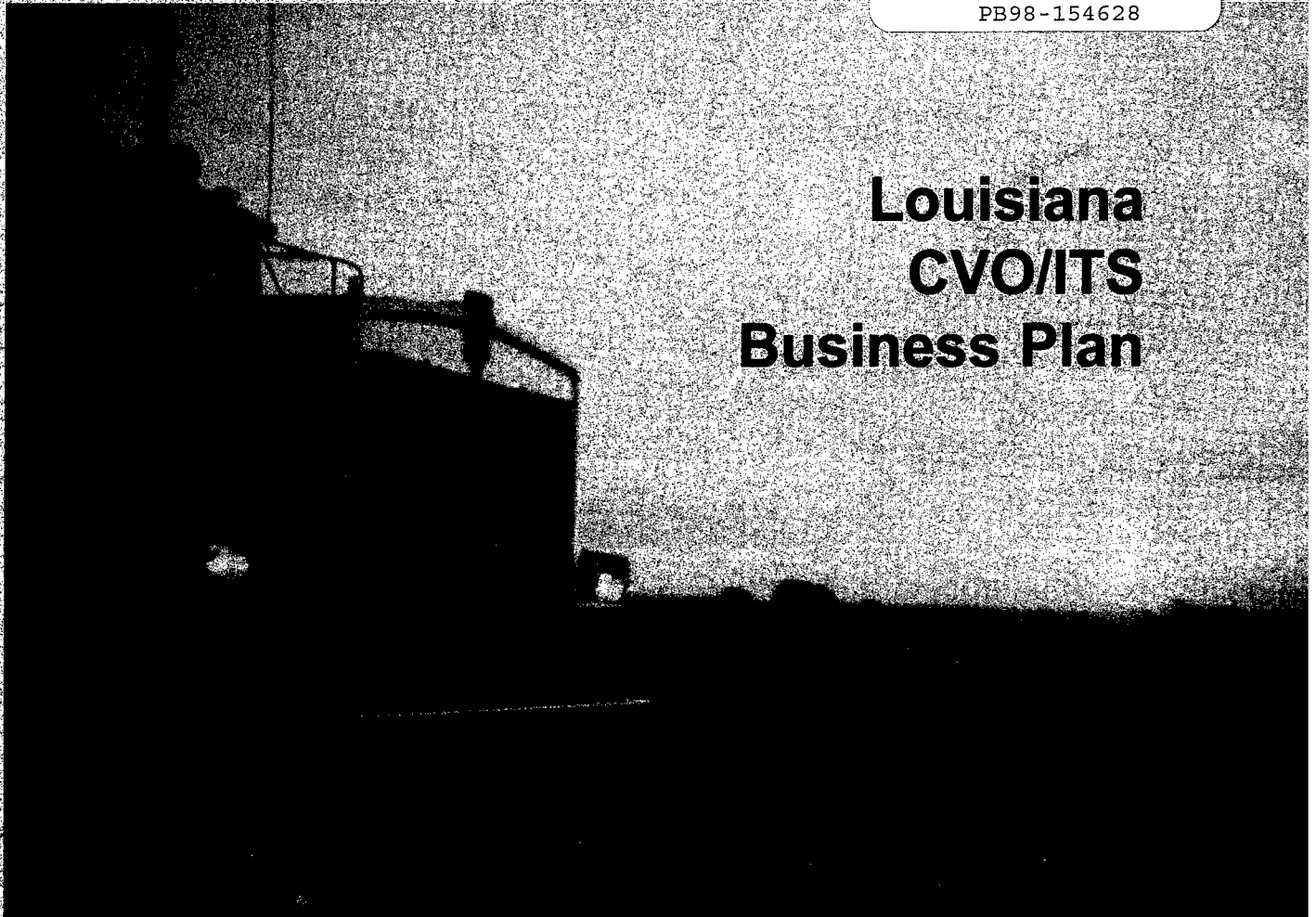


Louisiana Transportation Research



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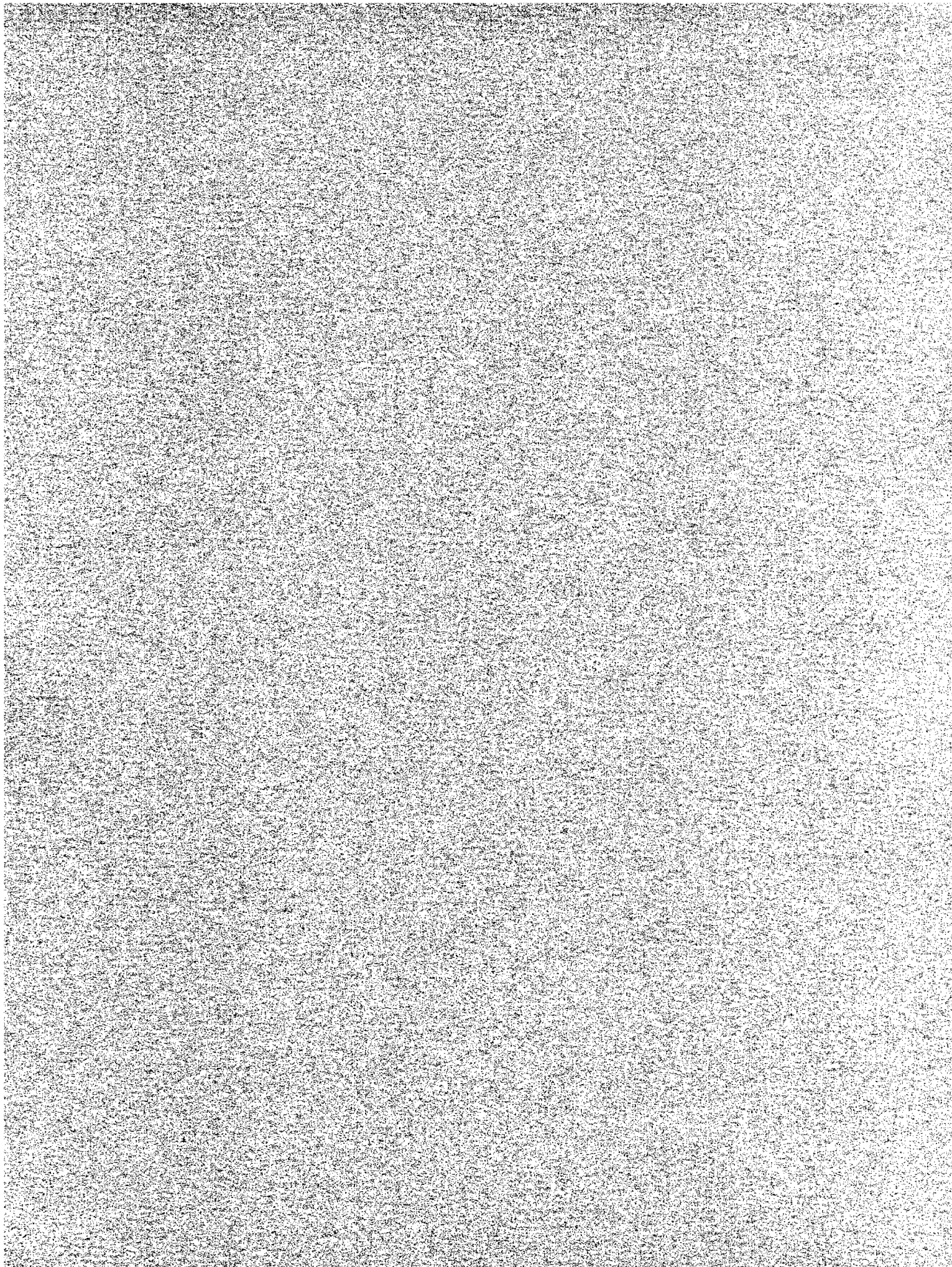
Louisiana CVO/ITS Business Plan

LTRC

Louisiana Transportation Research Center

Sponsored Jointly by the Louisiana Department of Transportation and Development and Louisiana State University

REPRODUCED BY: **NTIS**
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National Technical Information Service
Springfield, Virginia 22161



Louisiana CVO / ITS Business Plan

Prepared by:

Louisiana CVO / ITS Steering Committee

and

**Parker-Young
In Motion, Inc.**

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Conducted for:

**LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
LOUISIANA TRANSPORTATION RESEARCH CENTER**

The contents of this report reflect the views of the authors, who are responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views of the State or Federal highway Administration. This report does not constitute a standard, specification or regulation.

JUNE 1998



STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
P. O. Box 94245
Baton Rouge, Louisiana 70804-9245



April 22, 1998

M. J. "MIKE" FOSTER, JR.
GOVERNOR

FRANK M. DENTON
SECRETARY

Mr. Jeffery Loftus
FHWA ITS/CVO Division
400 7th Street SW
Washington, D.C. 20590

Dear Mr. Loftus:

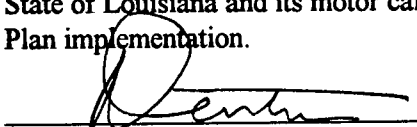
The State of Louisiana is pleased to present its CVO/ITS Strategic Business Plan. The Business Plan is the result of many months of research, deliberation and discussion by state staff responsible for CVO credentialing, enforcement and safety assurance, FHWA's Louisiana Division and FHWA's Office of Motor Carriers, and the Louisiana Motor Transport Association.

