SYSTEMS ENGINEERING ANALYSIS
Roadway Safety and Incident Patrol

FINAL

August 2010

Presented to:

Louisiana Department of Transportation
And Development

ABMB ENGINEERS, INC.

ABMB 25
ENGINEERS, INC.

August 13, 2010

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LA Dept of Transportation and Development
1212 E. Highway Dr.
Baton Rouge, LA 70802

RE: TO 701-65-1138, FAP ITS-9908(541) ROADWAY SAFETY AND INCIDENT PATROL

Dear Ms. Delaney:

We are very pleased to submit the final system engineering analysis for the Roadway Safety and Incident Patrol (RSIP) program.

All comments received to date have been addressed as part of this submittal. A copy of this report can be provided to DOTD Legal Section for review and consideration of the criminal background check information if directed.

The requirements and constraints contained in this document will readily support DOTD's efforts in developing a Request for Proposal or Construction Bid Proposal for contracting the RSIP vehicles and operations.

We can provide further assistance at your request.

Yours truly,

ABMB ENGINEERS, INCORPORATED

Jonathan Fox P.E., PTOE
Director of ITS Services

Attachments

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1 Acronyms and Abbreviations

Wherever the following abbreviations or acronyms are used in this document, they are interpreted as follows:

AVL	Automatic Vehicle Locator
BR	Baton Rouge
CE&I	Construction Engineering & Inspection
CFM	Cubic Feet per Minute
CPR	Cardiopulmonary Resuscitation
DOTD	Department of Transportation and Development
DWI	Driving While Intoxicated
EMS	Emergency Medical Service
EMT	Emergency Medical Technician
FAP	Federal Aid Project
FHWA	Federal Highway Administration
GED	General Equivalency Diploma
GIS	Geographic information system
IEEE	Institute of Electrical and Electronics Engineers
ITS	Intelligent Transportation Systems
LA	Louisiana
LED	Light Emitting Diode
LSP	Louisiana State Police
MAP	Motorist Assistance Patrol
MHz	Megahertz
MUTCD	Manual on Uniform Traffic Control Devices
NO	New Orleans
OJT	On-the-Job Training
PA	Public Address
RS	Revised Statute
RSIP	Roadway Safety and Incident Patrol
SEA	Systems Engineering Analysis
SP	Shreveport
SUV	Sport Utility Vehicle
TIM	Traffic Incident Management
TMC	Traffic Management Center
TO	Task Order
U.S.	United States
USDOT	United States Department of Transportation
VCMS	Variable Changeable Message Sign

2 Introduction

This document is a system engineering analysis (SEA) for the Louisiana Department of Transportation and Development's (DOTD) roadway safety patrol program called Motorist Assistance Patrol (MAP). This program has been in existence since 1995 and has been highly successful in the eyes of motorists and the general public.

This document analyzes the architecture/information flows, needs, requirements, and procurement at a project level. Resulting from this document, DOTD will solicit contract(s) to continue the operations of its roadway safety patrol program.

2.1 FHWA TIM Objectives

The Federal Highway Administration (FHWA) recently released its final report on traffic incident management (TIM) performance measures. The TIM Program Objectives[1] outlined in the report are:

1. Reduce "roadway clearance" time
2. Reduce "incident clearance" time
3. Reduce the number of secondary incidents

U.S. Dept. of Transportation has reported[2] that roadway safety patrol programs can reduce minor incident clearance times by 52% and downstream secondary incidents by 14%. DOTD has embraced its roadway safety patrol program as a part of highway operations and wants to continue to support the TIM Program Objectives through its use.

2.2 DOTD's MAP Program

DOTD's Intelligent Transportation Systems (ITS) Section currently contracts MAP through construction type contracts (governed under RS 38: 2290 et al). Although MAP is contracted by the ITS Section, it is managed directly by a project engineer under one of the DOTD District Offices within the area of patrol: Baton Rouge (District 61), New Orleans (District 02), and Shreveport (District 04).

Lake Charles also has a MAP program currently operating. This MAP program is a joint cooperative service between DOTD and Calcasieu Parish Sheriff's Office. Currently the sheriff's office provides and manages the daily patrol vehicles.

The current DOTD MAP contracts are set to expire at the end of 2010 and the ITS Section is using a system engineering approach to revamp the existing roadway safety patrol program. This revamp will include refining contract requirements as well as a changing the name of the program to brand it directly to highway safety and traffic incident management. The requirements within the existing construction contracts need to be revised to better support the ITS Section's envisioned operations.

In support of rebranding the program, this document will only use "MAP" when referring to the existing program. The rebranded name is the Roadway Safety and Incident Patrol (RSIP) Program.

[1] U.S. Dept. of Transportation, Federal Highway Administration, *Federal Highway Administration Focus States Initiative: Traffic Incident Management Performance Measures Final Report,* December 2009.
[2] U.S. Dept. of Transportation, Federal Highway Administration, *Federal Highway Administration Service Patrol Handbook,* November 2008.

3 Physical Architecture

3.1 Architecture Creation Process

The Project ITS Architecture is based primarily on DOTD's experience with the MAP program, traffic management center (TMC) operations, and *the Louisiana Statewide ITS Implementation and Telecommunications Plan*, referenced herein as the statewide ITS architecture. Regional architectures and the U.S. National ITS Architecture were also used to supplement the statewide ITS architecture where necessary.

3.2 Project ITS Architecture

Turbo Architecture, version 4.1 and the National ITS Architecture, version 6.1 were used to create the project level physical architecture for RSIP. Note the physical architecture, **Figure 1**, has been developed at a high level to represent any RSIP program deployment(s).

3.2.1 Stakeholders

The stakeholders associated with this project are indicated below. When implemented, the local agencies will fall within the broader classification indicated.

- DOTD
- Local Public Safety Agencies
- Louisiana State Police (LSP)

3.2.2 Inventory Elements

Table 1: RSIP Inventory Elements

Element	Status	Description	Comment
DOTD TMC	Existing	This element represents the DOTD TMC operating the ITS within the region that the RSIP vehicles are operating	In the RSIP contract, this element should be updated to specifically identify the TMC for RSIP area of patrol
DOTD RSIP Vehicle	Planned	This element represents RSIP vehicles	The RSIP is a revamp of MAP. For the architecture this element and the associated flows are shown as "planned".
LSP Troop	Existing	This is the local LSP troop office(s) that patrol within the RSIP area of coverage	
Local Police Department	Existing	This is the local police department and/or sheriff's offices that patrol within the RSIP area of coverage	

3.2.3 RSIP Interfaces

This section includes an architecture flow diagram **(Figure 1)** that defines the interfaces that are included in the RSIP. The architecture flows are defined in **Table 2**. Note the descriptions for each architecture flow are from the National ITS Architecture.

Figure 1: Project Interfaces

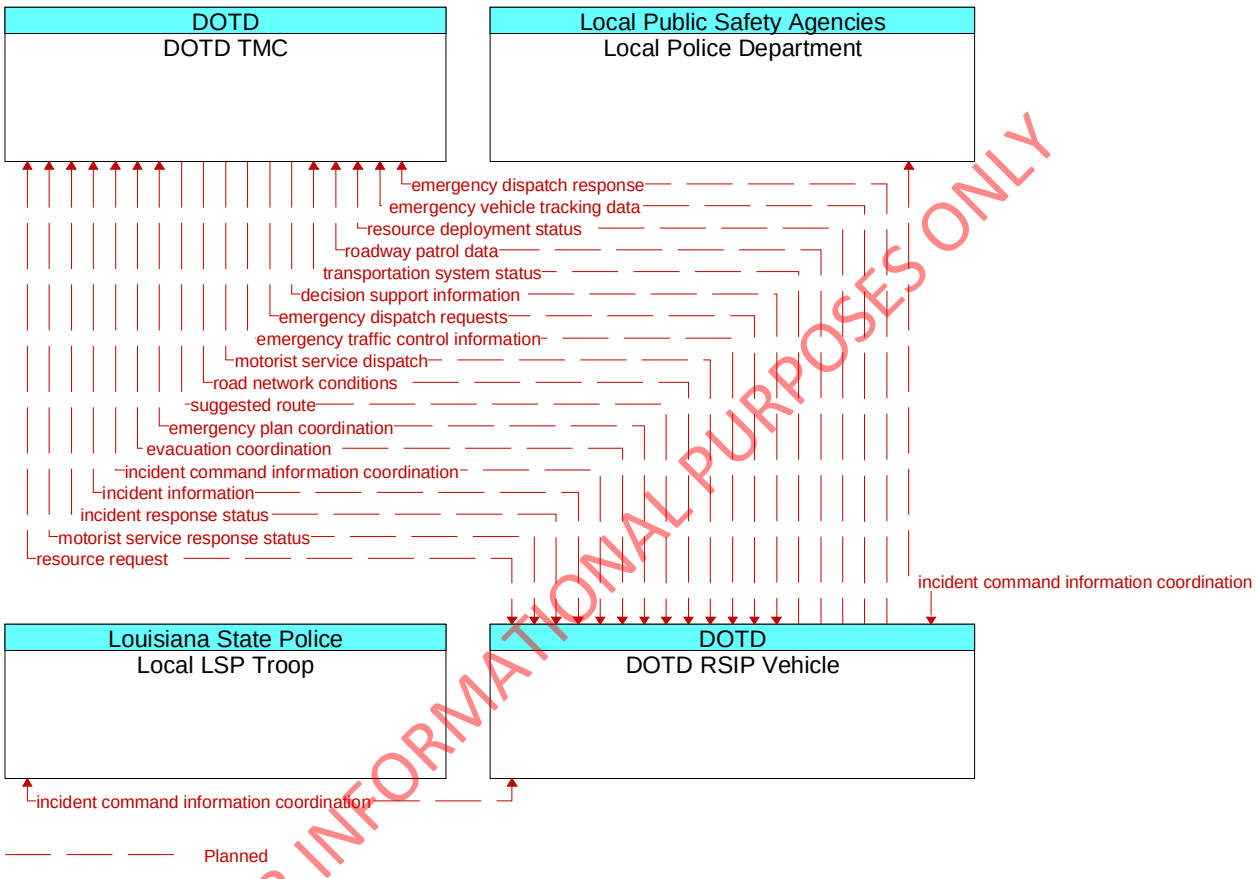

Table 2: Architecture Flow Definitions

Name	Description
Emergency Dispatch Response	Request for additional emergency dispatch information and provision of en route status.
Emergency Vehicle Tracking Data	The current location and operating status of the emergency vehicle.
Resource Deployment Status	Status of resource development identifying the resources (vehicles, equipment, materials, and personnel) available and their current status. General resource inventory information and specific status of deployed resources may be included.
Roadway Patrol Data	User-defined flow. Data transmitted to include the motorist services provided
Transportation System Status	Current status and condition of transportation infrastructure (e.g., tunnels, bridges, interchanges, TMC offices, maintenance facilities). In case of disaster or major incident, this flow provides an assessment of damage sustained by the surface transportation system including location and extent of the damage, estimate of remaining capacity and necessary restrictions, and time frame for repair and recovery.
Decision Support Information	Information provided to support effective and safe incident response, including local traffic, road, and weather conditions, hazardous material information, and the current status of resources that have been allocated to an incident.
Emergency Dispatch Request	Emergency vehicle dispatch instructions including incident location and available information concerning the incident.
Emergency Traffic Control Information	Status of a special traffic control strategy or system activation implemented in response to an emergency traffic control request, a request for emergency access routes, a request for evacuation, a request to activate closure systems, a request to employ driver information systems to support public safety objectives, or other special requests. Identifies the selected traffic control strategy and system control status.
Motorist Service Dispatch	User-defined flow. Roadway safety patrol dispatch instructions included location and available information about the motorist requiring service(s) (e.g., fuel, tire change, tow, etc.) that are not emergency conditions. The response to these request are critical for driver safety as accident may occur due to disabled vehicles being present within the roadway clear zone.
Road Network Conditions	Current and forecasted traffic information, road and weather conditions, and other road network status. Either raw data, processed data, or some combination of both may be provided by this architecture flow. Information on diversions and alternate routes, closures, and special traffic restrictions (lane/shoulder use, weight restrictions, width restrictions, HOV requirements) in effect is included along with a definition of the links, nodes, and routes that make up the road network.
Suggested Routes	Suggested route for a dispatched emergency or maintenance vehicle that may reflect current network conditions and the additional routing options available to en route emergency or maintenance vehicles that are not available to the general public.
Emergency Plan Coordination	Information that supports coordination of emergency management plans, continuity of operations plans, emergency response and recovery plans, evacuation plans, and other emergency plans between agencies. This includes general plans that are coordinated prior to an incident and shorter duration tactical plans that are prepared during an incident.
Evacuation Coordination	Coordination of information regarding a pending or in-process evacuation. Includes evacuation zones, evacuation times, evacuation routes, forecast network conditions, and re-entry times.

Name	Description
Incident Command Information Coordination	Information that supports local management of an incident. It includes resource deployment status, hazardous material information, traffic, road, and weather conditions, evacuation advice, and other information that enables emergency or maintenance personnel in the field to implement an effective, safe incident response.
Incident Information	Notification of existence of incident and expected severity, location, time, and nature of incident. As additional information is gathered and the incident evolves, updated information is provided. Incidents include any event that impacts transportation system operation ranging from routine incidents (e.g., disabled vehicle at the side of the road), through large-scale natural or human-caused disasters that involve loss of life, injuries, extensive property damage, and multi-jurisdictional response. This also includes special events, closures, and other planned events that may impact the transportation system.
Incident Response Status	Status of the current incident response including a summary of incident status and its impact on the transportation system, traffic management strategies implemented at the site (e.g., closures, diversions, traffic signal control overrides), and current and planned response activities.
Motorist Service Response Status	User-defined flow. Status of the current motorist service request including a summary of motorist service(s) performed or being performed and/or whether vehicle will require tow service.
Resource Request	A request for resources to implement special traffic control measures, assist in clean up, verify an incident, etc. The request may poll for resource availability or request pre-staging, staging, or immediate deployment of resources. Resources may be explicitly requested or a service may be requested, and the specific resource deployment may be determined by the responding agency.

4 Concept of Operations

4.1 Existing Operations

Since the existing construction contracts for the MAP program are similar, an example contract has been attached in **Appendix A** for reference. These contracts indicate the contractual responsibilities of the MAP operators and contracted entity. It should be noted that they do not detail the current reporting and detailed coordination with the TMC. In reviewing the contract documents, it should be understood, when indicated that the MAP Operator reports to the "Project Engineer" or the "Police Department", he is typically reporting to the "DOTD TMC Operator". The exceptions are in reporting/providing contract documents, which go to the "Project Engineer".

4.1.1 Existing MAP Services Provided

The following are the general services currently provided by the MAP program:

- Change tires
- Inflate tires
- Provide fuel
- Perform first aid
- Perform minor vehicle repairs
- Provide traffic control
- Provide motorist usage of phone for local calls
- Transport stranded motorist and pedestrians
- Apply absorbent to small spills (fuel and other vehicle fluids)
- Provide engine fluids
- Suppress small vehicle fires
- Jump start vehicles
- Remove minor debris from roadway
- Tag abandoned vehicles
- Move disabled vehicles to the shoulder
- Notify the TMC of a problematic roadway, bridge, or signage conditions
- Notify the Traffic Management Center (TMC) of incidents and adverse weather conditions
- Report abnormal traffic congestion to TMC for motorist information system or media use
- Tow services on select bridges
- Provide up to 20 vehicles in case of emergency (e.g., hurricane evacuation or large traffic incident)

4.1.2 MAP Fleet information

Table 3: Existing MAP Fleet Information

Element	Baton Rouge	New Orleans	Shreveport	Lake Charles
Contract Type	Construction Contract (Jack B. Harper)			Cooperative Endeavor Agreement with Calcasieu Parish Sheriff's Office
Number of MAP vans /pick-up trucks contracted	4	5	4	3
Peak number of MAP on regular patrol on one time	3	4	3	2
Approximate number of route miles patrolled	40	30	43	28 miles
Routes covered on a routine basis. When requested by DOTD e.g. emergency events, MAP may go outside this area.				
Limits	I-10: LA 415 to LA 42 (Highland Road)	I-10: Loyola Ave. (West) to I-510	I-20: I-220 West to I-220 East	I-10 from LA 27 to LA 397
	I-12: I-10/I-12 to LA 447 (Walker)	I-610: All of I-610	I-220: All of I-220	I-210 from I-10 (West) to I-10 (East)
	I-110: I-10/I110 to US 61		LA 3132: I-10 to I-49	
			I-49: LA 3132 to I-20	
Number of Tow Trucks	1	1		0
Full-time MAP operators	0	0	0	
Part-time MAP operators	15	18	15	
Number of reserve vehicles available for emergencies	20			
Support employees in addition to regular MAP operations	40			
Hours of operations	14 hours/day (5:30 am to 7:30 pm) 7 days/week			12 hours/day (6:00 am to 6:00 pm) 7 days/week
Training	First Responder certified			
	6 hours yearly training			
	14 hours on-the-job training (new employees)			

4.2 Events Requiring RSIP Services

Based on the road network conditions, daily TMC operations, and DOTD's experience, the following are the typical events that require RSIP services:

- Disabled vehicles on the shoulder
- Disabled vehicles in traffic
- Accident
- Abandoned vehicles on the shoulder of the highway
- Abandoned vehicle in the travel lanes
- Debris on shoulder of the highway
- Debris in travel lanes
- Emergency events (e.g., chemical spills, oil well fire, train derail, etc)
- Towing events on bridges during peak traffic hours

4.3 Roles and Responsibilities

The table below outlines the general responsibilities for the RSIP program.

Table 4: RSIP Program Roles and Responsibilities

Stakeholder/Element	Roles	Responsibilities
DOTD (ITS Section)	• Management	• Manage overall RSIP program • Procure RSIP contract(s) • Provide oversight of coordination between TMC, RSIP operations, and incident management and emergency management personnel • Present RSIP data and performance measures to administration and elected officials • Perform routine and random inspections on RSIP vehicles
DOTD TMC (Statewide and/or Regional)	• Dispatch • Coordinate • Data collection and processing	• Dispatch RSIP vehicles as needed upon discovering or being informed of an event within RSIP area of coverage • Coordinate with RSIP for routing, equipment request, response status, etc. • Collect data from RSIP operations and process the data into user reports
DOTD RSIP	• Patrol • Report • Respond • Coordinate	• Continuously patrol for events on the assigned highway • Provide required services during patrol (see Section 4.2) • Report any events or conditions to the TMC • Respond to events when dispatched by TMC and perform required service • Perform tow services on assigned bridges • Provide monthly summary reports to the TMC • Provide additional RSIP support during emergency events • Provide on-scene support to police, emergency medical, fire departments, tow companies, etc.
LSP Troop and Local Police Department	• Coordinate	• Coordinate with RSIP operators on-scene for traffic control • Provide information to RSIP on the duration of the event

4.4 TMC Operations

Although the focus of this systems engineering analysis is the roadway safety patrol, the TMC operations components of the road network system must be identified to show the correlation between the TMC, roadway safety patrol, motorist, and the road network.

TMC operations are the "command center" component of the roadway operations. The TMC monitors the roadway system while the roadway safety patrol is the eyes on the street. Roadway safety patrol and the TMC operations complement each other however, the focus of the TMC is much broader than just the roadway safety patrol. For example, while the roadway safety patrol may be focused on performing a motorist service at one location, the TMC is focused on all the services needed on the roadway. Similarly, the TMC focuses on the impact of an incident on the regional roadway network, while the roadway safety patrol focuses on the roadway impact at scene of the incident. The key to success of the roadway system is the relationship and the benefits gained by the two entities utilizing the ITS.

The TMC collects and processes system data for measuring performance of the road network system. This includes measuring the impacts of having a roadway safety patrol. The system data collected by the TMC includes incidents, traffic volumes, vehicle classifications, and equipment status. The data provided by the roadway safety patrol supplements the data the TMC collects.

5 Needs

The project needs for RSIP are indicated below. It should be noted that all needs may not be met by the contracted RSIP operations.

