

Fourth Quarter 2011 Performance Measures Report

Hampton Roads
Transportation Operations Center





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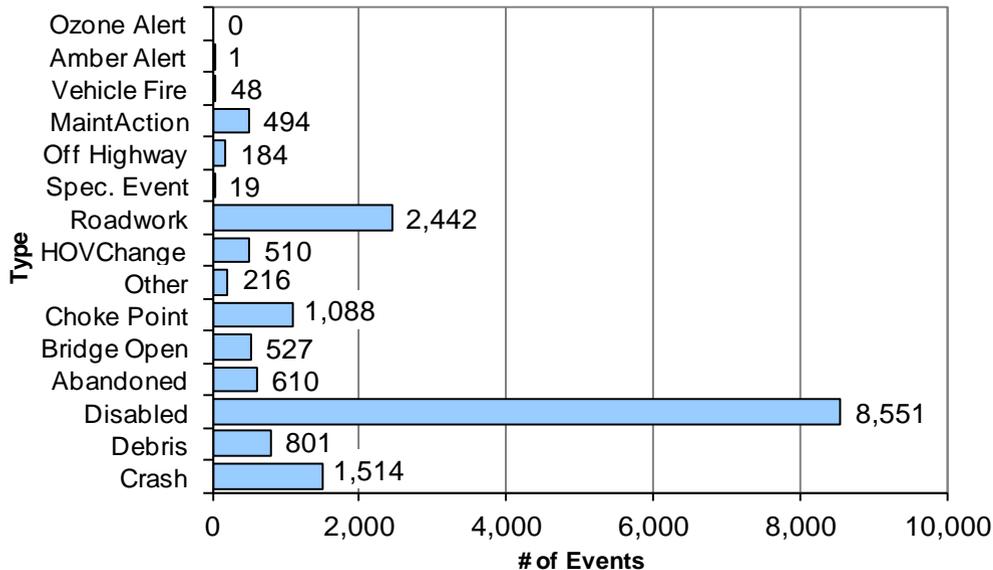
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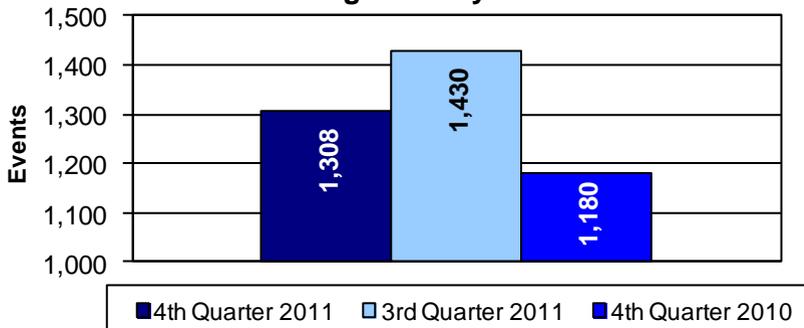
Control Room

Events Logged by Type



This graph enumerates event counts for the fourth quarter of 2011 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 50% of the 17,005 total events logged by the HRTOC Control Room in the fourth quarter.

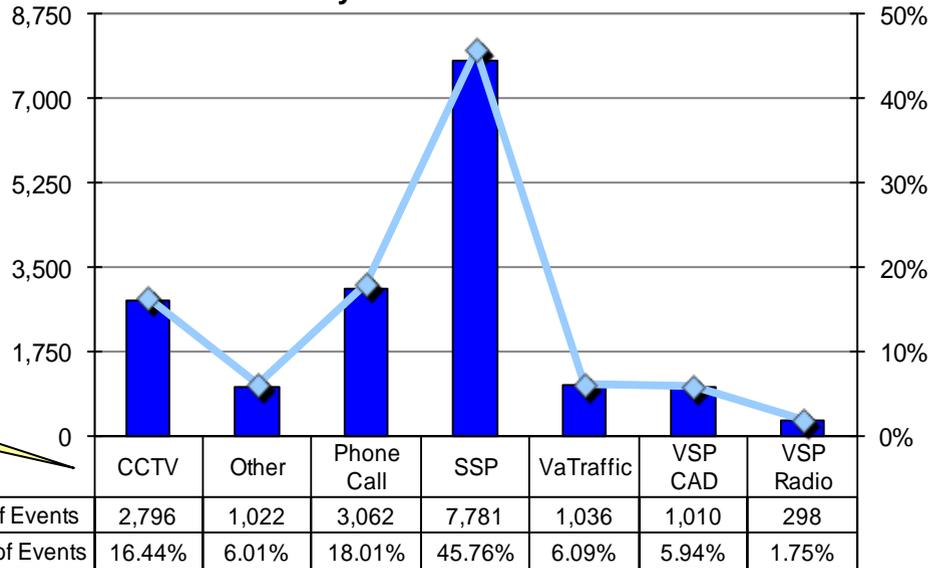
Average Weekly Total Events



Shown above are the weekly averages for events logged by the Control Room for the fourth quarter of 2011, the third quarter of 2011, and the fourth quarter of 2010. The fourth quarter of 2011 average of 1,308 events per week was up 10.9% from the fourth quarter of 2010, but down 8.5% from the third quarter 2011 weekly average.