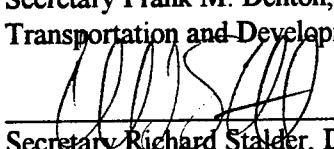
The Plan identifies a coordinated program of initiatives to increase the efficiency and effectiveness of Louisiana's commercial vehicle operations by:

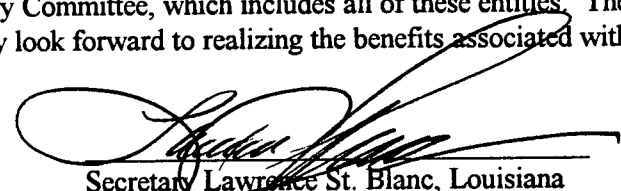
- Increasing the administrative productivity of both the public and private sectors;
- Maximizing commercial vehicle operational safety through improved compliance and targeted enforcement; and
- Increasing CVO operational productivity by improving freight flows.

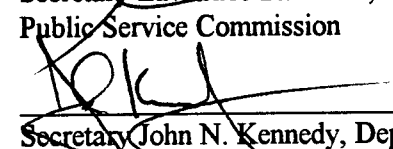
Louisiana's CVO/ITS Business Plan is a tool for change. The Plan provides a roadmap for changing the way that the State and motor carriers do business together, and a framework for implementing that change, with the expected result of decreasing costs for both state and industry, improving productivity and compliance, and decreasing unsafe/illegal carrier, vehicle and driver operations. Louisiana's CVO/ITS Business Plan helps position the state to take advantage of and leverage the technologies being developed nationally through the federal Commercial Vehicle Information Systems and Networks (CVISN) program.

Louisiana's Business Plan is a joint product of the departments of Transportation and Development, Public Safety and Corrections, Revenue and the state's Public Service Commission, as well as the state's Motor Transportation Association. As such, the Plan and its program of "no-tech", low-tech, and technology-based initiatives share the full support of each of these agencies. Plan implementation will be overseen by the legislatively established Motor Carrier Advisory Committee, which includes all of these entities. The State of Louisiana and its motor carrier community look forward to realizing the benefits associated with Plan implementation.


Secretary Frank M. Denton, Department of
Transportation and Development


Secretary Richard Stalder, Department of
Public Safety and Corrections


Secretary Lawrence St. Blanc, Louisiana
Public Service Commission


Secretary John N. Kennedy, Department of
Revenue and Taxation

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Overview

Louisiana's CVO / ITS Business Plan provides a long-term strategic vision and implementation program for meeting Louisiana's Commercial Vehicle Operations / Intelligent Transportation Systems (CVO / ITS) needs.

Commercial Vehicle Operations - CVO - are the various activities in which public agencies and motor carriers engage to credential or permit commercial vehicles; to clear vehicles through weigh stations; to assure motor carrier, vehicle and driver safety; and to manage the flow of commercial vehicle traffic. Intelligent Transportation Systems - ITS - is the application of advanced technologies to surface transportation needs. CVO / ITS activities involve automating existing CVO processes such as credentialing, clearance or safety assurance to improve the efficiency and effectiveness of these processes, for both motor carriers and the state.

Louisiana's CVO / ITS Business Plan identifies a coordinated program of "no-tech", low-tech and technology-based initiatives to achieve the following:

- Increase administrative productivity of both the state and private sector;
- Maximize commercial vehicle operational safety through improved compliance and targeted enforcement; and
- Increase CVO operational productivity by improving freight flows.

The Business Plan was developed by a state CVO / ITS Steering Committee led by the Louisiana Department of Transportation and Development (DOTD). Steering Committee members include representatives of the state's Department of Revenue, Office of Motor Vehicles, Public Service Commission (PSC), Louisiana State Police (LSP) Transportation and Environmental Safety Section (TESS), Louisiana Motor Transport Association (LMTA) and the regional office of the Federal Highway Administration (FHWA) and its Office of Motor Carriers (OMC). In addition, key state Steering Committee members attended a number of regional forums led by the Kentucky Transportation Center and including state CVO representatives from several southeast and midwest states. These regional forums provided an opportunity to discuss initiatives elsewhere and to identify ways to leverage Louisiana's activities with those planned or underway throughout the region and nationally. Project funding was provided by a grant from FHWA's ITS / CVO Mainstreaming funds and a state match.

State Role in Commercial Vehicle Operations

The State of Louisiana plays a vital role in commercial vehicle operations in three primary functional areas: regulatory and administrative functions, safety assurance and enforcement, and infrastructure / mobility provision and maintenance. The state plans, builds and maintains the state highway system that provides the primary thoroughfares for the motor carrier and motor coach industries. It manages the commercial driver licensing, commercial vehicle registration, fuel tax licensing and related reporting and auditing functions, oversize / overweight permitting services;

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enforces commercial vehicle safety regulations and weight restrictions; and verifies compliance with licensing and registration requirements.

Problems and Issues

Louisiana's commercial vehicle operations are highly efficient, within the confines of current CVO systems. Inefficiencies in Louisiana's CVO operations are not related to how state personnel implement the existing systems, but are instead a by-product of the systems themselves.

Administrative inefficiencies - Louisiana's current IRP, IFTA, and SSRS application and IFTA tax reporting processes are paper-based systems. Each of the administering agencies has developed or purchased computer systems to assist in application / tax processing, but carriers must still submit hard copy applications to the state, which must be checked by state staff and manually data-entered into the state's application processing systems. Checks must be processed and cleared, and credentials then mailed back to the motor carrier.

Carriers cite administrative inefficiencies - the time required to prepare and submit credential applications and supporting documents and rectify clerical errors (both carrier errors as well as state data entry errors), as well as the delay in getting new vehicles on the road - as the number one problem in their relations with the state. State staff finds itself working to meet increased demands for services in the face of fixed resources.

Enforcement processes - At a cost of over \$4 million annually, the state is currently pulling more than 11 million commercial vehicles out of mainline traffic for size and weight inspections, and finding only 0.16 percent of those vehicles out of compliance. While each vehicle is stopped at a weigh station for an average of only three to five minutes, the total cost to industry of weight inspections is almost \$38 million annually (assuming average CVO operating costs of \$50 per hour, with a total of 758,676 hours of vehicle weight inspection time).

Delays at weigh stations can be significant during peak periods. It is not unusual for weigh station traffic to back up onto the mainline during peak periods, creating a safety hazard. At this point, the WASP closes the inspection facility to further traffic to minimize hazard potential, allowing motor carriers to bypass inspection facilities without a weight or safety inspection or credential check.

Louisiana currently performs more than 41,000 vehicle and driver inspections annually under the Motor Carrier Safety Assurance Program (MCSAP). The state's Public Service Commission's Transportation Regulatory Enforcement Unit conducts an additional 56,000 motor carrier inspections to verify operating authority status. Inspection selection decisions are made randomly, or may be based on the operating behavior or appearance of a particular vehicle. Officers making the inspection selection decision are highly trained and experienced and are making the best decisions possible within the limited range of information available to them. However, because these officers are not currently privy to carrier / vehicle / driver safety status information at roadside, their ability to focus inspections on higher risk carriers is limited.

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Technology, including automated credentialing systems, automated vehicle clearance at weigh stations, weigh-in-motion scales, electronic transfer of credentialing and safety status information, and a variety of other advanced applications, provides opportunities to reduce costs and improve the effectiveness of CVO business and safety assurance functions.

Role of the Business Plan

Louisiana's Business Plan is a tool for change. The Plan provides a roadmap for changing the way the state and motor carriers do business together, and a framework for implementing that change, with the expected result of decreasing costs for both the state and industry, improving productivity *and* compliance, and decreasing unsafe / illegal carrier, vehicle and driver operations.

The Business Plan helps position the state to accommodate and implement change that is occurring nationally. Several years ago, FHWA initiated the Commercial Vehicle Information Systems and Networks (CVISN) prototype and model deployment. CVISN is focused on developing the technical infrastructure required to automate CVO credentialing, clearance and safety assurance functions. CVISN is developing the standards, protocols and communications systems that will allow states and motor carriers to routinely exchange and access the information required to support electronic credentialing, clearance and safety assurance. CVISN is not a new database or system, but is rather a way for existing systems to exchange existing information electronically through the use of standards developed in CVISN and commercially available communications systems. The central vision of CVISN, is that by the year 2005, most CVO business and safety assurance transactions will be conducted electronically. Louisiana's CVO / ITS Business Plan helps position the state to take advantage of and leverage the technologies being developed through the CVISN program. The Business Plan provides the framework for the organizational and institutional infrastructure that is necessary to accommodate and implement the opportunities for technological change brought about by CVISN.

Finally, the state planning process included participation in a regional planning process. States throughout the southeast are preparing CVO / ITS plans concurrently. Key steering committee members from each state met periodically during the planning process to exchange information and ideas. In 1998, a regional plan will be prepared to build upon and leverage the activities of individual states. This regional coordination provides opportunities for Louisiana to integrate its activities with those of other states and to leverage other state's investments in transportation corridors running through Louisiana.