1 Motorist Needs:

- 1.1 Tire change
- 1.2 Tire inflation
- 1.3 Fuel
- 1.4 Jump start vehicle
- 1.5 Use of phone for local calls
- 1.6 Transport
- 1.7 First aid
- 1.8 Move disabled vehicle to the shoulder
- 1.9 Tow service on selected bridges
- 1.10 Suppress small vehicle fires

2 TIM Needs:

- 2.1 Traffic control
- 2.2 Remove minor debris from the roadway
- 2.3 Tag abandoned vehicles
- 2.4 Apply absorbent to spilled fuel and other fluids

3 Traffic Management Center (TMC) Support Needs:

- 3.1 Notification of incidents and adverse weather conditions
- 3.2 Notification of problematic roadway, bridge, or signing conditions
- 3.3 Abnormal traffic congestion reports to the TMC for motorist information system or media use
- 3.4 RSIP operators reporting data to the TMC
- 3.5 RSIP performance measures data to the TMC

4 RSIP Operations Needs:

- 4.1 Provide vehicles
- 4.2 Support the following services:

  - Traffic Incident Management
  - Patrol
  - Debris pick-up
  - Tow
  - Emergencies on-call

4.3 Provide tools and traffic control devices

4.4 Provide radios for communications

4.5 Equip vehicles with Global Positioning System transmitters for vehicle location tracking

4.6 Provide quality control measures

4.7 Provide patrol operators

5 RSIP Qualifications and Training Needs:

5.1 Clean criminal background record

5.2 At least 18 years old with high school diploma or equivalent

5.3 Valid LA driver's license of the appropriate classification

5.4 Certified in first response First Aid.

5.5 Trained in Traffic Incident Management (TIM)

5.6 Trained in basic TMC operations coordination

5.7 Trained in work zone traffic control

5.8 Annual refresher in first aid, traffic incident management, basic TMC operations coordination, and work zone traffic control.

6 Requirements

The project requirements for RSIP are indicated below. It should be noted that not all of the requirements may be required by the contracted RSIP operations. The requirements for the contracted RSIP will be included within the advertised procurement documents and contract documents.

1 Motorist Services

1.1 The RSIP operator shall provide the motorist with the following prior to performing any service:

- Information about the RSIP program
- Motorist feedback card

1.2 The RSIP operator shall get verbal approval from motorist to provide the services offered prior to performing any service.

1.3 RSIP operations shall provide the following motorist services:

- Chilled drinking water
- Change tires
- Inflate tires
- Fuel
- Jump start vehicle
- Phone service
- Transport stranded motorist
- First aid including cardiopulmonary resuscitation (CPR)
- Move disabled vehicle to the shoulder of the highway
- Tow disabled vehicles off assigned bridges

2 Traffic Incident Management

2.1 The RSIP operations shall provide traffic control when first on-site of an incident.

2.2 The RSIP operations shall support traffic control at an incident under the direction of the on-site incident manager.

2.3 RSIP operations shall remove minor debris from the highway.

2.3.1 Minor debris shall be debris that a single RSIP operator can remove.

2.3.2 The RSIP operations shall dispose of the debris at a pre-authorized disposal location.

2.4 RSIP operations shall tag abandoned vehicles left on the shoulder.

2.5 RSIP operations shall apply absorbent material on the following fluids spilled on the highway:

- Fuel
- Oil
- Transmission fluid
- Coolant

2.6 RSIP operations shall suppress small vehicle fires.

3 TMC Support

3.1 RSIP operators shall notify the Traffic Management Center (TMC) of incidents by radio or cell phone.

3.1.1 The RSIP operators shall provide the following information immediately upon discovery of an incident:

- Location of incident
- Number of lanes blocked
- Number of vehicles involved
- Number of injured involved
- Arrival time on the incident scene
- Departure time from the incident scene
- Hazardous materials involved

3.2 RSIP operators shall immediately notify the TMC of adverse weather creating hazardous driving conditions by radio or cell phone.

3.2.1 The RSIP operator shall provide the TMC with the following hazardous weather information:

- Location
- Type
- Severity
- Highway closures

3.3 RSIP operators shall immediately notify the TMC by radio or cell phone of infrastructure problems that pose immediate threat to the motorist including but not limited to the following:

- Fallen overhead signs
- Buckled joints
- Major potholes
- Broken joint fingers on bridges
- Water ponding in traveled ways

3.4 RSIP operators shall immediately notify the TMC by radio or cell phone of infrastructure hazards that do not pose immediate threat to the motorist including but not limited to the following:

- Damaged signs
- Missing signs
- Damaged guardrails
- Damaged attenuators
- Missing bridge rails

3.5 RSIP operators shall immediately notify the TMC by radio or cell phone of abnormal traffic congestion.

3.6 RSIP operators shall maintain a daily log of motorist services being performed including

- Arrival time
- Route/Location
- License plate number, state and year

- Service(s) provided
- Comments
- Departure time

3.7 The RSIP shall include a full time TMC patrol supervisor.

3.7.1 The TMC patrol supervisor shall manage the day-to-day activities of the RSIP patrol including but not limited to the following:

- Verify RSIP operator schedules
- Provide quality control of RSIP patrol vehicle equipment inventory
- Provide RSIP patrol dispatch when on duty at the TMC
- Maintain a RSIP database
- Provide daily data entry into RSIP database
- Provide operation reports

3.7.2 The RSIP database shall contain the following data for all events involving the RSIP patrol:

- Event number
- Date
- Dispatch time
- Arrival time
- Route/location
- License plate number, state & year
- Service(s) provided
- Comments
- Departure time
- RSIP operator name
- Patrol vehicle number

3.7.2.1 Event number shall be of the format year, month, day, hour, and sec (e.g., event on July 14, 2010 at 4:15:32 pm would have an event number – 20100714161532).

3.7.3 The TMC patrol supervisor shall produce database query reports for TMC operations upon request for a specified period including but not limited to the following content:

- Locations where accidents most frequently occur
- Locations where specific motorist services most frequently occur
- Average time spent performing traffic control at an incident
- Average time spent with motorist for non-accident safety service event
- Route patrolled
- Number of occurrences traffic control was provided at an incident scene
- Number of stops made to provide motorist service
- Number of motorist service refusals
- Number of instances drinking water was provided
- Number of tire issues addressed
- Number of jump starts
- Daily number of miles patrolled
- Number of abandoned vehicles tagged
- Number of small vehicle fires
- Number of times RSIP operator spread automotive fluid absorbent

- Number of vehicles moved to the shoulder
- Number of towed vehicles from assigned bridges
- Number of phone services provided
- Number of stranded motorists transported

3.7.3.1 Reports shall be provided within one hour of the request.

3.7.3.2 Reports shall be provided in email in PDF, DOC, or XLS format as specified with the request.

3.8 RSIP operators shall respond to TMC operator dispatch on the following:

- Dispatch request
- Response status
- Weather status
- Roadway conditions status

3.9 TMC operators shall provide route guidance to the patrol vehicle for response to an incident.

4 RSIP Operations

4.1 RSIP shall have a fleet of vehicles that will patrol designated highways.

4.1.1 RSIP fleet shall contain the following:

- Daily patrol vehicles
- Tow vehicles for assigned bridges
- Emergency vehicles for major events

4.1.2 RSIP daily patrol vehicles shall be equipped for the following motorist services:

- Chilled drinking water
- Change tires
- Inflate tires
- Fuel
- Jump start vehicle
- Phone service
- Transport stranded motorist
- First Aid including CPR
- Move disabled vehicles

4.1.3 RSIP vehicles shall be equipped with vehicle to TMC communications

4.1.3.1 RSIP daily patrol vehicles shall be equipped with the following:
- Cellular telephones
- Two-way radios with remote shoulder microphone

4.1.3.2 RSIP tow vehicles shall be equipped with the following:
- Cellular telephones
- Two-way radios with remote shoulder microphone

4.1.3.3 RSIP emergency vehicles shall be equipped with the following:
- Cellular telephones

4.1.4 RSIP daily patrol vehicles location shall be transmitted for vehicle tracking by the TMC.

4.1.5 The RSIP operations shall provide a minimum of 20 additional vehicles for emergency

operations statewide.

4.1.5.1 The RSIP emergency vehicles shall be equipped for the following services:
- Chilled drinking water
- Change tires
- Inflate tires
- Fuel
- Jump start vehicle

4.2 The RSIP operations shall provide sufficient personnel to operate all of the following concurrently:

- Daily roadway patrol
- Tow vehicles for assigned bridges
- Emergency vehicles
- TMC patrol supervision

4.2.1 While on duty, RSIP operators shall wear appropriate uniform dress attire at all times.

5 RSIP Qualifications and Training

5.1 RSIP operations shall provide qualified operators for the fleet

5.1.1 The following RSIP operators shall pass a criminal background check:

- Daily patrol vehicle operators
- Tow vehicle operators

5.1.1.1 Criminal background checks shall be performed annually

5.1.1.2 A clean criminal record shall be maintained

5.1.2 RSIP daily patrol operators shall have a valid Louisiana Class "D" chauffeur's driver's license.

5.1.3 RSIP tow vehicle operators shall have a valid Louisiana Class “B” commercial driver’s license- heavy straight vehicle

5.1.4 RSIP emergency vehicle operators shall have a valid Louisiana Class “E” driver’s license- personal vehicle

5.1.5 RSIP daily patrol vehicle operators shall be a minimum age of 18 years old.

5.1.6 RSIP daily patrol vehicle operators shall have a high school diploma or equivalent.

5.1.7 RSIP daily patrol vehicle operators shall be certified in first aid including CPR.

5.2 RSIP shall provide training to the following operators

- Daily patrol vehicle
- Tow vehicle

5.2.1 RSIP operators shall be trained in the following areas:

- First aid including CPR
- Traffic incident management
- Traffic operations coordination
- Work zone traffic control

5.2.2 RSIP operators shall have annual refresher training in the following areas:

- First aid including CPR
- Traffic incident management
- TMC operations coordination
- Work zone traffic control

5.2.3 New RSIP operators shall have a minimum of 40 hours of on-the-job training with a qualified RSIP operator.

5.3 RSIP operations shall submit the following qualifications reporting items at the beginning of each year of operations:

- Background check reports
- Copy of valid driver's licenses
- First aid certificates
- Training records
- List of operator cell phone numbers

5.3.1 RSIP operations shall submit qualification reporting items prior to a new operator beginning patrol.

5.4 RSIP TMC supervisor shall be trained in database management

5.4.1 RSIP TMC supervisor shall be able to perform the following database tasks:

- Enter data
- Run query reports
- Modify the database
- Add custom reports

7 Design Analysis

7.1 Analysis of Vehicle Types Needed

Throughout the country, there are various ideas on the types of vehicles being used for safety service patrols. Most states use a mixture of a tow trucks along with other patrol vehicles, either utility truck, full size van, or sport utility vehicles. For daily patrol vehicles, the 4-door utility truck is recommended. The pros and cons for the types of vehicles have been outlined below:

Table 5: Daily Patrol Vehicle Type Analysis

Type	Pros	Cons
Van	• Internal storage of equipment • Equipment protected from weather • Lower priced than ¾ and 1 ton utility trucks	• Chemicals and debris onboard • Access to tools internally can be cumbersome • Limited debris can be moved
4-door utility truck	• Open bed for debris and equipment • Chemicals/fumes external to the cab • On board storage for equipment	• Higher cost than vans and SUVs due to utility back
SUV	• Internal storage of equipment	• Chemicals and debris onboard • Very limited in storage space • Access to tools is cumbersome
Tow	• Tow 2 vehicles with flat bed and rear wheel lift (pull behind) • Winch for recovery • Open bed for debris • Chemicals/fumes external to the cab	• Higher cost than utility truck • Limited storage for equipment • Limited seating for passengers

7.2 Contract

Consideration may be given for use of a single statewide contract rather than multiple regional based contracts. The table below outlines the pros and cons and analyzes the problems for each of these approaches. Note the assigned ratings in the table are based on the ITS Section's experiences with contracting for both consultants and construction contractors.

Table 6: Division of Contract

Contract Division Options	Pros	Cons	Problematic: (Low, Moderate, High, Very High)			
			Contracting	Flex-Ibility	Manage-ment	Ave-rage
Statewide Contract	• Single contract with one entity • Not subject to District boundaries; MPO areas/TMC areas cross district lines • Management provided by DOTD Statewide • Greater flexibility during emergency situations • Faster to get RSIP in operations (only one procurement) • Allows for flexibility in changing the area of patrol • The number of RSIP vehicles can be shifted between areas of patrol without having to modify insurance policies	• Locked into a contract with a single entity for the duration of the contract	Low	Low	Moderate	Low (Recommended)
Regional (BR, NO, SP…)	• Provides opportunity to spread the work • District management allows for direct local control	• District management of MAP has been hands off on day-to-day operations • Districts have been inconsistent in management approach of MAP • No flexibility with moving number of vehicles between regions • Regions of patrol typically cross district boundaries • Potential lack of consistency between service per region	High	High	High	High

7.3 RSIP Equipment

Based on the review of the existing MAP program, operations, and research, the minimum equipment required for the RSIP operations has been provided in the table below. Note the quantity is indicated per each vehicle.

Table 7: RSIP Equipment by Vehicle Type

Min. Qty	Item	Description	Vehicle Type		
			Daily Patrol	Bridge Tow	Emgcy Fleet
1	Front light bar	Amber lens w/ 3 - 55 watt halogen 100fpm rotators or LED equivalent	✓		
1	Rear light bar	Amber lens w/ 2 - 55 watt halogen 100fpm rotators & center stinger or LED equivalent	✓	✓	✓
1	Directional Arrow	Amber lens w/ 10 - 25 watt lamps w/ selectable patterns or LED equivalent	✓		
1	Vehicle Changeable Message Sign (VCMS) with handheld device for message programming	2 line 10" Character LED Changeable Message Sign with handheld device to program messages	✓		
4	7" double faced lights	Amber lens w/ 75 watt strobe bulbs or LED equivalent	✓	✓	✓
2	Low level strobes	Amber lens w/ 75 watt strobe bulbs or LED equivalent	✓	✓	✓
2	Low level strobes	Clear lens w/ 75 watt strobe bulbs or LED equivalent	✓	✓	✓
2	Strobe heads	75 watt variable pattern control heads or LED equivalent	✓	✓	✓
2	Light bar mounts	Stainless steel mounting brackets	✓	✓	✓
2	Extended directional	Amber lens, double faced, breakaway directional lights	✓		
1	Front push bumper	Rubber faced, frame mounted to push bumper top	✓	✓	
2	Tow hooks	10,000 pound chrome hook; mounted to push bumper top	✓	✓	
1	Tow hitch	Class 3 tow hitch; rear mounted	✓	✓	
1	Tow ball	1 7/8" , 2" & 2 5/16" chrome	✓	✓	
1	PA system	100 watt PA with an air horn & rebroadcast selection	✓	✓	
2	PA speakers	100 watt aluminum black finish speakers	✓	✓	
1	Cellular phone equipped with built in 2-way radio through carrier services	Sprint/Nextel	✓	✓	✓
1	700/800 MHz 2-way radio	Handheld 2-way radio with remote shoulder unit	✓	✓	
1	Automatic Vehicle Locator (AVL) System	• 1 AVL tracking device per RSIP vehicle • All RSIP vehicles polled at least once per minute or per mile. • All RSIP vehicles current & historical positions displayed on a GIS based map giving street level detail. Application shall be able to provide a report in a tabular format. • Real-time map displays of vehicle positions shall be provided to the DOTD in a Web Based application available to multiple concurrent users.	✓	✓	

Min. Qty	Item	Description	Vehicle Type		
			Daily Patrol	Bridge Tow	Emgcy Fleet
1	First Responder Kit	121 Piece Professional Emergency Kit	✓		
2	EMS blanket	Disposable EMS blanket	✓		
1	Fire extinguisher brackets	HD vehicle mount fire extinguisher brackets	✓		
1	Fire extinguisher	20lb ABC, must meet DOTD Spec. 046-001 Rev. 6/3/92	✓		
1	Flashlight	12V, rechargeable flashlight, 90 degree lamp, orange	✓	✓	✓
12	Flares	30 minute road flares	✓		
24	Orange safety cones	28" reflector cones, DOTD standard	✓	✓	
10	Road triangles	Standard reflector triangles	✓		
4	Portable Signs	Type III sheeting complying with ASTM D 4956 and in the color as designated by the FHWA MUTCD for "Incident Management" signing	✓		
1	12 volt air compressor	12V HD air compressor 2.2 CFM	✓		✓
1	Remote air coupler	Quick disconnect, right fender mounted air fitting	✓		
1	Air tank	9 gallon 120 Psi air tank	✓		
6	Tire sealant	Tubeless tire sealant 14 oz cans	✓		
1	Tire gauge	Tire pressure gauge	✓		✓
1	1.5 gal container	1.5 gallon gasoline storage container	✓	✓	✓
1	5 gal container	5 gallon diesel fuel container	✓	✓	✓
1	Impact Resistant Fuel Storage Cabinet with External Vent		✓	✓	
1	Funnel	Plastic, flex tunnel	✓	✓	✓
1	Floor Jack	2 ton compact floor jack	✓	✓	✓
1	Leverage bar	30" Pry bar	✓	✓	
1	Lug wrench	SAE lug wrench	✓	✓	✓
1	Lug wrench	Metric lug wrench	✓	✓	✓
1	Cordless Impact Wrench	Cordless impact wrench, heavy duty, 18v cordless, 1 hour recharge, max. torque 145-ft-lbs, 1/2" driver	✓		
2	Rechargeable batteries	18v, 1 hour recharge	✓		
1	Battery Recharger	18v cordless, 1 hour	✓		
1	Jumper cables	Standard type 20 ft length	✓		✓
1	Power onboard Jump Starter	Portable jumper box	✓		
1	Battery brush	Top post battery brush	✓		
1	Extension bar	2" 1/2" drive extension	✓		
1	Extension bar	6" 1/2" drive extension	✓		

Min. Qty	Item	Description	Vehicle Type		
			Daily Patrol	Bridge Tow	Emgcy Fleet
1	Sockets	1/2" Deep -SAE & Metric 6 point	✓		
1	Sockets	1/4" Deep -SAE & Metric 6 point	✓		
1	Hammer	4 oz. Ball peen hammer	✓		
1	Mallet	Rubber mallet	✓		
1	Pick-up tool	Claw type pick-up tool	✓		
1	Pliers	3 piece pliers set	✓		
1	Ratchet	1/2" drive flex handle, 18"	✓		
1	Scraper	Razor blade scrapper	✓		
1	Screw driver set	4 piece screw driver set	✓		
1	Vise Grip	4" vise grip	✓		
1	Vise Grip	8 1/2" vise grip	✓		
1	Windshield solvent	1 gallon bottle of windshield washers solvent concentrate	✓		
2	Automotive fluid absorbent	5 gallon pail of clay absorbent	✓	✓	
1	Broom	24" road broom	✓	✓	
1	Shovel	Square point D shovel	✓	✓	
1	Hazmat book	Emergency Response Guide, published by US DOT	✓	✓	✓
1	Spill Kit	Spill kit for petroleum based spills, Booms and pads	✓		
2	Tow strap	Nylon tow strap 5,000 lb capacity	✓	✓	
12	Bungee cords	Assorted sizes: 10"-25"	✓		
100	Rope	100' of tie down rope/clothes line	✓		✓
2	Duct Tape	~1.8"x 35 yards	✓		✓

7.4 Constraints

To further support the requirements, constraints are needed for procuring the RSIP. The following are key constraints that are recommended for inclusion in the procurement and contract documents:

7.4.1 Criminal Background Check

An operator shall be deemed to have a “clean criminal record” pursuant the following:

1) Any felony conviction involving stolen or embezzled vehicles, fraud related to the towing business, stolen or embezzled property, crimes of violence, felony driving while under the influence of alcohol and/or drugs, misdemeanor driving while under the influence of alcohol and/or a drug while involved in RSIP operations, or moral turpitude shall be cause for denial in the RSIP program or termination from the RSIP program.

