



# SEVERE INCIDENT RESPONSE VEHICLE (SIRV) PILOT PROJECT QUARTERLY REPORT (OCT. - DEC. 2005)

FLORIDA DEPARTMENT OF TRANSPORTATION DISTRICT IV

BROWARD COUNTY, FLORIDA

## Severe Incident Response Vehicle (SIRV) Pilot Project Quarterly Report (October – December 2005)

### SIRV PILOT PROGRAM OVERVIEW

The Severe Incident Response Vehicle (SIRV) is a one-year Pilot Project developed through the Broward County Traffic Incident Management (TIM) Team. The TIM Team identified a need for a FDOT Incident Coordinator to be present on the scene of all major incidents along I-95, I-595 and I-75 within Broward County. As a Florida Department of Transportation (FDOT) Incident Coordinator, the SIRV assists responding agencies, coordinates maintenance of traffic (MOT) activities of the Road Rangers, and acts as a liaison between other agencies and FDOT resources, such as Maintenance. Other SIRV responsibilities include; documenting response and clearance times, actively participate in TIM Team meetings, conduct quality of service audits on Road Rangers, and facilitate post-incident analysis meetings. The SIRV is a specially equipped vehicle that is staffed with emergency response qualified personnel. The SIRV staff is available 24 hours a day / 7 days a week and they are dispatched through the SMART SunGuide TMC in Broward County. For more information on the SIRV Pilot Project, visit [www.smartsunguide.com](http://www.smartsunguide.com).

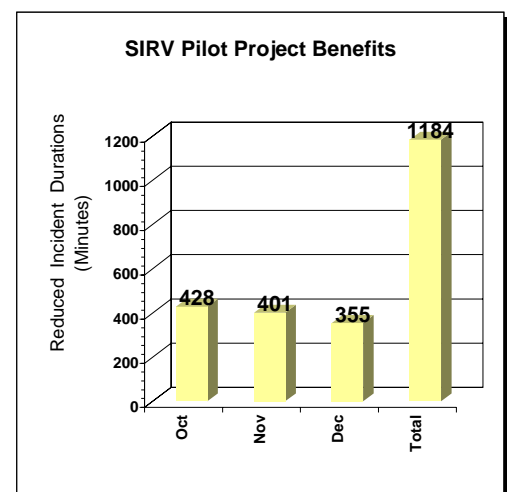


The SIRV Pilot Project Quarterly Report was evaluated and accepted by an independent consultant (Transportations Solutions Inc.). The same consultant will conduct a final review of the pilot project to determine the feasibility of continuing the program. The final evaluation will consider both quantitative and qualitative benefits, as well as recommendations for improving the SIRV Program.

The following summarizes the benefits and activities of the SIRV Pilot Project for the fourth quarter of operation (October - December 2005). The activities are grouped into the three (3) main areas; Responding to Major Incidents; Road Ranger Inspections and Public Outreach.

### SIRV PILOT PROJECT BENEFITS

Of the 99 incidents responded to by the SIRV staff, the SIRV staff was directly responsible for reducing the duration of 50 incidents for a total of 1,184 minutes. In addition, the SIRV provided benefits associated with congestion relief from reducing the number of lanes closed during incidents. While this reduced congestion, it did not reduce the overall incident duration. The overall reduction in congestion is estimated to have yielded a savings of \$ \$ \$6,523,696 to



motorists. The SIRV Pilot Project costs for the fourth quarter of operations was \$77,376, which distributes the start-up and operations costs for the life of the project. Therefore, the SIRV Pilot Project has yielded a **benefit-cost ratio of 84.31** for the fourth quarter of operations.

The estimated SIRV Pilot Project savings are conservative, as they don't include the impacts to traffic traveling in the opposite direction or emissions. The delay savings ratio assumed the following conservative factors:

- Delay savings to motorists assumes “for each minute reduced in incident duration, there is a reduction of three to five minutes in individual vehicle delay<sup>1</sup>”. A three-minute reduction in individual vehicle delay was assumed for off-peak periods and a five-minute reduction in individual vehicle delay was assumed for peak periods.
- A value of \$13.89 per individual passenger vehicle-hour and \$69 per commercial vehicle-hour was assigned<sup>2</sup>.
- The number of vehicles affected by an incident was based on location and available hourly and annual daily traffic loads.<sup>3</sup>