Plan Objectives

Louisiana seeks to improve the efficiency and effectiveness of CVO business and operational functions in the state. This overall mission includes three discrete elements designed to address priority needs as identified by state and industry stakeholders. These elements, in priority order, include: 1) increasing administrative productivity of both the private and public sectors; 2) maximizing CV operational safety and productivity through improved compliance and targeted enforcement; and 3) improving freight flows by increasing CVO operational productivity. ITS -

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Intelligent Transportation Systems - are viewed as one of several key tool sets available to the state to help implement its overall vision of improved efficiency / effectiveness.

Louisiana's CVO / ITS Business Plan includes a coordinated set of "no-tech", low-tech, and technology-based initiatives to move from the current way of doing business to the planning scenarios outlined below:

Administrative processes - Under the planning scenario, or desired state, credentialing, permitting and tax filing requirements would be streamlined. Any unnecessary requirements, for example, requirements for supporting documents that are no longer referenced in a credentialing decision, would be eliminated. Unproductive requirements would be modified to better meet both state and carrier needs. Rules and statutes regulating CVO credentialing, permitting and tax filing would be clear and consistent.

Credentialing and permitting systems would be automated. Motor carriers with access to a PC, modem and a phone line would enter all required application information using a "Carrier Automated Transaction" (CAT) system. The CAT system would check the application information for accuracy and completeness, calculate fees, and would then electronically transmit the application information along with any required payment to the appropriate state agency using the Internet or a Value Added Network (VAN). The carrier would be able to obtain an annual or temporary credential or permit within minutes.

On the state end, the automated credentialing or permitting system would upload the carrier application information to the appropriate legacy system(s). Both application data and electronic payment information would be uploaded and processed. The application information would be complete and free of routine errors as the CAT system would already have checked for these items and would not allow the application data to be transmitted to the state with these errors.

Monthly IRP recaps and IRP and IFTA transmittals and associated payments would be automated, using the national clearinghouses. Recaps, transmittals and payments would be exchanged electronically and payments would be netted out by the clearinghouse.

Finally, the vehicle and carrier credential status information residing in the IRP, IFTA, SSRS and OS / OW legacy systems, and the drivers license information residing in the CDL database would be available to enforcement staff, not only in Louisiana, but in any state desiring to access information about a particular carrier, vehicle or driver.

Operational Safety and Productivity - Under the planning scenario, MCSAP and PSC enforcement officers would have roadside access to carrier, vehicle and driver safety and credential status information that would allow them to "separate the good guys from the bad". Officers could still make inspection selection decisions based on their own experience and expertise, but additional information would be available at roadside to assist in identifying high risk carriers, vehicles or drivers. These information bases could be accessed by carrier name, US DOT number, license plate number or other unique identifiers. The available information would

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provide crash and inspection histories, carrier safety ratings and credential status information. Flags on the record would indicate that the carrier, vehicle or driver may warrant inspection. Drivers or vehicles operating out of service could be readily identified, as could vehicles which had recently been inspected with no violations found.

Interstate and other high volume fixed scales would include mainline weigh-in-motion scales (WIMs) that allow commercial vehicles to be weighed in mainline traffic. Vehicles equipped with transponders could be cleared through the fixed scale without leaving mainline traffic. A transponder (or license plate) reader at roadside would pick up the vehicle's unique identifiers from its transponder (or read the license plate number), check associated credential and permit status, and electronically clear the vehicle for weigh station bypass. Only those vehicles with problems or without transponders will be directed off-road to the fixed scale for further inspection or static weighing.

Program of Projects to Achieve Objectives

Louisiana's CVO / ITS program includes three interrelated goal areas and associated program elements as highlighted in the Table below.

Louisiana CVO / ITS Program Goals and Associated Program Elements.

Goal Area	Associated Program Elements
Increase Administrative Efficiency	• Streamlined Credentialing / Tax Filing Requirements
	• Initiatives to Improve Motor Carrier Compliance
	• Electronic Credentialing / Tax Filing
	• Electronic Information Exchange
Maximize Operational Safety / Productivity	• Increase Efficiency of Existing Scale Operations
	• Electronic Clearance
	• Information-based Safety Assurance
	• Commercial Vehicle Rest Areas
Improved Freight Flows	• Mobility Improvements
	• Increase Funds Available for Mobility Improvements

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Each of these program elements is made up of a series of mutually supportive planning and deployment activities designed to make the “planning scenarios” the operating scenarios, as illustrated on the following pages.

Program Elements Associated with Increasing Administrative Efficiency

Program Element Designed to Improve Administrative Efficiency / Associated Requirements
1.0 Streamline Credentialing / Tax Filing Requirements
1.1. Streamline Forms, Supporting Document Requirements, Processes
1.2. Revise statutes / administrative rules to resolve conflicting / ambiguous CVO credentialing, permitting or tax reporting / filing requirements
2.0 Initiatives to Improve Motor Carrier Compliance
2.1. Strengthen and Expand the Role of the Ongoing Motor Carrier Advisory Committee
2.2. Develop a regulatory handbook outlining both state and federal CVO regulatory requirements
2.3. Develop a state CVO Web site, with information on regulatory requirements (handbook), contact lists, permit and credential applications and tax filing forms, etc.
2.4. Develop a unique carrier identification system for interstate and intrastate motor carriers (Uniform Carrier Registry) and modify credentialing processes and associated legacy systems to capture unique identifiers
3.0 Electronic Credentialing
3.1. Review / revise administrative rules / statutes to pave the way for automation of CVO business functions;
3.2. Evaluate / acquire Carrier Automated Transaction (CAT) Software
3.3. Develop capabilities to upload carrier application data to existing legacy systems (Credential Interface (CI)) software
3.4. Implement associated electronic payment options (credit card, electronic funds transfer (EFT), debit card capabilities, etc.) and linkages to accounting systems
3.5. Add CAT access to State CVO Web page
4.0 Electronic Information Exchange
4.1. Automation of credential recap, transmittal and associated fee transfers

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Program Elements Associated with Improving Operational Safety and Productivity

Program Element Designed to Improve Operational Safety and Productivity / Associated Requirements
5.0 Increase Efficiency of Existing Scale Operations (1)
5.1. Joint Port Operations
5.2. Routine Scale Calibration Program
5.3. Fixed Scale Computer / Communication Links Upgrade
6.0 Electronic Clearance
6.1. Weigh-in-motion Capabilities at Select High Volume Fixed Scale Facilities
6.2. Quality Controlled Sampling at Select High Volume Facilities
6.3. AVI Systems Evaluation / Implementation
6.4. Credential and Safety Status Data Available to the Roadside
6.5. Transponder Marketing / Incentives Program
7.0 Information-based Safety Assurance
7.1. Automated Safety Inspections Data Collection and Exchange
7.2. SAFER Connection and Enrollment / Enhancements
7.3. Automate Crash Reporting
7.4. Evaluate Capabilities of "Smart" Mobile Scales
8.0 Increase Available Commercial Vehicle Rest Areas
8.1. Private Sector Incentives
8.2. Public Sector Initiatives

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Program Elements Associated with Improving Freight Flows

Program Element Designed to Improve Freight Flows / Associated Requirements
9.0 Mobility Improvements
9.1. Bring key freight corridors to target quality / service levels
9.2. Improve mobility in and around construction sites
9.3. Statewide incident management plan
9.4. Revise CVO operating restrictions to maximize operational efficiencies while maintaining operational safeguards
10.0 Increase Available Funds for Mobility Improvements
10.1. Review dedications to the Transportation Trust Fund

1.0 INTRODUCTION

1.1 Overview

Louisiana's CVO / ITS Business Plan provides a long-term strategic vision and implementation program for meeting Louisiana's Commercial Vehicle Operations / Intelligent Transportation Systems (CVO / ITS) needs.

Commercial Vehicle Operations - CVO - are the various activities in which public agencies and motor carriers engage to credential or permit commercial vehicles; to clear vehicles through weigh stations; to assure motor carrier, vehicle and driver safety; and to manage the flow of commercial vehicle traffic. Intelligent Transportation Systems - ITS - is the application of advanced technologies to surface transportation needs. CVO / ITS activities involve automating existing CVO processes such as credentialing, clearance or safety assurance to improve the efficiency and effectiveness of these processes, for both motor carriers and the state.

Louisiana's CVO / ITS Business Plan identifies a coordinated program of "no-tech", low-tech and technology-based initiatives to achieve the following:

- Increase administrative productivity of both the state and private sector;
- Maximize commercial vehicle operational safety through improved compliance and targeted enforcement; and
- Increase CVO operational productivity by improving freight flows.

The Business Plan was developed by a state CVO / ITS Steering Committee led by the Louisiana Department of Transportation and Development (LADOTD). Steering Committee members include representatives of the state's Department of Revenue, Office of Motor Vehicles, Public Service Commission, Louisiana State Police Transportation and Environmental Safety Section, Louisiana Motor Transport Association and the regional office of FHWA and its Office of Motor Carriers (OMC). In addition, key state Steering Committee members attended a number of regional forums led by the Kentucky Transportation Center and including state CVO representatives from several southeast and midwest states. These regional forums provided an opportunity to discuss initiatives elsewhere and to identify ways to leverage Louisiana's activities with those planned or underway throughout the region and nationally. Project funding was provided by a grant from FHWA's ITS / CVO Mainstreaming funds and a state match.

