TENNESSEE DEPARTMENT OF TRANSPORTATION
HELP PROGRAM
AND
TRANSPORTATION MANAGEMENT CENTERS
ANNUAL OPERATIONS REPORT

July 1, 2013 – June 30, 2014

Prepared by the
Tennessee Department of Transportation
Traffic Operations Division
Transportation Management Office
December, 2014

TDOT HELP MISSION STATEMENT

The mission of HELP is to minimize traffic congestion, promote the safe movement of people and products, and improve the travel environment. We work in partnership with emergency response agencies and other TDOT units as part of a highway incident management team. We are committed to performing our duties in a professional manner.

Transportation Management Centers (TMCs')
Mission Statement

It is the mission of Smartway to proactively monitor the highways to maximize traffic flow and inform area travelers of abnormal conditions. This mission is accomplished using the field devices, software, and Smartway partners to gather and disseminate real-time traveler information.

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SECTION 1

INTRODUCTION

The HELP program, which operates in Chattanooga, Knoxville, Memphis and Nashville, is a core component of Tennessee Department of Transportation's (TDOT) SmartWay Program. The purpose of SmartWay is to reduce traffic congestion, problems caused by congestion, and to improve operational efficiency, effectiveness, and safety on Tennessee's transportation system.

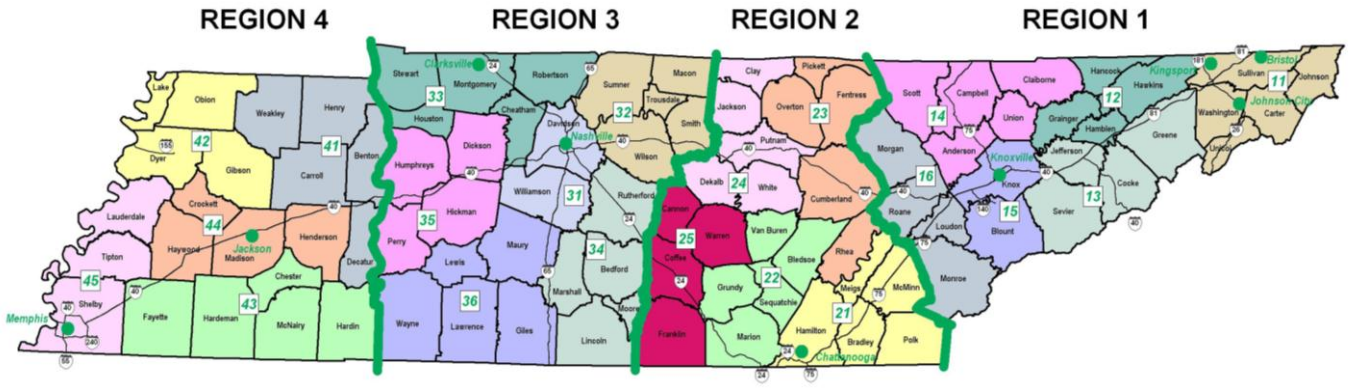
The SmartWay Program traffic cameras are operated from TDOT's regional Transportation Management Centers (TMC) located as follows:

Region I	**Region II**	**Region III**	**Region IV**
Steve Borden, Director	Ray Rucker, Director	David Layhew, Director	Chuck Rychen, Director
7345 Region Lane	7500 Volkswagen Drive	6601 Centennial Blvd.	5336 Boswell Ave.
Knoxville, TN 37914	Chattanooga, TN 37416	Nashville, TN 37243	Memphis, TN 38120
865-594-2403	423-892-3430	615-350-4300	901-935-0312

Just over eight years after the first Transportation Management Center opened in Nashville, TDOT's fourth TMC opened in Chattanooga on December 14, 2012. With continued expansion of the SmartWay Program, the system now covers 342 centerline miles. There are statewide 418 urban and 57 rural cameras used to visually monitor Tennessee's roadways. In addition, they have access to 163 Dynamic Message Signs, 1205 radar detection systems to spot traffic flow interruptions, 49 video cameras, and a city-wide highway advisory radio station broadcasting on AM 1620. Each TMC has a Transportation Operations Manager position, along with a staff of TMC Operators, TMC Supervisors and HELP Program Dispatchers. Currently, the TMC in Knoxville and Nashville operate on a 24/7 schedule. The Knoxville TMC monitors the Chattanooga service areas overnight starting after the second shift ends, and Nashville monitors the Memphis service area during the same time frame.

TDOT's first Transportation Management Center opened in Nashville June 12, 2003. TDOT's fourth TMC opened in Chattanooga on December 14, 2012. With continued expansion of the SmartWay Program the system now covers 393 centerline miles statewide . There are 418 urban and 59 rural cameras used to visually monitor Tennessee's roadways. In addition, there are 164 Dynamic Message Signs, 1,254 congestion monitoring devices, and 58 highway advisory radio transmitters. Each TMC has a Transportation Operations Manager, along with a staff of TMC Operators, TMC Supervisors and HELP Program Dispatchers. Currently, the TMC in Knoxville and Nashville operate on a 24/7 schedule.

Exhibit 1: TDOT Regional and District Boundaries



The HELP Program is a component of highway incident management in Tennessee and started its fifteenth year of operation as of July, 2014. Recent improvements in highway incident management in our state are due in large part to the work of local and state law enforcement agencies, fire services, rescue squads, emergency medical services, emergency communication centers, emergency management agencies, towing and recovery companies, news media, transportation planning organizations, and other agencies and organizations with responsibilities for highway response, planning, and operations.

This annual report describes the operations of TDOT's HELP Program summarizing the work accompanied by the HELP personnel during the past fiscal year beginning July 1, 2013 and ending June 30, 2014. TDOT is very proud of these accomplishments; however, as noted in the mission statement, HELP is part of an "incident management team." Other divisions within TDOT, along with other state and local agencies, also played critical roles in keeping Tennessee's roadways operating efficiently and safely.

We recognize and thank the individual police officers, troopers, fire fighters, Emergency Medical Technicians (EMTs), rescue squad members, 911 operators, police and fire dispatchers, tow truck operators, traffic reporters, transportation planners, and others who support the HELP program and assist the HELP personnel. As a result of the combined efforts of these entities and to maintain compliance with the National Traffic Incident Management Coalition (NTIMC) National Unified Goal (NUG) process, the Office of Transportation Management along with the assistance of other divisions in TDOT embraces the development of an "Open Road Policy" rule that will emphasize standard, consistent operations and cooperative efforts for the safe, quick removal of highway crashes and spilled cargo from Tennessee's interstates within ninety (90) minutes.

The HELP Annual Report for FY 2013-14 depicts resources committed to the program, numbers and types of services provided to motorists, customer evaluations, and the program costs, benefits, and funding sources.

TDOT's statewide TMCs' are in their fourth year utilizing a web based traffic incident locator, along with activity and reporting capabilities. The system provides real-time location information and reporting of traffic incidents and HELP Truck activity. The program system, **Locate/*IM*,** was integrated with the statewide TMCs for traffic incident management control and roadway monitoring. Through **Locate/*IM*** database each regional system has the capability to produce a quarterly report indicating total incidents, events affecting traffic, clearance time, type of service provided by the HELP Operators in each region. The system allows for a statewide quarterly report to be generated combining each region information. Presently, another ad hoc report is being generated to accumulate the data on an annual basis.

These reports are downloaded to the TDOT, Office of Transportation Management web site at http://www.tdot.state.tn.us/incident/default.htm. **Locate/*IM***, created by Gannett Fleming, is an ongoing project creating ad hoc reports and improving the system as recommended by TMC management and operators across the state.

Exhibit 2 is the ***Statewide Quarterly Report*** for October – December 2013 (4th Quarter) which can be found on the mentioned website along with the regional quarterly reports.

Exhibit 2: Statewide 2013 Quarter 4 Report

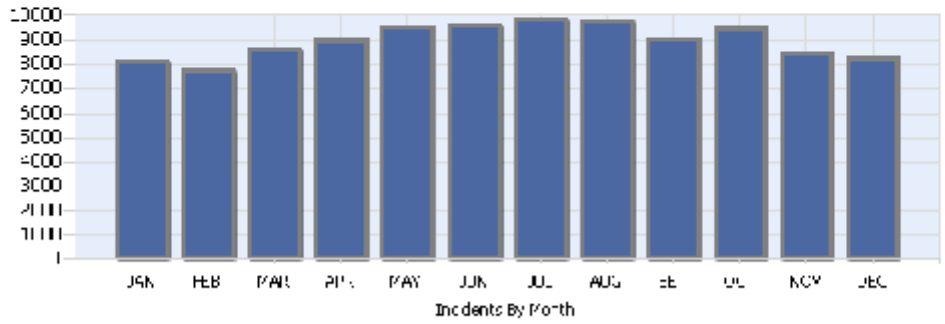
TDOT Statewide Quarterly Report

Quarter 4, 2013

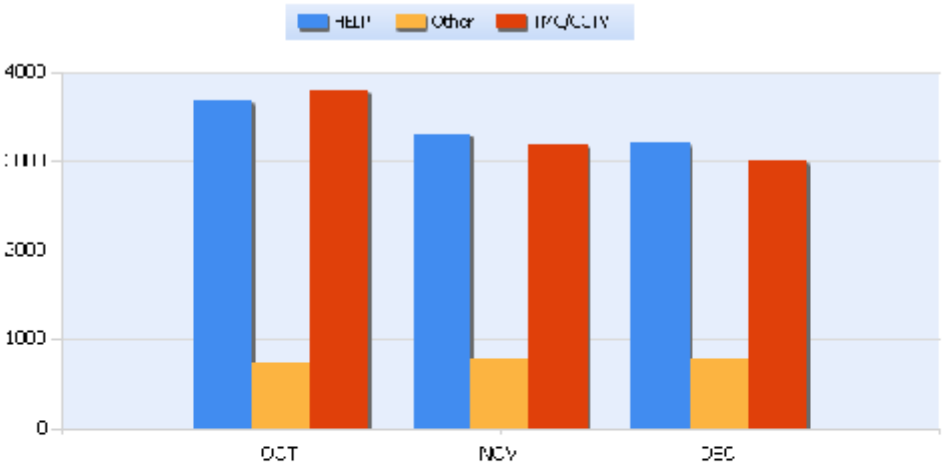
Total Incidents Managed This Quarter: 26335

Incidents Managed YTD

Total Incidents Managed YTD - 108114



Incidents By Detection Source



Powered By: LOCATE/IM

The database **Locate/*IM*** provides a collaborative environment by combining the existing TMC Operators and the HELP Truck's GPS/AVL application into a new integrated solution, allowing both entities to team together to manage and record a highway incident. When an incident occurs in the regional service area, the web based system locates the nearest HELP truck by the use of a GPS/AVL device installed in each HELP vehicle. The TMC personnel communicate with the HELP Truck Operator and login pertinent information concerning the incident into the **Locate/*IM*** database. The TMC personnel can monitor such incidents as well as incidents the driver happens upon. The map will merge two types of data used in the TMC onto one seamless map display. **Locate/*IM*** has eliminated all hand written documentations by the HELP Truck Operators; data entry functions are done by the TMC staff only. Regional incident information is communicated to the TMC personnel via radio communications with the HELP Truck Operators.

Exterior of the Transportation Management Centers

SECTION 2

ROLES AND RESPONSIBILITIES OF TENNESSEE'S TRANSPORTATION MANAGEMENT CENTERS

Region I

On May 5, 2005, Region I open the second TMC and was the first center to go to a twenty-four daily operation center. This schedule was due to the closure of I-40 during the Smartfix 40 Project. The success and importance of having a transportation management center open twenty-four hours proved to be effective at monitoring traffic and incidents on I-40 that it remained on the twenty-four schedule.

Currently, Region I is providing overnight monitoring for the service area in Region II. This process is done by equipping a Region I TMC operator work station with a flat screen monitor and video tours of all cameras changing approximately every five seconds. If an incident occurs a notification process has been put in place to contact the necessary responders.

Region 1 Transportation Management Center (TMC), Knoxville, TN

Region II

On December 14, 2011, the Region II TMC opened. The TMC utilizes cutting edge technology to monitor traffic trouble spots and keep drivers up to date on the latest roadway conditions.

From the TMC in Enterprise South Industrial Park, TDOT personnel can monitor 71 SmartWay traffic cameras located along the area's most heavily-traveled corridors. In addition, they have access to 16 Dynamic Message Signs, 175 speed/congestion monitoring stations to spot traffic flow interruptions and a city-wide highway advisory radio station broadcasting on AM 1620.

The system is specifically designed to keep Chattanooga motorists informed about road conditions by providing up-to-the-minute traffic information to help drivers avoid problems on the road.