Control Room (Continued)

Events by Detection Source

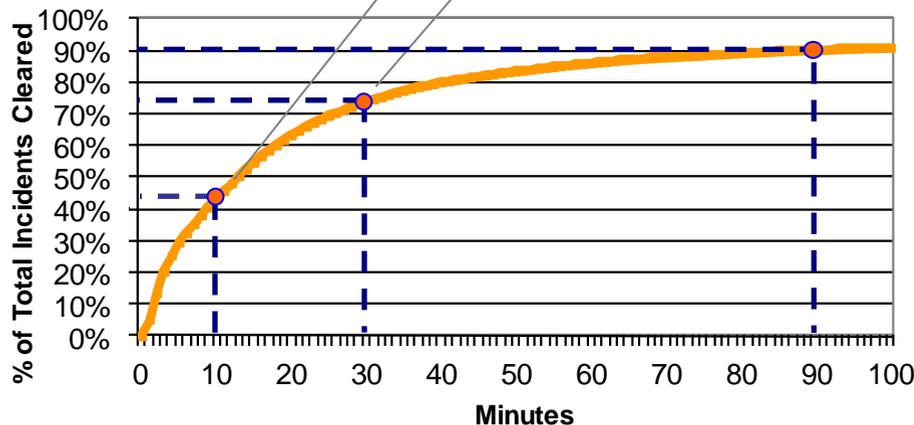


This graph provides a tally of the fourth quarter 2011 events, broken down by their detection source: CCTV [Closed Circuit Television], Other [i.e. field contractor, fire department, etc], Phone Call [public], SSP [Safety Service Patrol], VaTraffic [Virginia Traffic Information Management System] and Virginia State Police [VSP Radio or Computer Aided Dispatch]. Percents of total events logged are included.

Fourth Quarter Event Clearance

At 10 minutes, 43.3% of total events or 7,363 events were cleared in the fourth quarter of 2011.

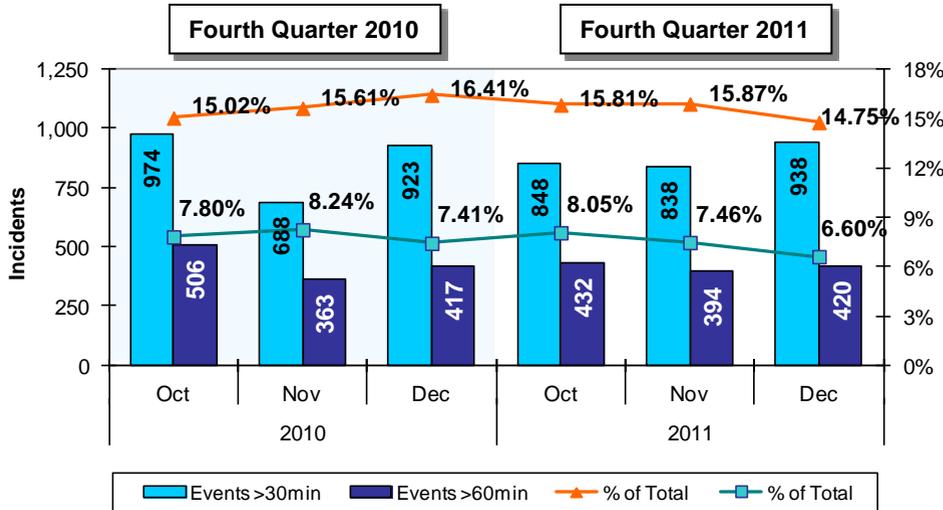
At 30 minutes, 73.9% of total events or 12,567 events were cleared in the fourth quarter of 2011.



There were 17,005 events logged by the Hampton Roads Transportation Operations Center in the fourth quarter of 2011. Of the 17,005, 90.2% (15,339 events) were cleared within 90 minutes of verification.

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 2010 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 2011 average percentage of events greater than 30 minutes decreased by 0.2% from the 2010 average and the events greater than 60 minutes average decreased by 0.4%.

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.

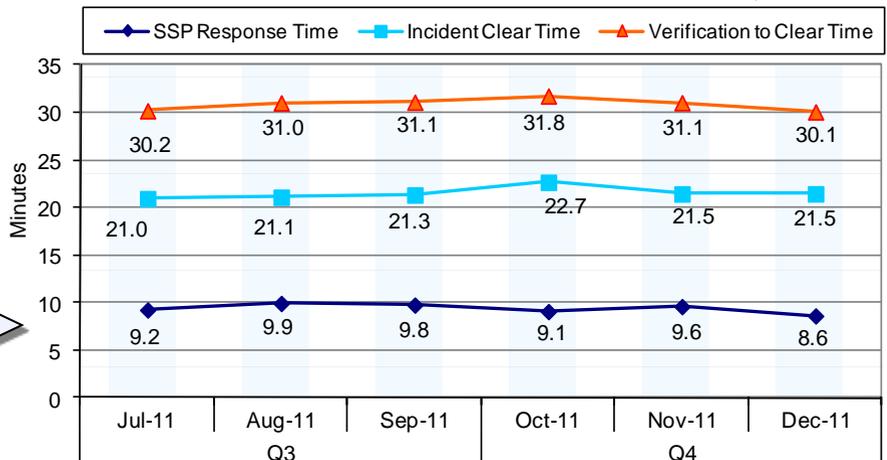
Events include the above defined Incidents, planned events (i.e. Roadwork), and special events (i.e. Amber Alerts).