1.2 Need for a CVO / ITS Business Plan

Louisiana's CVO / ITS Business Plan identifies ways to reduce the costs of doing business for both the state and motor carriers, while increasing the efficiency and effectiveness of CVO business and safety assurance practices. Significant changes have occurred in recent years in both the state and motor carrier operating and regulatory environments. While the number of vehicles and carriers, and thus demand for credentialing, clearance and safety assurance services, continues to increase, state staff and budget resources to provide these services have remained static in real terms, and, in some cases, are actually decreasing.

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From the carrier's vantage point, deregulation of the motor carrier industry has resulted in significant price competition for freight services. In 1997, the American Trucking Association estimated that industry profit margins nationally had been cut to an average of 1.4 percent annually. As a result, industry is evaluating all options for reducing operating costs while maintaining safe and legal operations. State staff and industry alike recognize that they can no longer rely on the "old ways" of doing business to meet their needs. Both state and industry are looking for ways to improve performance while lowering costs.

Technology, including automated credentialing systems, automated vehicle clearance at weigh stations, weigh-in-motion scales, electronic transfer of credentialing and safety status information, and a variety of other advanced applications, provides opportunities to reduce costs and improve the effectiveness of CVO business and safety assurance functions. In addition, there are a number of "no-tech", low-tech changes in the way states and carriers do business that can improve the efficiency and effectiveness of CVO. Louisiana's CVO / ITS planning process provided the opportunity for both the state and motor carrier industry to:

- Bring all CVO stakeholders to the table;
- Identify a set of mutually beneficial objectives for Louisiana's CVO operations;
- Identify and evaluate a range of alternative implementation actions to achieve these objectives; and
- Select a preferred implementation program to reduce the time, steps, people and / or dollars required to credential, inspect or clear vehicles, and to effectively provide safety assurance staff with the technology and information to focus on unsafe or illegal carriers, drivers and vehicles, thus maximizing scarce resources for both the state and motor carriers.

The resulting Business Plan is a tool for change. The Plan provides a roadmap for changing the way Louisiana and motor carriers do business together, and a framework for implementing that change, with the expected result of decreasing costs for both the state and industry, improving productivity *and* compliance, and decreasing unsafe / illegal carrier, vehicle and driver operations.

The Business Plan also helps position the state to accommodate and implement change that is occurring nationally. Several years ago, FHWA initiated the Commercial Vehicle Information Systems and Networks (CVISN) prototype and model deployment. CVISN is focused on developing the technical infrastructure required to automate CVO credentialing, clearance and safety assurance functions. CVISN is developing the standards, protocols and communications systems that will allow states and motor carriers to routinely exchange and access the information required to support electronic credentialing, clearance and safety assurance. CVISN is not a new database or system, but is rather a way for existing systems to exchange existing information electronically through the use of standards developed in CVISN and commercially available communications systems. The central vision of CVISN, is that by the year 2005, most CVO business and safety assurance transactions will be conducted electronically. Louisiana's CVO / ITS Business Plan helps position the state to take advantage of and leverage the technologies being developed through the CVISN program. The Business Plan provides the framework for the

1.0 INTRODUCTION

organizational and institutional infrastructure that is necessary to accommodate and implement the opportunities for technological change brought about by CVISN.

Finally, the state planning process included participation in a regional planning process. States throughout the southeast, the country, are preparing state CVO / ITS plans concurrently. Key steering committee members from each state are meeting periodically during the planning process to exchange information and ideas. In 1998, a regional plan will be prepared to build upon and leverage the activities of individual states. This regional coordination provides opportunities for Louisiana to integrate its activities with those of other states and to leverage other state's investments in transportation corridors running through Louisiana, for example concentrating port automation efforts within those corridors where other states are also making similar investments.

1.3 Business Plan Organization

The Business Plan is organized in six sections as follows:

Executive Summary - Provides an overview of the business plan purpose, planning process, goals, objectives, guiding principles, implementation program, schedule and funding requirements.

1.0 Introduction - Provides background on the Plan purpose, context and contents.

2.0 Commercial Vehicle Operations in Louisiana - Provides an overview of the role of trucking in the state's economy, the state's role in CVO operations and the responsibilities of agencies involved in CVO regulation, enforcement and service delivery. This section also highlights some of the problems and issues underlying the need for change in Louisiana's CVO business, operating and safety assurance environments.

3.0 Commercial Vehicle Operations Mission, Goals and Objectives - Details Louisiana's strategic vision for CVO and defines specific goals and objectives associated with this vision. This section also discusses national ITS / CVO objectives and explores the relationship of Louisiana's goals to these national goals. Chapter 3 also describes the state's business planning process and the guiding principles developed by the state's CVO / ITS Steering Committee to direct Plan development and evaluation of implementation alternatives.

4.0 Strategy for Achieving Louisiana's CVO / ITS Mission - Defines the current processes for CVO credentialing, clearance, safety assurance and supporting information exchange; outlines a series of planning scenarios, describing desired functionality and outcomes; assesses the changes required to bridge the gap between current and desired functionality; and provides an action plan for bridging that gap.

The action plan outlines the purpose, requirements, responsibilities, estimated cost and implementation schedule for each Plan initiative. Costs are not allocated to agency at this point, nor are full O&M costs described. In its next Plan update, Louisiana anticipates examining in more detail commercial alternatives available for electronic credentials

1.0 INTRODUCTION

verification, electronic credentialing, electronic funds transfer, etc. Until the state has more information about specific alternatives available, specific functionality of those alternatives and the ability of various alternatives to meet various agencies specific needs, the State does not feel it is appropriate to allocate costs to individual agencies or to attempt to accurately estimate O&M costs, as these costs will vary based on systems selected, timing of commercial availability of the preferred systems, etc. Subsequent revisions to the Plan will address these issues.

Where staffing requirements or specialized expertise are a potential issue in implementation of a particular action item, the limitation or need for specialized expertise is noted as part of the action item discussion.

5.0 Plan and Program Summary - Highlights the program of projects required to deploy and implement Louisiana's strategic vision for CVO; defines program costs and benefits and provides an overview of the proposed deployment schedule.

6.0 Implementation Strategy - Identifies the management activities required to implement the program and alternative funding strategies.

2.0 COMMERCIAL VEHICLE OPERATIONS IN LOUISIANA

2.1 Goods Movement in Louisiana

Louisiana's economy is dependent upon intermodal transportation. Almost 750 million tons of freight move into, out of, within and through Louisiana each year. Louisiana's transportation system includes six deep draft ports, which are among the largest in the US in terms of annual cargo tonnage, as well as 18 active shallow-draft ports and an extensive inland waterway system including the Gulf Intracoastal Waterway. The landside transportation network includes 16,660 miles of state highways, and 19 railroads operating 2,800 miles of track. Almost three-quarters of Louisiana's goods movements are transported by ship or barge. Fifty-two percent of Louisiana's landside freight movements are by truck, with the remainder moving by rail. Air freight accounts for 96,000 tons annually, less than one percent of total freight movements.

The trucking industry plays a significant role in goods movement in Louisiana, providing critical linkage between Louisiana's 19 railroads, 72 public airports, and 24 active ports, as well as transporting goods directly to the ultimate consumer. Trucks move 99 million tons of freight annually, more than 270,000 tons daily.

By the year 2020, vehicle miles of travel within Louisiana are forecasted to increase by 100 percent, from 74 million miles per day, to almost 150 million miles daily. Peak period congestion is expected to increase significantly as a result, particularly along I-20 from the Texas state line east to Monroe in the northern part of the state, and along the entire length of Interstates 10 and 12, which run east / west through the southern half of the state. The I-20, I-12 and I-10 corridors also serve as the state's primary truck routes, with trucks accounting for an average of 10 to 15 percent of total traffic in urban areas and 20 to 25 percent in rural areas. In some limited interstate segments, truck traffic comprises as much as 35 percent of total traffic volume.

During the 1990 to 2020 period, truck freight tonnage is expected to increase by 35 to 53 percent. Congestion and delays can already be a significant problem at some weigh stations during peak periods. Weigh station congestion can result in increased congestion and safety hazards for general traffic on the mainline roadway. Further, weigh station delays reduce motor carrier productivity, encourage weigh station bypass, and decrease enforcement staff's ability to identify and cite unsafe or illegal drivers or vehicles. As truck volumes and peak period weigh station congestion increase in the future, these problems will be exacerbated unless measures are taken to improve the operational efficiency of these facilities.

2.2 Trucking's Role in the State's Economy

Trucks supply almost 100 percent of the goods delivered to / shipped from the state's service and trade sectors, representing almost 50 percent of Louisiana's total employment. Louisiana's commercial fish and shellfish industry accounts for one quarter of the total industry nationally. It is one of the top five states in sugar cane, sweet potato, rice, cotton and pecan production, and is a large poultry producer. These industries rely almost exclusively on trucks to move their goods to market, as do the state's timber producers and much of its manufacturing market. Almost 60 percent of the trucks registered in Louisiana primarily service the agricultural, forestry, mining,

2.0 COMMERCIAL VEHICLE OPERATIONS IN LOUISIANA

manufacturing, service and trade industries. Almost 20 percent are used primarily in the construction industry.