Region II Transportation Management Center (TMC), Chattanooga, TN

Region III

The Region III TMC was the first in the state, beginning operations in June 2003. What began as a few cameras located at interstate interchanges around town has blossomed into a system of over 150 cameras, 59 DMS, and over 350 speed detection devices. Plans are to further expand in the very near future so that we can help assist the motoring public to safely reach their destinations.

The Region III TMC operates 24 hours a day, 7 days a week. To do this, we had to organize a solid staff of Operators, Dispatchers, and Supervisors working together to sustain the standard of excellence on a 24/7 scale. Currently, Region III is providing overnight monitoring for the service area in Region IV. This process is done by equipping a Region IV TMC operator work station with a flat screen monitor and video tours of all cameras changing approximately every five seconds. If an incident occurs a notification process has been put in place to contact the necessary responders.

The HELP program is stretching its limits outside of the Metropolitan area to a large degree. Closures of interstates well outside of the Nashville area have prompted THP and other agencies to request TDOT assistance. Our HELP Operators respond all hours of the night when called upon to assist in the safe transportation of motorists almost anywhere in the Region.

The Region III TMC works closely with the other Regions of Tennessee, plus with Kentucky transportation officials on a regular basis in order to keep all informed of potential problem areas. The cooperation of these various agencies makes for better service to the motorists we serve.

Region III Transportation Management Center (TMC), Nashville, TN

Region IV

The Region IV TMC sets in the Southwest corner of the state in the City of Memphis. Region IV TMC started operations in October, 2008 and was the first TMC in the state to cross train its entire staff. All are trained and certified dispatchers and can operate all the equipment in the TMC, giving flexibility for staffing during long term incidents. The Region IV TMC and HELP staffs have been integrated and work as a team under the Transportation Management Coordinator.

The location of the Region IV TMC makes it unique for several reasons. Region IV HELP Program operates within a few miles of the Arkansas and Mississippi borders.

Arkansas has several miles of ITS infrastructure that is monitored by the Region IV TMC on a daily basis. The TMC monitors these areas and relays incident information to the Arkansas State Police and State Highway Police along with other local agencies. The TMC staff also dispatches HELP trucks to the area to offer assistance at large events.

Region IV TMC may not have any ITS infrastructures setup in Mississippi but they have a great relationship with Mississippi Department of Transportation and their TMC in Jackson, MS. The centers are in regular contact with each other about incidents at the state line. Often each TMC posts messages on DMS boards to assist each other.

Region IV Transportation Management Center (TMC), Memphis, TN

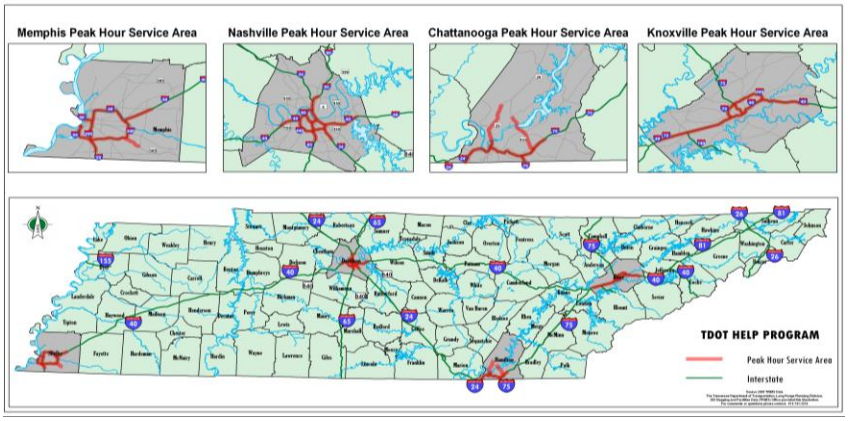
SECTION 3

ROLES AND RESPONSIBILITIES OF THE HELP PATROL

The HELP patrols operate on the most heavily traveled routes (peak hour service area) in the core of the state's four largest metropolitan areas (Chattanooga, Knoxville, Memphis, and Nashville) from early morning to late evening, seven (7) days a week. The HELP service is provided with three shifts of operators, working supervisors, and dispatchers. The operating hours are from 6:00 AM to 8:30 PM on Monday, 5:00 AM to 10:30 PM, Tuesday through Friday, 8:30 AM to 8:30 PM on Saturday and 9:30 AM to 8:30 PM on Sunday. Regions I and III TMCs' are providing 24/7 monitoring to their service areas along with after hour monitoring for Region II and Region IV.

In 2008, in preparation for the SmartFIX 40 project which closed I-40 through downtown Knoxville for 14 months and re-routed traffic onto I-640, the Knoxville TMC began operating 24 hours a day, seven (7) days a week to ensure quick response to any incidents which might occur. By operating on this schedule, it allowed the TMC to become a primary hub to receive and distribute incident information at all times. After the project was completed, the benefits were realized and the TMC remained on this schedule to efficiently coordinate incident information throughout the entire region." Beginning in the spring of 2014 Region I began overnight monitoring to Region II service area. The Nashville TMC began 24/7 operation in 2011: the TMC staff monitors the interstate twenty four hours, seven days a week, along with monitoring the overnight shift for Region IV service area. After the HELP trucks shifts end in Region III, the supervisor and HELP truck operators are "on call" status until the shift starts back the following morning.

Exhibit 3: Tennessee HELP Routes (Statewide)



KNOXVILLE	INTERSTATE
	I-40
	I-75
	I-140
	I-275
	I-640
*Total miles served during HELP Route *peak hours*	*77.00*

CHATTANOOGA	INTERSTATE
	I-24
	I-75
	I-124
*Total miles served during HELP Route *peak hours*	*73.00*

NASHVILLE	INTERSTATE
	I-24
Briley Pkwy	SR-155
	I-40
	I-65
	I-440
*Total miles served during HELP Route *peak hours*	138.00

MEMPHIS	INTERSTATE
	I-40
	I-55
	I-240
*Total miles served during HELP Route *peak hours*	*105.00*

Peak hours are morning and afternoon hours where commuter traffic volumes are at their highest.

These close-in patrol routes (designated service areas), which are adjusted by the working supervisors in response to prevailing conditions, allow prompt response to incidents that would otherwise cause widespread and prolonged congestion, secondary crashes, and related problems. Although rural roads and secondary routes are not part of the close-in patrol routes for the HELP program, the HELP units also respond to requests from local law enforcement agencies and/or the Tennessee Highway Patrol (THP) to assist with crashes and other emergencies outside of the normal patrol areas. The total number of miles serviced by the statewide HELP Program during peak hours is 312.50 miles.

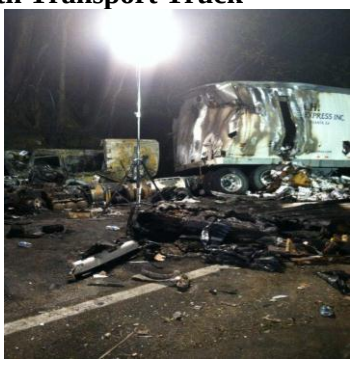
The Metropolitan Nashville Public Works Incident Response Program is another emergency assistance service for the Nashville Metropolitan area that plays a role in the incident management arena of providing assistance to the HELP Truck Operators and responding to incidents on non-freeway routes.

The clearance and response times for HELP assisted lane blockage incidents is approximately 95% statewide for all incidents (major and minor) incidents cleared within ninety (90) minutes during July 1, 2013 to June 30, 2014 (Exhibit 12). HELP Operators are usually the first responders at the scene of a major or minor incident. Without the assistance of the HELP Operator, such incidents could often impose potential danger to the public, as well as other emergency operators. In Tennessee, the HELP Supervisors and Operators also work closely with local towing and recovery companies to ensure the safety of the public, which is their first priority, and to implement quick clearance of the roadways.

According to the Tennessee Highway Patrol (THP) on October 23, 2013 at approximately 2:00 pm, a passenger bus was traveling eastbound on I-40 near mile marker 423 when its left front tire blew out. The driver lost control and the bus crossed the median and crashed into a tractor trailer and clipped a Tahoe SUV that was heading westbound. Reports indicate the tractor trailer immediately caught fire and the bus overturned. Within five minutes, the first emergency crews from Jefferson County arrived, and began helping the victims while sending out the call for more help.

An EMS official stated that 20 ambulances and five helicopters responded from multiple counties, including Knox, Sevier, Jefferson, Hamblen, and Grainger Counties. The THP was the lead investigating agency on the scene. Their Critical Incident Response Team (CIRT) has special training and equipment to respond to and reconstruct fatal accidents.

I-40 Jefferson County Bus Crosses the Median and Crashes with Transport Truck



Implementation of New Programs in TDOT's Traffic Operations Division

Yellow DOT Program

TDOT has been authorized by the state's General Assembly through bill number 2296 to implement a statewide program designed to provide crucial medical information to emergency responders in the event of a vehicle incident. The national program is known as the "Yellow DOT "Program. Immediately following a car crash, first responders have what is known as "the golden hour", which is the time when medical care can mean the difference between "life" and "death".

All too often, victims cannot communicate important information. If they see a yellow decal on the left rear window on the driver's side that will be an indication that a photo and medical information is in the glove compartment, hopefully of the driver and possible passenger. The intent of this program is to allow first responders the accessibility to important personal information when they arrive on the scene of an incident, regardless of the individual's condition. They can use the "Golden Hour" to begin assisting the injured condition, instead of trying to acquire medical information from the injured or someone else. The Tennessee Yellow DOT Program has distributed over 50,000 packets statewide to AARP chapters, AAA offices, Senior Centers, Church Groups, Local Law Enforcement Agencies, EMS/EMA Offices, Health Care Centers and other groups. Tennessee has over 100 enrollment sites in over fifty (50) counties.

Protect The Queue

In June of 2013, the **Protect the Queue Program** was created. The start of this program was due to a multiple vehicle crash on I-24 Eastbound just south of the Exit 80 (SR 99) Interchange. Traffic had been heavy along the I-24 corridor south of Nashville for the last several hours due to the upcoming start of the annual Bonnaroo Music Festival in Manchester. Prior to this accident, a non-injury incident had caused a line of slow moving traffic to develop on this section of the Interstate. A tractor trailer collided with the back of this line of traffic. Two vehicles became trapped underneath the trailer and caught on fire. Responders were able to save two people in one car, but two other persons perished in their vehicle.

This program stresses to all TDOT employees and partnering agencies the importance of protecting drivers caught in a traffic queue. A training program on the most effective queue management techniques was launched. Since the start of TDOT's **Protect the Queue** campaign, data gathered from July 2013 through December 2013 shows a 19% reduction in secondary incidents over the same period in 2012. This equates to 20 fewer secondary incidents, and could represent four lives saved. This information was retrieved from the Tennessee's Integrated Traffic Analysis Network, (TITAN), created by the Tennessee Highway Patrol. This tragedy was a turning point for the Tennessee Department of Transportation. Crashes like this, known as secondary crashes, account for 18% of all fatalities on freeways nationally. As much as 25% of all traffic incidents are secondary crashes, and up to 20% of those involve serious injuries or fatalities.

This movement stresses to all TDOT employees and partnering agencies the importance of protecting drivers caught in a traffic queue (defined as a line of slow moving traffic). Since the start of the Protect the Queue campaign, TDOT's Incident Management Team and Regional Operations staff have risen to the challenge. Specially outfitted trucks are being deployed at the notice of the formation of non-reoccurring traffic queues. These "queue trucks" are positioned to provide and maintain advance warning for approaching traffic. A Standard Operating Guideline has been developed to establish standard practices for queue protection. Queues resulting from construction related lane closures are being addressed with the Protect the Queue Construction Special Provision, which establishes specific contractor requirements for providing protection at the end of a queue. Additionally, special Protect the Queue reference cards have been distributed to all TDOT staff. Employees are directed to alert TMCs of nonrecurring traffic queues witnessed during their daily commute or personal travels.

Year to date data recorded in the Tennessee Department of Safety's crash database indicates a 24% reduction of all secondary incidents when compared to earlier figures 2013. This paper details all the efforts associated with the Protect the Queue Campaign and the standard practices that have grown as a positive byproduct. It is our hope that the success in Tennessee can be duplicated on a national level as a best practice. This information was

retrieved from the Tennessee's Integrated Traffic Analysis Network, (TITAN), created by the Tennessee Highway Patrol.