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 (Note: SSP is *not* included as a detection source because this generally forces response time to be zero); 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 2011.

In Q4 the average SSP response time decreased from Q3 while average incident clear time increased, causing the average incident duration to remain constant at 31 minutes from Q3 to Q4.

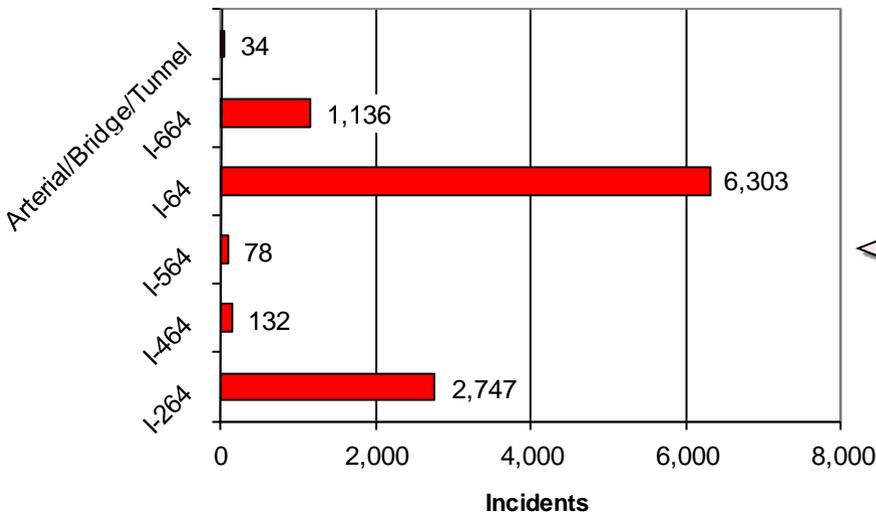
Average Incident Duration

Goal:
Average
26 Minutes



Safety Service Patrol

Number of SSP Assists by Roadway



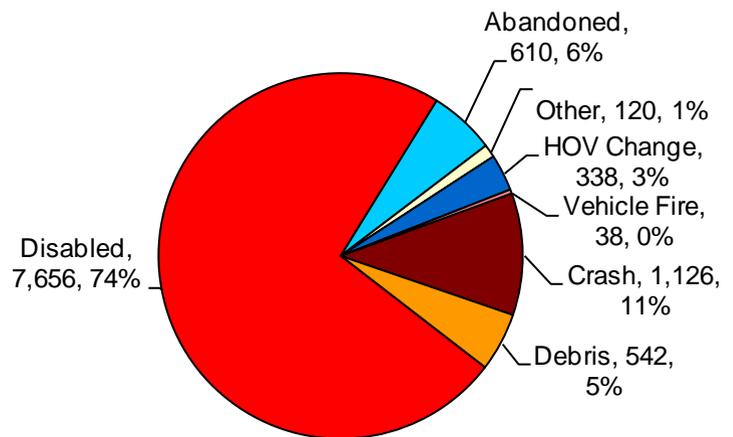
This graph shows the number of SSP assists for each freeway monitored by the HRTOC. Also included are responses on arterial roads, bridges and tunnels.

This information can be used to plan future patrol areas and staffing levels.

In the fourth quarter of 2011 SSP assists on I-64 made up 60% of the total 10,430 assists.

Note: I-64 responses include the assist type HOV Change.

SSP Assists by Type



This pie chart shows the values for the major types of SSP assists. Types include Disabled Vehicles, Abandoned Vehicles, Other (i.e. traffic control for police activity), HOV Change, 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	64-36	Jefferson Ave - Fort Eustis Blvd	543	4.73%	1
2	64-11	64 / 264 Interchange - Northampton Blvd	533	4.64%	2
3	264-20	Independence Blvd - Rosemont Rd	440	3.83%	3
4	64-08	Greenbrier Pkwy - Indian River Rd	396	3.45%	4
5	64-33	Hampton Roads Center Pkwy - J Clyde Morris Blvd	392	3.42%	5
6	264-18	Newtown Rd - Witchduck Rd	361	3.15%	6
7	264-19	Witchduck Rd - Independence Blvd	311	2.71%	9
8	264-13	Ballentine Blvd - Broad Creek Bridge	281	2.45%	7
9	264-17	64 / 264 Interchange - Newtown Rd	281	2.45%	11
10	64-09	Indian River Rd - Twin Bridges	247	2.15%	8
TOTAL INCIDENTS			11,476	32.98%	

This table and accompanying map depict the highest overall incident occurrence locations for July 1, 2011 through September 30, 2011. 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 2011 (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 SSP routes are highlighted on the map in green (post December expansion).