Louisiana is home to more than 5,400 family-owned and corporate trucking firms, with more than 68,500 medium and heavy trucks registered in the state. In 1992, the trucking industry paid \$292 million in state and federal highway use taxes – more than a quarter of total highway use taxes collected in Louisiana. According to the Louisiana Motor Transport Association, trucking employed one of 11 workers in the state in 1993, with an annual payroll of more than \$3 billion.

2.3 State Role in Commercial Vehicle Operations

The State of Louisiana plays a vital role in commercial vehicle operations in three primary functional areas: regulatory and administrative functions, safety assurance and enforcement, and infrastructure / mobility provision and maintenance. The state plans, builds and maintains the state highway system that provides the primary thoroughfares for the motor carrier and motor coach industries. It manages the commercial driver licensing, commercial vehicle registration, fuel tax licensing / reporting / auditing and oversize / overweight permitting services; enforces commercial vehicle safety regulations and weight restrictions; and verifies compliance with licensing and registration requirements. Each of the state CVO functions is described in more detail below.

Exhibit 2-1. State Role in Commercial Vehicle Operations.

Agency / Entity Division	CVO Responsibility
Department of Transportation and Development (DOTD)	
Weights and Standards Program, Truck Permit Office	• Oversize / overweight permit issuance • 48-hour trip permit issuance on behalf of OMV
Weights and Standards Police (WASP)	• Enforcement of state laws limiting motor vehicle size and weight, including operation of fixed scale locations • Enforcement of vehicle registration and licensing, fuel tax compliance
Planning Division	• Plan development for the state's transportation network
Department of Public Safety and Corrections	
Office of Motor Vehicles (OMV)	• Commercial Driver's License issuance and renewal • Licensing and registration for intrastate commercial vehicles • IRP program administration
Louisiana State Police	• State traffic and criminal law enforcement

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Agency / Entity Division	CVO Responsibility
Transportation and Environmental Safety Section (TESS)	• MCSAP program administration • State traffic law enforcement • Operation of state's mobile scales and dual enforcement for state size and weight laws
Department of Revenue	
Excise Tax Division	• IFTA program administration, including license issuance and fuels tax collection
Public Service Commission	
Transportation Division	• SSRS program administration • Enforcement of operating authority requirements • Operating authority oversight for household goods carriers, passenger carriers and waste haulers

2.3.1 Regulatory / Administrative Functions

CVO regulatory and administrative functions include credentialing, permitting, transmittal of apportioned fees to other jurisdictions, fuel tax collection and distribution to other states, and commercial driver licensing. Each of these functions is described below.

Credentialing

Motor carriers must obtain a variety of credential types at the state level. *Interstate* carriers - carriers running vehicles in more than one state - must obtain the following registrations and operating authorities:

International Registration Plan (IRP) - The IRP registration is an apportioned vehicle registration for interstate carriers. Carriers select one state as their IRP base state. Carriers register their vehicles (power units and trailers) with this base state, and also declare all other states in which the vehicles included in that fleet will run, indicating how many miles will be run in the base state and each of the jurisdiction states. The state calculates the total fee due and then apportions out a pro-rated share of the fee to all other jurisdiction states. In Louisiana, the Office of Motor Vehicles, a division of the state's Department of Public Safety and Corrections, issues IRP registrations. The registration consists of a VIN-specific cab card, and a license plate which must be affixed to the vehicle.

International Fuels Tax Agreement (IFTA) - The IFTA registration process provides the interstate carrier with a fuels tax license. Like the IRP registration, carriers select one state as their IFTA base state. Carriers register with this base state, and also declare all other states in which they

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will incur fuels tax liability. Unlike IRP, which is a vehicle-based registration, the IFTA registration is carrier-based. Louisiana's Department of Revenue, Excise Tax Division, is responsible for administering the state's IFTA program. The IFTA credential consists of a carrier-specific license, a copy of which must be carried in each power unit operated by the licensed carrier, and two decals affixed to the outside of the power unit.

Single State Registration (SSRS) - The SSRS credential is a carrier-based registration for interstate operators. The purpose of the SSRS registration is to verify that the carrier has the proper insurance coverage in place. As with IRP and IFTA, the carrier selects a base state and declares the number of vehicles that it will operate in other jurisdictions or operating states. Fees for all jurisdictions are paid to the base state by the carrier. The base state then pays all other jurisdiction states the amounts due them. The Louisiana Public Service Commission's Transportation Division administers the state's SSRS program. The SSRS credential consists of a paper receipt which is copied and carried in each power unit operated by the registrant.

Intrastate carriers - Deregulated carriers running only in Louisiana must obtain an intrastate vehicle registration and license from the Office of Motor Vehicles in the Department of Public Safety and Corrections. The insurance check (SSRS equivalent) is performed at the time of registration and fuel taxes are paid at the pump, so no IFTA-equivalent registration is required. Regulated intrastate carriers such as household goods carriers, carriers hauling waste and passenger carriers must still register with the PSC. Exhibit 2-2 shows the number of credentials issued by Louisiana in 1997.

Exhibit 2-2. Credentials Issued by the State of Louisiana, 1997.

Credential Type / Responsible Agency		Number Credentials Issued in 1997
IRP - Louisiana Department of Public Safety and Corrections, Office of Motor Vehicles		
Power Unit Registrations		19,293
Commercial Trailer Registrations		811 (1)
Bus Registrations		2
Motor Carrier Accounts		4,593
Motor Coach Accounts		2 (2)
IFTA - Louisiana Department of Revenue, Excise Tax Division		
Motor Carrier Accounts		1,440
SSRS - Louisiana Public Service Commission, Transportation Division		
Motor Carrier Accounts		814

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Credential Type / Responsible Agency	Number Credentials Issued in 1997
Regulated Passenger Carriers - Louisiana Public Service Commission, Transportation Division	
Passenger Carrier Accounts	179 (2)
Intrastate Registrations for Deregulated Carriers - Louisiana Department of Public Safety and Corrections, Office of Motor Vehicles	
Commercial Truck Registrations	91,770 (3)
Commercial Trailer Registrations	285,257 (4)
For-hire bus registrations	1,240 (2, 5)

- (1) Most of Louisiana's IRP registrants choose to plate trailers using intrastate plates; only those trailers that will run in California are typically registered using an apportioned plate.
- (2) Note that motor coach operators are not a significant force in Louisiana's regulatory / administrative processes, given their minimal representation among vehicles / accounts registered; passenger carriers registered with the PSC include motor coach operators as well as van and taxi operators.
- (3) Includes all gravel haul plates, tow/wrecker plates, private (commercial) truck plates, farm, and forest plates issued to vehicles over 6,000 pounds.
- (4) Includes all one-year and four-year trailer plates issued to trailers over 1,500 pounds.
- (5) Includes all intrastate for-hire buses and vans.

At present, all of the credentialing is "paper-based", that is, carriers complete a paper application, attach required supporting documentation to the application and mail or hand deliver the application to the appropriate state agency. Agency staff reviews the application and supporting documents, contacts the carrier regarding any application errors, omissions, etc., and, when all errors have been corrected, manually enters the application data into the legacy system (hardware and software platform). The legacy system calculates the required fee. The state then mails a bill to the carrier for IRP registration fees, and upon receipt of certified funds, mails cab cards and license plates to the carrier. Because SSRS and first-time IFTA registration fees are relatively straightforward to calculate, carriers typically mail their payment with those applications. SSRS registrations are thus mailed out upon processing of the initial application, as are IFTA licenses and decals.

Transmittal of Apportioned Registration Fees to Other Jurisdiction States

Because IRP, IFTA and SSRS are apportioned registrations, where a carrier is paying registration fees for all jurisdictions to one base state, the base state must periodically transfer registration data and fees owed to other states. To accomplish this information and funds transfer, and to provide an audit trail, Louisiana prints IRP recaps and transmittals and IFTA and SSRS transmittals - reports indicating carrier registrations and registration fees received - on a monthly or bimonthly basis for each of the other IRP, IFTA and SSRS jurisdictions. These reports are mailed to the

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agencies responsible for IRP, IFTA and SSRS program administration in other jurisdiction states, along with a check for apportioned fees owed.

Fuel Tax Reporting / Collections

Louisiana-based IFTA-registered carriers file a monthly or quarterly IFTA tax report with the state, showing miles run in Louisiana and each jurisdiction state, fuel purchased in Louisiana and each jurisdiction state and fuel tax owed or credited. This is presently a paper-based process, with carriers reporting on a paper form, and the state data entering the report into the IFTA legacy system. Each month, the state prepares transmittals - monthly reports of tax payments received from Louisiana IFTA-registered carriers - and mails these transmittals along with a check for apportioned fuel tax owed to each of the other participating IFTA jurisdictions.