Traffic Incident Management Training Track

TDOT has secured funds for the building of a Traffic Incident Management training site. This training site will be built at 283 Stewarts Ferry Pike, Nashville, TN 37214, which is located adjacent to the Tennessee Department of Safety and Homeland Security Training Center (TDOSHS). The property is located is leased through an interagency agreement from the Department of Intellectual and Developmental Disabilities (DIDD). The scope of the subject document is to form a three party interagency agreement between TDOT, TDOSHS, and DIDD. The following is an explanation of the responsibilities of each agency:

TDOT: The Tennessee Department of Transportation will design, let to contract, and fund construction of the Traffic Incident Management Training Site at 283 Stewarts Ferry Pike.

TDOSHS: The Tennessee Department of Safety and Homeland Security will be responsible for the management and maintenance of the Traffic Incident Management Training Site.

DIDD: The Department of Intellectual and Developmental Disabilities, being the owner of the property, shall grant access for TDOT, or representing agents, for the purpose of constructing the Traffic Incident Management training site.

The Traffic Incident Management training site will feature sections of simulated roadway that will provide a real-world training environment for all emergency response professionals from law enforcement, Fire Service, EMS, Emergency Management Agencies, TDOT and towing/recovery and HAZ-MAT companies. The site will include the following design features:

- Approximately 1500 ft of simulated roadway with multiple lane transitions, cross-section changes, and points of curvature.
- Connector access to facilitate the circulation of traffic flow during training.
- A full four leg intersection.

Proposed Location for the Traffic Incident Management Training Track, Nashville, TN

Region III HELP; Providing Traffic Assistance on I-40 in Nashville, TN

In February 2012, TDOT, Tennessee Department of Safety, and Homeland Security (TDOSHS), and the Tennessee Highway Patrol (THP) jointly prepared and signed an interagency memorandum of understanding to provide guidance to personnel of each department relative to incidents on Tennessee highways, including crashes and spilled cargo to ensure public safety, promote safe and orderly flow of traffic, protect the safety of emergency responders, and restore the roadway to full capacity as soon as possible following an incident. Since the signing of the inter-agency memorandum of understanding TDOT has prepared an agreement for local law enforcement offices to recognize and cooperate by the quick clearance rule established by Federal Highway Administration (FHWA). A new initiative in the program is to enter into memorandums of understanding with local agencies to ensure efficiency in accordance with the national 3Cs'cooperation, coordination and communication.

During FY 2013-14, TDOT entered into memorandums of understanding with the following local cities/counties:

Region 1	**Region 2**	**Region 3**	**Region 4**
City of Knoxville		Cheatham County	Carroll County
Union County		Dickson County	Crockett County
Washington County		Giles County	Madison County
Johnson City Police Dept		Humphreys County	Hardin County
Johnson County		Marshall County	
		Metro-Nashville-Davidson County	
		Montgomery County	
		Smith County	
		Robertson County	
		Trousdale County	
		Wilson County	
		City of Murfreesboro	

The HELP operators and supervisors are specially trained and equipped for the many kinds of emergencies encountered on Tennessee's most heavily traveled roadways, from disabled vehicles to major crashes. All of the operators and supervisors are certified emergency medical "First Responders" and have recertification training throughout the year. The HELP services are provided without charge to the motorist and the HELP operators do not accept tips. The operators give a postage-paid "comment card" to each motorist receiving assistance to fill out and mail the card as soon as possible after the incident. The FY 2013 – 2014 statewide rating for HELP Operators being courteous and helpful to motorists on our roadways is 96.1%.

During FY 2013-2014, HELP Operators were called on to assist with special events across the State which created exceptional demands on the transportation system. Region I provided HELP Truck Patrols on I-40 in Jefferson County during Thanksgiving holiday weekend, 2013 and Memorial Holiday weekend, 2014, due to I-40 bridge repair project having I-40 reduced to one lane.

Other events provided by Region I HELP Patrol

- ***During Bristol Sprint Cup Races, several HELP Trucks operated in Bristol during race weekend.***
- ***During the University of Tennessee Football season, August-November, 2013, the HELP Operators provide assistance to motorists and traffic control for seven home games. Extended patrol hours to accommodate event's traffic.***
- ***Region I HELP Operators have worked with different elementary and high schools during school functions by demonstrating the HELP Truck equipment and explaining Operators duties.***
- ***June, 2014, Region I worked in conjunction with THP during a weekend traffic safety enforcement campaign to enforce the State Move Over Law***

- ***TIMS Training Class: On May 31, 2014, the Region I HELP Supervisors demonstrated to the students how to hook to an overturned vehicle and turn it over and push it out of the roadway to provide a quick clearance of lanes.***

The Chattanooga HELP Unit annually works in conjunction with the THP, local law enforcement, and numerous other agencies to manage traffic flow on I-24 to insure the safety of the motoring public during the mid-June Bonnaroo Music Festival near Manchester, TN, and during this time the Chattanooga TMC annually provides motorist information. Last fiscal year the Chattanooga HELP Unit assisted the Governor's Highway Safety Office (GHSO) with motorist driver safety check points.

<u>Other events provided by Region II HELP Patrol</u>

- ***Region II annually help provide traffic control and the TMC helps provide motorists information for the River Bend Festival in downtown Chattanooga.***
- ***Region II provided traffic control for the USA Cycling National Championship and the Chattanooga TMC served as the command center for the road race point of the event.***
- ***Region II HELP Patrol assisted the Georgia State Patrol (GSP) with traffic control for the 150th Anniversary Battle of Chickamauga re-enactment celebration.***
- ***Region II HELP Operators have worked with different elementary and high schools during school functions by demonstrating the HELP Truck equipment and explaining Operator duties.***

The Nashville HELP Program, which serves the largest geographical area during peak hours, participated in many events throughout the fiscal year. June 2014, The Nashville HELP Patrol assisted the THP in escorting the ***"Wall that Heals"*** (Tennessee Vietnam Vets Memorial Wall) from the TN/KY state line to the TN Bicenntennial Mall State Park. The Middle Tennessee HELP Program annually works with Metro-Nashville Police Department with traffic control for the Nashville Christmas Parade, CMA Festivals, and the Music City Marathon. This year the Nashville Patrol assisted Region II with traffic control during annual BONNAROO festivities.

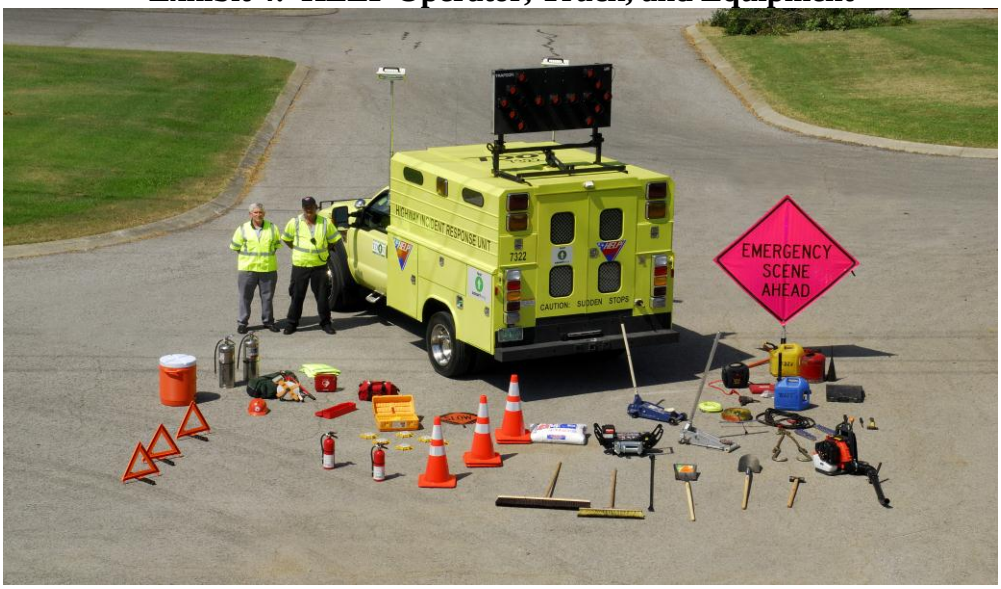
<u>Other events provided by Region III HELP Patrol</u>

- ***Assisted THP and Smyrna Police Department with traffic controls for the Smyrna Air Show***
- ***Assisted THP with traffic control during DUI checkpoints in September and December, 2013***
- ***Participated in the training exercises with the THP statewide certification teams and other law enforcement agencies at the Smyrna Airport***
- ***Nashville HELP Operators have worked with different elementary and high schools during school functions by demonstrating the HELP Truck equipment and explaining Operators duties.***

The Memphis HELP Unit peak hour service area is the smallest in miles as compared to the other regions, yet their total fiscal year mileage always comes in second to the largest. Memphis HELP Program participates in many special events; assists Region 2 by providing traffic control each year at the Bonaroo Festival in Region II. The unit also visited several elementary and middle schools on career day informing the children on their job's responsibilities.

Exhibit 4 shows a HELP operator with his truck and a display of standard equipment available to assist the operator and other incident responders. (When "in service," the operators always wear their reflective vests.)

Exhibit 4: HELP Operator, Truck, and Equipment



Installed Equipment

- Two-way radio w/repeater
- CB radio
- Police radio (supervisors)
- Public address system
- Emergency vehicle package (lights, siren, etc.)
- Air compressor
- 3500 watt generator
- 20-foot self-retracting air hose
- Halogen work lights; spot light
- Front-facing video camera (some vehicles)

Portable Equipment and Tools

- Tow straps and chains
- Reflector zed traffic cones
- Portable traffic control signs
- Roadway flares
- Fluorescent traffic control flags
- Traffic control paddles
- Sockets, wrenches, screw drivers
- Ball peen hammer, sledge hammer, pry bar, hack saw
- Air impact wrench, portable air hose, lug-lock removal tool
- Portable air tank
- Jacks, wheel chocks
- 25-foot jumper cables
- Battery booster pack
- Push brooms, shovels
- 300-foot measuring tape
- Camera
- Portable flood light
- Leaf blower (some vehicles)
- Radiological monitoring device

Supplies

- Gasoline and diesel fuel
- Water
- Fire extinguishers
- Absorbent material
- Assorted fuses, hose clamps, nuts, bolts, clips
- Electrical tape, duct tape, mechanical wire
- Marking paint
- Area maps and phone directories
- Motorist comment cards

Medical

- First aid/trauma kit
- Blankets, flat cloth sheets
- Oxygen kit
- Automated external defibrillator
- Eye wash kit

Personal Protective Equipment (PPE)

- Reflective vest
- Cell phone
- Flashlight
- Hard hat

Exhibit 5 shows a HELP supervisor heavy-duty pickup trucks with much of the same equipment and the capacity to transport passengers when necessary.

Exhibit 5: HELP Supervisor Trucks, Regions II and IV

The HELP Operators utilize a language interpreting service contracted by the State of Tennessee to more readily assist motorists with limited English proficiency. The HELP operator uses a "Point to your Language" card to ascertain the native language spoken by the motorist. The HELP Operator contacts the language interpreters services via cellular telephone utilizing an "800" number and pin number. The HELP Operator speaks with a company operator and states the type of language interpretation needed. The company operator serves as a facilitator between the HELP Operator and the motorist. The language interpreting company (AVAZA) can also provide onsite service, if needed. Although there has not been a large demand for this service, it is reassuring to know when needed the Department has services in place to assist any stranded motorist on our urban roadways.

The Traffic Operations Division, Transportation Management Office produced and continues to distribute throughout the state a brochure directed to motorists explaining Tennessee's "Move It" law (TCA 55-10-117) as shown in Appendix A. Moving a vehicle off the roadway in Tennessee is not only a law, but it helps clear crashes quickly, reduces congestion, and improves safety conditions for all motorists and emergency responders.

Each TDOT Region is equipped with incident response trailers to be used as an onsite command post for long term major highway incidents.

SECTION 4

STATEWIDE RESOURCES AND OUTPUT

The following pages provide a statistical review of HELP performances during FY 2013-14, recognizing the numbers do not capture the full extent of the work performed by the HELP personnel. A "stop" can be as simple as tagging an abandoned vehicle or changing a flat tire on the shoulder of the roadway without any complications. However, the next stop may involve multiple vehicles, an overturned truck, spilled fuel or cargo, serious injuries, or the need to make immediate decisions to close ramps, lanes, or even an entire freeway. Even during routine stops the HELP operators must contend with traffic operating at high speeds, high levels of noise, exhaust fumes, wind, and sometimes adverse weather, all of which make the job especially challenging and potentially hazardous.

The Tennessee Department of Transportation contracted services with Gannett Fleming, who implemented an internet database that is being used to update the data collection process for the HELP Program. The objective of this project is to improve the effectiveness of the HELP Program by allowing the HELP Operator to concentrate on assisting stranded motorists, and not be concerned with keeping up with hand written data sheets. The created system (***Locate/IM)*** also has the ability to create and retrieve real time data in a timely manner for reporting purposes.