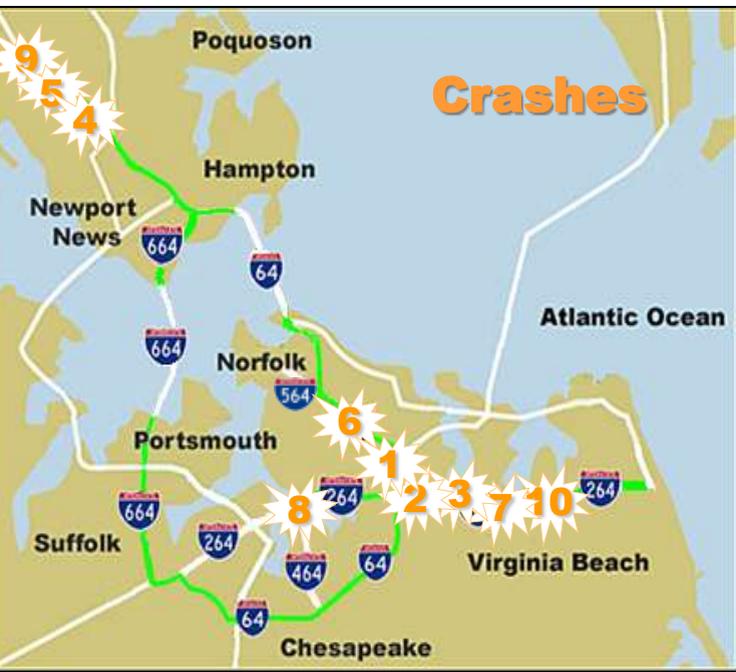
The charts that follow contain similar information that has been separated into the four incident types (abandoned, crashes, debris and disabled).

Safety Service Patrol (Continued)

Most Active Hotspots (Continued)

Ranking	Location	# at Location	% of Total Abandoned	Last Q Rank
1	64-36	33	5.41%	1
2	64-33	26	4.26%	2
3	64-11	25	4.10%	3
4	64-08	20	3.28%	5
5	64-31	19	3.11%	11
6	264-21	19	3.11%	20
7	664-01	18	2.95%	25
8	264-13	17	2.79%	7
9	664-04	17	2.79%	16
10	264-20	16	2.62%	4
TOTAL ABANDONED		610	34.43%	

Ranking	Code	Location
1	64-36	Jefferson Ave - Fort Eustis Blvd
2	64-33	Hampton Roads Center Pkwy - J Clyde Morris Blvd
3	64-11	64 / 264 Interchange - Northampton Blvd
4	64-08	Greenbrier Pkwy - Indian River Rd
5	64-31	Mercury Blvd - Magruder Blvd
6	264-21	Rosemont Rd - Lynnhaven Pkwy
7	664-01	64 / 664 Interchange - Rte 58
8	264-13	Ballentine Blvd - Broad Creek Bridge
9	664-04	Dock Landing Rd - Portsmouth Blvd
10	264-20	Independence Blvd - Rosemont Rd



Ranking	Location	# at Location	% of Total Accidents	Last Q Rank
1	64-11	92	6.08%	1
2	264-17	57	3.76%	5
3	264-18	56	3.70%	4
4	64-36	52	3.43%	3
5	64-37	46	3.04%	2
6	64-16	45	2.97%	13
7	264-19	44	2.91%	7
8	264-08	40	2.64%	11
9	64-38	38	2.51%	10
10	264-20	37	2.44%	18
TOTAL ACCIDENTS		1,514	33.49%	

Ranking	Code	Location
1	64-11	64 / 264 Interchange - Northampton Blvd
2	264-17	64 / 264 Interchange - Newtown Rd
3	264-18	Newtown Rd - Witchduck Rd
4	64-36	Jefferson Ave - Fort Eustis Blvd
5	64-37	Fort Eustis Blvd - Yorktown Rd
6	64-16	Chesapeake Blvd - Tidewater Dr
7	264-19	Witchduck Rd - Independence Blvd
8	264-08	Downtown Tunnel (inside tunnel)
9	64-38	Yorktown Rd - Rte 199
10	264-20	Independence Blvd - Rosemont Rd

Safety Service Patrol (Continued)

Most Active Hotspots (Continued)



Ranking	Location	# at Location	% of Total Debris	Last Q Rank
1	Midtown	55	6.87%	1
2	264-20	39	4.87%	2
3	64-11	31	3.87%	3
4	264-22	26	3.25%	6
5	JRB	24	3.00%	9
6	264-19	20	2.50%	4
7	64-07	19	2.37%	7
8	64-36	18	2.25%	5
9	64-08	18	2.25%	11
10	64-30	18	2.25%	12
TOTAL DEBRIS		801	33.46%	