Commercial Driver Licensing

The Louisiana Department of Public Safety and Corrections, Office of Motor Vehicles is responsible for issuing and renewing commercial driver licenses (CDLs). CDL requirements cover both intrastate and interstate drivers. All requests for first-time Louisiana CDL licenses and requests for duplicate licenses are run through the national Commercial Drivers License Information System (CDLIS) to ensure that the applicant does not have another CDL in another state, does not have a suspended license or violations / convictions that would prevent him or her from obtaining the CDL. Renewals are issued accessing only the Louisiana database, as any violations / citations incurred during the year are forwarded to the home CDL state for posting. First-time applicants must also pass a knowledge and driving skills test prior to CDL issuance. All of Louisiana's 84 OMV field offices can issue / renew CDLs.

Permitting

Louisiana issues several types of vehicle-based permits which provide limited operating authority or authorization to run oversize or overweight for set time periods. When a vehicle is operating over the state's legal size or weight limits, it must obtain a permit from the Louisiana's Department of Transportation and Development's (DOTD) Weights and Standards Program, Truck Permit Office. This is typically a vehicle-specific permit, authorizing specified total weight, axle weights, and / or overhang, width, length or height dimensions on a specified route, with a specific start and end date.

Vehicles that are not IRP registered or base plated to run in Louisiana must obtain a 48-hour trip permit, which provides limited operating authority and registration in Louisiana. These permits are issued by the Office of Motor Vehicles and can also be issued on behalf of the OMV by DOTD's Truck Permit Office. Exhibit 2-3 shows the number of permits issued by Louisiana in 1996.

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Exhibit 2-3. Permits Issued by Louisiana in 1996.

Permit Type / Responsible Agency	Number Issued in 1996
Oversize	180,411
Overweight	94,705
Total OS / OW Permits	275,116

These permitting processes have been paper-based in the past, although the DOTD is presently working with a contractor to develop an automated Permitting, Routing and Bridge Analysis (PERBA) system for oversize / overweight permit issuance and routing.

2.3.2 Enforcement / Safety Assurance Functions

The State of Louisiana is responsible for enforcing the Federal Motor Carrier Safety Assurance Program (MCSAP), as well as state laws relating to commercial vehicle size and weight, and traffic operations. Enforcement responsibilities are dispersed in Louisiana.

MCSAP Enforcement

In the Surface Transportation Act of 1982, Congress established the MCSAP program. The program provides federal funds to states to monitor commercial carrier, vehicle and driver safety through roadside driver and vehicle inspections and compliance reviews conducted at carriers' facilities. The Louisiana State Police's Transportation and Environmental Safety Section (TESS) is responsible for MCSAP enforcement. The TESS unit currently has 37 officers with full-time MCSAP enforcement duties and 15 officers with part-time MCSAP responsibility. Officers with part-time MCSAP responsibilities have responsibilities for enforcement of hazardous waste requirements and can perform partial inspections.

Driver and vehicle inspections may be performed at fixed scales or any roadside location. TESS officers select which vehicles / drivers to stop for safety inspection based on a variety of formal and informal criteria. A number of inspections are random. Others are targeted. For example, an oversize or overweight vehicle cited at a fixed scale for not having the proper permit might be inspected more fully by the TESS unit. Alternatively, some detail of the vehicle, its operation or driver behavior might lead an officer to make an inspection decision. Compliance reviews may be conducted at an officer's initiative, at the request of a carrier, in response to complaints, or at FHWA request because of a poor crash record or safety rating. Compliance reviews are conducted by the TESS unit at the carrier's place of business.

The TESS unit has ordered and will begin operation of 19 laptop computers in early 1998. This will allow officers to enter results of inspections and compliance reviews directly into a database which can then be uploaded to SafetyNet and the federal Motor Carrier Management Information System (MCMIS). The state plans to provide all TESS officers with laptops and mobile communications capabilities by 1999. Exhibit 2-4, below, characterizes the TESS unit's operations in 1996 / 1997.

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Exhibit 2-4. TESS Unit FY 1996 MCSAP Operations.

Activity Type	Number in 1996 / 1997
Field Officers with MCSAP Responsibilities	37 Full-time; 15 Part-time
Safety Inspections Conducted:	41,221
• Level I	16,010
• Level II	22,450
• Level III	2,758
• Level IV	3
• Level V	0
Compliance Reviews Conducted	32
Vehicle Out-of-Service Violations Issued	10,926
Driver Out-of-Service Violations Issued	4,913
Registration-related Citations Issued	1,889
Mobile Scales Operated	32
Inspections at Mobile Scales	Averages 1,000 per month
Citations issued at mobile scales	Averages 800 reports per month, with 2 violations per report

In 1997, authority for operation of mobile scales moved from the state's DOTD to the TESS unit. The 32 mobile scales are used by the TESS unit in roadside inspections and weighings. As can be seen from Exhibit 2-4, the mobile scale operations are highly effective.

Regulatory Enforcement

The Louisiana DOTD is responsible for enforcing the state's commercial vehicle size and weight regulations, as well as checking vehicle and driver registrations and licenses. The DOTD's Weights and Standards Police (WASP) operate the state's 12 permanent or fixed scales, where the bulk of the size and weight enforcement activities occur. Ten of these are double locations, with a scale on either side of the roadway. Two are single locations. In 1996, the DOTD weighed more than 11,380,000 vehicles and found that only 0.16 percent of the vehicles weighed were out of the size and weight limits for which they were permitted. Only 0.003 percent of the vehicles weighed were issued registration-related citations. More than \$2 million was collected from citations issued by the DOTD at fixed scales in 1996. Results of 1996 fixed scale operations are illustrated below.

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Exhibit 2-5. Results of 1996 Louisiana DOTD Fixed Scale Operations

Fixed Scale Location	Total Commercial Vehicles Weighed, 1996	Oversize / Overweight Citations Issued, 1996	Registration-related Citations Issued 1996
LaPlace I-10	994,379	2,090	34
Kentwood I-55	722,256	2,042	23
Slidell I-10	944,262	2,305	55
Starks LA 12	104,911	477	15
Pineville US 71	8,679	49	15
West BR US 190	128,457	203	20
Baptist I-12	1,715,471	2,089	21
Toomey I-10	1,906,328	5,277	54
LaPlace US 61	159,829	144	29
Breaux Bridge I-10	1,842,155	547	7
Greenwood I-20	1,554,497	1,740	70
Delta I-20	1,298,920	1,068	5
Total	11,380,144	18,301	348

The state's Public Service Commission operates a Transportation Regulatory Enforcement unit with responsibility for enforcing operating authority requirements. PSC officers conduct most of their inspections at the state's fixed scales, but also have authority to operate statewide. In 1996, the Transportation Regulatory Enforcement unit conducted 55,914 inspections to verify status of carriers' operating authority and issued 6,376 violations.

Exhibit 2-6. Results of 1996 PSC Regulatory Enforcement Operations

	1996 PSC Inspections	1996 PSC Citations Issued	1996 PSC Citation Rate
All sites	55,914	6,376	11.4 %

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2.4 Problems and Issues for Commercial Vehicle Operations in Louisiana

Louisiana's commercial vehicle operations are highly efficient, within the confines of current CVO systems. Carriers are able to receive credentials in a timely manner when compared with similar processes in other states. Oversize / overweight permits are typically issued within three to six minutes of a phone request for permits. Commercial vehicle weight inspections typically take three to five minutes if permits and credentials are in order, or as much as 20 minutes if a citation is issued. TESS vehicle and driver inspections can typically be completed within 7 to 22 minutes, depending upon the type of inspection being conducted. PSC inspections can typically be completed within only six to seven minutes if no violations are found.

Inefficiencies in Louisiana's CVO operations are not related to how state personnel implement the existing systems, but are instead a by-product of the systems themselves. Examples of inefficiencies inherent in the existing systems, and opportunities to increase efficiencies using proven technologies, are highlighted below and are examined in more detail in Section 4 of the Business Plan.

2.4.1 Administrative Processes

As in most states, a number of inefficiencies are built into Louisiana's paper-based IRP, IFTA, and SSRS application submittal and processing systems, as well as in the IFTA tax reporting process. While each of the administering agencies has developed or purchased computer systems to assist in application processing, fee calculation and credential issuance by the state, carriers must still submit hard copy applications, which must be checked by state staff and manually data-entered into the state's application processing systems. Checks must be processed and cleared, and credentials are then mailed back to the motor carrier. SSRS applications can usually be turned around in two days. IFTA credentials are typically processed within two days to two weeks, depending on mail volume. IRP applications, which are vehicle-based and thus considerably more complex than either IFTA or SSRS, typically require six weeks to process. Application errors and data omissions can slow down the process considerably.

Carriers cite administrative inefficiencies - the time required to prepare and submit credential applications and supporting documents and rectify clerical errors (both carrier errors as well as state data entry errors), as well as the delay in getting new vehicles on the road - as the number one problem in their relations with the state. State staff finds itself working to meet increased demands for services in the face of fixed resources.

A variety of CVISN-compliant automated credentialing systems are currently under development and are being tested and refined in other states. Automated systems allow the motor carrier to data enter all required application data. The automated system then performs a variety of checks to ensure accurate and complete application information. The system calculates required fees, allows the carrier to submit fees electronically, and electronically routes the application information and associated fees to the appropriate state agency, where the data can be uploaded to the existing legacy system for processing. These systems can be designed to automatically issue OS / OW and trip permits, intrastate registrations, IRP, SSRS and IFTA credentials back to the carrier

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within minutes, providing the carrier with the ability to obtain required credentials 24 hours a day, seven days a week, and to obtain these credentials within minutes rather than days or weeks. These types of systems can significantly reduce error potential, on both the state and carrier side, eliminate state data entry requirements, provide for immediate fee payment and processing and significantly increase the state's administrative capacity for application review, processing and customer service provision within current staffing levels. The Louisiana DOTD's Truck Permit Office is in the process of developing an automated system for issuing oversize / overweight permits to take advantage of these types of administrative efficiencies.

2.4.2 Enforcement Processes

At a cost of over \$4 million annually, the state is currently pulling more than 11 million commercial vehicles out of mainline traffic for size and weight inspections, and finding only 0.16 percent of those vehicles out of compliance. While each vehicle is stopped at a weigh station for only three to five minutes, the total cost to industry of weight inspections is almost \$38 million annually (assuming average CVO operating costs of \$50 per hour, with a total of 758,676 hours of vehicle weight inspection time).

Delays at weigh stations can be significant during peak periods. It is not unusual for weigh station traffic to back up onto the mainline during peak periods, creating a safety hazard. At this point, the WASP closes the inspection facility to further traffic to minimize hazard potential, allowing motor carriers to bypass inspection facilities without a weight or safety inspection or credential check.

Automation of scales can provide a significant cost savings to both states and carriers alike, and can improve compliance by providing WASP officers with improved capabilities to verify registrations and licenses. At present, credentials are typically not verified at a weigh station unless a driver is called into the scale house. Weigh-in-motion (WIM) scales measure vehicle weights at mainline speeds. Mainline WIMs, coupled with electronic screening for vehicle / carrier identity and legality, enable enforcement personnel to weigh and clear vehicles without requiring them to stop at fixed scales, reducing both demand on enforcement resources and delays to safe and legal carriers. Further, mainline screening reduces potential for peak period traffic backup at scales, thus reducing the potential for safety hazard and increasing facility capacity to screen 100 percent of CVO traffic for both weight and credential requirements.

Louisiana's TESS unit currently performs more than 41,000 MCSAP inspections annually. The PSC performs more than 55,000 insurance inspections annually. At present, inspection selection decisions are made randomly, or based on the operating behavior or appearance of a particular vehicle. TESS and PSC officers making the inspection selection decision are highly trained and experienced and are making the best decisions possible within the limited range of information available to them. However, because TESS and PSC officers are not currently privy to carrier / vehicle / driver safety status information at roadside, their ability to focus inspections on higher risk carriers is limited. As a result, total state costs per MCSAP violation issued are relatively high - more than \$91.00 per violation issued.

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Technology offers the potential to target inspection selections toward higher risk carriers by making safety and credential status information available directly to roadside. By increasing the number of higher risk carriers / vehicles / drivers stopped for inspection and reducing the number of safe and legal carriers / vehicles stopped, Louisiana's TESS unit expects to identify more violations with the same number of stops, thus lowering its unit cost per violation issued, reducing inspection delays for safe and legal carriers and improving overall carrier compliance and operational safety.

2.5 Innovations Currently Underway in Louisiana's CVO Operations

Over the past twelve months, Louisiana has implemented or paved the way for a variety of changes in its CVO operating environment. These include the following:

- A pilot project is underway to install WIMs at the Breaux Bridge fixed scale on I-10 to allow vehicles to be weighed at mainline speeds.
- Computer systems at all of the fixed scales are being upgraded to improve information flow between weigh stations and central systems and among weigh stations.
- The state is negotiating with Mississippi to allow joint ports operation at the Louisiana / Mississippi border, reducing operational costs for both states and cutting the number of stops required by carriers at the border in half.
- The state has established a physical one-stop credentialing center in Baton Rouge, where carriers can obtain SSRS, IFTA, IRP and other credentials, as well as oversize / overweight permits at one location. The state is considering expanding this program, possibly establishing satellite one-stop facilities.
- The DOTD's Truck Permit Office is developing an automated oversize / overweight permitting, routing and bridge analysis system that will allow carriers to submit permit requests electronically. The automated system will route the load, conduct required bridge analysis and electronically issue a permit back to the carrier.
- Louisiana is a pilot state for the IRP Clearinghouse, which provides for automated transfer of monthly recap and transmittal information among IRP states, as well as electronic transfer of associated apportioned fees due to other states.
- In the 1997 legislative session, the state passed enabling legislation allowing third parties to issue credentials, paving the way for both automated and third party credentialing.
- The TESS unit has acquired 19 laptops for use in MCSAP inspections in 1998 and is planning to acquire 18 more in 1999 for 100 percent TESS unit laptop accessibility. Enhanced radio communications systems are being pilot tested to provide direct links from mobile units to central data systems.
- The state is participating in the COVE Electronic Data Sharing Project, a multi-state effort funded through the FHWA's ITS program. Through this project, Louisiana will data map IRP,

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IFTA, SSRS, OS / OW credential status and administrative information, as well as vehicle and driver out-of-service violation data from its legacy systems to a standard data dictionary, and then to the CVISN X12 standard for electronic data exchange. The project also involves a demonstration test for direct state-to-state electronic exchange of some credential status data with other COVE states, assisting in CVISN readiness for the longer term.

- Variable message signs will be installed along some segments of I-10 to inform drivers of weather-related speed limit changes and upcoming congestion / alternate routes.
- The state, carrier community and local metropolitan planning organizations (MPOs) have jointly established several incident management task forces to evaluate options for improving the public sector response to hazardous material incidents, general traffic incidents and construction-related traffic management.
- A Motor Carrier Advisory Committee (MCAC) has been legislatively established in Louisiana. The MCAC includes representatives of all state agencies involved in CVO permitting, credentialing, clearance and safety assurance, as well as LMTA representation. The MCAC will be involved in design, development and deployment of the CVO / ITS program outlined in this Plan by providing a forum for multi-agency discussion, evaluation and recommendations regarding needs, alternatives and actions. A series of MCAC subcommittees will be established to assist in situation analysis and provide recommendations regarding such implementation areas as automated credentialing, electronic payment options, automated screening, etc. Each regulatory, credentialing and / or taxing agency will ultimately be responsible for the decisions and implementation actions affecting that agency, but the MCAC provides a forum for multi-agency discussion and coordination, thus maximizing the opportunities for integrated implementation activities. The private sector will be involved in the MCAC via the advisory subcommittees.

2.6 Role of the Business Plan in Louisiana's CVO Operations

The business planning process provided a forum to bring all of the players in Louisiana's commercial vehicle operating environment together to identify problems and issues for state agencies, motor carriers and motor coach operators alike, to evaluate the need for change and the preferred mechanisms for implementing that change. The Plan provides a mechanism through which to integrate the CVO / ITS initiatives Louisiana has already undertaken in a cohesive overall CVO / ITS program that meets the needs of both the state and industry, and takes advantage of technology and infrastructure investments regionally and nationally.

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3.1 ISTEА and Intelligent Transportation Systems

The Intermodal Surface Transportation Efficiency Act (ISTEA) provides authorization for federal aid to highway and transit programs from Fiscal Year (FY) 1991 through (FY) 1997. Included within ISTEA are funds for development of a national intelligent transportation systems (ITS) program. Within the national ITS program, the commercial vehicle operations (CVO) component focuses on the operations associated with moving people and goods via commercial vehicles over the nation's highways. The national ITS / CVO program involves applying advanced and emerging technologies to CVO to streamline the administration of motor carrier regulations, focus safety on high-risk carriers and reduce congestion costs for motor carriers and states. The national program is developing capabilities in four broad areas:

- *Safety Assurance* - These are programs and services designed to assure the safety of commercial drivers, vehicles and cargo, as well as the general traveling public. These programs include automated roadside safety inspections and carrier reviews, safety information systems and onboard safety monitoring.
- *Credentials and Tax Administration* - These programs and services are designed to improve the efficiency and effectiveness of deskmade procedures. They include electronic application, fee payment and issuance of credentials; electronic transfer of periodic accounting information and pro-rated fees among states; as well as automated fuel tax reporting and filing.
- *Electronic Screening* - These programs and services are designed to facilitate verification of size and weight compliance and registration status. They include information exchange to provide for remote vehicle identification and credentials / permit verification, as well as weigh-in-motion scales capable of weighing vehicles at mainline speeds.
- *Carrier Operations* - These programs and services are designed to reduce congestion and manage the flow of commercial vehicle traffic. The public sector role is focused on incident management and travel advisory services, with the private sector leading deployment of fleet and vehicle management technologies that can improve carrier safety and productivity.

Each of these program areas requires a network of information systems that can routinely exchange and access CVO credential and safety information.

3.2. Commercial Vehicle Information Systems Network (CVISN)

The Commercial Vehicle Information Systems Network (CVISN) is being developed by the FHWA to provide the information infrastructure required to support the safety assurance, credentials administration, electronic screening and carrier operations functions that make up the national ITS / CVO program. CVISN is not a new system or database, but rather a way for existing systems to exchange information electronically through standards developed in CVISN and commercially available communications systems.

3.3 Louisiana's CVO / ITS Business Planning Process

CVISN provides the technological infrastructure, electronic data exchange standards and communication protocols that states will need to move from paper-based transactions and ad hoc

3.0 LOUISIANA'S CVO MISSION, GOALS AND OBJECTIVES

enforcement to information-based decisions. The business planning process is the first step in providing the organizational and institutional framework required to accommodate and implement the opportunities for technological change brought about by CVISN. Louisiana's business plan was developed in five stages as follows:

1. Participation in the COVE Institutional Barriers Study.
2. Establishment of a CVO Steering Committee.
3. Goals identification and needs analysis.
4. Alternatives identification and evaluation.
5. Plan preparation.

Each of these stages is summarized below.

3.3.1 Participation in the COVE Institutional Barriers Study.

Louisiana was one of seven states participating in a study of institutional barriers to efficiency / effectiveness of CVO operations in the early 1990s. The study, completed in 1994, required the state to form a working group of state agencies and industry representatives involved in commercial vehicle operations. The working group identified state and carrier roles and responsibilities in CVO credentialing, clearance, safety assurance and tax administration, analyzed strengths and weaknesses of the existing CVO processes, and developed a number of recommendations to improve the efficiency and effectiveness of the state's CVO operations. Many of the state's ongoing CVO / ITS initiatives were undertaken in response to issues and strategies identified through the original COVE study.

3.3.2 Establishment of a CVO Steering Committee.

Louisiana's CVO / ITS Steering Committee includes the same agencies, and in many cases, the same staff, involved in the original COVE study. The Steering Committee's role in the planning process was threefold:

- To develop a strategic vision for the commercial vehicle operations within the state;
- To identify the technological and institutional changes necessary to implement that vision;
- To evaluate implementation alternatives in terms of specific state and agency resources and requirements and to select the implementation program that could provide for meaningful change given anticipated financial and organizational limitations and opportunities.

The Steering Committee includes representatives from the business and information systems areas of the organizations highlighted on the next page in Exhibit 3-1.

LOUISIANA CVO / ITS BUSINESS PLAN

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Exhibit 3-1. Louisiana CVO / ITS Business Plan Steering Committee Membership

Agency / Entity Division	Steering Committee Members
Department of Transportation and Development (DOTD)	
Weights and Standards Program, Truck Permit Office	Mr. James B. Norman, Weights and Standards Enforcement and Vehicle Permits Administrator
Weights and Standards Police (WASP)	Major Mac Linton, DOTD, WASP
Louisiana Transportation Research Center (LTRC)	Dr. Babak Naghavi, Technology Transfer Manager
Information Systems Division	Mr. Dominic A. Cali, Information Systems Director
Other DOTD Divisions	Mr. Lance Goodson, Mechanical Design Engineer Dr. Eric Kalivoda, Intermodal Transportation Planning Engineer
Department of Public Safety and Corrections	
Office of Motor Vehicles (OMV)	Ms. Kay Covington, Undersecretary of OMV Mr. Rick Carr, Data Processing
Louisiana State Police	
Transportation and Environmental Safety Section (TESS)	Captain Joey Booth Lt. Gary Le Blanc Lt. Tim Sharkey Sergeant Morris Beverly Mr. Paul Flemming, Data Processing
Weights and Standards	Captain Cleve McCall
Public Service Commission	
Transportation Division	Ms. Martha Powell, Director of Transportation Mr. William Withers, Assistant Director of Transportation
Management and Finance Division	Mr. Scott Beatty, Information Systems
Department of Revenue	
Excise Tax Division	Mr. Sam D. Losavio, Tax Director Mr. Greg Montagnino, Information Services

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Agency / Entity Division	Steering Committee Members
Louisiana Motor Transport Association	
Executive Director's Office	Ms. Cathy Gautreaux, Executive Director
Carrier Focus Group	13-member carrier focus group
Federal Highway Administration	
Office of Motor Carriers, Louisiana Field Office	Mr. Sterlin Williams, State Director Mr. Tom Walker, State Program Specialist
FHWA Louisiana Division	Mr. Seve Serna

3.3.3 Goals Identification and Needs Analysis

The goals, objectives and guiding principles contained in the Plan were developed jointly by and with the full support of state agency representatives responsible for administering and enforcing Louisiana's CVO rules, regulations and processes, and in cooperation with the state's motor carrier interests through the LMTA.

The CVO / ITS Steering Committee met monthly from June through August, 1997, to identify a strategic mission or vision for commercial vehicle operations in Louisiana. In these working sessions, a structured decision process, involving workshops, focus groups and individual interviews with state agency staff and motor carriers, was used to identify and prioritize the state's CVO goals and objectives. A set of guiding principles was also developed by the Steering Committee to guide both plan development and the identification and evaluation of alternative program implementation options.

Strengths and limitations of existing CVO processes were evaluated by Steering Committee members to identify what worked well in relation to the state's overall CVO goals and objectives, and where changes were required to achieve the desired outcome.

3.3.4 Alternatives Identification and Evaluation

From August through October, 1997, the Steering Committee evaluated a series of implementation actions in relation to the goals and objectives established, as well as the guiding principles defined earlier in the planning process. In late October, Steering Committee members developed the preferred program of deployment activities to achieve the state's CVO objectives.

3.3.5 Plan Preparation

The preferred implementation program was documented in a draft plan for Steering Committee review in November and December, 1997. Upon full Steering Committee approval, the final draft

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was then reviewed by the Kentucky Transportation Center, the Southeast Mainstreaming Region's Regional Champion, and was subsequently reviewed and endorsed by the Secretaries of the DOTD, Department of Public Safety and Corrections, Department of Revenue and Public Service Commission in early 1998.

The state views the Plan as a living document. The Plan will be amended over time to reflect changes in the CVO operating and regulatory environment, implementation of the state's CVO / ITS program, and revisions to that program to reflect changing opportunities regionally and nationally. At a minimum, the Plan will be updated to reflect environmental or program changes every other year. The Plan may be amended more frequently at the request of the MCAC or the DOTD, LPSC, Department of Revenue or Department of Public Safety.

3.4 Louisiana's Mission for Commercial Vehicle Operations

Louisiana seeks to improve the efficiency and effectiveness of CVO business and operational functions in the state. This overall mission includes three discrete elements designed to address priority needs as identified by state and industry stakeholders. These elements, in priority order, include: 1) increasing administrative productivity of both the private and public sectors; 2) maximizing operational safety and productivity through improved compliance and targeted enforcement; and 3) to improve freight flows by increasing CVO operational productivity. ITS - Intelligent Transportation Systems - are viewed as one of several key tool sets available to the state to help implement its overall vision of improved efficiency / effectiveness.

3.5 CVO / ITS Goals / Objectives

1. Improve Administrative Efficiency

Specific objectives include:

- 1.1 Improve state and carrier productivity and carrier compliance with regulatory requirements by increasing the state's customer service orientation to reduce the steps, paper, dollars or people required to fulfill a regulatory obligation, by both the public and private sectors.
- 1.2 Improve safety compliance and carrier accountability by supporting electronic clearance and targeted enforcement activities through timely, current, accurate information provision.
- 1.3 Create a regulatory environment which encourages establishment of additional motor carrier terminal operations in Louisiana.

Specific related performance objectives include:

- Utilize technology to maximize state credentialing staff and budget resources by decreasing resources expended on routine administrative tasks such as credential application review and data entry, allowing skilled staff to focus on "exceptions" and other more complex activity areas such as audit.
- Increase IRP, IFTA and SSRS revenues as a result of improved compliance.

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- Significantly reduce the costs of compliance to motor carriers by using technology such as automated credentialing to assist carriers in reducing the time it takes to get safe and legal vehicles on the road.

2. Maximize Operational Safety / Productivity

Specific objectives include:

- 2.1 Target and focus safety assurance resources and activities on unsafe and illegal carriers, to improve safety, reduce crashes, improve safe and legal carrier operating productivity, and reduce public and private sector unit costs per violation / citation issued.
- 2.2 Improve the operating productivity of safe and legal carriers and maximize the efficiency and effectiveness of enforcement resources by allowing for mainline screening and bypass at key locations throughout the state.

Specific related performance objectives include:

- Reduce carrier stops at joint ports by a minimum of 50% after full joint port consolidation / operation.
- Provide mainline screening capabilities and / or mainline bypass capabilities using quality controlled sampling at all fixed scales.
- Provide 100% of officers with MCSAP responsibilities access to automated inspections selection systems / inspection reporting within four years.
- Decrease non-compliance through improved inspection selection capabilities.
- Reduce the commercial vehicle crash rate.
- Reduce motor carrier fines resulting from inaccurate scale readings.

3. Improve freight flows by Increasing CVO Operational Productivity

Specific objectives include:

- 3.1 Maintain and enhance system quality and mobility on priority freight corridors.
- 3.2 Increase available funding dedicated to freight flow mobility improvements.

Specific related performance objectives include:

- