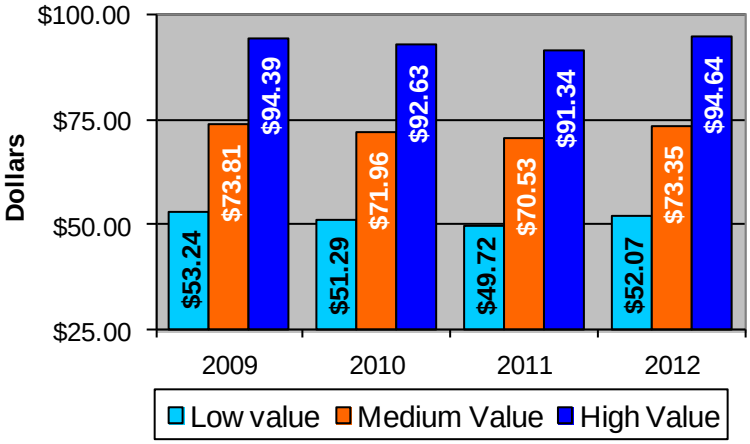
Hampton Roads TrafficLine Calls



In December 2006, VDOT launched Hampton Roads TrafficLine, (757) 361-3016, as another method to inform motorists of road conditions and traffic delays.
The graph depicts the 4,009 TrafficLine calls in the fourth quarter of 2012 by day of the week.

Customer Service*

What Value Would You Place on the Services Received from the SSP Program?



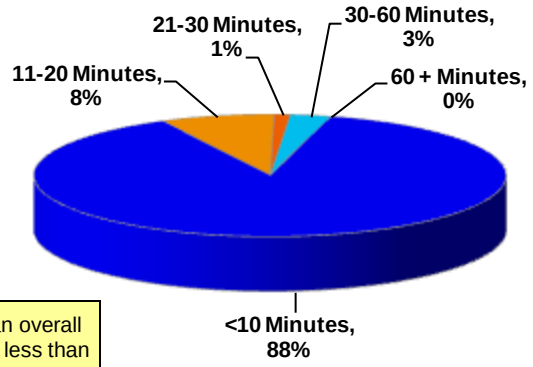
This graph depicts the perceived value that assisted motorists place on SSP services. Because the survey asks participants to choose a value within a monetary range (e.g. $50-$100), a range of values has also been shown here.

After adjusting for inflation, the average survey participant values each assist between $52 and $95 for 2012.

How Long Did You Wait For the SSP Driver?

The numbers depicted in this pie chart show the length of time a motorist waited before a SSP driver arrived. This information goes beyond what is in our database, as we are typically unaware of how long a motorist has been waiting when the control room verifies the incident.

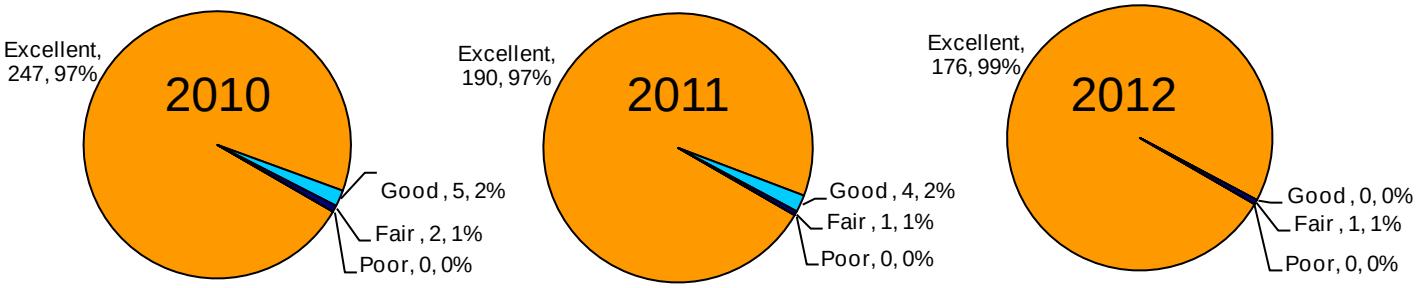
180 valid responses were collected in Q4. Using the midpoint for each range of time, the overall average wait time before SSP arrival was 7.1 minutes for the fourth quarter of 2012.



Goal: To maintain an overall average wait time of less than 9 minutes

These pie charts compare the overall SSP service rating for the fourth quarters of 2010, 2011 and 2012. 97% or more, of responses stated they receive excellent service from the SSP.

Overall, How Would You Rate the SSP Service?



* All of the information on this page was gathered from the SSP comment cards given to assisted motorists.