2) Any RSIP operator arrested or charged with a violation involving the above crimes or any drug- or alcohol-related charges shall be suspended from working in the RSIP program until the case is

adjudicated.

3) Additionally, an RSIP operator shall be disqualified for a conviction of any of the following offenses. A conviction means a plea or verdict of guilty or a conviction following a plea of nolo contendere.

a) An RSIP operator shall be permanently disqualified for any of the following violations

- False imprisonment
- Assault or attempted murder on a government officer
- Sexual assault
- Assault and battery
- Rape
- Procurement by force or fraud
- Procurement of a child
- Abduction of a person under the age of 18 for the purpose of prostitution
- Lewd or lascivious acts with child
- Continuous sexual abuse of child
- Sexual exploitation of child
- Murder or voluntary manslaughter
- Mayhem
- Sodomy by force, violence, duress, menace, or fear
- Robbery
- Kidnapping
- Any felony convictions or three misdemeanor convictions
- Any felony punishable by death or life in state prison
- Any felony in which the defendant inflicts great bodily harm on another person except accomplice

b) A RSIP vehicle operator shall be disqualified if he/she has three or more drug-related misdemeanors or any drug related felony within five years of application.

c) A RSIP vehicle operator shall be disqualified if he/she has three or more violations of the following within the previous seven years.

- Gross vehicular manslaughter while intoxicated
- Driving While Intoxicated (DWI) or reckless driving causing injury or death
- Three convictions of DWI and/or reckless driving

d) A driver who has had a felony conviction within the previous 10 years or a misdemeanor conviction within the previous five years for any of the following offenses shall be disqualified from working in the RSIP program:

- Resisting/delaying a peace officer
- Administering drugs with the intent to commit a felony
- Infliction of injury to spouse, cohabite, or parent of child
- Statutory rape
- Cruelty to child
- Infliction of corporal punishment of child which results in traumatic conditions
- Brandishing a firearm in a threatening manner
- Arson
- Possession of a fire bomb
- Burglary and possession of burglary tools
- Possession of deadly weapon with intent to commit an assault
- Forgery
- Reproduction or falsification of driver licenses or ID card
- Display or possession of reproduction of falsified drivers licenses or ID card
- Counterfeiting money

- Theft of access card
- Forgery of access card or signature
- Fraudulent use of access card
- Grand theft of firearm
- Receiving stolen property
- Embezzlement
- Fraudulent impersonation of peace officer
- Evading a peace officer
- Altering, defacing, or replacing vehicle identification numbers
- Fraudulent acquisition or disposition of DMV or manufacturer issued vehicle identification numbers
- Vehicle theft
- Hit and run collision causing injury or death

4) A driver may reapply for participation in the RSIP program if the felony or misdemeanor conviction is reversed or dismissed.

5) A contractor may request a hearing with the DOTD regarding disqualification of a driver due to a criminal conviction. Requests for a hearing must be submitted in writing to the DOTD ITS Director within 10 working days following any notice of disqualification. Exceptions to the criteria listed above generally will not be granted, unless extenuating circumstances indicate an exception is appropriate and disqualification is unreasonable. No exceptions shall be granted if the individual cannot demonstrate he/she is not a threat to public safety and not a liability to the RSIP program. The burden of proof will rest upon the contractor or driver to demonstrate that an exception is appropriate.

7.4.2 Other Constraints

There are various other constraints that should be included within the procurement and contract documents. They include the following:

- Motorist services
  - Only motorist's spare tire to be used for tire changes
  - One gallon of fuel per motorist
  - Duration of phone call limited to 5 minutes
  - Transport of stranded motorist limited to nearest location with service facilities
  - First aid kit contents and guidelines
  - Location to stage tow vehicles
  - Locations to tow vehicles off assigned bridges
- Define regions and limits of patrol
- Daily patrol vehicle specifications
- Tow vehicle specifications
- Emergency vehicle specifications
- Minimum number of daily patrol vehicles per region
  - Minimum number of daily patrol spare vehicles
- Minimum number of emergency vehicles per region
  - Minimum response time for emergency vehicle response
- Number of RSIP TMC patrol supervisors
- Minimum number of hours RSIP TMC patrol supervisor required in the TMC

- RSIP database specifications
- Safety equipment specifications
- Standard DOTD contract specifications

8 Procurement

8.1 Implementation Methodologies

The following table identifies the implementation methodologies for RSIP services. Currently the MAP program uses a combination of contracted services and joint agency cooperative agreements. Baton Rouge, Shreveport, and New Orleans MAP are construction contracted services. The Lake Charles MAP program is a joint cooperative service between DOTD and Sheriff of Calcasieu Parish.

The available methodologies for the RSIP program are:

- State Owned and Operated
- Contracted Services
  - Sole Source
  - Proprietary Purchase
  - Sealed Bids
  - Term Contract
  - Letter Bid
  - Construction Contract
  - Design-Build
  - State Contract
  - Consulting Service Contract
  - Consultant Contract Service Contract
- Hybrid: State/Local owned

Table 8: RSIP Implementation Methodologies

Method	Description	Pros	Cons	Comments/ Recommendations
State Owned & Operated	State owns and operates a fleet of safety patrol vehicles	• Flexibility for changes in operations, equipment and maintenance of fleet.	• Cost of fleet, personnel, and maintenance of fleet. • Management oversight of the fleet required. • For Personnel, the state usually pulls from their Maintenance department to operate daily safety service patrol vehicles. Often those operators are pulled out of the daily patrol to help with more urgent maintenance needs. The frequency of the operators not providing the daily patrol establishes inconsistency of service for motorists and for the law enforcement agencies that rely on their assistance. Ohio (Columbus, Cleveland, Dayton) and Indiana particularly use state personnel in the matter above. • Often cost of a Public Safety Grade AVL/GPS System to track the safety service patrol vehicles and custom software for recording of incidents by vehicle operators is underestimated. Florida DOT has a huge overhead expense for supplying laptop computers for all safety service patrols vehicles, having custom incident recording software written, and maintaining the laptops and client computers. • Motorist complaints regarding quality of service, vehicle damage, and general liability are often high with the state option. The process of resolving these issues usually doesn't occur to the motorist's satisfaction. • State employees as safety service patrols vehicle operators typically do not have professional first responder skills or certifications.	• Only the States of Illinois and Indiana (Minute man program) fully own and operate their fleets. • Not recommended for continuing DOTD's safety service patrols

Method	Description	Pros	Cons	Comments/ Recommendations
Contracted Services	Services are contracted out to a vendor that supplies safety patrol services	• Currently used by the DOTD for high density urban areas and has had great success • Vehicle maintenance and overhead are not direct burdens on DOTD management • See **Table 9** for pros for each procurement option	• Contract modifications needed for significant changes to operations and equipment. • See **Table 9** for cons for each procurement option	• Most states use contracts for the fleet equipment, maintenance, and management while using a statewide agency coordinator/manager • Example: California DOT contracts their fleet but provides joint management with local MPO throughout the State. • Recommended to continue to be used in Louisiana

Method	Description	Pros	Cons	Comments/ Recommendations
Hybrid: Contracted and State/local owned services	For dense urban areas, contracted services are used. For rural and light urban areas, local or state owned services are used for safety patrols	• This is the current method used in Louisiana. • Both types of services seen as successful • Flexibility	• Services between the two types are not uniform • Local owned and operated services have not provided any coordination with the TMC • Contract modifications needed for significant changes to operations and equipment • Limited data sharing and reporting have been provided by the local owned and operated services • DOTD has limited control over the local owned and operated services	• Ohio (ARTIMIS) provides dispatch and other communication to/from safety service patrol vehicles. • Management of operations is performed by the safety service patrol contractor(s). • Further evaluation and analysis should be performed to determine if the local owned service is sufficient for the overall program

8.2 Contract Services Procurement Options

Within the Contracted Services option, there are various methodologies to procure RSIP services. These options have been summarized in Table 9 below.

Table 9: RSIP Contracted Services, Procurement Options

Options	Applicability	Pros	Cons	Recommendations
Sole Source	Purchase of a required supply, service, or major repair without competition (governed by RS 39:1551 et al)	• Least time consuming since competitive bids are not required • Items purchased may be letter bid for installation at later day	• Restricted to commodities costing less than $500 • Permissible only if item is available from a single supplier • Requires reason why no other product is suitable or acceptable for their needs, unique characteristics, and why sold through only one source • Installation is typically not included or is limited	• Not applicable for project
Proprietary Purchase	Purchase of one specific product (only one in kind) but is sold through multiple distributors (governed by RS 39:1551 et al)	• A proprietary purchase is allowed • Items purchased may be letter bid for installation at later day	• Requires a letter stating why only one brand name or item is suitable • Requires solicitation from multiple distributors	• Not applicable for project
Sealed Bids	Purchases of exempt commodities (including ITS equipment) having an estimated cost which exceeds $25,000 (or the latest revision to R.S. 48:205, whichever is higher) (governed by RS 39:1551 et al)	• Competitive offers allow for obtaining commodities at the lowest price • Items purchased may be letter bid for installation at later day	• Restricted to awarding procurement on basis of lowest responsive price quotation • Required to advertise in the Official Journal of the State and newspaper of general circulation printed in the parish, published no less than 10 days prior to the date set for opening the bids • Minimum advertising period of 21 days required for bids over $25,000 (or R.S. 48:205)	• Not applicable for project

Options	Applicability	Pros	Cons	Recommendations
Term Contract (Indefinite Quantity Purchase)	Purchase by which a source of service or supply is established for a specific period of time and based on indefinite quantities to be ordered "as needed" (governed by RS 39:1551 et al)	• Once contract is established, competitive bids for commodities covered under contract are not required • Qualitative & cost based selection	• Approval to by-pass a DOTD Term Contract requires written approval from the DOTD Procurement Director and would only be approved in cases of emergency • Time consuming process for supplier to get term contract • DOTD required to obtain bids from multiple suppliers when available	• Not applicable for project
State Contract	State contracts (i.e., Term Contract) are a procurement method in which a source of supply is established for a specific period of time and based on an indefinite quantity to be ordered as needed. State contracts are typically for furnishing supplies, but may also include labor, services, and installation. (governed by RS 39:1551 et al)	• Qualitative and cost based selection • Quicker process than requesting sealed bids	• Approval to bypass the use of a Term Contract when already established as the feasible means of procuring a particular item requires written approval from the DOTD Procurement Director and would only be approved in cases of emergency • The process is time consuming for a supplier to obtain a term contract • Requires annual renewals • Scope is limited by Department of the Division of Administration (DOA) • DOTD is required to obtain bids from multiple suppliers for bids over $25,000 • DOA limits total purchase to be under $250,000 with each item having to be under $25,000	• Not applicable for project

Options	Applicability	Pros	Cons	Recommendations
Letter Bid	Letter bids are one of the available contracting methods used by DOTD for constructing a project or obtaining a contracted service. The critical limitation is that the contract must be under $500,000. (governed by RS 38:2290 et al)	• Short advertisement time • Quicker contracting mechanism than developing a construction plan set • Flexible in the type of construction and services that can be obtained as part of the letter bid • Used for installing parts provided by DOTD	• Limited to $500,000 • Federal funds are not available if using letter bids • Not applicable to any project that's primary purpose is purchase or acquisition of materials, equipment, or supplies • Addenda are prohibited except to withdraw the invitation for bids • Federal funds not allowed	• The use of federal funds is desired for this project. • Also, estimates for RSIP are above $500K per region. • Not applicable for project
Construction Contract	Construction contract is the standard DOTD method for constructing any transportation based project. This process has been vetted by DOTD. RSIP contracts have used this method previously. (governed by RS 38:2290 et al)	• Advertisement on DOTD website for a minimum of 10 calendar days • DOTD is familiar with enforcing penalties/stipulated damage for poor performance • Contract can include performance requirements • Payment, performance, and retainage bond required as disincentive	• Low bid; not qualifications based • Typically, construction contracts are managed out of the district	• Feasible as used before for contracting these services • Scope of contract to be revised to requirement and performance based. • ITS oversight required (See Consultant Contract Service below) • (Recommended)
Design-Build	Process for obtaining a deployed system in which one entity provides both the design and construction. (governed by RS 48:250.3)	• Equipment installed is not prone to be outdated at the time of construction • Design-Builder selected by review committee • Designer still under contract during construction and maintenance	• More effort is required during planning prior to advertising for design-build • Current laws require a 10-day advertisement period • Procurement process has not been well vetted by DOTD	• Since the RSIP is primarily an operations contract this option is not recommended

Options	Applicability	Pros	Cons	Recommendations
Personal Services Contract (DOA)	• Process for procuring work rendered by individuals which use creative or artistic skills or highly technical or unique individual skills • Governed by Department of Administration, Title 34 (RS 39:1490 et al)	• Roadway patrol does requires "unique individual skills" for operators	• Contract with individuals not corporations, firms, or independent contractor • Direct expenses are limited to a certain sum of the maximum.	• Not recommended for project
Consulting Services Contract (DOA)	• Process for procuring work other than professional, personal, or social services to provide counsel, review, design, development, analysis, or advice. • Includes the procurement of supplies and services when supplies and services are less than the consulting services • Governed by Department of Administration, Title 34 (RS 39:1490 et al)	• Utilizes a Request for Proposal • Qualitative and price based selection to determine "most advantageous to the state" • Multiple expertise can be utilized • Management, reporting, and tracking at a level familiar to DOTD • Single point of coordination for RSIP services • Response time can be incentive/disincentive based	• Construction bonding (payment, performance and retainage) may be required by DOTD	• May be considered feasible; however, DOTD must receive acceptance from the Dept. of Administration • Not recommended for project

Options	Applicability	Pros	Cons	Recommendations
Consultant Contract Services Contract (DOTD)	• Process for procuring professional services for preconstruction, construction, planning, research, and other activities. • Materials are incidental to the service provided. RSIP is a service which uses gasoline and other disposable items. • Governed by RS 48:285-294	• Diverse set of expertise • Training • Qualitative based selection; no low bid • Multiple expertise can be utilized • Audited billable rates can be utilized: office rates differ from field rates • Management, reporting, and tracking at a level familiar to DOTD • Single point of coordination for RSIP services • Response time can be incentive/disincentive based • Percentage of work provided by prime must always be greater than percentage of work of any sub	• Consultant would be required to obtain equipment at their expense or DOTD would have to furnish equipment • Construction bonding (payment, performance and retainage) may be required by DOTD	• DOTD administration would have to classify RSIP operations under the professional services "other activities" • Construction, Engineering, and Inspection (CE&I) could be used for oversight of a construction contract. CE&I retainer already in place. • (CE&I recommended).

9 Standards

The Turbo Architecture database that was created for SEA (See **Figure 1**) identifies the ITS standards that support the planned system interfaces. **Table 10** lists all of the ITS standards that are associated with one or more Project interfaces.

Note that the ITS standards presented in this table represent a superset of options provided by the Turbo Architecture software and, in some cases, the listed standards provide redundant capabilities. In addition, these ITS standards are at different maturity levels. This set of ITS standards should be reviewed and analyzed for suitability for a particular application as part of the regional and/or statewide architecture maintenance. Also, as new ITS standards are developed those standards should be reviewed and incorporated into the regional and/or statewide architecture.

Table 10: ITS Standards Supporting Future Roadway Safety Service Patrol Interfaces

Type	SDO	Doc ID	Title
Incident Management	IEEE	IEEE 1515-2006	Standard for Common Incident Management Message Sets for use by Emergency Management Centers
	IEEE	IEEE 1512.1-2006	Standard for Traffic Incident Management Message Sets for Use by Emergency Management Centers
	IEEE	IEEE 1512.2-2004	Standard for Public Safety Traffic Incident Management Message Sets for Use by Emergency Management Centers
	IEEE	IEEE 1512.3-2006	Standard for Hazardous Material Incident Management Message Sets for Use by Emergency Management Centers

Appendix A

Existing Contract Sample

JHI
1276

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

CONSTRUCTION PROPOSAL

"CONSTRUCTION COPY"
(Construction Proposal modified to include: Any addenda, any DBE CS-6AA Forms, Schedule of Items with bid prices, any additional required returnables, copy of Construction Proposal Signature and Execution Form).

Letting Date: 10/25/2006

Checked by: Margaret Smith 11/6/2006

Edwin Lanier 11/08/2006

FEDERAL AID PROJECT

STATE PROJECT NO. 737-99-0827
BATON ROUGE METRO AREA MOTORIST ASSISTANCE PATROL (MAP)
ROUTES I-10, I-110 AND I-12
EAST BATON ROUGE, WEST BATON ROUGE, LIVINGSTON AND ASCENSION PARISHES

STATE OF LOUISIANA
RANDAL D. SANDERS
REG. No. 21391
REGISTERED
PROFESSIONAL ENGINEER
CIVIL ENGINEERING

20 SEPTEMBER 2006

KATHLEEN BABINEAUX BLANCO
GOVERNOR

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
P.O. Box 94245
Baton Rouge, Louisiana 70804-9245
www.dotd.louisiana.gov
225-379-1485

JOHNNY B. BRADBERRY
SECRETARY

October 17, 2006

STATE PROJECT NO. 737-99-0827
FEDERAL AID PROJECT NO. 9906(529)
BATON ROUGE METRO AREA MOTORIST ASSISTANCE PATROL
ROUTES I-10, I-110 and I-12
EAST BATON ROUGE, WEST BATON ROUGE, LIVINGSTON AND ASCENSION PARISHES

SUBJECT: ADDENDUM NO. 2 (CONSTRUCTION PROPOSAL REVISION)

Gentlemen:

Attached is the construction proposal revision dated 10/17/06 on the captioned project for which bids will be received on Wednesday, October 25, 2006.

The following change has been made:

1. Revised the special provision entitled, "**Item S-001, Furnishing Vehicles and Equipment, and Item S-002, Motorist Assistance Patrol Service (First Year)**. (21 pages)

Please note this revision in the proposal previously furnished you and bid accordingly.

Very truly yours,

FOR

RANDAL D. SANDERS, P. E.
CONTRACTS ENGINEER

Attachments

pc: Mr. Brian Buckel
Mr. Roy Schmidt
Mr. Mike Vosburg
Mr. John Wells
Ms. Margaret Thompson
Mr. John Oglesby

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
P.O. Box 94245
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225-379-1443

KATHLEEN BABINEAUX BLANCO
GOVERNOR

JOHNNY B. BRADBERRY
SECRETARY

October 6, 2006

STATE PROJECT NO. 737-99-0827
FEDERAL AID PROJECT NO. 9906(529)
BATON ROUGE METRO AREA MOTORIST ASSISTANCE PATROL
ROUTES I-10, I-110 and I-12
EAST BATON ROUGE, WEST BATON ROUGE, LIVINGSTON AND ASCENSION PARISHES

SUBJECT: ADDENDUM NO. 1 (CONSTRUCTION PROPOSAL REVISION)

Gentlemen:

Attached is the construction proposal revision dated 10/06/06 on the captioned project for which bids will be received on Wednesday, October 25, 2006.

The following change has been made:

1. Revised project engineer information in the Notice to Contractors. (1 page)

Please note this revision in the proposal previously furnished you and bid accordingly.

Very truly yours,

for NEAL C. THIBODEAUX
CONTRACTS AND SPECIFICATIONS ENGINEER ADMINISTRATOR

Attachments

pc: Mr. Brian Buckel
Mr. Roy Schmidt
Mr. Mike Vosburg
Mr. John Wells
Ms. Margaret Thompson
Mr. John Oglesby

NOTICE TO CONTRACTORS (01/06)

Sealed bids for the following project will be received by the Louisiana Department of Transportation and Development (DOTD), 1201 Capitol Access Road, Headquarters Administration Building, Room 405-L, Baton Rouge, Louisiana 70802 until 8:00 a.m. on **Wednesday, October 25, 2006**. After 8:00 a.m., bids will be received in the Headquarters Auditorium until 10:00 a.m., at which time and place bids will be publicly opened and read. No bids will be received after 10:00 a.m. Any person requiring special accommodations shall notify the Department of Transportation and Development (DOTD) at (225) 379-1111 not less than 3 business days before bid opening.

STATE PROJECT NO. 737-99-0827
FEDERAL AID PROJECT NO. 9906(529)
DESCRIPTION: BATON ROUGE METRO AREA MOTORIST ASSISTANCE PATROL
ROUTE: I-10, I-110, and I-12
PARISHES: EAST BATON ROUGE, WEST BATON ROUGE, LIVINGSTON AND ASCENSION.
LENGTH: 40.000 miles.
TYPE: MOTORIST ASSISTANCE PATROL AND RELATED WORK.
LIMITS: State Project No. 737-99-0827: LOCATED ON ROUTES I-10, I-12, I-110 IN EAST BATON ROUGE, WEST BATON ROUGE, LIVINGSTON AND ASCENSION PARISHES AS DIRECTED BY THE PROJECT ENGINEER.
ESTIMATED COST RANGE: $500,000 to $1,000,000
PROJECT ENGINEER: VOSBURG, MIKE; 7686 Tom Drive, Baton Rouge, LA 70815. (225) 231-4123.
PROJECT MANAGER: JOHN WELLS; (225) 379-2522.
COST OF PROPOSAL FORMS: $25.00
COST OF PLANS: NONE

Bids must be submitted in accordance with Section 102 of the 2000 Louisiana Standard Specifications for Roads and Bridges as amended by the project specifications, and must include all information required by the proposal.

Plans and/or proposals may be obtained in Room 101-A of the DOTD Headquarters Administration Building, 1201 Capitol Access Road in Baton Rouge, or by contacting the DOTD; Email: sknight@dotd.louisiana.gov, Phone (225) 379-1111, FAX: (225) 379-1714, or by written requests sent to the Louisiana Department of Transportation and Development, Contracts Management Section, P. O. Box 94245, Baton Rouge, LA 70804-9245. Proposals will not be issued later than 24 hours prior to the time set for opening bids. Purchase price for plans and proposals is non-refundable. Plans and specifications may be seen at the Project Engineer's office or in Room 101-A of the DOTD's Headquarters Administration Building in Baton Rouge. Upon request, the Project Engineer will show the work.

The U. S. Department of Transportation (DOT) operates a toll free "Hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should call 1-800-424-9071. All information will be treated confidentially and caller anonymity will be respected.

GENERAL BIDDING REQUIREMENTS (01/06): The specifications, contract and bonds governing the construction of the work are the 2000 Edition of the Louisiana Standard Specifications for Roads and Bridges, together with any supplementary specifications and special provisions attached to this proposal.

Bids shall be prepared and submitted in accordance with Section 102 of the Standard Specifications.

The plans herein referred to are the plans approved and marked with the project number, route and Parish, together with all standard or special designs that may be included in such plans. The bidder declares that the only parties interested in this proposal as principals are those named herein; that this proposal is made without collusion or combination of any kind with any other person, firm, association, or corporation, or any member or officer thereof; that careful examination has been made of the site of the proposed work, the plans, Standard Specifications, supplementary specifications and special provisions above mentioned, and the form of contract and payment, performance, and retainage bond; that the bidder agrees, if this proposal is accepted, to provide all necessary machinery, tools, apparatus and other means of construction and will do all work and furnish all material specified in the contract, in the manner and time therein prescribed and in accordance with the requirements therein set forth; and agrees to accept as full compensation therefore, the amount of the summation of the products of the quantities of work and material incorporated in the completed project, as determined by the engineer, multiplied by the respective unit prices herein bid.

It is understood by the bidder that the quantities given in this proposal are a fair approximation of the amount of work to be done and that the sum of the products of the approximate quantities multiplied by the respective unit prices bid shall constitute gross sum bid, which sum shall be used in comparison of bids and awarding of the contract.

The bidder further agrees to perform all extra and force account work that may be required on the basis provided in the specifications.

The bidder further agrees that within 15 calendar days after the contract has been transmitted to him, he will execute the contract and furnish the Department satisfactory surety bonds.

If this proposal is accepted and the bidder fails to execute the contract and furnish bonds as above provided, the proposal guaranty shall become the property of the Department; otherwise, said proposal guaranty will be returned to the bidder; all in accordance with Subsection 103.04.

DBE PARTICIPATION IN FEDERAL AID CONSTRUCTION CONTRACTS (07/00): This project has not been selected for a specific DBE Goal. The contractor shall meet the obligations of the Required Contract Provisions for DBE Participation in Federal Aid Construction Contracts contained elsewhere herein.

ELECTRONIC BIDDING (04/06). The 2000 Louisiana Standard Specifications for Roads and Bridges and supplemental specifications thereto are amended as follows.

SECTION 101 - GENERAL INFORMATION, DEFINITIONS AND TERMS:
Subsection 101.03 - Definitions.
Revise the following definitions.

Bid. The binding offer of a responsible bidder that was submitted to the Department on the bid forms or via approved electronic media, in accordance with the bidding documents.

Bid Forms. The portion of the bidding documents, either paper or electronic, required to be submitted, in accordance with the bidding documents, in order to constitute a bid.

Add the following definitions.

Bid Express. An on-line service provided by Bidx.com, an Info Tech company, which is under contract to DOTD to facilitate two-way Internet electronic bidding.

Bidx.com. The subsidiary company owned by Info Tech that provides the Bid Express service.

Electronic Bidding. The process by which the Department and the bidder can utilize the Internet to facilitate the bidding process.

Electronic Bid Bond. An instrument by which a contractor and surety can submit a bid guarantee with a bid electronically in lieu of a written, signed paper.

Electronic Signature. A secure and verifiable alpha-numeric code assigned to an individual, replacing or acting instead of a traditional signature.

Expedite. Software developed for AASHTO by Info Tech that enables and facilitates electronic bidding.

SECTION 102 – BIDDING REQUIREMENTS.

Subsection 102.02 - Contractor's Licensing Laws.

Delete the first sentence of the third paragraph and substitute the following.

When the estimated project cost is greater than $50,000 and no FHWA funds are involved, the contractor shall show his license number on the bid envelope unless the contractor submits the bid via the DOTD approved electronic bidding process.

Subsection 102.03 - Contents of Bidding Documents.

Amend the first paragraph to include the following.

The prospective bidder may use the Bid Express services through Bidx.com. The use of these services will require payment by the contractor of additional fees to the service provider.

Delete the first sentence of the third paragraph and substitute the following.

Unless the contractor properly submits the bid forms electronically, the bid forms bound with or attached to the construction proposal should be detached, completed, and returned by the bidder.

Subsection 102.04 - Issuance of Bid Documents.

Delete the first sentence of the first paragraph and substitute the following.

The Department may refuse to issue bid documents to a bidder or allow a bidder access to Bid Express for bidding purposes, for any of the following reasons:

Subparagraphs (b), (c), (f), and (g) are reinstated.

Subsection 102.06 - Examination of Bid Documents and Site of Work.

Amend this subsection to include the following.

Written instructions necessary to use the electronic bidding service and prepare and submit a bid electronically are provided on the Bidx.com Internet site. Fees payable to

Bidx.com are required of the contractor to use the service and to establish electronic signatures. The contractor is advised to timely make all necessary arrangements with Bidx.com and to familiarize himself with system and process requirements prior to using the service to submit a bid.

Subsection 102.07 - Preparation of Bid.

Delete the first sentence of the first paragraph and substitute the following.

For paper bids, bids shall be submitted on bid forms provided by the Department or obtained through Bidx.com.

Delete the first sentence of the second paragraph and substitute the following.

A unit bid price, in English and U.S. dollars, shall be specified in the Schedule of Items in words or numerals, either typed or printed in ink, or computer printed in the spaces provided for each pay item or alternate pay item.

Delete the first sentence of the third paragraph and substitute the following.

The Construction Proposal Signature and Execution Form shall be signed either with an authorized electronic signature or with ink by the individual, or a member of the partnership; or an officer of one of the firms representing a joint venture; or an officer of a corporation; or an agent of the contractor legally qualified and acceptable to the state.

Add the following paragraph.

Bid bonds may be furnished and completed by a DOTD approved electronic bond verification service if the contractor elects to prepare and submit an electronic bid.

Subsection 102.08 - Irregular Bids.

Delete Subparagraph (a) and substitute the following.

(a) If the bid, except for legible facsimiles, is on a form other than that furnished by the Department or Bidx.com, or if the bid forms are materially altered.

Delete Subparagraph (j) and substitute the following.

(j) If the portion of the construction proposal form designated as Bid Forms is not properly executed either by hand or electronically and submitted with the bid.

Subsection 102.09 - Proposal/Bid Guaranty.

Delete the fourth paragraph and substitute the following.

All signatures required on the bid bond may be original, mechanical reproductions, facsimiles or electronic. Electronic bonds issued in conjunction with electronic bids must have Departmental approval prior to use. The Department will make a listing of approved electronic sureties providers on the Bidx.com site.

Subsection 102.10 - Delivery of Bids.

Delete this subsection and substitute the following.

Unless delivered electronically through the approved electronic bid submission service, each bid should be submitted in the envelope furnished by the Department. The blank spaces on the envelope shall be filled in correctly to clearly indicate its content. When an envelope other than the one furnished by the Department is used, it shall be the same general size and shape and be similarly marked to indicate its contents. Bids shall be received no later than the time and at the place specified in the Notice to Contractors. Paper bids received after the time set for opening bids will be returned to bidders

unopened. Electronic bids shall be submitted via the Internet in accordance with Subsection 102.07. Electronic bids transmitted by the bidder, after the time set for bid opening will not be accepted.

A proposal guarantee and all other required returnables not submitted electronically with an electronic bid must be delivered by the contractor to the Department in a sealed envelope as specified above prior to the date and time of the bid opening.

Subsection 102.11 - Withdrawal or Revision of Bids.
Delete this subsection and substitute the following.

A bidder may withdraw or revise a bid after it has been deposited with the Department, provided the request for such withdrawal or revision is received by the Department in person or in writing before the time set for opening bids and at the location set forth in the Notice to Contractors. Electronic bids submitted to Bid Express may be withdrawn prior to the specified bid opening time by the authorized bidder.

Subsection 102.12 - Public Opening of Bids.
Delete this subsection and substitute the following.

Paper or electronic bids will be publicly opened and read or presented at the time and place indicated in the Notice to Contractors.

SECTION 103 – AWARD AND EXECUTION OF CONTRACT
Subsection 103.01 - Consideration of Bids.
Delete the first paragraph and substitute the following.

After paper or electronic bids are opened and read, they will be compared on the basis of summation of the products of the quantities and the unit bid prices in the Schedule of Items. Results of such comparisons will be available to the public.

Subsection 103.04 - Return of Proposal/Bid Guaranty.
Amend this subsection to include the following.

Electronic bid bonds of unsuccessful bidders will not be returned but will be deemed by the Department to have no force or effect after sixty days.

CONTRACTOR'S PAYROLLS (06/02): Subsection 107.26 is amended as follows. The minimum wage rate determinations of the Davis-Bacon Act do not apply to this project.

PAYMENT ADJUSTMENT (05/06): Section 109, Measurement and Payment of the Standard Specifications is amended to add the following.

This project is not designated for payment adjustments for asphalt cements or fuels.

ITEM: S-001, FURNISHING VEHICLES AND EQUIPMENT, and ITEM S-002, MOTORIST ASSISTANCE PATROL (MAP) SERVICE (FIRST YEAR):

Description of Work:

The work generally consists of providing certain motorist assistance patrol services, as described herein, on the designated segments of **Interstate 10, Interstate 110, and Interstate 12 in East Baton Rouge, West Baton Rouge, Livingston and Ascension Parishes**. The purposes of the work is to reduce congestion and potential safety risks on the designated segments of Interstate by continuously patrolling these segments and by quickly locating, assisting, and/or removing any disabled vehicles thereon as soon as possible.

Location of Patrol Segments and Hours of Operation

A. There are three patrol segments with a total mileage of 40 miles. They are:
   1. **Interstate 10 from LA 415 to LA 42 (Highland Road) ~ 15 miles**
   2. **Interstate 110 from Interstate 10 to US 61 (Airline Highway) ~ 10 miles**
   3. **Interstate 12 from Interstate 10 to LA 447 (Range Avenue) ~ 15 miles**

B. The patrol hours of operation shall be **14 hours per day (5:30 a.m. to 7:30 p.m.) 7 days per week.** Each of the vehicles must control a separate segment during the hours of operation. The patrol shall operate regardless of weather condition. Adjustments may be made to the schedule if deemed necessary by the Project Engineer.

C. If the contractor fails to provide the required number of patrol vehicles or otherwise fails to provide patrol service, then the payment to the contractor will be reduced based upon the number of hours the required number of vehicles failed to provide service.

D. Any extensions of operating hours due to emergencies or special events approved by the Project Engineer, or his duly appointed representative, or due to requests made by the Project Engineer and agreed to by the contractor, shall be paid at the same rate for patrolling during regular hours. The project engineer, or his duly appointed representative, may request one or all of the MAP vehicles to respond to major traffic incidents outside of the regular patrol hours or outside of the regular patrol areas.

Categories of Service

The contractor shall provide the following categories of service:

A. Locating disabled vehicles on the shoulder of the highway segment and providing limited assistance available to the contractor (i.e., tire change, provide gasoline, etc...) if such assistance will make the vehicle operational.

B. Locating a disabled vehicle in traffic on the highway segment and, at the motorists election, to move the vehicle to the nearest safe location of the highway segment and there to provide the limited assistance available to the contractor if such assistance will make the vehicle operational. The nearest safe location shall be the nearest full width shoulder, the nearest exit ramp when no shoulder is present, or the nearest exit ramp when the shoulder is not deemed safe by the MAP driver or police personnel.

C. Assisting motorists and local public agencies or law enforcement authorities as requested concerning an accident or other emergency on the highway segment. Such assistance includes, without limitation, protecting the scene of an accident, cleaning up minor debris caused by an accident, and calling and assisting local law enforcement in the event of an accident, coordinating activities with the Police Department.
D. To pick up light debris on the roadway as needed. Large debris will be reported to the Project Engineer.

E. Provide traffic information to the Police Department.

Work Requirements

The contractor shall provide MAP services according to the following work requirements:

A. All services shall, at all times, be provided by the contractor free of any charge to, or payment from the disabled motorists or any other person or entity, public or private, except for payment from LADOTD as provided in any contract resulting from this invitation to bid. The contractors shall refuse any offers of other payment or gratuities of any kind.

B. The contractor shall provide the services to disabled motorists only after the contractor explains to the motorist the services to be provided, (that the services are free of charge), and only after requesting and obtaining the motorist's consent to such services. The services may be refused by the motorist at any time.

C. Subject to the motorist's consent, it is preferable for the contractor to push the vehicle out of traffic in order to eliminate any hazard or congestion that might result if the contractor provided services in traffic.

D. The contractor shall provide the service chosen by the motorist as long as such service is deemed necessary and appropriate.

E. The contractor will report all incidents requiring the contractor to be in and out of service, and each beginning and ending tour of duty to the Project Engineer when the event occurs.

F. The Contractor will report all occurrences causing traffic congestion to the Police Department and the District Traffic Management Center (TMC).

G. The Contractor shall coordinate activities with the District TMC and respond to any incident on the patrol route at the direction of the TMC Operator.

Work Prohibitions

The success of the MAP program relies heavily on public relations and on the public perception of the program's purposes and operation, and therefore, on the conduct of the contractor and its operators in performing the program services. DOTD has determined that all of the actions listed below would create a negative public image, and present a problem for local law enforcement concerning traffic management, and interfere with the operation and success of the program. Therefore, at all times during the performance of the MAP, the contractor, and/or its operators/employees shall not perform any of the following actions:

A. Solicit membership in any commercial/business organization or association, including vehicle repair or service associations.
B. Recommend any towing service (other than MAP) to a motorist with disabled vehicle.
C. Recommend, or pressure motorists to use, any business for service on a disabled vehicle.
D. Radio for another tow truck for the disabled vehicle, except when specifically asked by a motorist to do so after the free MAP services have been explained to the motorist.
E. Tow or push a disabled vehicle to a place other than to the shoulder of the highway segment, except when the shoulder is not full width or when the shoulder is not deemed safe the vehicle may be pushed to the nearest exit ramp.
F. Interfere with a private sector towing service that is already present at the immediate location of a disabled vehicle when the operator arrives at the vehicle. Stop and offer assistance to the motorist in such circumstances.
G. Patrol near another MAP vehicle on the highway segment. The contractor shall use all reasonable efforts to separate its two truck operators by a sufficient distance on the highway segment, in order to provide continuous coverage/service on as much of the segment as possible and, as a result, to minimize response time by one of the vehicles to a disabled vehicle at any location on that segment.
H. Stay at the scene of an accident on the highway segment after the local law enforcement authorities have arrived at the scene, unless requested by local authorities to assist at the accident scene.
I. Refuse the orders of a law enforcement officer, directions from the TMC Operators, or any directions the Project Engineer or his designee has provided to the contractor.
J. Accept tips, money, or any other payment or compensation of any kind from the disabled motorists for the service.
K. Patrol with any other person in the patrol vehicle, unless that person is directly associated with the program or has been specifically authorized in writing to accompany the MAP operator for a specific shift of duty on a one time basis.
L. Perform any act that provides an unfair competitive advantage to any private tow service.
M. Use the vehicle's yellow warning lights other than as authorized by law. The yellow warning lights shall be activated only when the vehicle is operating on the roadway so as to create a hazard to other traffic.
N. Have an operator complete any service as a private tow service when services were initiated as MAP. This includes staying at the scene of an incident until out-of-service, and removing MAP signs at the incident, and then performing services as a private service for a fee. It also provides a negative public image and an unfair advantage in the market place. MAP vehicles shall be dedicated to this specific project and shall not be otherwise used.

O. If any contractor performs any such prohibited action, or permits or allows its operator(s) to perform such action, the contractor shall be subject to any corrective action or penalties described herein, including termination of the contract at DOTD's option. DOTD will notify the contractor of any operators or employees who perform such actions and, upon receipt of such notice, the contractor shall take immediate action to remove such operators from further performance of program services. Failure of the contractor to take such action shall subject the contractor to any corrective action or penalties described herein, including termination of the contract, at DOTD's option.

MAP Van Patrol Procedures

A. The Project Engineer will provide more specific instructions on how and when to utilize the VCMS prior to the commencement of the project.
B. At the beginning of a patrol shift, the contractor shall start three specifically equipped MAP vehicles patrolling on the designated highway segments. The three vehicles must start at opposite ends of the segments, traveling in opposite directions. The operators/drivers of such vehicles shall not bunch close together during a shift. Vehicles must be patrolling the designated highway segments at the beginning of the shift and not be in the process of being in-route or being acquired.
C. The three MAP vehicles must continuously patrol the designated highway segments searching for disabled vehicles in need of assistance and, upon finding such vehicles render assistance, as described herein as quickly as and safely as possible. No more than a total of 3/4 of an hour per vehicle per day (not shift) will be allowed for operator changing, refueling, restroom or nourishment breaks during the scheduled hours of the patrol.
D. Contractors' operators shall not park a MAP vehicle during the hours of operation and wait for an incident, but instead must constantly patrol during the shift except when otherwise providing service, in order to get disabled vehicles, debris, etc. off the highway as quickly as possible. When a disabled vehicle incident/accident is discovered the patrol vehicle shall respond as follows according to the scenario:

Arriving at a Disabled Vehicle on the Shoulder

A. When an operator finds a disabled vehicle, the operator shall pull immediately behind the vehicle as soon as possible. However, the operator shall not turn on the MAP truck vehicle's yellow warning lights unless the disabled vehicle or the MAP truck poses a hazard to other motorists.
B. The operator shall use the public address system if he/she deems it necessary, to inform the passenger in the disabled vehicle of his intentions to help and of his association with DOTD.
C. The operator shall then exit the patrol vehicle, distribute DOTD's program brochure and offer the program services to the motorist. Following directives provided by DOTD's Project Engineer, the operator shall explain to the motorist that:
    1. The Motorist Assistance Patrol is a DOTD program
    2. The program is publicly funded
    3. The services are free of charge to the motorist
    4. The motorist has the option to refuse or accept the service, and

5. Only particular services may be provided to the motorist.

D. The operator shall then request the motorist's consent to such service, and must obtain such consent before providing service.

E. The contractor shall offer to allow the motorist to use the mobile telephone equipment in the truck, and the motorist shall be allowed local calls of reasonable duration at no charge to the motorist.

F. If the motorist refuses the service, the patrol operator shall leave the scene immediately, report the incident to the Police Department, and shall continue patrolling.

G. If the motorist consents to service and if the operator can make the vehicle operational by providing the limited assistance available from the contractor then the contractor shall proceed as follows:

1. If the operator can render service on the shoulder with minimal hazards created, then the operator will render service on the shoulder for a short period of time (approximately 10-30 minutes).
2. If the operator cannot make the vehicle operational within a reasonably short period of time, then he will let the motorist make a call and leave.
3. If the motorist **does** consent to have the vehicle moved, it is recommended, in terms of traffic congestion, to move the vehicle to the nearest safe location available. After the operator provides assistance on the shoulder, or moves the disabled vehicle and the motorist safely and provides assistance there, the operator shall immediately return to patrolling.
4. If the motorist **does not** consent to moving the disabled vehicle and the operator has offered all available options of MAP to the motorist, the operator shall notify the Project Engineer and the appropriate law enforcement agency then leave the scene immediately and continue patrolling.

Arriving at a Disabled Vehicle in Traffic

A. When the operator finds a disabled vehicle in traffic, the operator shall pull immediately behind the vehicle as soon as possible and turn on the vehicles yellow warning lights. The operator shall then, if he/she deems it necessary use the public address system to explain his purpose, exit the vehicle and explain to the motorist the program and the available services.

B. The operator shall then ask for the motorist's consent to move the disabled vehicle and the motorist to the nearest safe shoulder of the highway segment.

C. If the motorist consents, the operator shall take appropriate action and inform the Police Department of the incident's status.

D. If the motorist refuses, the operator shall contact the Police Department immediately to inform them of the disabled vehicle in traffic, and the operator shall stay immediately behind the disabled vehicle with yellow warning lights activated until the vehicle is moved from traffic or until a local law enforcement officer arrives. The operator shall follow the instructions of local law enforcement officer.

Arriving at an Accident

A. The operator shall call the Police Department Patrol and inform them of the accident statistics. When the operator finds an accident on the highway segment, the operator shall pull immediately behind the vehicles(s) as soon as possible and turn on the yellow warning lights. The operator then should, if he/she deems it necessary, use the public address system to explain his association with the DOTD and that he is willing to help the motorist. The operator should then carefully exit the patrol vehicle and discuss the situation with the motorist(s).

B. If there are injuries the operator should not attempt to move the vehicle(s), but should call and discuss further action with local law enforcement. The operator shall follow all instructions made by local law enforcement.

C. If there are no injuries (accident involves only property damage) but the vehicle(s) cannot be safely driven, then the operator shall explain the program to the motorists and ask the motorists consent to move the vehicles from the traveled portion, median, or ramp of the highway segment.

D. If the motorist does not consent, then the operator shall stay immediately behind the vehicles until local law enforcement arrives, and shall assist law enforcement as requested and inform the Police Department Patrol of the incident's status.

E. If the motorist consents, then the operator shall request additional Motorist Assistance Patrol assistance before taking further action. When assistance arrives, the vehicle(s) shall be safely removed from the traveled portion of the roadway. (The operator should not move one of the vehicles if that means that the other disabled vehicle will remain alone in traffic, but instead should protect the accident scene by staying immediately behind both vehicles until assistance arrives.)

F. When assistance arrives the operators should move the disabled vehicles to the nearest safe location as soon as possible. The operator shall perform only those repairs which seem minor and which can be performed in a reasonably short time in order to make an accident vehicle mobile.

MAP Van Equipment Requirements

Each van shall be equipped at all patrol times with following items. The Contractor shall promptly replenish these items as needed or as directed by the project engineer:

QTY	ITEM	MANUF/VENDOR	MODEL #	DESCRIPTION
1	Front light bar	Public Safety *	PSE 5100XL	Amber lens w/ 3 55 watt, halogen 100fpm rotators or LED equivalent
1	Rear light bar	Public Safety *	PSE 5100XL	Amber lens w/ 2 55 watt, halogen 100fpm rotators & center stinger or LED equivalent
1	Directional Arrow	Public Safety *	AS1035	Amber lens w/ 10 25 watt lamps, w/ selectable patterns or LED equivalent
1/MAP	Vehicle Changeable	LiteSys Intelicom *	1020A-4	2 line, 10" Character LED

Van	Message Sign (VCMS) with handheld device (PDA) for message programming			Changeable Message Sign with PDA to program messages
4	7" double faced lights	Unity *	20110AP	Amber lens w/ 75 watt strobe bulbs or LED equivalent
2	Low level strobes	Public Safety *	HIDCX	Amber lens w/ 75 watt strobe bulbs or LED equivalent
2	Low level strobes	Public Safety *	HIDCL	Clear lens with 75 watt strobe bulbs or LED equivalent
2	Strobe heads	Public Safety *	PSE 475	75 watt, variable pattern control heads or LED equivalent
2	Light bar mounts	Public Safety *	EXHOOK	Stainless steel mounting brackets
2	Extended directionals	Federal Mogul *	52005	Amber lens, double faced, breakaway directional lights
1	Front push bumper	Fleet Specialist *	HD8-22	Rubber faced, frame mounted to push bumper top
2	Tow hooks			10,000 pound chrome hook, mounted to push bumper top
1	Tow hitch			Class 3 tow hitch, rear mounted
1	Tow ball			Tow balls, 1 7/8" , 2" & 2 5/16" chrome
1	PA system	Public Safety *	3696P	100 watt PA with an air horn & rebroadcast selection
2	PA speakers	Public Safety *	PB1008	100 watt aluminum, black finish speakers, pushbumper mig
1 per Van	Cellular phone equipped with Walkie Talkie services			Sprint/Nextel
1 per Van	Automatic Vehicle Locator (AVL) System			▪ 1 AVL tracking device per MAP van ▪ All MAP vans polled every 1 minutes ▪ All MAP vans current & historical positions displayed on a GIS based map giving street level detail 1. Real-time map displays of vehicle positions shall be provided to the DOTD in a Web Based Application available to multiple concurrent users.
1	12 volt air compressor	Buel *	1602-2	12V, HD air compressor 2.2 CFM
1	Remote air coupler	Parker *	97323	Quick disconnect, right fender mounted air fitting
1	Air tank	Asociated *	BA-50	9 gallon, 120 Psi air tank
1	Fire extinguisher brkts.			HD vehicle mount fire extinguisher brackets
1	1.5 gal container	DOT Approved		1.5 gallon gasoline storage container
1	2.5 gal container	DOT Approved		2.5 gallon antifreeze storage container
1	5 gal container	DOT Approved		5 gallon diesel fuel container

1	Impact Resistant Fuel Storage Cabinet with External Vent			
1	Fire extinguisher			20lb ABC, must meet DOTD Spec. 046-001 Rev. 6/3/92
1	Flashlight	Stream light *		12V, rechargeable flashlight, 90 degree lamp, orange
1	Floor Jack	Sears Craftsman *		2 ton compact floor jack
1	Funnel			Plastic, flex tunnel
2	Funnels			Plastic, straight funnels
1	Leverage bar	Sears Craftsman *		30" Pry bar
1	Lug wrench	KEN tool *		SAE lug wrench
1	Lug wrench	KEN tool *		Metric lug wrench
1	Sledge hammer	Sears Craftsman *		6lb sledge hammer
1	Spill Kit	Petroleum Inc. *	HZMT1	Spill kit for petroleum base spills, Booms and pads
2	Tow strap			Nylon tow strap 5,000 lb capacity
1	First Responder Kit	First-AidProduct.com *	502-H	216 Piece Professional Emergency Kit
1	Battery brush	Sears Craftsman *		Top post battery brush
1	Broom	Fleet specialties *		24" road broom
1	Center punch	Sears Craftsman *		Spring loaded punch
1	Electrical crimper	Sears Craftsman *		Solderless term pliers
1	Extension bar	Sears Craftsman *		2" ½" drive extension
1	Extension bar	Sears Craftsman *		6" ½" drive extension
1	Hammer	Sears Craftsman *		3 lb hand drilling hammer
1	Hammer	Sears Craftsman *		4 oz. Ball peen hammer
1	Jumper cables			Standard type jumper cables
1	Power onboard Jump Starter			Portable jumper box
1	Fuel siphon hose w/ pump			
1	Mallet	Sears Craftsman *		Rubber mallet
1	Pick-up tool	Sears Craftsman *		Claw type pick-up tool
1	Pliers	Sears Craftsman *		3 piece plier set
1	Ratchet	Sears Craftsman *		½" drive flex ratchet
1	Scraper	Sears Craftsman *		Razor blade scrapper
1	Screw driver set	Sears Craftsman *		4 piece screw driver set
1	Shovel	Sears Craftsman *		Square point D shovel
1	Sockets	Sears Craftsman *		½" Deep & shallow – SAE & Metric 6 point
1	Sockets	Sears Craftsman *		¼" Deep & shallow – SAE & Metric 6 point
1	Tin snips	Sears Craftsman *		10" tin-snips
1	Tire gauge	Sears Craftsman *		Tire pressure gauge
1	Vise Grip	Sears Craftsman *		4" vise grip
1	Vise Grip	Sears Craftsman *		8 ½" vise grip
1	Wrench set	Sears Craftsman *		SAE flare nut wrench set
1	Wrench set	Sears Craftsman *		Adjustable wrench set
1	Wrench set	Sears Craftsman *		Open end wrench set
2	Antifreeze			Ethyl glycol antifreeze, gallon containers

2	Brake fluid			12 oz brake fluid
2	Power Steering fluid			1 quart bottle
12	Bungee cords			Assorted sixes: 10"-25"
2	Carb & choke cleaner			Carb & choke cleaner 13 oz cans
2	EMS blanket	Moore Med *		Disposable EMS blanket
12	Flares	Fusee corp. *		30 minute road flares
24	Orange safety cones			28" reflectorized cones, DOTD standard
10	Road triangles			Standard reflectorized triangles
4	Portable Signs	*** 3 M SIGNS, VINYL, ROLL-UP SEE SPECS BELOW		Type III sheeting complying with ASTM D 4956 and in the color as designated by the FHWA MUTCD for "Incident Management" signing
2	Floor dry			5 gallon pail of clay absorbent
1	Hardware assortment	Lawson *		Assortment of nuts, bolts & washers ¼", 5/16" & ½"
1	Hazmat book	USDOT		USDOT hazardous materials guide book
12	Oil			10W30 Engine oil quarts
6	Radiator stop leak			Liquid radiator stop leak 11 oz.
100	Rope			100' of tie down rope/clothes line
6	Tire sealant			Tubeless tire sealant 14 oz cans
2	Trans fluid			Automatic transmission fluid quarts
6	Windshield solvent			Pint bottles of windshield washers solvent concentrate

* - Model Number listed or equivalent approved by Project Engineer.

*** SIGNS, VINYL, ROLL-UP

This specification sets forth the material requirements for retroreflective vinyl roll-up signs used in the control of traffic through the maintenance work zone. Other specifications are referenced in this document and it is the responsibility of the bidder to obtain and comply with these referenced specifications. If any discrepancies exist between this specification and referenced specifications, then this document shall govern.

RETROREFLECTIVE VINYL ROLL-UP SIGNS

The 48" reflective roll-up signs and overlay panels shall be a made of a heavy duty coated fabric, or vinyl material with a minimum Type III sheeting complying with ASTM D 4956 and in the color as designated by the FHWA MUTCD for "Incident Management" signing . Each sign shall

include two fiberglass ribs with beveled ends to prevent sharp edges, splintering, and/or damage to the sign face. The vertical rib shall be 3/8" thick by 1 ¼" wide. The horizontal rib shall be either 3/16" or ¼" thick by 1 ¼". The two ribs shall attach in the center with metal fasteners and pivot, allowing smooth rotation and shall be of a low profile to allow the sign panel to roll up around the ribs when the sign is not in use. The sign shall have corner pockets to slide the ribs into when the sign is being used. These pockets shall be non-sliding plastic corner pockets, molded polycarbonate, or Dicke tool "delta" corner pockets. Cloth pockets, sliding pockets and sewn plastic pockets are not acceptable. There shall be two anti-kiting Velcro loops on the back of the sign, top and bottom, to keep the roll-up sign face from billowing out. Each sign shall have a Velcro or equivalent strap riveted near one side corner on the back of the sign; of sufficient length to secure the sign when it is rolled up. The sign message shall be printed between the border and the edge of the sign near the right and left corners so it is readable when the sign is rolled up.

The ink used to produce the sign legend and border shall be compatible to the sign sheeting as required by the sheeting manufacture and shall not crack, peel, split, or delaminate from the sheeting for the useful life of the sign.

All sign legends shall be in accordance with the Manual of Uniform Traffic Control Devices (MUTCD) and provided as directed by the PE.

RETROREFLECTIVE VINYL ROLL-UP SIGNS WITH OVERLAYS

The signs shall meet the requirements in Section II above. Overlay panels shall have a minimum of four (4) snaps or Velcro to attach the overlay to the sign face. Snaps or Velcro shall also be required on the back of those signs with overlays to store the panels when not in use. Snaps should be black anodized brass meeting Military Standard #27980. An assortment of typical incident management overlay messages shall be included. Typical overlay messages include "merge, incident, right, left, right arrow, left arrow, detour, ahead, 1 mile, ½ mile, etc. Additional information for typical overlay panels is available in the MUTCD .

LOUISIANA
DEPARTMENT OF TRANPORTATION AND DEVELOPMENT

SPECIFICATIONS

SIGN HOLDER, ROLL-UP

This specification sets forth the material requirements for retroreflective vinyl roll-up sign stands used in the control of traffic through the maintenance work zone. Other specifications are referenced in this document and it is the responsibility of the bidder to obtain and comply with these referenced

specifications. If any discrepancies exist between this specification and referenced specifications, then this document shall govern.

ROLL-UP SIGN STANDS

The sign stands shall be designed for flexible signs up to 48" x 48" and a minimum of 12" off the ground. The stands shall be composed of four (4), two-piece, positive-locking legs with two (2) different settings to accommodate uneven terrain and equipped with rubber anti-skid feet. Parts shall be manufactured from ASTM 6000 series tubular aluminum (0.100 inch wall thickness minimum). A bi-directional dual coil spring mechanism, bending only perpendicular to the sign face, shall be attached to the base assembly to provide for wind deflection and rebounding of signs. These stands shall be capable of withstanding wind gust up to 60 mph and return to the upright position without requiring additional ballast or tie downs. Sign stands shall be designed so that all component parts may be readily replaced if required. The stands shall be designed to accept roll-up signs from any manufacture without requiring additional hardware and allow the attachment of these signs by a positive locking mechanism to the stand. The stands shall be designed to allow folding for storage.

CERTIFICATION

The stands shall have been tested in accordance with National Cooperative Highway Research Program (NHCRP) Report 350 and meet all requirements of the report. The manufacture shall provide the Department with a letter of acceptance from FHWA documenting their approval of the sign stands.

This certification must accompany each shipment. Shipments will not be accepted without proper certification.

A copy of the National Cooperative Highway Research Program (NHCRP) Repot 350 can be accessed through the internet as follows: **www.fhwa.dot.gov**

Adequate number of storage bins shall be mounted to the frame of the van to store all equipment in a safe manner.

MAP Van Operator Requirements

The Contractor shall comply with the following operator requirements:

A. Prior to beginning operations the contractor shall identify and submit to the Project Engineer for approval, the specific individuals (by full name, date of birth, La. drivers license number) who will be operating the vans on patrol under this program. The contractor shall supply in writing each operator with a written copy of the pertinent parts of this proposal for his /her information and use. The contractor shall insure that the operators are thoroughly familiar with the program, its intent and the

duties/attitude expected of them along with their responsibilities to the public, the DOTD and the contractor as intended by this program.

B. The contractor must notify the Project Engineer before the contractor substitutes any other individual to perform such services, and shall comply with the same requirements regarding such individual.

C. In the interest of safety and for the purpose of orientating and training the MAP operators, four mandatory meetings of four hour duration will be scheduled per contract year. All costs of presentation and meeting facilities shall be borne by LADOTD. Per Diem costs of the operators, which includes salary and meals, shall be borne by the contractor.

D. The Contractor's Operators must meet all of the following requirements at all times of the performance of MAP services:

1. Shall meet all federal, state, and local requirements to operate a vehicle. This includes having the proper driver's license.
2. Shall be at least 18 years old, have a high school diploma, have no moving violations in the last six months, no DWI arrest for the previous three years, have a general knowledge of the City areas, have vehicle maintenance/repair knowledge, must be familiar with the use of the radio and the "10 code language" and pass a criminal background check. Operators who have been convicted of a felony may be rejected.
3. Shall wear clean clothing, which is free of holes at the beginning of each shift. Operators must wear shirts covering their chest and armpits, full length pants, and appropriate shoes. Operators shall wear blue shirts or blue coveralls. These items shall be provided and maintained by the contractor and/or the operator, at their expense. Operators shall wear blue hats with MAP logos on the hats and shall wear a visible MAP name tag at all times while patrolling.
4. Shall be reasonably clean at the beginning of each shift.
5. Shall not smoke during patrol operations.
6. Shall not use, be under the influence of, or have in their possession any alcohol or illegal substances during patrol operations.
7. Shall not carry firearms, or any device whose primary function is as a weapon, either on their person or in the vehicle.
8. Must conduct themselves appropriately, with courtesy, at all times. Swearing, sexual advances, sexual harassment, racial or ethnic jokes, discrimination, rude conduct, or any other activity that is deemed unacceptable by the Project Engineer and his designee, are all prohibited.
9. Shall express a positive, helpful, cooperative attitude when dealing with motorists, or law enforcement officials.
10. Must have Red Cross or approved equal course certification in first response first aid and CPR.
11. Shall wear safety clothing during all times or operating MAP service, which includes blue shirt or blue overalls reflectorized vest, blue hat with MAP logo.
12. Must make provisions to transport all occupants of a disabled vehicle to the shoulder of the road. Under no circumstances are any occupants or

pets in a disabled vehicle to be left unprotected while the vehicle and operator are transported to the shoulder of the road.

E. The Project Engineer, or his designee, may direct a contractor to remove a specific Operator from the performance of MAP services at anytime for violation of any Operator requirements. Such removal may continue for any length of time the Project Engineer determines is appropriate under the circumstances. Failure of the Contractor to affect such removal upon such notice shall be cause for corrective action or penalties described herein, including termination of the contract, at DOTD's option.

F. If the Project Engineer or the Contractor removes an Operator, the Contractor shall supply a replacement Operator as soon as possible, but not later than within 24 hours. The Contractor shall lose hourly pay and pay stipulated damages for any hours that the required number of Operators and MAP vehicles vans are not operating as a result of such removal. The replacement shall meet all Operator requirements.

MAP Van Requirements

The Contractor shall furnish MAP vehicles and ancillary equipment as described herein.

A. The Contractor shall provide at least **four** vehicles, in which **three** must be patrolling at all times during the designated patrol period.

B. The vehicles shall be purchased by the Contractor. Each vehicle shall be new, of current manufacture, a production model, and must meet all State and Federal safety standards in effect at time of delivery. Minor deviations from this specification, which do not impair comparative function equivalency, will be considered by the Project Engineer.

C. The fair market salvage cash value of all vehicles and equipment and all added accessories, equipment and materials for service that were purchased by the contractor shall be transmitted to DOTD at the end of the contract or the DOTD Project Engineer may choose, in lieu of cash, to take ownership of the all vehicles and equipment and all added accessories, equipment and materials for service that were purchased by the contractor.

D. MAP vehicles shall meet the following minimum requirements/options or equivalent which will include:

1. 1-ton, full size cargo van
2. 4x2 drive train
3. V8 Engine
4. Automatic transmission
5. Full instrumentation
6. Full interior headliner
7. Air Conditioner
8. Heavy Duty service package, handling package
9. Heavy Duty alternator capable of running all equipment specified on the MAP vehicle
10. Heavy Duty battery

11. Tires: first line, first quality, as recommended by the manufacturer, furnished with same size spare tire and carrier. Must meet or exceed GVWR.
12. Fuel Tank: minimum capacity of thirty gallons
13. Brakes: service - power; emergency – independent.
14. Front Bumper: designed to push all models of disabled cars and light trucks.
15. Glasses: rear doors to be equipped with tinted safety glass.
16. Accessories: Self-canceling directional lights, power steering, two speed electrical dual windshield wipers and washers, two sunshades, fresh air heater and defroster, air conditioner, inside rearview mirror, right and left union west coast mirrors, dome light, stationary right front seat, additional seating for a minimum of three passengers, cigarette lighter, and seatbelts. Safety partition, weather guard, model 86000 or approved equal shall be installed transversely to protect the driver.
17. Seats: driver and front passenger bucket seats, with additional seating for a minimum of three more passengers. All seats to be equipped with safety restraints.
18. Serviceability: ready for operation.
19. Paint: paint to be manufacturer's standard white
20. Louisiana Safety Inspection: safety inspection shall be performed on vehicle and a Louisiana safety sticker properly affixed.
21. Louisiana vehicle license.
22. Miscellaneous Requirements: vehicle shall comply with Louisiana State emission requirements in effect at time of delivery.

E. The contractor shall provide documentation to the Project Engineer that he is the registered owner of the purchased vehicles.

F. The vehicles must be completely operational, in sound mechanical condition, and in full compliance with applicable legal requirements, at all times relative to the performance of the MAP services.

G. The vehicle's exterior shall be reasonably clean at the beginning of each shift, and shall be free of road grime, grease, and articles/equipment not needed for the service. No body damage and/or broken glass shall be permitted on the vehicle at the start of a shift. The inside of the vehicle shall also be clean. The seat and floor shall be free of dirt, grease, and any other substance that may transfer to someone's clothing by contact. The seats shall not be torn. Exposed springs, seat stuffing or damaged upholstery shall not be permitted. Torn dashboards, missing screws, hanging hoses or wire, or any other unsightly items inside the cab shall be not permitted.

H. The Contractor shall have an operational spare vehicle(s) necessary to provide uninterrupted service during the patrol times and shall use the spare to replace any disabled MAP vehicle, or to replace any MAP vehicle cited for non-compliance with operational requirements within one hour of verbal notification by the Project Engineer or his designee. Failure to provide a replacement vehicle within this time requirement will result in an assessment of stipulated damages, as described herein.

I. The vehicle shall display one magnetized MAP logo sign on each door at all times during performance of MAP services. There shall be no private information

displayed. If these signs are lost, stolen or damaged, the contractor shall replace these signs at his own cost. Contractor name, phone number, etc. shall not be permitted anywhere on the vehicle. The words "Motorist Assistance Patrol" will be displayed on the rear of the vehicle and on both sides of the vehicle. Letter size for rear signage shall be 6" and 8" for side lettering.

J. The operator before his/her shift each day will check to ensure all the required equipment is in working order, and can be used. This includes checking the fire extinguisher, emergency lighting on unit, truck operation, hydraulics, tires, emergency brake, truck brakes, running lights, turn signals, hazard flashers, radio equipment, cellular telephone, etc.

K. Any repairs to equipment, unit or clothing will be done prior to the Operator reporting to duty. Needed repairs will be noted and repaired by the Contractor.

L. The contractor will only be required to perform services up to the capacities of their equipment. If situations are encountered outside of their capacities, the operators shall:

i) If on shoulder, offer use of cellular phone;

ii) If in roadway, alert motorists by activating yellow warning lights and contacting the responsible law enforcement agency. When officer is at scene, return to patrol unless otherwise ordered.

iii) When cellular phones are provided, their usage must be reasonable to the situation. The contractor shall have the right to control unreasonable requests (such as calls outside the local area code). The contractor shall provide the cellular phone numbers called during contract period to the Project Engineer upon request.

Miscellaneous MAP Van Operating Procedures

A. Safety Equipment: All safety equipment will be used when operator is assisting a motorist in the lanes lined for traffic.

- Traffic cones
- Fuses
- Triangles
- Unit lighting
- Arrow board

a. All equipment will be provided by the Contractor

B. Operator Clothing: The following safety clothing will be worn by the operators at all times while on duty for MAP.

- Blue shirt or blue overalls
- Reflectorized vest
- Blue hats with MAP logo on them

C. Equipment Check: The operator before his/her shift each day will check to ensure all the required equipment is in working order, and can be used.

- Fire extinguisher
- Emergency lighting on unit
- Truck operation
- Hydraulics
- Tires
- Emergency brake
- Truck brakes
- Running lights, turn signals, hazard flashers, etc.
- Radio equipment
- Cellular telephone

D. Cellular telephones shall be in all MAP vehicles. These telephones are to be used in an emergency. The use of the telephones for personal reasons will not be permitted. The telephones are to be primarily used for calls requesting emergency services when radios are not available. Cell phone numbers shall be provided to the Project Engineer, the TMC, and to the police.

Paperwork

A. The contractor shall give every motorist assisted a mail-in card and a program brochure provided by DOTD. The card will aid DOTD in tracking services provided to the motorist and the public's reaction to the program.

B. The Project Engineer will provide the contractor with a sample blank Service Report Form at the Preconstruction meeting. The contractor will be required to fill out a Service Report Form of each motorist assist and a log of total miles driven/hours patrolled for each shift for each operator. Service Report Forms will be supplied to the operators by the contractor. The Service Report Forms and logs shall be accurate, legible, neat, and completed at the end of each operators shift. The contractor shall submit an e-mail or a hard copy of each Service Report form, per Project Engineer instructions, completed during the month and a Service Report monthly summary that includes information as shown below to the Project Engineer with the monthly billings. The contractor shall submit all Service Report data that includes information as shown below in an electronic MS Excel spreadsheet format to the ITS Program Manager on a monthly basis.

SERVICE REPORT Information included (but not limited to):

General Information

- Date
- Arrival Time
- Departure Time
- Operator
- License

- State
- Direction
- Route

Service Information

- Fixed Tire
- Gave Gas
- Gave Water
- Other Mechanical
- Called Help
- Abandoned
- Accident
- Towed Vehicle
- Moved Debris
- Service Refused
- Police Involved
- Protected Scene
- Other
- Comments

SERVICE REPORT Summary – provided to Project Engineer with monthly invoice

Summary of totals for following services provided:

- Fixed Tire
- Gave Gas
- Gave Water
- Other Mechanical
- Called Help
- Abandoned
- Accident
- Towed Vehicle
- Moved Debris
- Service Refused
- Police Involved
- Protected Scene
- Other
- Total Stops Made for all MAP Operators
- Total Miles Traveled for all MAP Operators

C. The contractor/operators shall report all incidents where they are harassed, interfered with, or the program equipment vandalized, to the Project Engineer and to the local law enforcement agency with jurisdiction over the location where such action(s) occurred.

D. Contractor shall keep detailed records of the number of patrol hours, mileage and services provided by each vehicle. The billing submitted to the Project Engineer will contain sufficient documentation as to the total monthly hours the vehicles were normally scheduled to patrol, the total average extra hours that the vans were requested to patrol, the total average hours that circumstances dictated that the vehicles remain on patrol and the total number of hours that the contractor did not have (for any reason) the specified number of vehicles patrolling at the same time during the normally scheduled patrol period. The hours of patrol/service operation shall be determined by the actual time that the contractor patrols/provides services, within the maximum number of hours authorized per shift, by approved patrol vehicles, within the designated highway segment, and with no more than the designated number of vehicles.

E. The hours shall be kept to the nearest quarter hour on a daily basis and rounded to the nearest hour for payment at the end of the payment period.

F. The contractor shall bill DOTD for actual hours, as described above, on a monthly basis, starting on the first day of the month after the contractor begins performance. The billing shall begin with the first day of the month and end with the last day of the month.

Rights and Responsibilities

A. Failure of the contractor/operators to satisfactorily perform any work/operational requirement may, at the option of DOTD result in immediate termination of the contract and requiring the surety to complete the service.

B. The Contractor shall be solely responsible for the safe and satisfactory performance of all services required by the contract resulting from this bid.

C. The contractor will not be paid for any hours that the vehicles are not patrolling the designated highway segment during the designated patrol time. In addition to the loss of hourly pay, an amount of stipulated damages equal to two times the hourly pay will be deducted from the payment due to the contractor for each hour of failure to perform or deficiency per vehicle during the designated operating hours.

D. By responding to this bid, the contractor agrees that the amount of actual damages resulting from its failure to provide required vehicles and to perform the program services at a given time is difficult to determine, and that the method described above would result in a reasonable estimate of such damages.

Insurance

A. All policies and certificates of insurance of the Contractor shall contain the following clauses:

1. The Contractor's insurer will have no right of recovery or subrogation against the DOTD, it being the intention of the parties that the insurance policies so effected shall protect both parties and the primary coverage for any and all losses covered by the below described insurance.
2. DOTD shall be named as an additional insured as regards negligence by the contractor (ISO Forms CG 20 10 11 85 or equivalent).

3. The insurance companies issuing the policy or policies shall have no recourse against the DOTD for payment of any premiums or for assessments under any form of policy.
4. Any deductibles or self-insured retentions must be declared to any approved by the agency. At the option of the Agency, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the Agency, its officers, officials, employees and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.
5. In carrying out the provisions of the contract or in exercising any power of authority granted there under, there shall be no liability upon the Secretary and the Chief Engineer or their authorized representatives, either personally or otherwise, as they are agents and representative of the State.

B. Subsection 107.02 of the Standard Specifications is deleted and the following substituted:

The Contractor, prior to commencing work, shall provide at his own expense, proof of the following insurance coverages required by the contract to the DOTD from the insurance companies authorized in the State of Louisiana. Insurance is to be placed with insurers with an A.M. Best's rating of no less than A:VI. This requirement will be waived for workers' compensation coverage only for those contractors whose workers' compensation coverage is placed with companies who participate in the State of Louisiana Workers' Compensation Assigned Risk Pool or Louisiana Workers' Compensation Corporation. Thirty days prior notice of cancellation shall be given to the DOTD by registered mail, return receipt requested, on all of the required coverage provided to the DOTD. All notices will name the Contractor and identify the contract number.

C. Insurance coverage to be provided by the Contractor, and any other insurance described below shall be furnished with the following minimum limits:

1. Workers' Compensation - Statutory - Workers' compensation insurance as required by the labor code of the State of Louisiana, including Employers Liability insurance.
2. Commercial General Liability Insurance - Combined single limit of $1,000,000.00 per occurrence. Insurance Services Office form number GL 0002 (Ed. 1/73) covering Comprehensive General Liability and Insurance Services Office form number GL 0404 covering Broad Form Comprehensive General Liability; or Insurance Services Office Commercial General Liability coverage ("occurrence" form CG 0001). "Claims Made" form is unacceptable. The "occurrence form" shall not have a "sunset clause".
3. Comprehensive Automobile Liability Insurance - Combined single limit of $1,000,000.00 per occurrence. Insurance Services Office form number CA 0001 (Ed. 1/78) covering Automobile Liability, code 1 "any auto" and endorsement CA 0025 or current CA0001 12 90.

D. If, at any time, any of the said policies shall be or become unsatisfactory to the DOTD, as to form or substance, or if a company issuing any such policy shall be or become unsatisfactory to the DOTD, the contractor shall promptly obtain a new

policy, submit the same to the DOTD for approval and submit a certificate thereof as hereinabove provided. Upon failure of the contractor to furnish, deliver and maintain such insurance as above provided, this contract, at the election of the DOTD, may be declared suspended, discontinued or terminated. Failure of the contractor to take out and/or maintain or the taking out and/or maintenance of any required insurance, shall not relieve the contractor from any liability under the contract, nor shall the insurance requirements be construed to conflict with the obligations of the contractor concerning indemnification. Failure of the contractor to take prompt action on all claims presented to him resulting from his contract may result in termination of the contract as provided herein. If the contractor or its insurer unreasonably delays or fails to honor, settle, pay, or defend all suits, actions, or claims in good faith, the Department may, in its sole discretion, withhold amounts from proceeds due the contractor under this contract as considered necessary by the Department to protect claimants against the contractor or insurer for the amount of their claims, or in case no money is due, its surety bond may be held in lieu of damages have been settled, paid, honored, or defended in good faith and suitable evidence thereof furnished to the Department. The failure of the Department to place the contractor in default or to retain contract proceeds or its surety bond shall not act as a modification or waiver of any of the obligations of the contractor, his insurer or his surety herein.

Notice to Proceed (NTP)

A. DOTD will issue a Notice to Proceed (NTP) to the successful bidder to perform the MAP services within 10 days after the award of contract. The vehicles must be supplied and operational, by the contractor, within 50 days of the Notice to Proceed, and the contractor must present each vehicle to the Project Engineer for inspection to ensure conformance to specifications. If the vehicles comply with all conditions then they must start patrolling the designated highway segments immediately. If the vehicles fail to comply with such conditions, then the contractor will be assessed the hourly stipulated damages.

B. Upon NTP from DOTD, the contractor shall provide the MAP vehicles for further inspections. DOTD will re-inspect each vehicle designated for the MAP within approximately 30 working days after commencement of service to ensure it meets the vehicle specifications.

C. Additional random inspections will be conducted by DOTD during the contract period. If during the contract period, the Project Engineer or his representative determines the contractor is operating unsafe, poorly maintained or improperly equipped vehicle(s), the contractor shall be required to pay liquidated damages during the period of deficiency at a rate of two times the contractor's hourly rate. In addition, any unsafe vehicle will not be permitted to patrol and additional stipulated damages may accrue for any time the segment isn't patrolled.

Method/Basis of Payment

A. The contractor shall base the bid solely on the units of measurement and the pay items listed below. Prices per pay unit must be shown on the Schedule of Items of the bid form.

B. All vehicles, and equipment that the contractor must provide to satisfactorily perform the MAP services, as described in this bid proposal, shall be paid for under **Item S-001, Furnishing Vehicles and Equipment,** at the contract unit price per each in accordance with the following schedule:

Total Contract Amount Earned	Allowable % of Per Vehicle Price for Furnishing Vehicles
1st Partial Estimate	40
4 Partial Estimate	60
8 Partial Estimate	80
12 Partial Estimate	100

Payment will be made under: **Item S-001, Furnishing Vehicles and Equipment, per each.**

C. The hourly bid price shall be paid for under **Item S-002, Motorist Assistance Patrol Service (First Year),** for each hour of satisfactory performance of MAP services per vehicle as described in these specifications based on specific hourly rate, multiplied by the number of actual hours (minus hours of stipulated damages assessed) that the contractor's MAP vehicles are patrolling and performing assistance services for disabled motorists on stated project route. All **maintenance associated with the appropriate upkeep and proper operation shall be included in this item as an incidental cost at no direct pay.**

All payment to the contractor for the performance of all MAP program services shall be calculated based on a specific hourly pay rate, multiplied by the number of actual hours (minus hours of stipulated damages assessed) that the contractor's MAP vehicles are patrolling and performing assistance services for disabled motorists on the segments. DOTD will pay the contractor only at the hourly bid price. The contractor shall base the bid price solely on the unit of measurement and the pay item listed below.

Payment will be made under: **Item S-002, Motorist Assistance Patrol Service (First Year), per hour.**

D. DOTD will not pay the contractor for any separate charges, or for:

1. Meetings required by DOTD.
2. Patrolling and/or service performed before or after the designated hours of operation, except when an incident occurs requiring a patrol vehicle to stay on duty past the designated hours of operation then that activity shall be paid for if approved by the Project Engineer; or when a patrol vehicle is required to patrol outside of the designated hours by the project engineer or his duly appointed representative.

3. More than the designated number of vehicles patrolling the highway segments, even if contractor chooses to patrol with more than that called for in the contract.
4. Contractor's supervisory vehicles, if any.
5. Vehicles that fail to meet all equipment requirements.
6. Any non-operational vehicles for the time they are non-operational.
7. Vehicles removed from service due to a dysfunctional operator for the time they are removed from service; or
8. Overtime, shift differential or any other rate adjustments when determining hours worked.

No Subcontracts: Subsection 108.01 of the Standard Specifications is deleted and the following substituted.
One-hundred percent of the work shall be performed by the selected bidder/contractor. No subcontracting shall be allowed.

CONTRACT TIME: The contractor will be issued a "Conditional Notice to Proceed" as defined in Subsection 101.03 of the Standard Specifications, 2000 Edition. The "Conditional Notice to Proceed" will expire FIFTY (50) calendar days after its issuance, whereupon a "Notice to Proceed" will become effective, unless the Department allows the contractor to begin patrolling the specified routes at an earlier date at which time the "Notice to Proceed" would become effective. The contract time for the services provided under this proposal is for three hundred and sixty-five (365) calendar days, commencing on the date of the "Notice to Proceed". On an annual basis, the Department shall have the option to renew this contract up to THREE (3) additional one (1) year periods. Renewal will require a fully executed Renewal Contract and Payment / Performance / Retainage Bond and proof of insurance in accordance with Subsection 107.02 of the Standard Specifications, 2000 Edition. The DOTD will have the option of canceling the contract at any time or not renewing the contract should the contractor fail to perform the work in an acceptable manner or if sufficient funds are not available.

OPERATING REQUIREMENTS AS DEFINED IN THE ORIGINAL SPECIAL PROVISIONS DOCUMENT IS AMENDED HEREIN:

MAP Van Operator Requirements

1. Identify specific individuals (by full name, date of birth and LA drivers license number) who will be operating the MAP vehicles;
2. Explain the process used to ensure each Operator meets the requirements as stated in the MAP Van Operator Requirements section. Be prepared to provide substantiating documentation;
3. Provide documentation to verify that shift coverage is compliant with contract. Include the number of shifts, start and finish times, and hours worked per employee;
4. Confirm that each operator is issued and uses a reflectorized vest compliant with FHWA regulation 23 CFR 634;
5. Provide written proof of training, training schedule and course outline as stated in the Special Provisions, MAP Van Operator Requirements, part C

MAP Van Requirements

1. Provide written proof of insurance and proof of ownership for the fleet of MAP vehicles

EMERGENCY RESPONSIBILITIES

1. Provide gas, water, and jack service along interstates and primary evacuation routes during an emergency event at the direction of the DOTD ITS Section;
2. Provide up to twenty (20) additional pick-up trucks;
3. Provide additional staff as needed

Payment for any extension of operating hours and services due to emergencies shall be in accordance with item *D* in the *Location of Patrol Segments and Hours of Operations* section of the original Special Provisions Document.

DOTD 03-40-0655
REV. 11 80
STATE OF LOUISIANA
DEPT. OF TRANSPORTATION & DEVELOPMENT

PLAN CHANGE AND/OR SPECIAL AGREEMENT

No. 2

Date: 9/17/2007

S. P. NO.	F. A. P. NO.
737-99-0827	9906(529)
NAME: Baton Rouge Metro Area Motorist Assistance Patrol (MAP)	PARISHES: East Baton Rouge, West Baton Rouge, Livingston, and Ascension
CATEGORY: 2 / SUBCATEGORY: 3B	ROUTES: I-10, I-110, AND I-12

ENGINEERS DESCRIPTION, EXPLANATION AND ESTIMATED COST OF PROPOSED REVISION

The purpose of this plan change is to add a tow truck to the existing MAP contract. The tow truck is needed to patrol the service area between the hours of 6:30 a.m. to 9:30 a.m. and 3:30 p.m. to 6:30 p.m., in the event that a breakdown occurs and a vehicle needs to be towed and/or assisted with minor repairs. The current wait time for Law Enforcement Agencies to have a wrecker respond in approximately 45 minutes. This is intended to better assist the motoring public by reducing congestion and potential safety risks. This is a 1 year contract with the Department's option of renewal up to 3 years. The tow truck cost is prorated from September 1, 2007 to December 31, 2007 and will be renewed when the current contract is renewed. This plan change is based on the "normal" contract hours during the contract period and does not include tow trucks completing calls after the normal contract hours or callouts for special events. The contractor will be required to transmit to DOTD the fair market salvage cash value of all vehicles and equipment and all added accessories, equipment and materials for service that were purchased by the contractor shall be transmitted to DOTD at the end of the contract or the DOTD Project Engineer may choose, in lieu of cash, to take ownership of all vehicles and equipment and all added accessories, equipment and materials for service that were purchased by the contractor. Accessories include 1-Floor Jack, 1-4 way lug wrench, 1 Bag of floor dry (10-20 pound bag), 1-D shape shovel, 2-Push brooms, Five gallons of gas, and water. This plan change is to incorporate, by attachment, the special provisions required for the tow truck. The Special Provisions incorporated herein appear on pages 2 through 6 which have been initialed by the contractor as acceptance. See attached special provisions and quote from Jack B. Harper Contractor, Inc. for details.

Add Item S-004, "*Furnish Tow Vehicle,*" in the amount of $79,500.00 per each.
Add Item S-005, "*Operating Tow Vehicle*," in the amount of $45.50 per hour.
Add Item S-006, "*Maintain Tow Vehicles*," in the amount of $1,400 per month.

THE ABOVE WILL NECESSITATE THE FOLLOWING CHANGES IN QUANTITIES (IF SPACE IS NOT SUFFICIENT USE EXTRA FORMS)

ITEM NO.	ITEM	UNIT	UNIT PRICE	REVISED QUANTITY	REVISED AMOUNT	ORIGINAL QUANTITY	ORIGINAL AMOUNT
S-004	Furnish Tow Vehicle	each	$79,500.00	1.00	$79,500.00	0.00	$0.00
S-005	Operating Tow Vehicle	hour	$45.50	516.00	$23,478.00	0.00	$0.00
S-006	Maintain Tow Vehicles	month	$1,400.00	4.000	$5,600.00	0.00	$0.00
				TOTAL	$108,578.00	TOTAL	$0.00

ADDITIONAL CONTRACT DAYS REQUESTED: None

AMOUNT OF OVERRUN: $108,578.00

IT IS MUTUALLY AGREED TO PERFORM AND ACCEPT THE ABOVE REVISIONS IN ACCORDANCE WITH ORIGINAL CONTRACT AND APPLICABLE SPECIFICATIONS AT THE ABOVE PRICES. APPROVAL OF THIS PLAN CHANGE BY THE DOTD CHIEF ENGINEER IS SUBJECT TO AND CONDITIONED UPON APPROVAL BY OTHER PARTICIPATING AGENCIES AND BECOMES OFFICIAL UPON DISTRIBUTION.

PREPARED BY:
Michael Vosburg, P.E.
PROJECT ENGINEER
DATE 9-18-07

ACCEPTED BY:
Jack B. Harper Contractor, Inc.
CONTRACTOR
BY
DATE 9-19-07

RECOMMENDED BY:
DISTRICT ADMINISTRATOR
DATE

DOTD CHIEF CONST. ENGINEER
DATE

APPROVED:
CHIEF ENGINEER
DATE 9/19/07

FORWARD TO BATON ROUGE
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PLAN CHANGE 2
STATE PROJECT NO. 737-99-0827
SPECIAL PROVISIONS

ITEM S-004, FURNISH TOW VEHICLES; ITEM S-005, OPERATING TOW VEHICLES; ITEM S-006, MAINTAIN TOW VEHICLES:

These items will consist of the following equipment and work. The requirements of the existing MAP contract shall also be followed.

MAP IMAP Tow Truck Contract Key Elements

Patrol Area and Hours of Operation

Define Limits of Service Area: The service area for Incident Motor Assistance Patrol (IMAP) Tow Truck operations will be defined as: I-10 between the LA 1 interchange and the College Drive interchange; LA 1 from I-10 to the intracoastal canal bridge; and I-110 from I-10 to the DOTD/State Access interchange; or as directed by the Project Engineer.

Define Hours of Operation: Hours of operation will be weekdays Monday through Friday. The morning shift is from 6:30 a.m. to 9:30 a.m. and the afternoon shift is from 3:30 p.m. to 6:30 p.m. There will be no weekend operations.

Provide for Emergency or Special Event Operations: Emergency or special event operations will be provided at the request of the Baton Rouge Traffic Management Center (TMC). Operations will be compensated per the provisions of the compensation section of this contract.

Define Where Vehicle Staged: The IMAP Tow Truck will be staged at the Washington St. Interchange during the afternoon shift. During the morning shift the IMAP Tow Truck will be staged at the LA 1 Intracoastal Bridge drop off site.

Define Service to Be Provided

Towing Service: The IMAP Tow Truck will provide towing service using a slide back or roll back type vehicle. The IMAP Tow Truck Operator must obtain permission from the driver to tow the vehicle through the signing of a release form. If the driver of the of the vehicle refuses to sign a release form the operator will wait for the arrival of a police unit and follow the instructions of the police officer relative to towing of the vehicle.

The IMAP Tow Truck Operator will provide fuel, water, or a jump start to enable the disabled vehicle to be driven if this can be done in a safe manner and in a short timeframe (generally under five minutes). Flat tires will not be changed in any travel lane in the service area.

The IMAP Tow Truck will push vehicles to the shoulder of the road where conditions allow for this to be done safely and there is a shoulder available for the vehicle. No vehicles will be pushed on the Mississippi River Bridge.

The IMAP Tow Truck will tow only vehicles that it is rated for.

Identify Drop Off Locations: Towed vehicles will be towed to the nearest drop off point depending on traffic conditions. The five drop off points are defined as:

- LA 1 Intracoastal Bridge Site
- I-10/Nicholson Drive Site
- I-110 Convention Street Site
- I-110 DOTD Headquarters Site
- I-10 College Drive Site

The IMAP Tow Truck Operator will provide written directions to the selected drop off location to the driver of the vehicle being towed.

Define Services at the Drop Off Site: The IMAP Tow Truck Operator can change a flat tire on a disabled vehicle after towing the vehicle to the drop off site. If the IMAP Tow Truck is able to push a disabled vehicle to the shoulder a flat tire can be changed there.

Minor Debris Removal at Accident Scene: The IMAP Tow Truck Operator will remove debris from the scene of an accident that can be placed safely on the IMAP Tow Truck. Glass and debris on the road that can be swept up will be removed by the IMAP Tow Truck Operator. The IMAP Tow Truck Operator will carry a small amount of sand that can be spread on small fuel spills. The IMAP Tow Truck Operator will request assistance for debris that is too large to be picked up and placed on the IMAP Tow Truck.

Assistance in Obtaining Tow at Drop Off Site: The IMAP Tow Truck Operator will insure that the driver of the vehicle has made contact with his/her towing company if the driver designates a towing company. This will be done before the vehicle is towed from the roadway. If the driver does not have a preferred towing company the IMAP Tow Truck Operator will request that the TMC contact the appropriate police agency depending on the location of the incident to dispatch a Tow Truck to the drop off site using the police agency's normal procedures.

Traffic Control: The IMAP Tow Truck will carry 12 orange traffic cones for use in securing the incident scene and directing the merge of traffic. Cones should be set out immediately upon arriving at the incident scene.

Define Procedures for Towing

Dispatch Procedure: The IMAP Tow Truck will be dispatched by the TMC or by a MAP vehicle on the scene of the disabled vehicle.

Police and other emergency response agencies will contact the TMC to request dispatch of the IMAP Tow Truck.

Arrival at Scene: The IMAP Tow Truck Operator will immediately protect the incident scene upon arrival. Traffic cones will be placed behind the disabled vehicle to warn oncoming motorist of the stopped vehicle and to direct vehicles to merge to the appropriate lane. Cones will be removed when the operator tows the vehicle to the drop off site.

Disabled Vehicles Procedures: The IMAP Tow Truck Operator will assist or remove disabled vehicles that are not involved in an accident immediately. The presence of a police unit is not required for removal of a disabled vehicle. The operator will ask the vehicle driver if they have a preferred towing company to remove their vehicle from the drop off site. Assistance will be provided to the driver to contact the towing company. If the driver does not have a preferred towing company the IMAP Tow Truck Operator will request that the TMC contact the appropriate police agency depending on the location of the incident to dispatch a Tow Truck to the drop off site using the police agency's normal procedures.

Accidents Procedures: The IMAP Tow Truck Operator will not remove a vehicle(s) from an accident site without the approval of the responding police officer. The police officer will request the dispatch of a tow truck to the designated drop off site if the driver of the vehicle does not select a towing company.

Vehicles Too Large to Tow: Should the IMAP Tow Truck be dispatched to an incident where the type of vehicle involved cannot be towed by the IMAP Tow Truck, the TMC will be immediately contacted. The TMC will assist in determining the appropriate police agency to be contacted to request the appropriate type of tow truck.

IMAP Tow Truck Vehicle Requirements:

- The IMAP Tow Truck shall have a minimum GVW of 20,001 lbs.
- The IMAP Tow Truck shall be a slide back or roll back type vehicle.
- The IMAP Tow Truck shall be equipped with a wheel lift attached to the rear of the truck.
- The IMAP Tow Truck shall utilize the slide back or roll back bed as the primary method to transport a single vehicle. In the event of a multi-car incident that requires more than one vehicle be towed, one vehicle shall be transported on the flat bed and the secondary vehicle shall be transported using the attached rear wheel lift device.
- The IMAP Tow Truck Operator shall maintain equipment adequate to winch and transport passenger cars, trailer, truck or vans up to 15,000 lbs.
- The IMAP Tow Truck shall have adequate service brake system for normal and adverse towing conditions.
- The IMAP Tow Truck parking brake system shall be separate from the service brakes and maintained in proper working order.
- The IMAP Tow Truck shall be capable of damage free towing and recovery.

IMAP Tow Truck Operator Requirements

Same as MAP Vehicle Requirements but also must be trained as a tow truck operator.

Valid Class "B" Chauffeurs License

Method/Basis of Payment

A. Tow truck vehicles, and equipment that the contractor must provide to satisfactorily perform the MAP services, as described in this specification and in the current contract specification bid proposal requirements, shall be paid for under **Item S-004, Furnish Tow Vehicles,** at the contract unit price per each, **and Item S-006, Maintain Tow Vehicles,** at the contract unit price per month, in accordance with the following schedule:

Total Contract Amount Earned	Allowable % of Per Vehicle Price for Furnishing Vehicles
1st Partial Estimate	40
2nd Partial Estimate	70
3rd Partial Estimate	100

Payment will be made under:

Item S-004, Furnish Tow Vehicle, per each.
Item S-006, Maintain Tow Vehicles, per month.

B. The hourly bid price shall be paid for under **Item S-005, Operating Tow Vehicle,** for each hour of satisfactory performance of MAP services per vehicle as described in these specifications based on specific hourly rate, multiplied by the number of actual hours (minus hours of stipulated damages assessed) that the contractor's MAP vehicles are patrolling and performing assistance services for disabled motorists on stated project route..

All payment to the contractor for the performance of all MAP program services shall be calculated based on a specific hourly pay rate, multiplied by the number of actual hours (minus hours of stipulated damages assessed) that the contractor's MAP vehicles are patrolling and performing assistance services for disabled motorists on the segments. DOTD will pay the contractor only at the hourly bid price. The contractor shall base the bid price solely on the unit of measurement and the pay item listed below.

Payment will be made under: **Item S-002, Motorist Assistance Patrol Service, per hour.**

C. DOTD will not pay the contractor for any separate charges, or for:
   1. Meetings required by DOTD.
   2. Patrolling and/or service performed before or after the designated hours of operation, except when an incident occurs requiring a

patrol vehicle to stay on duty past the designated hours of operation then that activity shall be paid for if approved by the Project Engineer; or when a patrol vehicle is required to patrol outside of the designated hours by the project engineer or his duly appointed representative.

3. More than the designated number of vehicles patrolling the highway segments, even if contractor chooses to patrol with more than that called for in the contract.
4. Contractor's supervisory vehicles, if any.
5. Vehicles that fail to meet all equipment requirements.
6. Any non-operational vehicles for the time they are non-operational.
7. Vehicles removed from service due to a dysfunctional operator for the time they are removed from service; or
8. Overtime, shift differential or any other rate adjustments when determining hours worked.

Jack B. Harper Contractor, Inc.

P.O. BOX 309 • MANDEVILLE, LA 70470-0309 • PHONE (504) 892-6500 • FAX (504) 892-0707

April 30, 2007

RE: QUOTATION FOR FURNISHING, OPERATING & MAINTAINING IMAP TOW VEHICLE

Gentlemen:

The following is our Quotation as referenced above.

	Quantity	Unit	Description	BID Un Price	Item Total
	1.000	EA	Furnish Tow Vehicle	79,500.00	$79,500.00
	1.000	HR	Operating Tow Vehicle Per Each	45.50	$45.50
	1.000	EA	Maintain Tow Vehicles Monthly	1,400.00	$1,400.00
				Total	$80,945.50

SPECIAL NOTES TO ABOVE QUOTATION:

IMAP TOW TRUCK REQUIREMENTS

The Contractor shall furnish IMAP vehicles and ancillary equipment as described herein.

A. The vehicles shall be purchased or leased by the Contractor. Each vehicle shall be new, of current manufacture, a production model, and must meet all State and Federal safety standards in effect at time of delivery. Minor deviations from this specification, which do not impair comparative function equivalency will be considered by the Project Engineer.

B. The fair market salvage cash value of all vehicles and equipment and all added accessories, equipment and materials for service that were purchased by the contractor shall be transmitted to DOTD at the end of the contract or the DOTD Project Engineer may choose, in lieu of cash, to take ownership of all the vehicles and equipment and all added accessories, equipment and materials for service that were purchased by the contractor.

C. Ownership of all added accessories, equipment, and materials from service shall be transmitted to the DOTD.

D. IMAP Tow Truck minimum requirements:

a. The IMAP Tow Truck shall have a minimum GVW rating of 20,001 lbs.
b. The IMAP Tow Truck shall be a slide back or roll back type vehicle.
c. The IMAP Tow Truck shall be equipped with a wheel lift attached to the rear of the truck.
d. The IMAP Tow Truck shall utilize the slide back or roll back bed as the primary method to transport a single vehicle. In the event of a multi-car incident that requires more than 1 vehicle be towed, one vehicle shall be transported on the flat bed and the secondary vehicle shall be transported using the attached rear wheel lift device.

e. The operator of the IMAP Tow Truck shall maintain equipment adequate to winch and transport passenger cars, trailers, trucks or vans up to 15,000 lbs.

f. The IMAP Tow Truck shall have adequate service brake system for normal and adverse towing conditions.

g. The IMAP Tow Truck parking brake system shall be separate from the service brakes and maintained in proper working order.

h. The IMAP Tow Truck shall be capable of damage free towing and recovery.

Yours truly,

JACK B. HARPER CONTRACTOR, INC.

Craig Melancon

CM/cj

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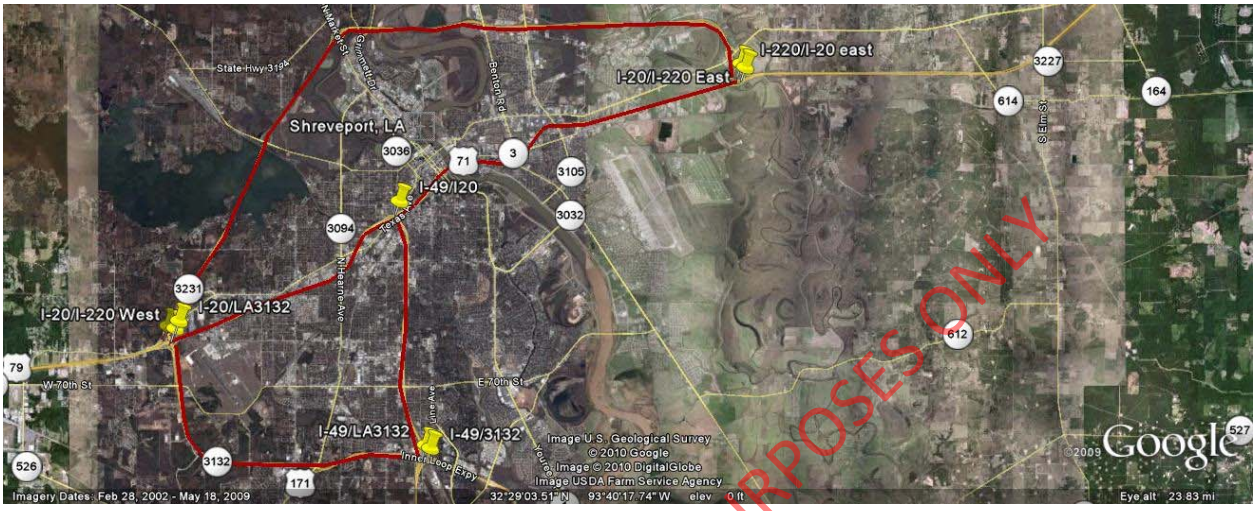
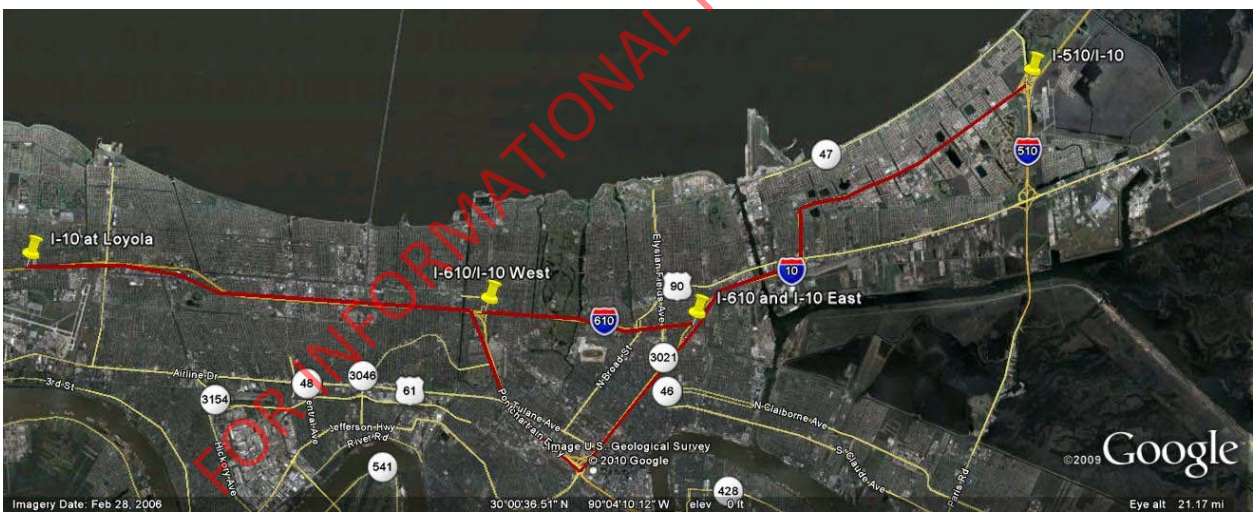
Appendix B

Existing MAP Program Areas of Patrol by Region

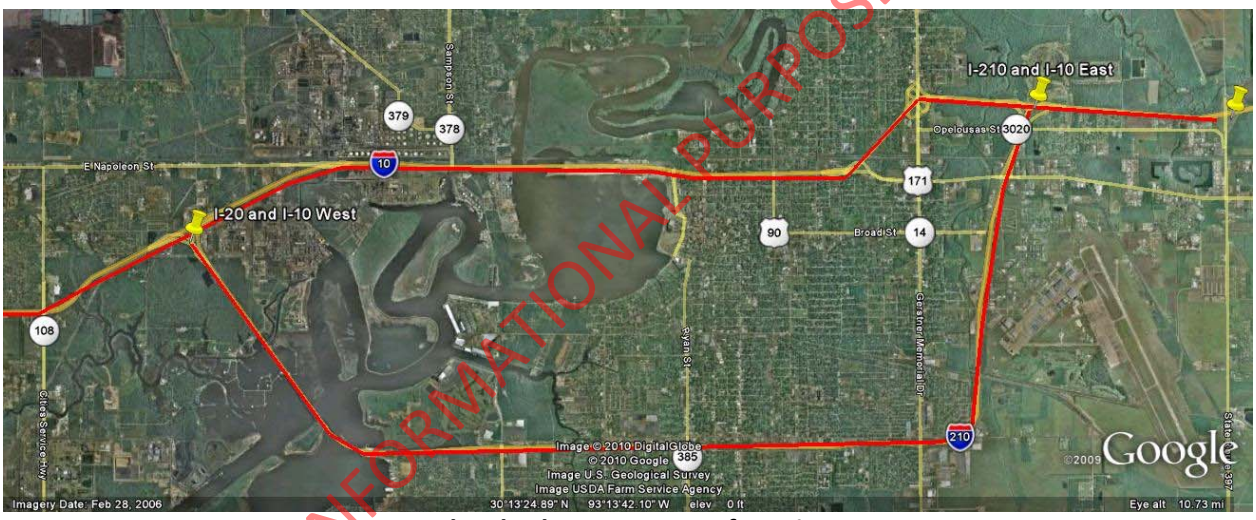


Shreveport MAP Area of Service



New Orleans MAP Area of Service

Baton Rouge MAP Area of Service



Lake Charles MAP Area of Service

Appendix C

Survey of Safety Service Patrols

A quick survey was performed to see what safety service patrol services were provided in various states. The survey was made primarily by internet research. In addition, several state safety service patrol services were called to get clarification on the services they offered. The two documents, from which most of this data was obtained, are: 1.) "Overview of Freeway Service Patrols in the United States," Vanderbilt Center for Transportation Research Final Report, Nov. 2008, and 2.) SafeHighways.org on-line database, Safe Highway Matters, Travelers Marketing.

The following tables summarize the findings. They include summaries of the following items:

1. Which states offer safety service patrol services
2. Which states do not offer safety service patrol services
3. Number of service patrol vehicles used in each state
4. Services the various safety service patrols typically offer
5. Equipment that the safety service patrol vehicles typically have
6. Hours that the safety service patrols typically operate
7. Who employs the safety service patrols
8. Who funds the safety service patrols' Operations and Maintenance
9. Training typically given to safety service patrol operators

There are 41 states plus Washington DC that currently have safety service patrols. They are listed in the table below, along with their names:

States that have safety service patrols	Name of safety service patrols
Alabama	Alabama Service Assistance Patrol (ASAP)
Arizona	Freeway Service Patrol
Arkansas	Motorist Assistance Patrol (MAP)
California	Freeway Service Patrol, and Emergency Service Patrol
Colorado	Mile High Courtesy Patrol and E 470 Safety Patrol
Connecticut	Connecticut Highway Assistance Motorist Patrol (CHAMP)
Delaware	Motorist Assistance Patrol
Florida	Road Rangers and State Farm Safety Patrol
Georgia	Highway Emergency Response Operations (H.E.R.O.)
Hawaii	Freeway Service Patrol

States that have safety service patrols	Name of safety service patrols
Idaho	Incident Response
Illinois	Minutemen/Emergency Traffic Patrol (ETF)
Indiana	Hoosier Helpers
Iowa	Highway Helper
Kansas	Motorist Assist Program
Kentucky	SAFE Patrol
Louisiana	Motorist Assistance Patrol
Maine	Courtesy Patrol, Night Patrol, and Weekend Patrol
Maryland	Emergency Traffic Patrol/Response Unit (ETP/RU)
Massachusetts	Motorist Assistance Program
Michigan	Freeway Courtesy Patrol
Minnesota	Freeway Incident Response Safety Team (FIRST)
Missouri	Motorist Assist
Nebraska	Nebraska Motorist Assist Program (NeMAP), and Central Nebraska Motorist Assist Program (CNMAP)
Nevada	Freeway Service Patrol
New Jersey	Emergency Service Patrol
New Mexico	HELP (Courtesy Patrol) Truck Program
New York	Highway Emergency Local Patrol (HELP)
North Carolina	Incident Management Assistance Patrol (IMAP)
Ohio	Freeway Incident Response Team (FIRST)/Road Crewzers
Oregon	Incident Response (formerly COMET – Corridor Management Teams)
Pennsylvania	Pennsylvania Turnpike Commission (PTC) and various Freeway Service Patrols
Rhode Island	CVS Samaritan

States that have safety service patrols	Name of safety service patrols
South Carolina	Incident Response
Tennessee	HELP
Texas	Courtesy Patrol and Texas Toll ways Courtesy Patrol
Utah	Incident Management Team
Virginia	Safety Service Patrol
Washington	Incident Response Program
West Virginia	Courtesy Patrol
Wisconsin	Dane County Beltline Service Patrol, Milwaukee County Enhanced Freeway Patrols, Racine, Kenosha, and Waukesha County Gateway Patrols

The states that don't have safety service patrols are: Alaska, Mississippi, Montana, New Hampshire, North Dakota, Oklahoma, South Dakota, Vermont, and Wyoming.

The number of freeway service patrol vehicles used varies between states. The number of such patrol vehicles used in some of the states is listed in the following table (state with highest number of vehicles listed first):

State	Number of freeway service patrol vehicles used
California	438
Florida	126
Virginia	108
Georgia	100
New York	98
Illinois	95
Maryland	85
New Jersey	77
Tennessee	75
Texas	66

State	Number of freeway service patrol vehicles used
North Carolina	58
Missouri	35
West Virginia	34
South Carolina	28
Kentucky	27
Oregon	25
Michigan	24
Massachusetts	22
Pennsylvania	21
Connecticut	20
Colorado	19
Louisiana	18
Minnesota	13
Arizona	13
Utah	12
Nevada	11
Indiana	10
Alabama	10

The services most commonly offered on a routine basis and the percent (%) of safety service patrols who routinely offer these are listed in the table below:

Services or activities performed on a routine bases	% of safety service patrols who routinely offer these services
Change tires	99 %
Provide fuel	99 %
Jump start vehicles	99 %
Remove debris from roadway	99 %
Provide traffic control	97 %
Notify law enforcement of hazards or security concerns	96 %
Move disabled or abandoned vehicles from travel lanes	93 %
Transport motorists/pedestrians	88 %
Move damaged vehicles to clear lanes at non-injury crash scenes	88 %
Make minor vehicle repairs	87 %
Provide cell phone for motorist use	87 %
Provide engine fluids (water, etc.)	86 %
Suppress vehicle fires	85 %
Apply absorbent to spilled fuel and other fluids	83 %
Push or drag spilled cargo and other obstruction from travel lanes	79 %
Notify transportation agency of roadway, bridge, or signing problems	79 %
Move disabled or abandoned vehicles on the shoulder to safer locations	73%
Tag abandoned vehicles	71 %
Report traffic conditions for motorist information system or media use	66 %

Services or activities performed on a routine bases	% of safety service patrols who routinely offer these services
Perform first aid	65 %
Call commercial tow trucks to move abandoned or disabled vehicles	40 %
Transfer fuel from overturned vehicles	13%

Other services or activities frequently offered by safety service patrols are listed in the following table:

Other Services Provided by some safety service patrols
Provide Directions: assist lost motorists
Check well-being
Provide bottled water
Provide lighting at nighttime scenes
Re-secure loads
Extinguish median fires
Perform animal rescue/control
Deploy changeable message signs
Assist law enforcement with translating foreign languages
Assist with crash investigations
Participate in public outreach events

Equipment that service patrol vehicles most often carry and the percentage safety service patrols whose vehicles carry them are listed in the following table:

Equipment carried by safety service patrol vehicles	% of safety service patrols who reported having this type of equipment on most of their service patrol vehicles
Cones, signs, and other traffic control equipment	98 %
Equipment to push/pull disabled or damaged vehicles	89 %
Arrow or message boards	84 %
Authorized "emergency vehicles" equipped for "code" responses	43 %
Tow trucks	37 %

Most of the 37% safety service patrols that reported having tow trucks in their fleets were believed (by the authors of the Vanderbilt study) to contract with private towing and recovery companies to provide the respective safety service patrol services. It is unknown (by the authors of the Vanderbilt study) whether the respective contracts require the use of tow trucks.
Only a few of the safety service patrols whose operators are employed by public agencies (based on responses to the Vanderbilt Report survey) reported having tow trucks in their fleets. The public agencies with tow trucks include the Illinois DOT's two Emergency Traffic Patrols, the New Jersey DOT's two Emergency Service Patrols, the two programs in Maryland, and the Harris County (TX) Toll Road Authority's Patron Emergency Assist Team (PEAT).

The hours that safety service patrols usually operate are summarized in the following two tables:

Weekday hours of operation (for most safety service patrols)	% of safety service patrols having such hours of operation
Regular patrols operate during peak travel periods only	21 %
Regular patrols operate from before the AM peak period to after the PM peak period	26 %
Regular patrols operate from early morning to late night	17 %
Other	36 %

Weekend Hours of Operation (for most safety service patrols)	% of safety service patrols having such hours of operation
Operates on weekends only for special events	25 %
Does not operate on weekends	19 %
Regular patrols operate on most weekends, but fewer hours than on Monday through Friday	17 %
Regular patrols operate on most weekends, about the same hours as Monday through Friday	12 %
Other	27 %

The entities that most often employ the safety service patrols are listed in the table below:

Employers	% of safety service patrols having these employers
State DOT	41 %
Private Contractors	39 %
Local Government	9 %
Other state agency	6 %

The funding sources for the Operations and Maintenance for most safety service patrols are listed in the following table:

Source of funds	% of safety service patrols receiving funds from this source
State funds (State DOT)	76 %
Other state funds	10 %
Federal funds (USDOT)	39 %
Other federal funds	1 %
Local government	12 %
Private	8 %
Other	13 %

The number of funding sources for each safety service patrol varies, as shown in the following table:

Number of funding sources for a safety service patrol's Operations and Maintenance	% of safety service patrols having this many sources of funds
1	51 %
2	39 %
3	8 %
4	1%
5	1 %

There are three main categories of training given to safety service patrol operators: 1. Classroom training, 2. On-The-Job training, and 3. Emergency Medical Technician (EMT) training.

Classroom training varies from a few days to nine weeks, depending on the safety service patrols. Safety service patrol programs that require a month or more of classroom training include the Tennessee DOT's HELP patrols, some of the Florida Road Ranger patrols, the Georgia DOT's HERO program in Metro Atlanta, the Dallas County (Texas) Sheriff's Department Courtesy Patrol, the Metro Nashville Roadway Incident Response program, and the Illinois DOT's Minutemen (Emergency Traffic Patrol) in Chicago.

On-The-Job training (OJT) varies from a few days to 6 months, depending on the safety service patrols. Safety service patrol programs requiring a month or more of OJT (riding with experienced operators or participating in other hands-on activity) were found in fourteen separate states, including the Dallas County (Texas) Sheriff's Department Courtesy Patrol (six months), the Oregon DOT Region 1 Incident Response Program (four months), the Metro Nashville Roadway Incident Response Program (two months), the Alabama Service and Assistance Patrol operated by the Alabama Highway Patrol for the Alabama DOT (eight weeks), and the Illinois DOT Minutemen and Maryland CHART programs (both seven weeks).

Certification as either an EMT or automotive mechanic is a pre-requisite for new safety service patrol hires at Samaritania, which operates in Rhode Island, Massachusetts, Washington DC, Northern Virginia, North Carolina, Ohio, Indiana, Michigan, and Illinois.

Appendix D

Traceability Matrix

Outline ID	ID	Need Type	Outline ID	RSIP ID	Title	Outline ID	RSIP ID	Title	Outline ID	RSIP ID	Title
1.1	Need_1	Tire changes	1.3	RSIP_3	Specific services provided						
1.3	Need_2	Fuel	1.3	RSIP_3	Specific services provided						
1.4	Need_5	Jump start vehicle	1.3	RSIP_3	Specific services provided						
1.5	Need_6	Use of phone for local calls	1.3	RSIP_3	Specific services provided						
1.6	Need_7	Transport stranded motorist	1.3	RSIP_3	Specific services provided						
1.7	Need_8	First Aid	1.3	RSIP_3	Specific services provided						
1.10	Need_9	Suppress small vehicle fires		RSIP_11	Suppressing minor vehicle fires						
2.1	Need_10	Traffic control	2.1	RSIP_4	First responder traffic control						
			2.2	RSIP_5	Traffic control support ot on-site incident manager						
2.2	Need_11	Minor debris	2.3	RSIP_6	Minor debris removal	2.3.1	RSIP_7	Size or minor debris			
						2.3.2	RSIP_8	Disposal of minor debris			
2.3	Need_12	Abandoned vehicles	2.4	RSIP_9	Tagging abandoned vehicles						
1.8	Need_13	Move disabled vehicles	1.3	RSIP_3	Specific services provided						
2.4	Need_15	Spilled fluids	2.5	RSIP_10	Fluid spills						
3.1	Need_16	Notification of incidents and adverse weather	3.2	RSIP_14	Notification of adverse weather	3.2.1	RSIP_15	Information about hazardous weather			
3.2	Need_17	Notification of infrastructure problems	3.3	RSIP_16	Notification on infrastructure problems immediate threat						
			2.3.1	RSIP_17	Notification on infrastructure problems no immediate threat						
3.3	Need_18	Reporting abnormal traffic congestion	2.3.2	RSIP_18	Notification of abnormal congestion						
1.9	Need_19	Towing from selected bridges	1.3	RSIP_3	Specific services provided						
5.1	Need_20	Clean criminal record	5.1.1	RSIP_41	Clean criminal background	5.1.1.1	RSIP_42	Annual criminal background checks			
						5.1.1.2	RSIP_43	Maintaining a clean criminal record			
5.3	Need_21	Drivers license	5.1.2	RSIP_44	Class D license						
			5.1.3	RSIP_45	Class B license						
			5.1.4	RSIP_46	Class E license						
5.4	Need_22	First aid certified	5.1.7	RSIP_49	First aid certified						
			5.2.2	RSIP_52	Annual refresher training						
5.5	Need_23	TIM training	5.2.1	RSIP_51	Specific training areas						
			5.2.2	RSIP_52	Annual refresher training						
5.2	Need_24	Age and education	5.1.5	RSIP_47	Minimum RSIP operator age						
			5.1.6	RSIP_48	Minimum education						
5.6	Need_25	TMC operations training	5.2.1	RSIP_51	Specific training areas						
			5.2.2	RSIP_52	Annual refresher training						
4.3	Need_26	Vehicle equipment	4.1.2	RSIP_31	Fleet vehicle equipment						
			4.1.3	RSIP_32	Fleet vehicle communications	4.1.3.1	RSIP_58	Daily patrol communications equipment			
						4.1.3.2	RSIP_59	Tow truck communications			
						4.1.3.3	RSIP_60	Emergency vehicle communications			
			4.1.5.1	RSIP_37	Emergency vehicles equipment						
4.4	Need_27	Communications equipement	4.1.3	RSIP_32	Fleet vehicle communications	4.1.3.1	RSIP_58	Daily patrol communications equipment			
						4.1.3.2	RSIP_59	Tow truck communications			
						4.1.3.3	RSIP_60	Emergency vehicle communications			
4.5	Need_28	Global positioning equipment	4.1.4	RSIP_33	Fleet vehicle location tracking equipment						
3.4	Need_29	RSIP Operator reporting data	3.6	RSIP_19	RSIP Operator log						
			3.7.2	RSIP_22	RSIP database information	3.7.2.1	RSIP_23	Event reporting format			

Traceability Matrix

Outline ID	ID	Need Type	Outline ID	RSIP ID	Title	Outline ID	RSIP ID	Title	Outline ID	RSIP ID	Title
			3.7.3	RSIP_24	Reporting on RSIP activities	3.7.3.1	RSIP_25	Response time for reports			
						3.7.3.2	RSIP_26	Report format			
			3.7.3.1	RSIP_25	Response time for reports						
3.5	Need_30	RISP performance measures	3.1.1	RSIP_13	Incident information						
			3.6	RSIP_19	RSIP Operator log						
			3.7.2	RSIP_22	RSIP database information	3.7.2.1	RSIP_23	Event reporting format			
			3.7.3	RSIP_24	Reporting on RSIP activities	3.7.3.1	RSIP_25	Response time for reports			
						3.7.3.2	RSIP_26	Report format			
5.8	Need_31	Annual refresher training	5.2.2	RSIP_52	Annual refresher training						
5.7	Need_32	Work zone training	5.2.1	RSIP_51	Specific training areas						
			5.2.2	RSIP_52	Annual refresher training						
4.1	Need_33	Provide a fleet of vehicles	4.1	RSIP_29	Vehicle fleet	4.1.1	RSIP_30	Vehicle fleet types			
						4.1.2	RSIP_31	Fleet vehicle equipment			
						4.1.3	RSIP_32	Fleet vehicle communications	4.1.3.1	RSIP_58	Daily patrol communications equipment
									4.1.3.2	RSIP_59	Tow truck communications
									4.1.3.3	RSIP_60	Emergency vehicle communications
						4.1.4	RSIP_33	Fleet vehicle location tracking equipment			
						4.1.5	RSIP_34	Emergency vehicle fleet size			
						4.1.5.1	RSIP_37	Emergency vehicles equipment			
4.2	Need_34	Services provided		RSIP_6	Minor debris removal	2.3.1	RSIP_7	Size or minor debris			
						2.3.2	RSIP_8	Disposal of minor debris			
				RSIP_30	Vehicle fleet types						
				RSIP_31	Fleet vehicle equipment						
4.6	Need_35	Quality control									
1.2	Need_36	Tire Inflation	1.3	RSIP_3	Specific services provided						
4.7	Need_37	Provide patrol operators	4.2	RSIP_38	Number of personnel	4.2.1	RSIP_39	Uniforms			
			5.1	RSIP_40	Qualified operators	5.1.1	RSIP_41	Clean criminal background	5.1.1.1	RSIP_42	Annual criminal background checks
									5.1.1.2	RSIP_43	Maintaining a clean criminal record
						5.1.1.2	RSIP_43	Maintaining a clean criminal record			
						5.1.2	RSIP_44	Class D license			
						5.1.3	RSIP_45	Class B license			
						5.1.4	RSIP_46	Class E license			
						5.1.5	RSIP_47	Minimum RSIP operator age			
						5.1.6	RSIP_48	Minimum education			
						5.1.7	RSIP_49	First aid certified			

Appendix E

FHWA Final Rule Compliance Report

The Project's goal is to analyze the existing DOTD Motorist Assistance Program. This project includes the DOTD TMC, local police, local LSP troop, the RSIP patrol and its associated services.

This Systems Engineering analysis report complies with the FHWA Final Rule CFR 940 part 11. The following is a compliance matrix that RSSPs elements of the final rule to this SE document:

Compliance with 23 CFR 940 part 11
The following is the compliance matrix that maps the FHWA final rule to the section in this systems engineering analysis report.

FHWA Rule Element	Section in this SEA Report that Addresses the FHWA Rule Element	Comment
(1) Identification of portions of the regional ITS architecture being implemented	Section 3	
(2) Identification of participating agencies' roles and responsibilities	Section 4.3, Table 4	
(3) Requirements definitions	Section 5, Needs Section 6, Requirements	Needs and requirements
(4) Analysis of alternative system configurations and technology options to meet requirements	Section 7	
(5) Procurement Options	Section 8, Tables 8 & 9	
(6) Identification of applicable ITS standards and testing procedures	Section 9, Table 10	
(7) Procedures and resources necessary for operations and management of the system	Sections 4, 6, 7 & 8	