The reduced incident durations are based on the time SIRV staff provided a service or equipment that saved the time it would have taken to dispatch additional resources. Below describes SIRV staff activities on-scene that reduced incident durations:

- Contacted FDOT Maintenance Supervisor while on-scene to get a head start in deploying resources. This saved the time it would have taken the FDOT Maintenance Supervisor to get to the scene and then deploy resources.
- Used fuel spill clean up material, saving the time it would take to deploy additional Fire Rescue or Maintenance units for clean-up.
- SIRV staff helped clean up debris, saving overall time to open lanes.
- Used high intensity lighting on-scene to save time during clean up.
- Use of radio communications on-scene with Road Rangers to remove MOT and opening lanes quicker.
- Directed Road Rangers with DMS to end of queue to set-up “Accident Ahead” message for advanced warning to motorists.
- Communicated Florida “Move It” law to responders to expedite opening lanes before FHP arrival.

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<sup>1</sup> *Freeway Incident Management Handbook*, FHWA-SA-91-056, Federal Highway Administration (FHWA), U.S. Department of Transportation, 1991.

<sup>2</sup> Texas Transportation Institute, “Urban Mobility Report”, 2004.

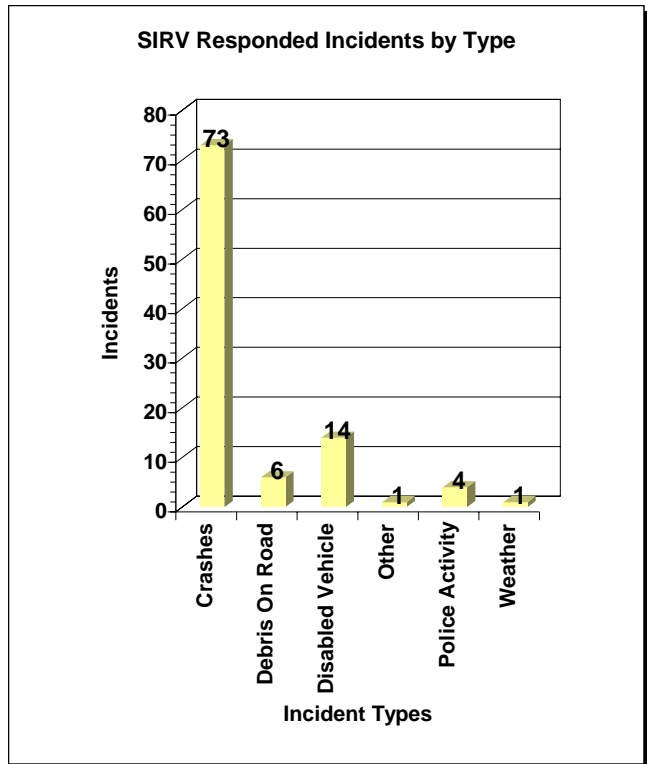
<sup>3</sup> Florida Traffic Information 2004 CD, FDOT Transportation Statistics Office.

Another quantifiable benefit the SIRV Pilot Project has yielded is the “freeing up” of Incident Responders. The presence of SIRV on-scene was able to reduce agency resources on-scene as follows:

- Road Rangers = 2,230 minutes
- Law Enforcement = 2,279 minutes
- FDOT / ICA Maintenance = 1,040 minutes
- Tow Companies = 135 minutes
- Fire Rescue = 90 minutes

**RESPONDING TO MAJOR INCIDENTS**

The primary responsibility of SIRV staff is to respond to major incidents along I-95, I-75 and I-595. While on scene, the SIRV staff provides incident coordination of FDOT resources, improve safety on-scene through enhanced MOT and work with responding agencies to open lanes safely and quickly. Through the fourth quarter of operations, the SIRV staff responded to 99 incidents, of which 73 were crashes, six (6) debris on road, 14 were disabled vehicles on the road, two (1) were other, four (4) were police activity and one (1) was weather related.



The SIRV was activated for Hurricane Wilma and responded to events immediately after the Hurricane. The SIRV provided much needed traffic control to support FHP and FDOT Maintenance with clearing the roads. During the fourth quarter of operations, the SIRV staff used the following equipment:

Equipment	Qty	Events	Avg. Qty/Event
Absorbent	1035	17	60.9
Deploy Cones	624	20	31.2
Flare	468	8	58.5
Flood lamp	2	1	2
Miscellaneous	67	38	1.8
Portland Cement	560	16	35
Radio	1	1	1

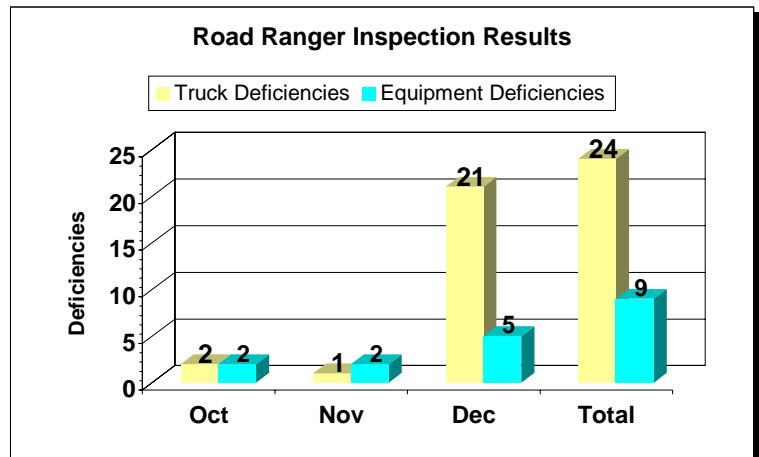
**ROAD RANGER INSPECTIONS**

The SIRV staff conducts weekly inspections on Broward County Road Ranger Contractors. They serve as a CEI would on a construction project. They monitor the Road Ranger services and report deficiencies to the FDOT Road Ranger Project Manager. The inspection process, which has improved the Road Ranger Contractor’s response to deficiencies, uses a new bi-color carbonless two page field inspection form. A copy of the field inspection form is provided to the Road Ranger to give to his/her supervisor at the end of their shift. This provides immediate feedback to the Road Ranger and the Road Ranger Supervisor for corrective action. As a result, almost all deficiencies are resolved at the end of the Road Ranger shift. Unresolved deficiencies are tracked and discussed during weekly Road Ranger Contractor meetings.



Weekly inspection reports are developed and distributed to FDOT and Road Ranger Supervisors in preparation of the weekly Road Ranger Contractor meetings with FDOT. These meetings provide a forum to discuss Inspections, Contractor and Department issues, Complaints, Staffing Issues and Training. The meetings help to quickly identify, deal with and solve any problems or issues brought forward by all involved parties. Contractual issues are clarified and resolved. Policy and procedure enhancements have been discussed and implemented. As a result of these meetings, the group agreed that the SIRV staff can request a truck be removed from service if it violates any state statutes that would have it removed by law enforcement.

The SIRV staff conducted 64 inspections in the fourth quarter of operations. The SIRV identified 24 truck deficiencies and 9 equipment deficiencies. Truck deficiencies represent violations to truck specifications identified in the Road Ranger contract, which include tires, turn signals, head lights, safety lights, power take off, arrow boards, etc. Equipment deficiencies are violations regarding the contract required equipment to be carried on the truck, which include air supplies, first aid, jacks, spill mitigation supplies, tools, fire extinguishers, etc. Road Ranger violations were significantly reduced during October and November. However, there was an increase in December. The Road Ranger Contractor obtained new trucks that were placed in service with minor violations to maintain the required number of trucks in service.



**PUBLIC OUTREACH**

Public Outreach has been a very important part of the SIRV Pilot Project's early success. As the SIRV staff builds relationships with incident responders, the SIRV staff becomes more effective as an on scene incident coordinator. Due to the outreach efforts in the first quarter of operations, other agencies have begun to open their Post Incident Analysis meetings to the SIRV. Public Outreach was not as aggressive in the fourth quarter of operations (October - December 2005). The public outreach effort was hindered by the hurricanes, especially in October. The SIRV participated in the following activities:

- November
  - Attended I-595 improvement meeting (11-09-05)
  - Attended Broward TIM (11-15-05)
  - Outreach presentation at Tequesta Middle School (11-17-05)
  - Held PIA for incident # 170360 (11-23-05)
- December
  - Statewide Traffic Incident Management Team Meeting in Orlando, FL on December 7th and 8th, 2005.
  - SIRV participated in TIM Incident Scene Management on December 15th, 2005 in Miami, FL.
  - Staying Alive on 95 on December 23rd, 2005 in Palm Beach County, FL.