Ranking	Code	Location
1	Midtown	Inside the Midtown Tunnel
2	264-20	Independence Blvd - Rosemont Rd
3	64-11	64 / 264 Interchange - Northampton Blvd
4	264-22	Lynnhaven Pkwy - Laskin Rd
5	JRB	On the James River Bridge
6	264-19	Witchduck Rd - Independence Blvd
7	64-07	Battlefield Blvd - Green Brier Pkwy
8	64-36	Jefferson Ave - Fort Eustis Blvd
9	64-08	Greenbrier Pkwy - Indian River Rd
10	64-30	64 / 664 Interchange - Mercury Blvd

Ranking	Location	# at Location	% of Total Disabled	Last Q Rank
1	64-36	440	5.15%	1
2	64-11	385	4.50%	2
3	264-20	348	4.07%	3
4	64-08	342	4.00%	4
5	64-33	324	3.79%	5
6	264-18	276	3.23%	6
7	264-19	233	2.72%	9
8	264-13	230	2.69%	8
9	64-09	202	2.36%	7
10	264-17	199	2.33%	13
TOTAL DISABLED		8,551	34.84%	

Ranking	Code	Location
1	64-36	Jefferson Ave - Fort Eustis Blvd
2	64-11	64 / 264 Interchange - Northampton Blvd
3	264-20	Independence Blvd - Rosemont Rd
4	64-08	Greenbrier Pkwy - Indian River Rd
5	64-33	Hampton Roads Center Pkwy - J Clyde Morris Blvd
6	264-18	Newtown Rd - Witchduck Rd
7	264-19	Witchduck Rd - Independence Blvd
8	264-13	Ballentine Blvd - Broad Creek Bridge
9	64-09	Indian River Rd - Twin Bridges
10	264-17	64 / 264 Interchange - Newtown Rd



Projects

Current Projects

Project Description	Start Date	Status	Scheduled Completion Date
VA-164 ITS Deployment	Apr-11	In Progress - On Budget, On Schedule	May-12
HAR - Frequency Switch	Apr-11	In Progress - On Budget, On Schedule	May-12
Detector Upgrades	Aug-11	In Progress - On Budget, On Schedule	May-12
DMS Retrofit - Phase 1 (44 signs)	Jun-11	In Progress - On Budget, On Schedule	Jul-12
DMS Retrofit - Phase 2 (30 signs)	Sep-11	In Progress - On Budget, On Schedule	Jul-12
ITS Communications Upgrade - Phase 1	Oct-11	In Progress - On Budget, On Schedule	Sep-12

Upcoming Projects

Project Description	Status
I-264 Lane Control System	In Engineering - Target to go to AD May. 2012
HRTOC Alternate Control Room Upgrade	In Engineering - Target to go to AD Jun. 2012

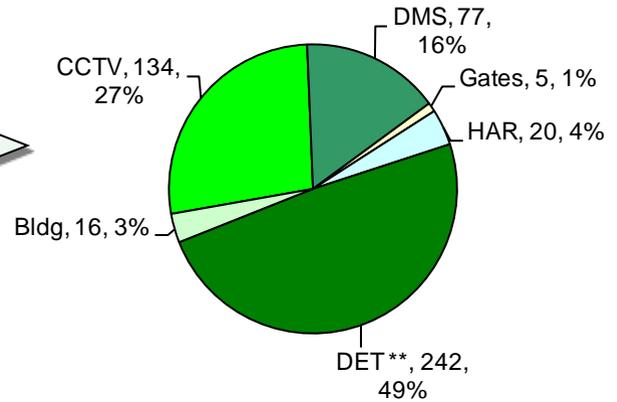
Recently Completed Projects

Project Description
Video Wall Replacement for HRTOC Control Room

Field Maintenance

Number of PM Tasks by Equipment Type

This chart and the accompanying table show the preventive maintenance (PM) tasks completed during the fourth quarter of 2011. These figures do not include other PM tasks related to safety inspections and hub buildings, etc. This information helps management allocate PM resources (equipment) and keep to the established preventive maintenance schedule.