Another statewide resource is the **Protect the Queue** initiative to all TDOT employees and partnering agencies the importance of protecting drivers caught in a traffic queue. Since the start of TDOT's **Protect the Queue** campaign, data gathered from July 2013 through December 2013 shows a 19% reduction in secondary incidents over the same period in 2012. This equates to 20 fewer secondary incidents, and could represent four lives saved.

Another service provided by HELP operators is inspecting and tagging abandoned vehicles on Tennessee's roadways. The tagging of vehicles is in accordance with the T.C.A. 56-16-103, which states a vehicle is considered abandoned if it remains illegally on public property, and T.C.A. 55-16-111, which states the law authorizes removal of illegally stopped or parked vehicles at the owner's expense. (Exhibit 6)

Exhibit 7 describes the resources committed to the HELP program and the program output for FY July, 2013 – June, 2014, along with definitions for key terms that are used throughout the report.

Underlying all of the numbers and the details about the HELP program are two priorities – *safety* and *quick clearance* of incidents.

Exhibit 6: Unattended Vehicle Notice

TENNESSEE DEPARTMENT OF TRANSPORTATION

UNATTENDED VEHICLE NOTICE

Your vehicle has been tagged by the Tennessee Department of Transportation's HELP Patrol for Highway Incident Management.

Tennessee law provides for removal of a vehicle when an operator has reasonable grounds to believe it has been ABANDONED or if it is CREATING A TRAFFIC HAZARD.

A vehicle is considered abandoned if it remains illegally on public property per T.C.A. Section 55-16-103.

This vehicle should be removed as soon as possible to prevent it from being damaged by accident or vandalism.

The law authorizes removal of illegally stopped or parked vehicles at owner's expense, T.C.A. Section 55-16-111.

To promote safety and protect property, this vehicle was checked:

Date _____, 20 _____ Time: _____ a.m. p.m. By Unit # _____

DT-1692

Exhibit 7: Statewide Resources and Output

Resources	Output
Hwy Response Operators position [1]	**71**
HELP trucks [2]	**72**
Statewide urban area route miles [3]	**341.5**
Statewide vehicle miles driven [4]	**2,936,408**
Statewide stops recorded [5]	**90,180**
Miles driven per position [6]	**41,358**
Miles driven per operator shift	**172**
Miles driven per truck per year	**40,783**
Stops per authorized position per year	**1,270**
Stops per route mile	**307**
Number of Special Events	**48**

[1] **Operating positions:** Number of authorized positions for HELP operators and supervisors.

[2] **Trucks:** Number of specially equipped HELP operator and supervisor vehicles available for patrols.

[3] **Route miles:** Centerline mileage for routes that are patrolled by HELP trucks on a routine basis and during peak hours. Where routes overlap for more frequent service (shorter headways) on a particular roadway segment, the mileage is counted only once. The actual route miles patrolled vary from day-to-day and during each day in response to changing traffic conditions, weather, and the number of incidents that require HELP trucks on-scene for extended periods.

4 **Vehicle miles driven:** Difference between mileage at the beginning and end of the year for all of the specially equipped HELP trucks, which includes miles driven for training purposes, moving vehicles to the site of special events, and other miles off the regular routes.

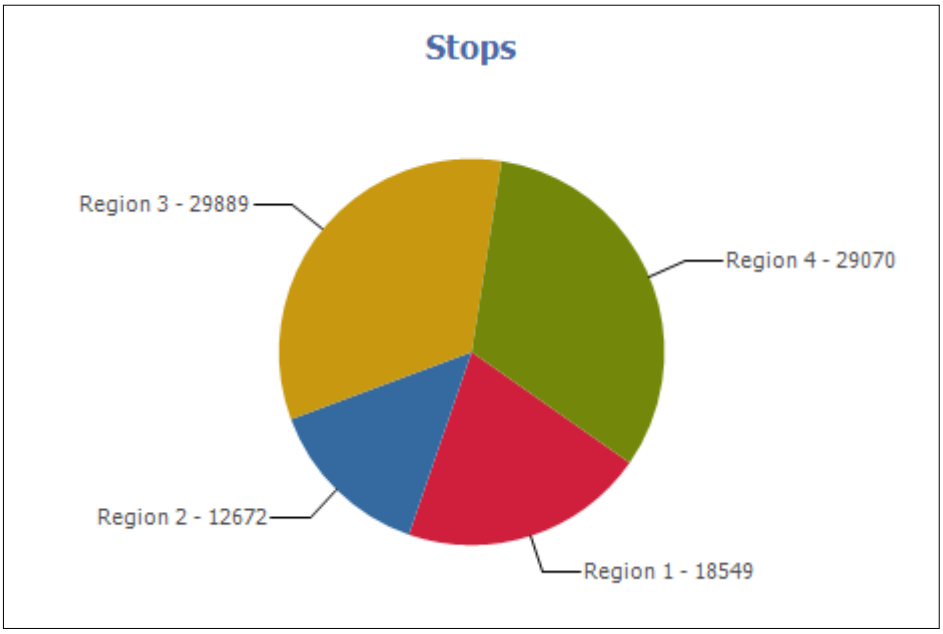
5 **Stops recorded:** Total number of patrol stops.

6 **Miles driven per position:** Regional Coordinators and Dispatchers are not included

On June 16, 2014, at I-24 East at I-40 East Junction in Nashville a large metal spool hit the bridge and caused debris at Exit 50E. Eastbound traffic was affected with the left lane being blocked. The traffic was diverted to an alternate route. The westbound traffic was affected with no delays. The roadway time was within ninety (90) minutes and all lanes were open.

The following charts and tables on pages 22 through 29 describe the reasons that HELP trucks stopped to provide assistance, the type of assistance provided, characteristics of the vehicles assisted, circumstances at the scene, and other aspects of HELP service during FY 2013-2014.

Exhibit 8
HELP Stops by Region
For
Fiscal Year 2013-2014



Region	Calls	% Of Total
Region 1	18549	20.6
Region 2	12672	14.1
Region 3	29889	33.1
Region 4	29070	32.2
Total:	90180	100

Exhibit 9
Services Provided
(In Order of Statewide Frequency)
For Fiscal Year 2013-2014

	Statewide		Region 1		Region 2		Region 3		Region 4	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Blocked Ln/Traf Crtl	25126	19.7	2257	10	8405	33.8	12036	0.1	2428	6.9
No Service-occupied	12660	9.9	4608	20.5	956	3.8	4256	0.1	2840	8.1
Fuel	12185	9.6	2310	10.3	1710	6.9	3168	7.1	4997	14.2
Tag Abandoned	11387	8.9	2316	10.3	1578	6.3	5065	0.1	5012	14.3
Tire	10917	8.6	2114	9.4	1205	4.8	3177	7.1	4421	12.6
Comment Card	10389	8.2	0	0	586	2.4	6332	14.1	3471	9.9
Mechanical	8820	6.9	1935	8.6	945	3.8	1998	4.5	3942	11.2
Directions	6753	5.3	587	2.6	5648	22.7	345	0.1	173	0.5
Remove Debris	6617	5.2	1880	8.4	1190	4.8	2122	4.7	1425	4.1
Relocate Vehicle	6446	5.1	879	3.9	1015	4.1	3007	6.7	1545	4.4
Jump Start / Pack	3194	2.5	602	2.7	376	1.5	891	0.1	1325	3.8
Fluids	2165	1.7	576	2.6	296	1.2	378	0.8	915	2.6
Other	1642	1.3	672	3	319	1.3	262	0.6	389	1.1
Notified Law Enforce	1226	1	214	1	131	0.5	608	0.1	273	0.8
Called Wrecker	1322	1	126	0.6	20	0.1	289	0.1	887	2.5
No Service-abandoned	970	0.8	578	2.6	88	0.4	270	0.1	34	0.1
Unable to Locate	802	0.6	312	1.4	87	0.3	112	0.1	291	0.8
Phone Call	548	0.4	186	0.8	91	0.4	117	0.1	154	0.4
Transported	427	0.3	73	0.3	67	0.3	77	0.1	210	0.6
Absorbent	387	0.3	96	0.4	59	0.2	212	0.5	20	0.1
Wrecker Towed	321	0.3	2	0	2	0	16	0.1	301	0.9
Secure Load	295	0.2	94	0.4	53	0.2	73	0.1	75	0.2
First Aid	120	0.1	53	0.2	22	0.1	32	0.1	13	0
Notified TDOT	69	0.1	30	0.1	5	0	34	0.1	0	0
Extinguish Fire	35	0	4	0	10	0	9	0	12	0
Totals	124823	100%	22504	100%	24864	100%	44886	100%	35153	100%

Exhibit 10
Types of Incidents
For Fiscal Year 2013-2014

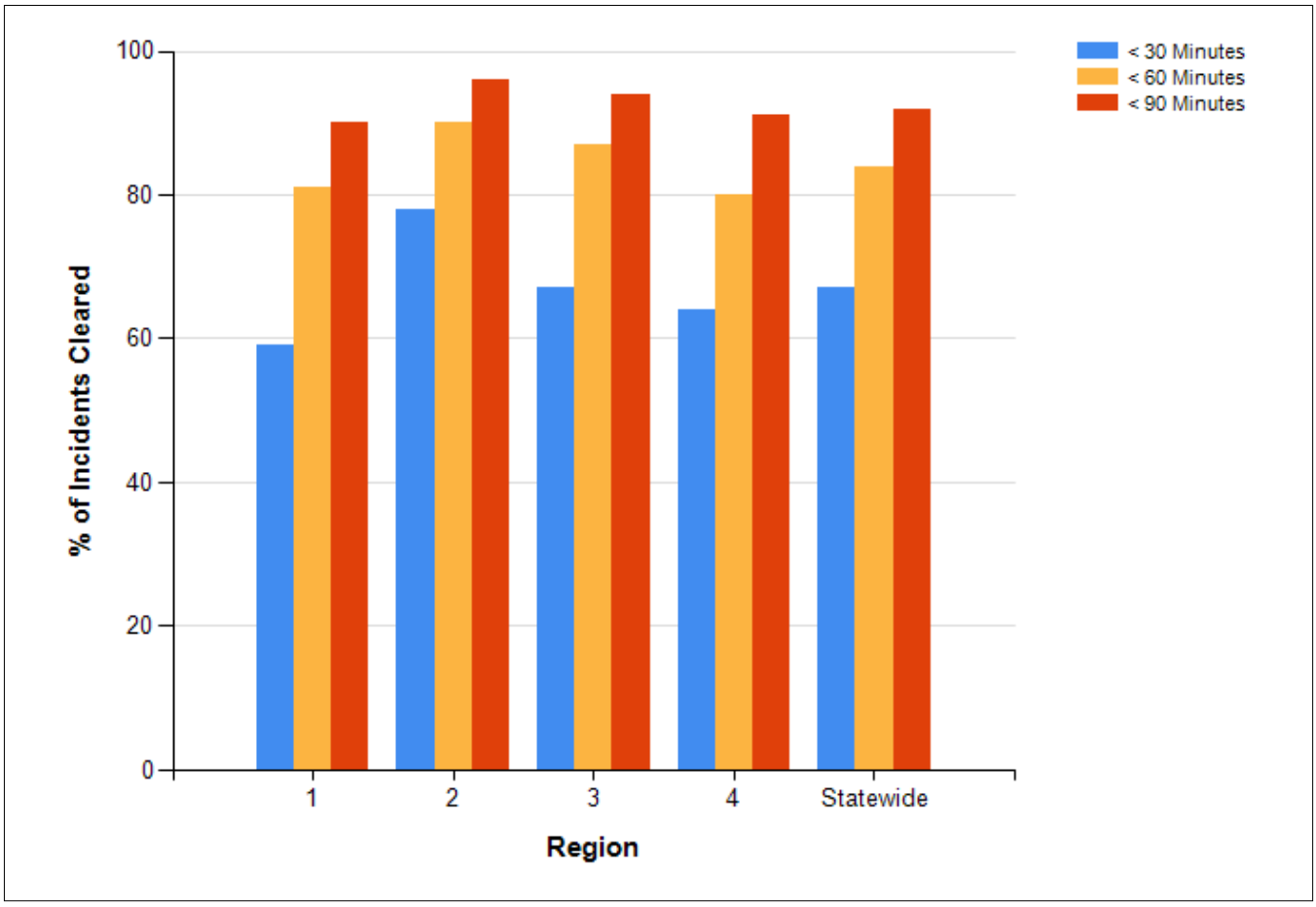
	Statewide		Region 1		Region 2		Region 3		Region 4	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Disabled Vehicle	71670	67.3	17039	66.3	13066	74.2	19834	57.7	21731	75.5
Aban Vehicle	10841	10.2	3013	11.7	741	4.2	4659	13.6	2428	8.4
Multivehicle Crash	7105	6.7	1157	4.5	1031	5.9	3663	10.7	1254	4.4
Debris	6112	5.7	1749	6.8	1164	6.6	1714	5	1485	5.2
Sched Roadwork	1998	1.9	641	2.5	96	0.5	1122	3.3	139	0.5
Special Evt/PSA	1794	1.7	590	2.3	390	2.2	487	1.4	327	1.1
Travel Time	1786	1.7	560	2.2	289	1.6	599	1.7	338	1.2
Single Vehicle Crash	1830	1.7	414	1.6	269	1.5	826	2.4	321	1.1
PD/MED Activity	1259	1.2	152	0.6	273	1.6	652	1.9	182	0.6
Unsched Roadwork	510	0.5	113	0.4	79	0.4	132	0.4	186	0.6
Unknown	580	0.5	60	0.2	0	0	266	0.8	254	0.9
Weather	296	0.3	125	0.5	68	0.4	80	0.2	23	0.1
Overturned Vehicle	322	0.3	26	0.1	56	0.3	184	0.5	56	0.2
Vehicle Fire	281	0.3	63	0.2	52	0.3	117	0.3	49	0.2
Amber Alert	5	0	2	0	2	0	1	0	0	0
JK TR TR	42	0	1	0	23	0.1	14	0	4	0
Test Incident	31	0	5	0	6	0	8	0	12	0
Totals	106462	100%	25710	100%	17605	100%	34358	100%	28789	100%