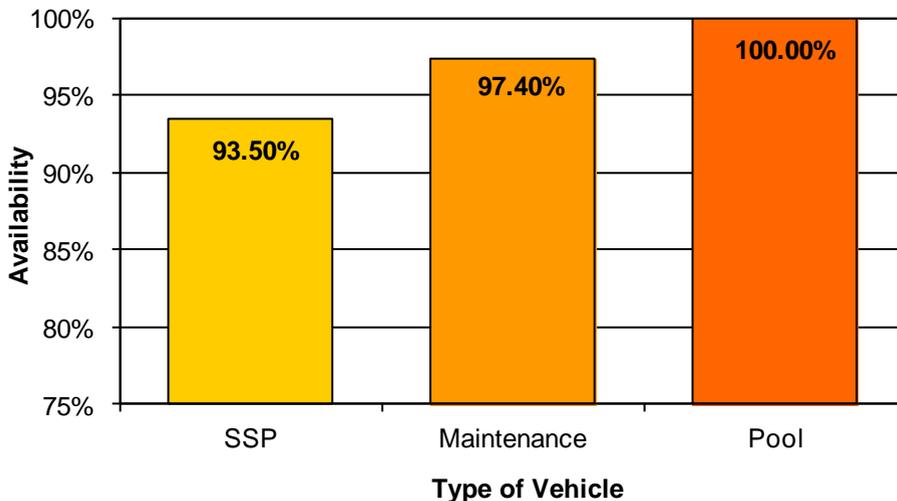


** DET refers to maintenance for detector cabinets.

Fleet and Asset Management

HRTOC Vehicle Average Availabilities

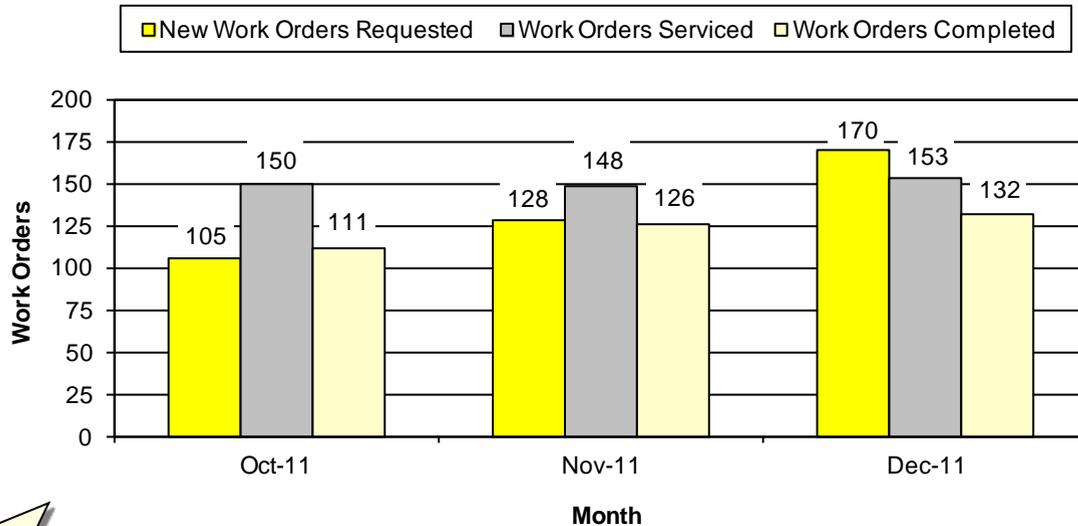
Goal: To Maintain 100% Availability for all Vehicle Types.



These three bars show what percentage of the 54 total SSP, Maintenance and Pool vehicles were available for use during the fourth quarter of 2011. These numbers measure fleet service effort and success rates.

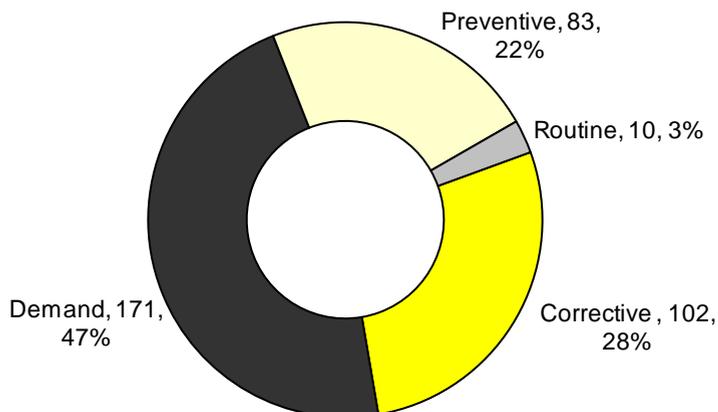
Information Technology

Work Orders Submitted to/Serviceed by IT



The above bar graph shows the number of work orders requested, serviced and completed by the IT Department for the fourth quarter of 2011. The majority of the 369 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

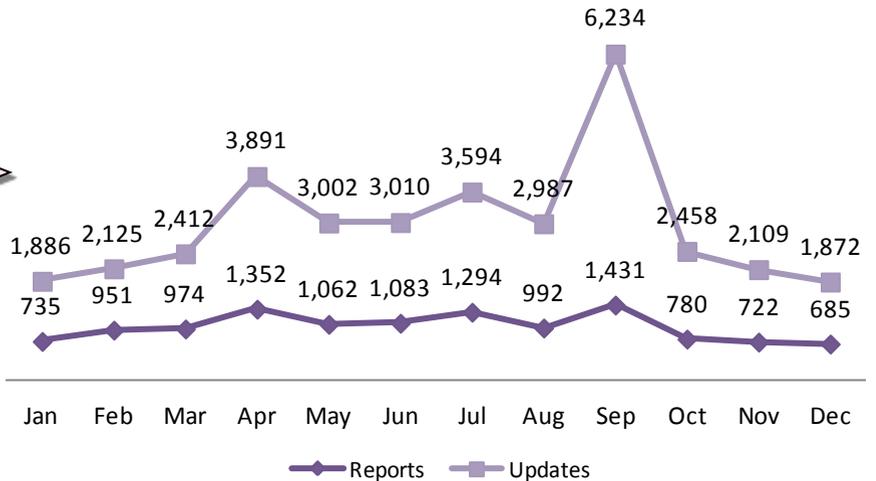


This donut graph shows IT Department tasks completed during Q4 for work types: corrective - "My printer is not working, please fix it"; demand - "I need a new printer"; preventive - regular PM on a schedule; and routine - a replacement printer every three years, for example. The breakout supports management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

Public Information

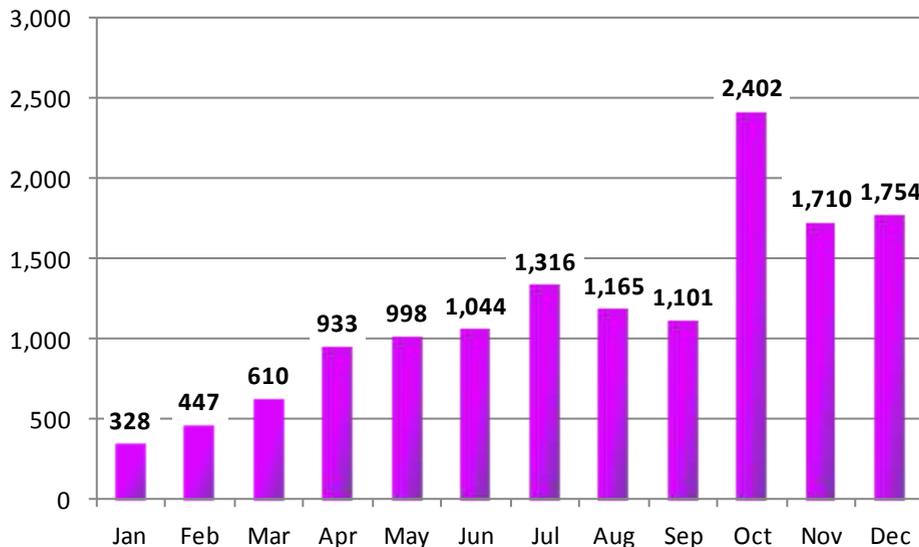
VaTraffic Reports & Updates

The travel 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 two primary ways to access the information— on the web at 511virginia.org and the 511 phone number. 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.



The September VaTraffic Update total was well above previous month's totals due to the hurricane that passed through Hampton Roads during week ending September 2nd causing flooding and debris to block many roadways in the area.

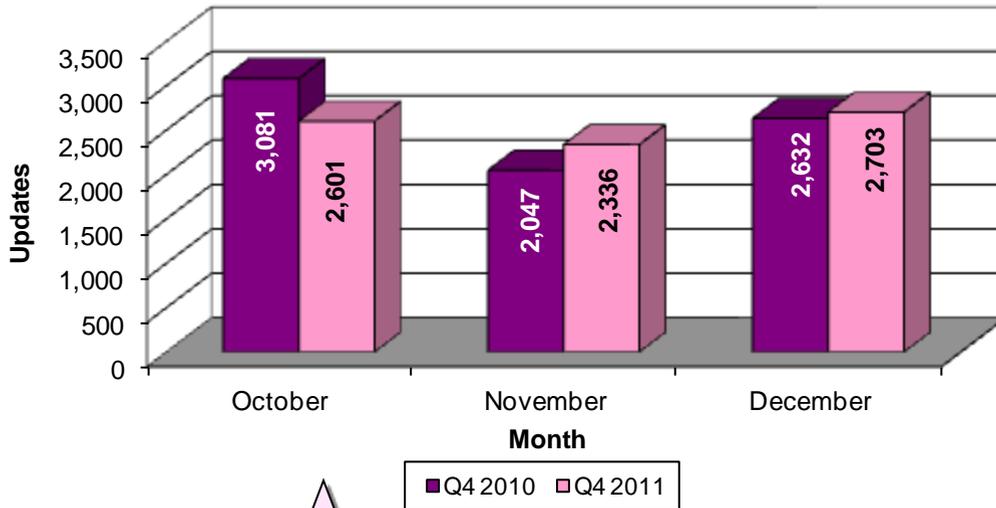
Hampton Roads Lane Closure Counts



The HRTOC began using LCAMS (Lane Closure Advisory and Management System) on May 1st 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.