Exhibit 11
Average Incident Clearance Times
For Fiscal Year 2013-2014

Statewide	Region 1	Region 2	Region 3	Region 4
Minutes	Minutes	Minutes	Minutes	Minutes
58.75	61	52	62	60

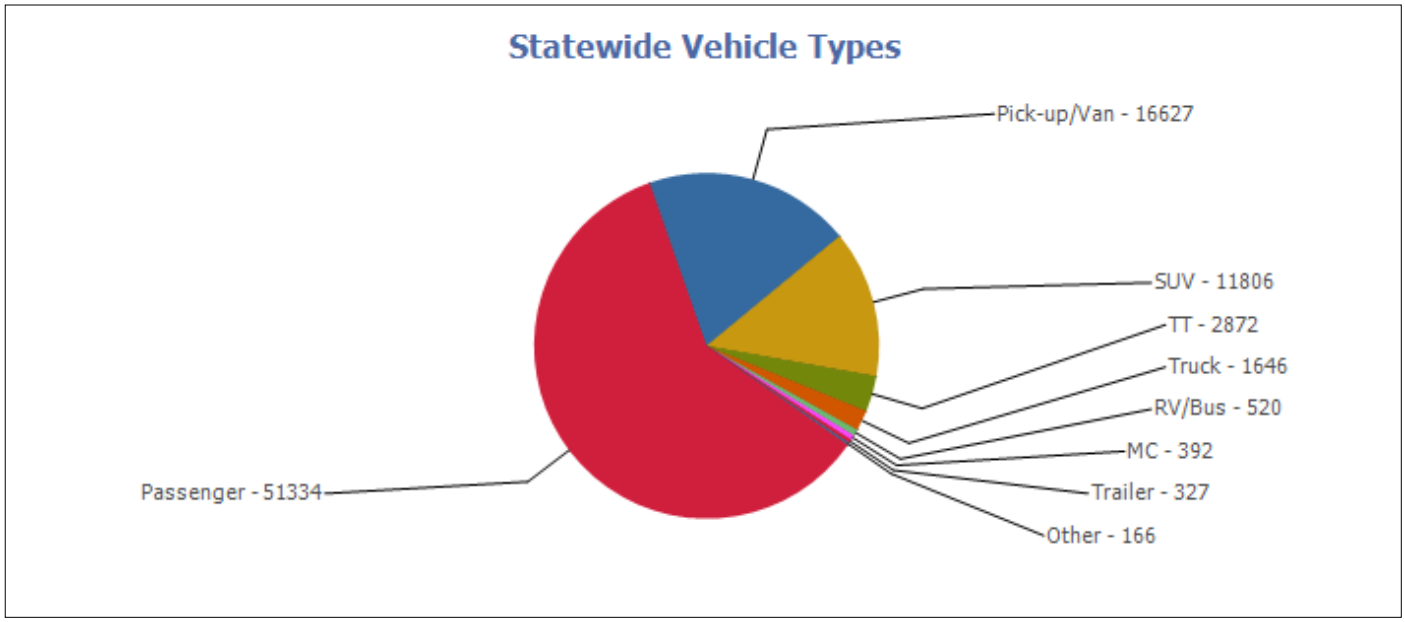
FHWA defines Incident Clearance Time as the "time between the first recordable awareness of the incident and the time at which the last responder has left the scene."

Exhibits 12
Roadway Clearance Time
(Incidents Cleared within 90 Minutes)
For Fiscal Year 2013-2014



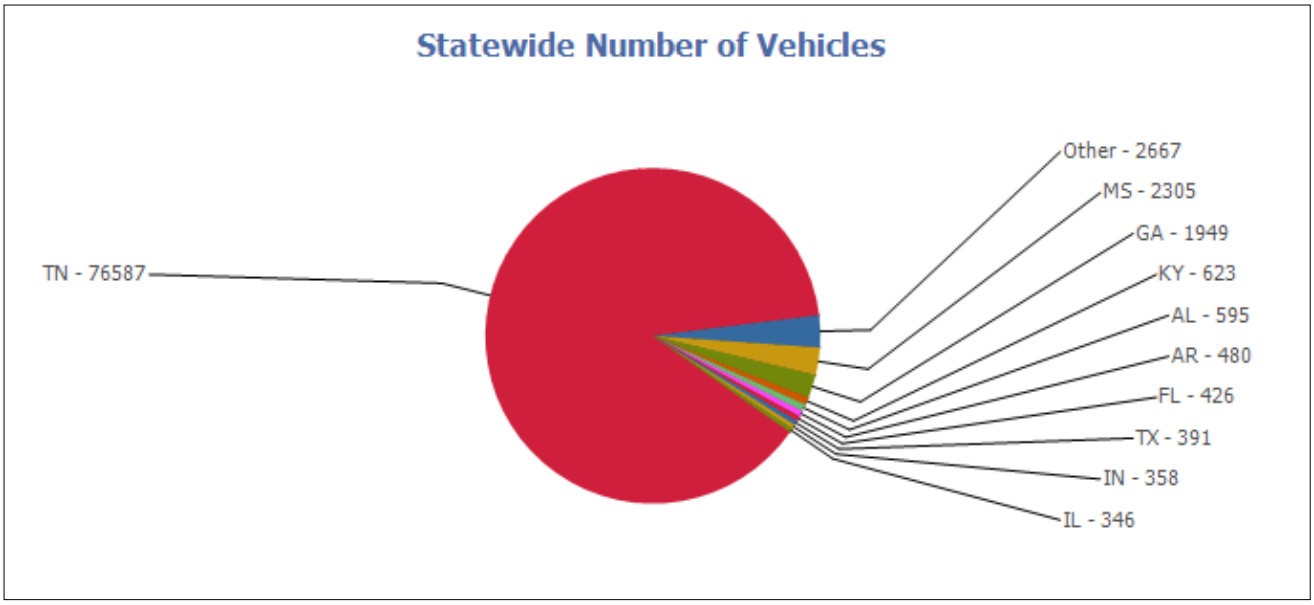
FHWA defines Roadway Clearance Time as the "time between first recordable awareness of an incident by a responsible agency and first confirmation that all lanes are available for traffic flow."

Exhibit 13
Types of Vehicles Assisted
For Fiscal Year 2013-2014



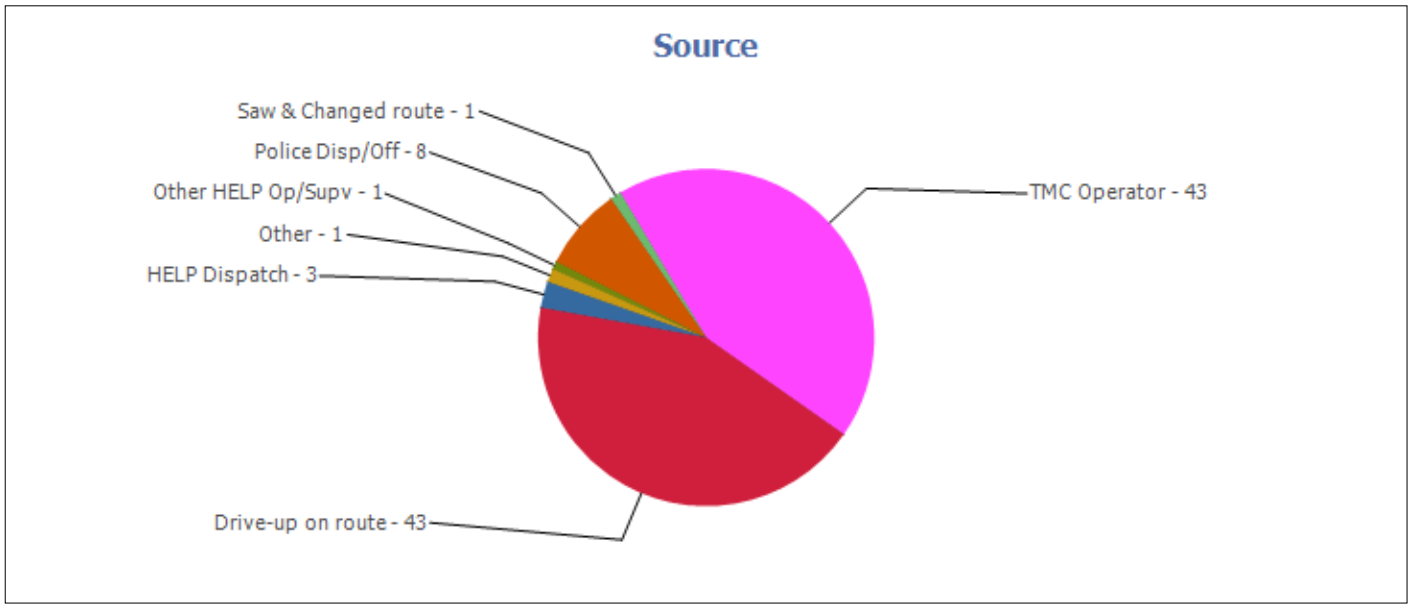
	Statewide		Region 1		Region 2		Region 3		Region 4	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Passenger	51334	59.9	8279	49.3	7712	48.9	15264	57.1	20079	75.8
Pick-up/Van	16627	19.4	4523	26.9	3927	24.9	5127	19.2	3050	11.5
SUV	11806	13.8	2758	16.4	2251	14.3	4357	16.3	2440	9.2
TT	2872	3.4	571	3.4	896	5.7	1026	3.8	379	1.4
Truck	1646	1.9	306	1.8	527	3.3	435	1.6	378	1.4
RV/Bus	520	0.6	163	1	150	1	144	0.5	63	0.2
MC	392	0.5	106	0.6	126	0.8	106	0.4	54	0.2
Trailer	327	0.4	44	0.3	112	0.7	149	0.6	22	0.1
Other	166	0.2	35	0.2	6	0	111	0.4	14	0.1
Totals	85690	100%	16785	100%	15707	100%	26719	100%	26479	100%

Exhibit 14
Origin of Registration (Based on License Plate)
For Fiscal Year 2013-2014



	Statewide		Region 1		Region 2		Region 3		Region 4	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
TN	76587	88.3	14831	88.4	13285	84.2	25333	91.2	23138	87.4
MS	2305	2.7	34	0.2	35	0.2	97	0.3	2139	8.1
GA	1949	2.2	179	1.1	1485	9.4	226	0.8	59	0.2
KY	623	0.7	195	1.2	50	0.3	346	1.2	32	0.1
AL	595	0.7	95	0.6	253	1.6	195	0.7	52	0.2
AR	480	0.6	19	0.1	8	0.1	36	0.1	417	1.6
FL	426	0.5	134	0.8	126	0.8	132	0.5	34	0.1
TX	391	0.5	90	0.5	59	0.4	147	0.5	95	0.4
IN	358	0.4	89	0.5	40	0.3	166	0.6	63	0.2
IL	346	0.4	67	0.4	47	0.3	172	0.6	60	0.2
Other	2667	3	1052	6.2	383	2.4	922	3.5	390	1.5
Totals	86727	100%	16785	100%	15771	100%	27772	100%	26479	100%

Exhibit 15
How Incident Discovered by HELP
For Fiscal Year 2013-2014



	Statewide		Region 1		Region 2		Region 3		Region 4	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Drive-up on route	40342	43	9207	41	6126	38	14846	49	10163	41
HELP Dispatch	2360	3	435	2	87	1	480	2	1358	6
Other	1218	1	672	3	270	2	196	1	80	0
Other HELP Op/Supv	717	1	109	1	84	1	313	1	211	1
Police Disp/Off	7467	8	1746	8	1362	9	4190	14	169	1
Saw & Changed route	984	1	203	1	385	2	286	1	110	0
TMC Operator	40446	43	10388	46	7631	48	9788	33	12639	51
Totals	93534	100	22760	100	15945	100	30099	100	24730	100

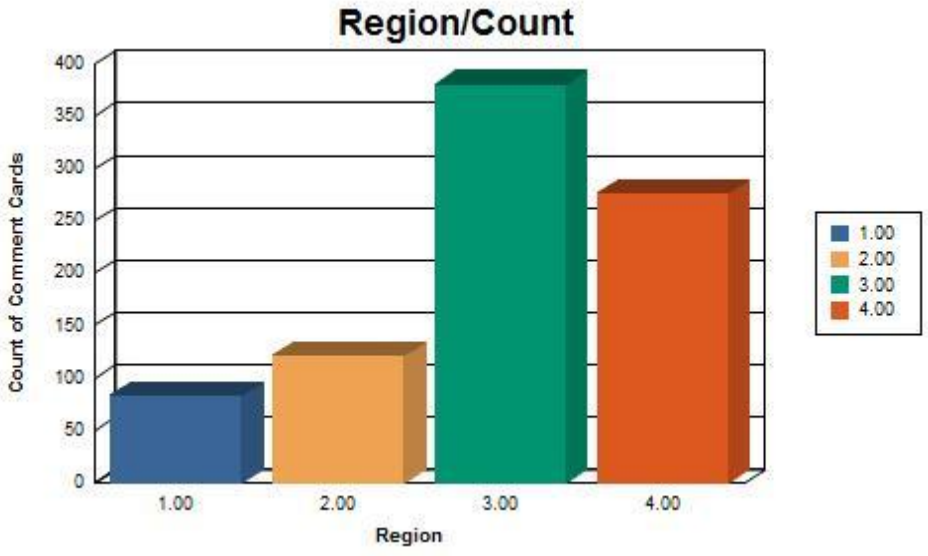
SECTION 5

HELP COMMENT CARD DATA

The information in this section is from 864 comment cards received by TDOT from motorists that received assistance from HELP operators. Each card is entered into TDOT's Business Object Enterprise (BOE) database weekly to allow staff the ability to review the number of comments cards received from each region.

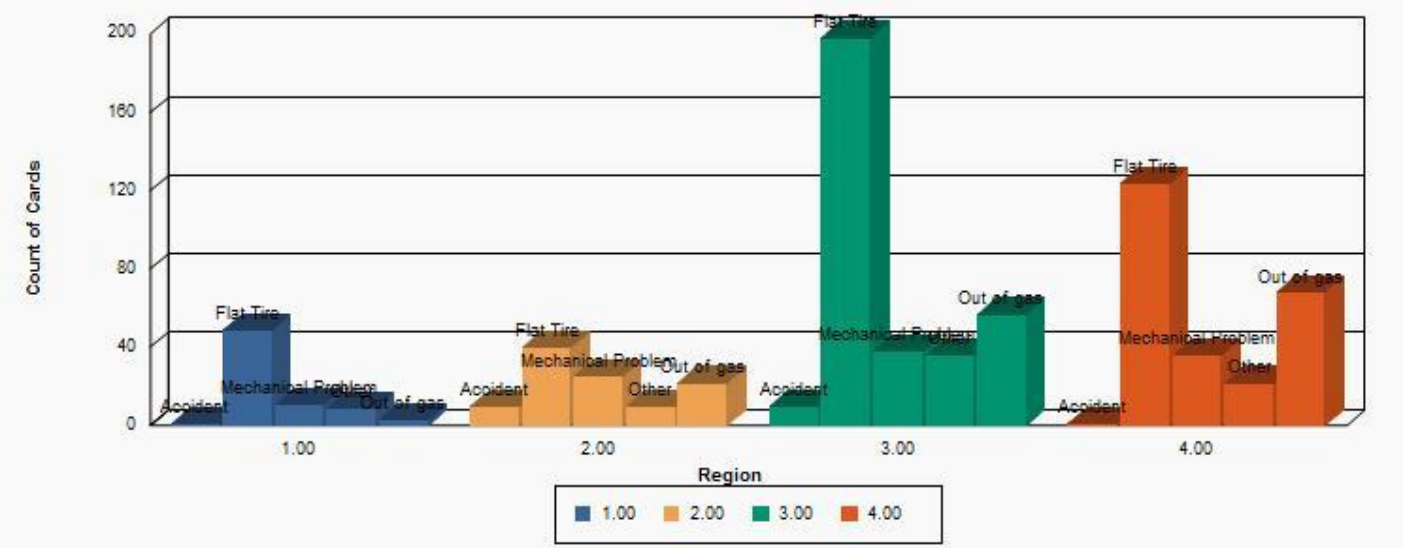
The HELP operators and shift supervisors make a strong effort to distribute postage-paid comment cards to customers, recognizing that handing out comment cards may be precluded by more important considerations – safety, prompt restoration of traffic flow, or respect for individuals in stressful situations. Further, no "customer" may be available to receive a comment card for activities such as directing traffic, removing debris, tagging an abandoned vehicle, or notifying other agencies that assistance is needed.

Exhibit 16
Comment Cards Received From Each Region As Percent of Total
For Fiscal Year 2013-2014



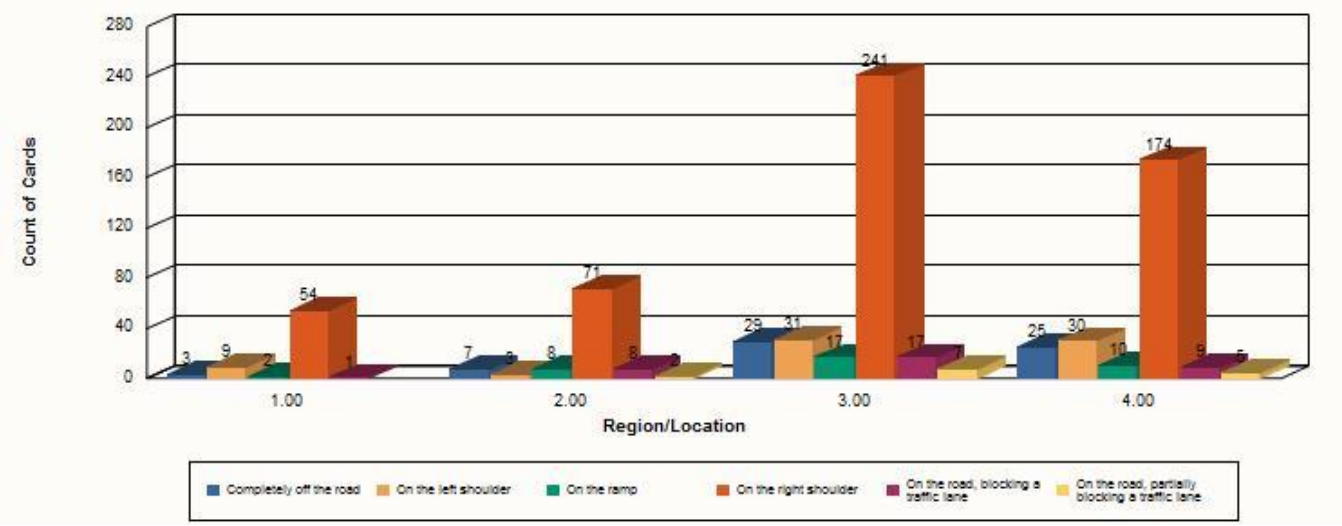
	Statewide	Region 1	Region 2	Region 3	Region 4
Total	**864**	84	122	381	277
	100%	10%	14%	44%	32%

Exhibit 17
Response to: "For What Reason Did You Need Assistance?"
For Fiscal Year 2013-2014



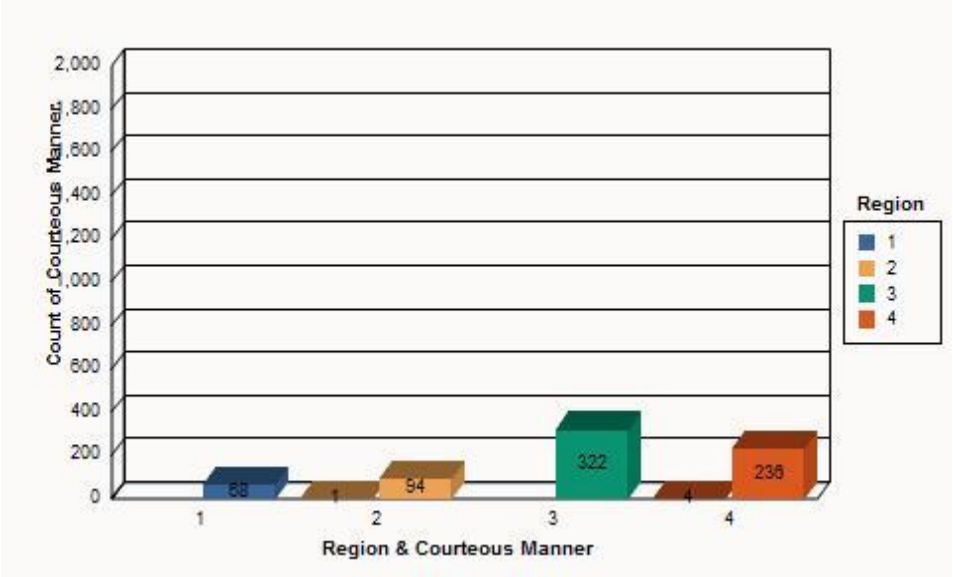
	Statewide		Region 1		Region 2		Region 3		Region 4	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Accident	22	2.9%	1	1.4%	10	9.3%	10	3.0%	1	0.4%
Flat Tire	411	53.3%	49	67.1%	40	37.4%	198	58.4%	124	49.3%
Mechanical Problem	110	14.3%	11	15.1%	25	23.4%	38	11.2%	36	14.3%
Other	77	10.0%	9	12.3%	10	9.3%	36	10.6%	22	8.8%
Out of gas	150	19.5%	3	4.1%	22	20.6%	57	16.8%	68	27.2%
Totals	770	100%	73	100.0%	107	100.0%	339	100.0%	251	100.0%

Exhibit 18
"Where was your Vehicle when the HELP unit arrived?"
For Fiscal Year 2013-2014



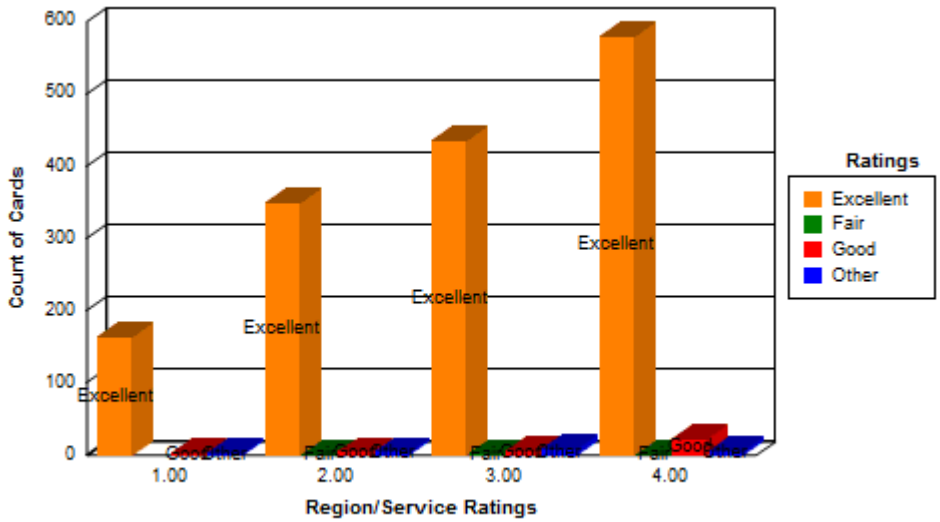
	Statewide		Region 1		Region 2		Region 3		Region 4	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Completely off the road	64	8.4%	3	4.4%	7	7.1%	29	8.5%	25	9.9%
On the left shoulder	73	9.6%	9	13.1%	3	3.0%	31	9.1%	30	11.9%
On the ramp	37	4.8%	2	2.9%	8	8.1%	17	5.0%	10	3.9%
On the right shoulder	540	70.8%	54	78.2%	71	71.7%	241	70.5%	174	68.8%
On the road, blocking a traffic lane	35	4.6%	1	1.5%	8	8.1%	17	5.0%	9	3.5%
On the road, partially blocking a traffic lane	14	1.8%	0	0.0%	2	2.0%	7	2.0%	5	2.0%
Totals	763	100.0%	69	100.0%	99	100.0%	342	100.0%	253	100.0%