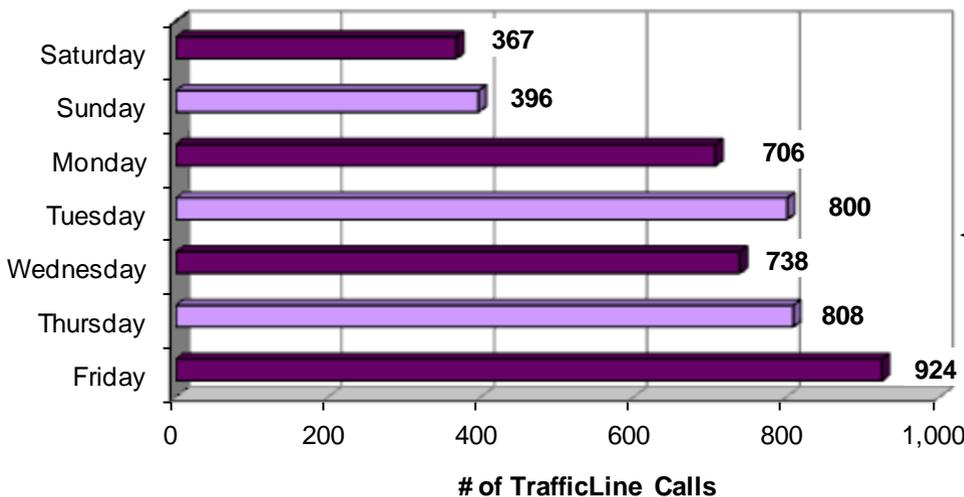
Public Information

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 updates made to the HAR system during the fourth quarter of 2010 and 2011 by month. An average day during the fourth quarter of 2011 registered about 84 updates to the HAR system, 5 more per day than the same period of 2010. The HAR increases over 2010 counts follow the trend of the total event count increase in Q4 2011 over 2010.

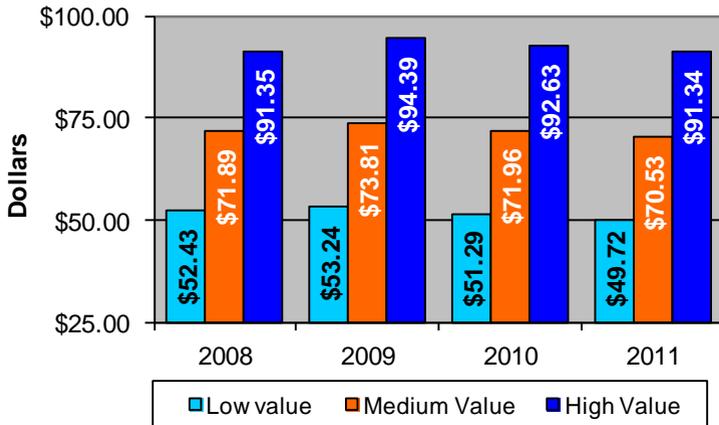
Hampton Roads TrafficLine Calls



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 4,739 TrafficLine calls in the fourth quarter of 2011 by day of the week.

Customer Service*

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

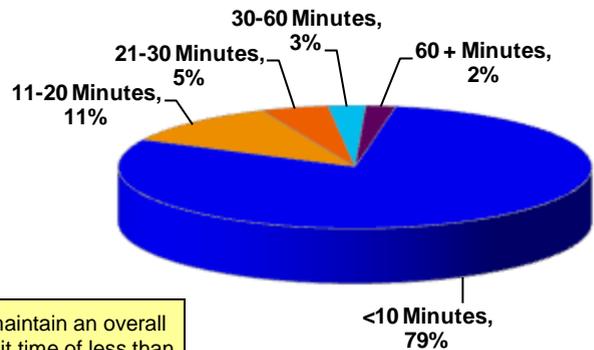


This graph depicts the perceived value that assisted motorists place on SSP services. Because the survey asks participants to choose a value within a monetary range (e.g. \$50-\$100), a range of values has also been shown here. After adjusting for inflation, the average survey participant values each assist between \$49.72 and \$91.34 for 2011.

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.

195 valid responses were collected in Q4. Using the midpoint for each range of time, the overall average wait time before SSP arrival was slightly above 9 minutes for the fourth quarter of 2011.

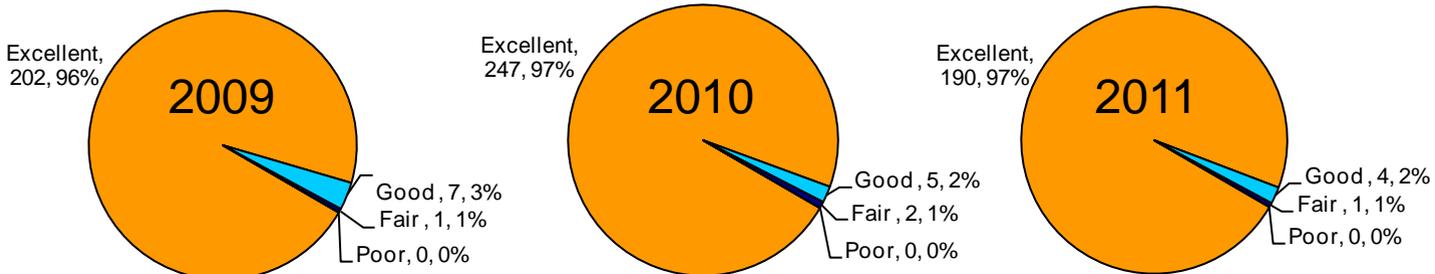
How Long Did You Wait For the SSP Driver?



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 2009, 2010 and 2011. 96%, 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.