Exhibit 19
Response to: "Did the HELP Operator Assist You in a Courteous Manner?"
For Fiscal Year 2013-2014



	Statewide		Region 1		Region 2		Region 3		Region 4	
			Knoxville		Chattanooga		Nashville		Memphis	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Yes	720	99.3%	68	100.0%	94	98.9%	322	100.0%	236	98.3%
No	5	0.7%	0	0.0%	1	1.1%	0	0.0%	4	1.7%
Totals	725	100.0%	68	100.0%	95	100.0%	322	100.0%	240	100.0%

Exhibit 20
Response to: "How would you rate the HELP Service?"
For Fiscal Year 2013-2014



	Statewide		Region 1		Region 2		Region 3		Region 4	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Excellent	697	96.1%	67	98.5%	95	100.0%	308	95.7%	227	94.6%
Good	20	2.8%	1	1.5%	0	0.0%	12	3.7%	7	2.9%
Fair	1	0.1%	0	0.0%	0	0.0%	0	0.0%	1	0.4%
Others	7	1.0%	0	0.0%	0	0.0%	2	0.6%	5	2.1%
Totals	725	100.0%	68	100.0%	95	100.0%	322	100.0%	240	100.0%

Statewide Dynamic Highway Signs (DHS) in Tennessee

Customer Comments

The HELP Comment Card includes a space for the motorist to add written comments if they choose. The excerpts in Exhibit 21 include representative comments from each of the four cities and from each month of the year. Comment cards are available for review upon request.

TDOT also receives incident management feedback through e-mails, letters, phone calls, and personal conversations with citizens, law enforcement officers, fire and emergency medical services personnel, tow truck operators, and local transportation officials. A few comments with fair ratings were received during the year, mostly from motorists who had to wait longer than they expected, or thought the HELP operator was not sufficiently helpful. A few motorists reported actions that were perceived as unsafe or unnecessarily disruptive to traffic flow, and HELP supervisors and managers addressed all such complaints promptly and thoroughly. However, the comments from all sources during FY 2013-2014 were overwhelmingly positive.

Exhibit 21
Excerpts from the HELP Comment Cards

Date Helped	Comment	Route	City
7/12/2013	**He was an angel sent in time of need! If only the world made more!**	**I-75**	**Knoxville**
8/11/2013	**Very helpful and polite. Thanks so much. Jacksonville, Florida**	**US-27**	**Chattanooga**
10/20/2013	**He was patience and courteous in a situation when I was nervous. I was grateful he was there.**	**I-24**	**Nashville**
10/27/2013	**The cavalry came. The Operator represents TDOT's pride and professionalism**	**I-55**	**Memphis**
11/17/2013	**Great service! Great use of tax dollars!**	**I-40**	**Knoxville**
11/26/2013	**Mr. Saint pulled up behind us. He is a lifesaver.**	**SR-153**	**Chattanooga**
12/26/2013	**Best service on the planet!!**	**I-24**	**Chattanooga**
12/30/2013	**The Operator was amazing---so friendly and helpful an exceptional employee.**	**I-40**	**Knoxville**
1/12/2014	**Thank God for TDOT.**	**I-440**	**Nashville**
1/19/2014	**Followed me to my exit to make sure I would not run hot. Now that's love!!**	**I-40**	**Memphis**

Traffic Control Setup on Briley Parkway, Nashville, TN (Region 3)

SECTION 6

COSTS, BENEFITS, AND FUNDING SOURCES

The total operating expenditures for the HELP Program during FY 2013-2014 were approximately $8.8 million, including salaries and related costs, vehicle operation and maintenance, fuel, supplies, and other operating costs.

These resources generate benefits for all highway users and others who would otherwise suffer because of the crashes, disabled vehicles, debris in the roadway congestion, or other conditions rectified by the HELP operators.

The TDOT HELP Program profile is as follows:

Exhibit 22
HELP Truck Authorized Data and Personnel

	Region 1	**Region 2**	**Region 3**	**Region 4**	**Total**
Operators	10	10	22	15	57
Supervisors	4	4	4	4	16
Dispatchers	4	5	6	5	20
Reg. Coord.	1	1	1	1	4
Total Personnel	**19**	**20**	**33**	**25**	**97**
Oper. Trucks	11	10	24	17	62
Sprv. Trucks	4	4	4	4	16
Support Trucks	1	1	1	1	4
Total Trucks	**16**	**15**	**29**	**22**	**82**

Benefits

The benefits of the HELP program are categorized in Exhibit 23. For some of those benefit categories, a direct economic value could be estimated with a high degree of confidence. For other categories the economic benefits would be more difficult to determine and would require many assumptions. The University of Tennessee, Transportation Research Office, has prepared a technical report on cost-benefit estimation for TDOT's Traffic Operations Division, Transportation Management Office. The finding from this report indicates the quantifiable benefits of the HELP Program far exceed the funding costs of operation. The benefit to cost ratio for the statewide HELP Program is estimated at 8.48:1. As calculated by other states program studies, this ratio falls in the lower middle of the range of values. This estimation is probably lower because it only accounts for delay savings and does not account for safety benefits or environment impacts or goodwill.[1]

The 2012 Urban Mobility Report prepared by the Texas Transportation Institute (TTI) examined the causes and costs of traffic congestion in many U.S. urban areas, including Memphis and Nashville.[2] This report includes an estimate of the cost savings attributable to "operational treatments" to reduce congestion, including the HELP patrols in Memphis and Nashville. Based just on the reduced travel delays and fuel savings from avoided congestion the TTI study concluded that the benefits generated by the HELP patrols in Memphis totaled to approximately $24.5 million for calendar year 2011. For Nashville, the estimated benefits were approximately $31.5 million. The TTI estimates of the HELP Program benefits for reduced travel delays and fuel savings in just the two cities is $56.0 million versus the actual statewide operational costs of $9.5 million. The 2012 Urban Mobility Report also included Knoxville, TN.

As noted above, the TTI study did not attempt to assign any value to the reduced risks of secondary crashes, improved safety for other incident responders or motorists in distress, avoided air or water pollution, improved transportation system security, or the goodwill created when an out-of-state motorist is assisted, not to mention the benefits for the Tennessee citizens and visitors who received direct assistance from a HELP operator.

Funding Sources

Most of the startup costs for the HELP program, including the initial purchase of trucks and equipment, were paid with federal funds, primarily under a program known as Congestion Mitigation and Air Quality (CMAQ). The CMAQ funds, administered by the Federal Highway Administration, were allocated for use in Knoxville, Memphis, and Nashville because those cities were not in compliance with certain federal air quality standards. Chattanooga was in compliance and did not receive CMAQ allocations, and TDOT used Federal Surface Transportation Program (STP) funds for the startup in Chattanooga.

The operating costs for HELP Program during FY 2013-2014 were covered with state and federal National Highway Performance Program, (NHPP) funds.

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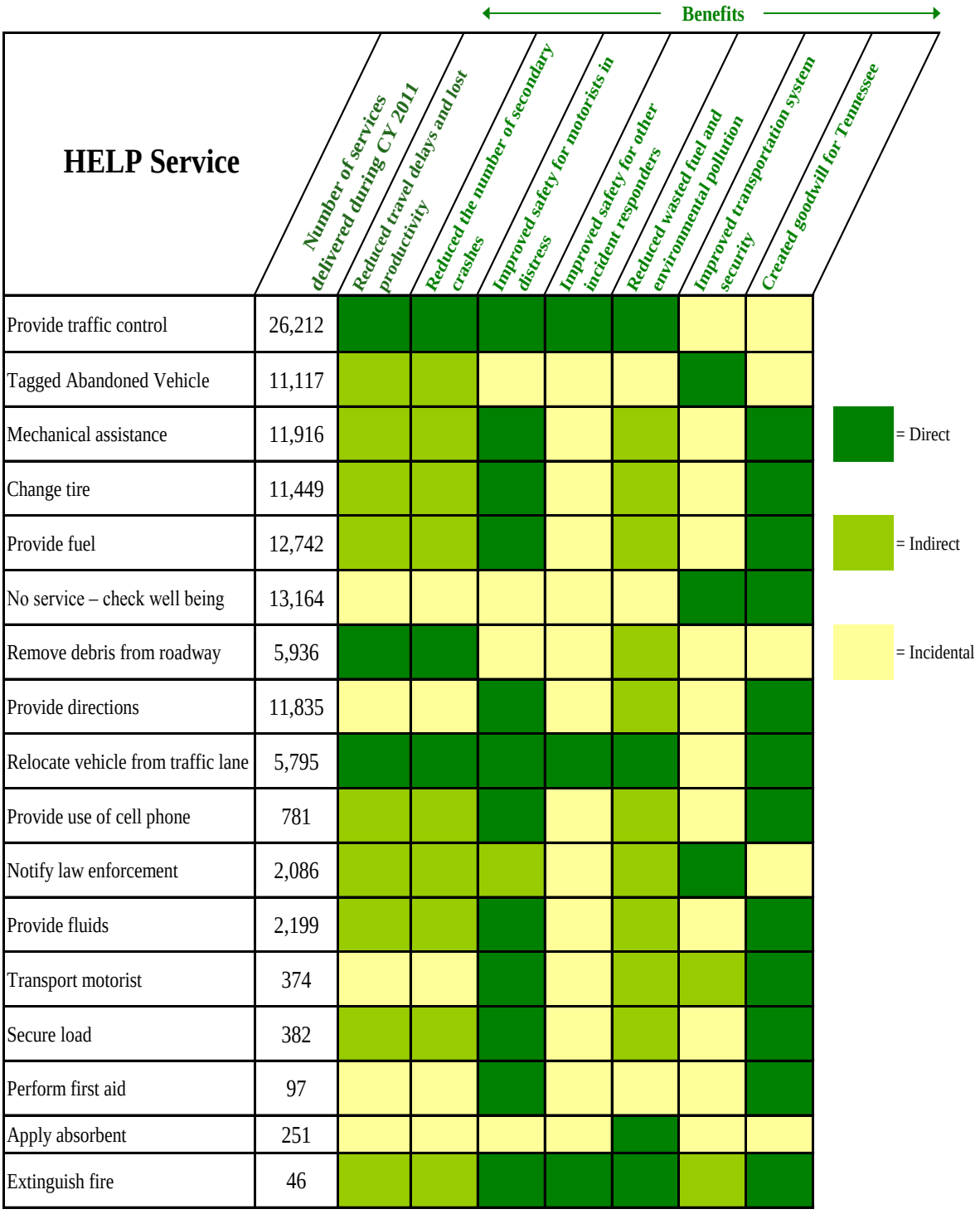
[1] The University of Tennessee, *A Technical Report on Cost-Benefit Estimation for TDOT's Traffic Incident Management* (draft) Sam Moss, Lee D. Han PhD, January 2012

[2] Texas Transportation Institute, *2012 Annual Urban Mobility Study*, 201. (http://mobility.tamu.edu/)

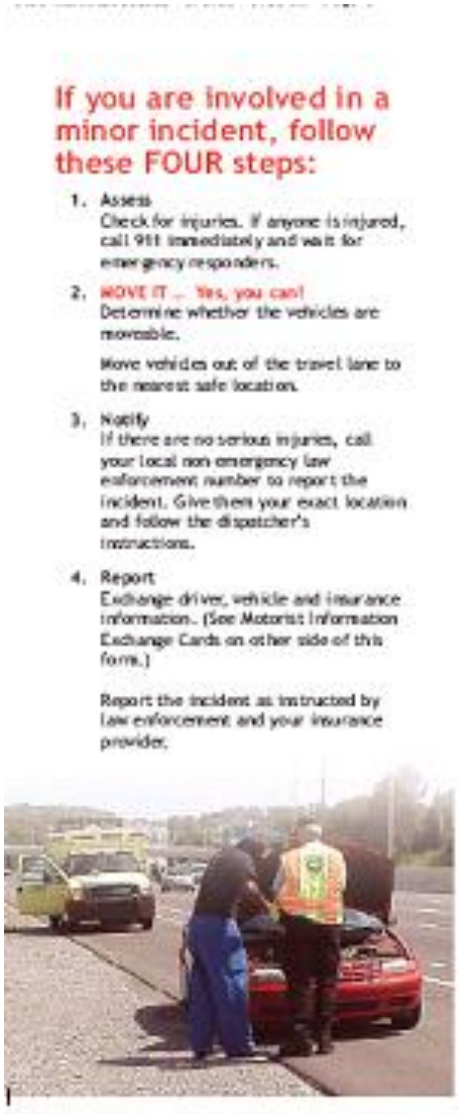
[3] TDOT also considered, but decided against, charging motorists for services such as changing tires or providing fuel. Several equally important factors influenced that decision. First, the HELP operators would have to handle cash or prepare an invoice for the motorist, extending the time of exposure to hazardous circumstances for both the HELP operator and the motorist. Likewise, other motorists would be distracted for a longer period, with the associated disruption of traffic and risks of secondary crashes. Further, some motorists might want to refuse the service if a fee were charged, causing continued delays and hazards for others. Finally, the administrative costs of collecting, securing, depositing, and accounting for payments and bills could easily exceed the amounts received. TDOT believes that the public interest is best served by clearing the roadway and getting stranded motorists back on their way as quickly as possible

Exhibit 23
Benefits of the HELP Program for Tennessee Taxpayers



Note: In addition to the above benefits for *all* Tennessee taxpayers, more than 88,550 Tennessee motorists and more than 10,422 motorists from other states received *direct* assistance from HELP (changed tire, fuel, first aid, etc.) during CY 2011.

Appendix A: "Move It" Brochure

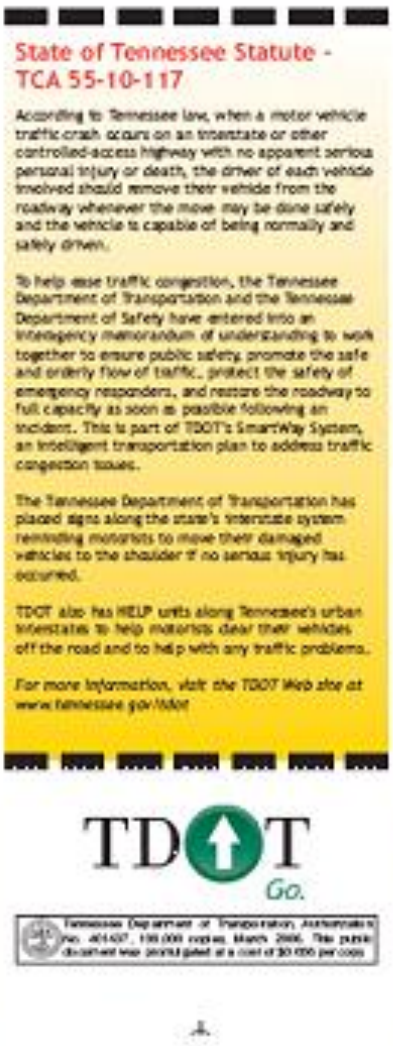


If you are involved in a minor incident, follow these FOUR steps:

1. Assess
   Check for injuries. If anyone is injured, call 911 immediately and wait for emergency responders.
2. MOVE IT ... Yes, you can!
   Determine whether the vehicles are moveable.

   Move vehicles out of the travel lane to the nearest safe location.
3. Notify
   If there are no serious injuries, call your local non emergency law enforcement number to report the incident. Give them your exact location and follow the dispatcher's instructions.
4. Report
   Exchange driver, vehicle and insurance information. (See Motorist Information Exchange Cards on other side of this form.)

   Report the incident as instructed by law enforcement and your insurance provider.



State of Tennessee Statute - TCA 55-10-117

According to Tennessee law, when a motor vehicle traffic crash occurs on an interstate or other controlled-access highway with no apparent serious personal injury or death, the driver of each vehicle involved should remove their vehicle from the roadway whenever the move may be done safely and the vehicle is capable of being normally and safely driven.

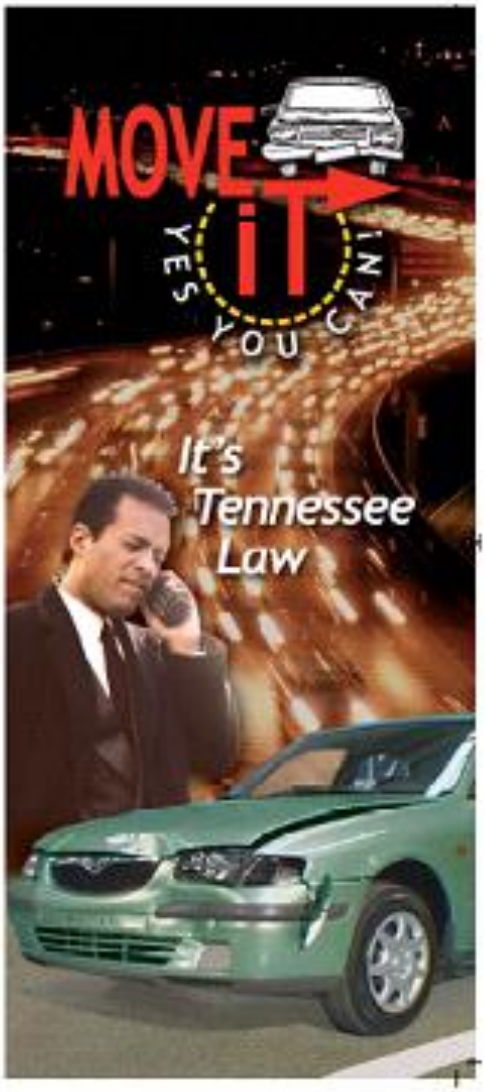
To help ease traffic congestion, the Tennessee Department of Transportation and the Tennessee Department of Safety have entered into an interagency memorandum of understanding to work together to ensure public safety, promote the safe and orderly flow of traffic, protect the safety of emergency responders, and restore the roadway to full capacity as soon as possible following an incident. This is part of TDOT's SmartWay System, an intelligent transportation plan to address traffic congestion issues.

The Tennessee Department of Transportation has placed signs along the state's interstate system reminding motorists to move their damaged vehicles to the shoulder if no serious injury has occurred.

TDOT also has HELP units along Tennessee's urban interstates to help motorists clear their vehicles off the road and to help with any traffic problems.

For more information, visit the TDOT Web site at www.tennessee.gov/tdot

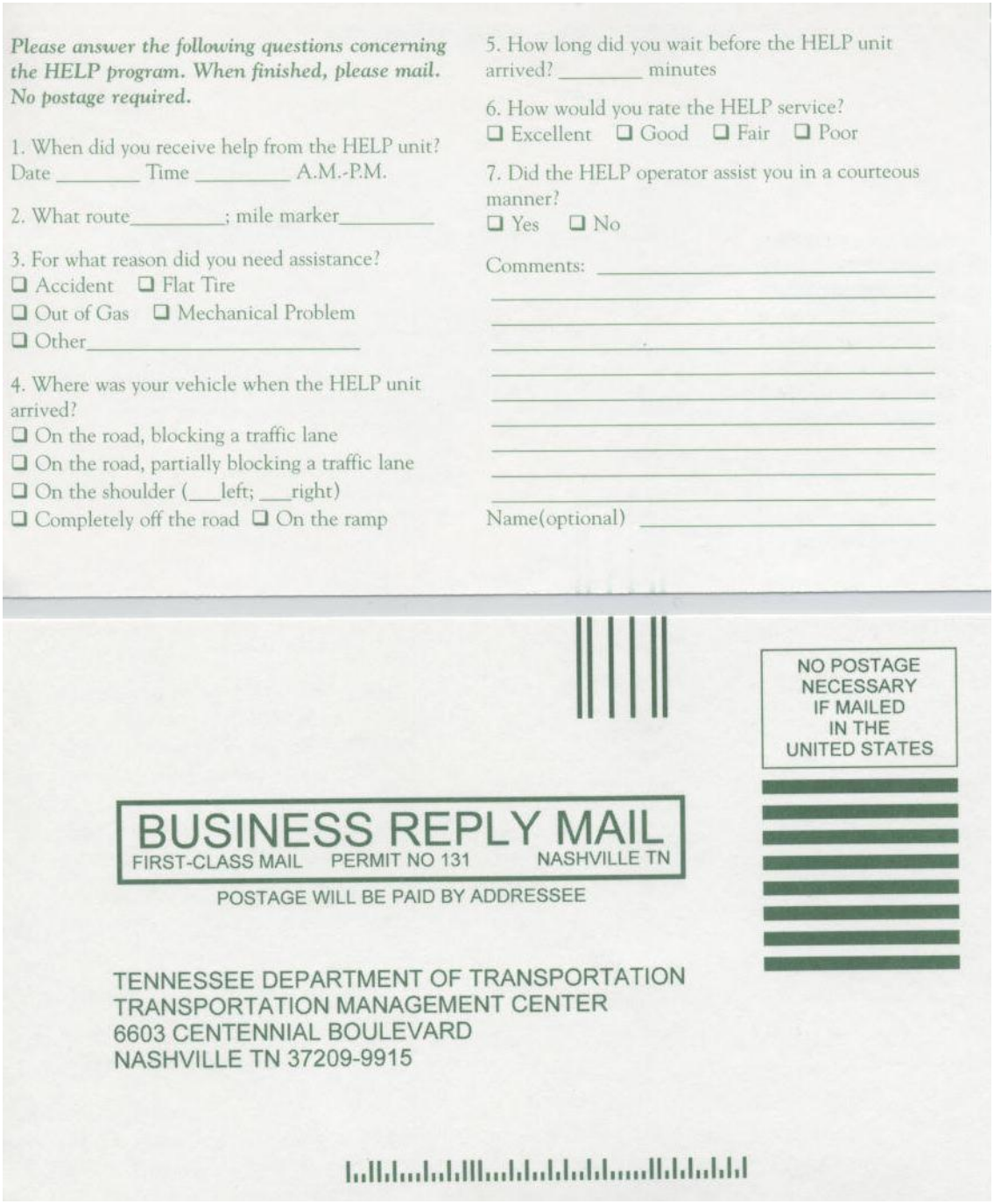
TDOT Go.



Region 2 TMC Operators

Region 2 TMC Incident Coordinator/ TN State Trooper

Appendix B: HELP Comment Card



Please answer the following questions concerning the HELP program. When finished, please mail. No postage required.

1. When did you receive help from the HELP unit?
Date _____ Time _____ A.M.-P.M.

2. What route_____; mile marker_____

3. For what reason did you need assistance?
❑ Accident ❑ Flat Tire
❑ Out of Gas ❑ Mechanical Problem
❑ Other_____

4. Where was your vehicle when the HELP unit arrived?
❑ On the road, blocking a traffic lane
❑ On the road, partially blocking a traffic lane
❑ On the shoulder (___left; ___right)
❑ Completely off the road ❑ On the ramp

5. How long did you wait before the HELP unit arrived? _____ minutes

6. How would you rate the HELP service?
❑ Excellent ❑ Good ❑ Fair ❑ Poor

7. Did the HELP operator assist you in a courteous manner?
❑ Yes ❑ No

Comments: _____

Name(optional) _____

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO 131 NASHVILLE TN

POSTAGE WILL BE PAID BY ADDRESSEE

TENNESSEE DEPARTMENT OF TRANSPORTATION
TRANSPORTATION MANAGEMENT CENTER
6603 CENTENNIAL BOULEVARD
NASHVILLE TN 37209-9915

APPENDIX C
TENNESSEE REGIONAL INCIDENT MANAGEMENT COORDINATORS

Region I
Mark Dykes, Incident Management Coordinator
David Wortham, Assistant Incident Management Coordinator
7238 Region Lane
Knoxville, TN 37914
Telephone Number: 865-594-2714
Mark.Dykes@tn.gov

Region II
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7500 Volkswagen Drive
Chattanooga, TN 37416
Telephone Number: 423-510-1168
Robert.VanHorn@tn.gov

Region III
Robert Allen, Incident Management Coordinator
Emerson Boguskie, Assistant Incident Management Coordinator
6603 Centennial Blvd. TMC Bldg. R
Nashville, TN 37243
Telephone Number: 615-350-4437
Robert.E.Allen@tn.gov

Region IV
John Thomas, Incident Management Coordinator
Carlton Towles, Assistant Incident Management Coordinator
5336 Boswell Ave.
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APPENDIX D

For Additional Information Contact:

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Or

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Tennessee Department of Transportation
Office of Transportation Management
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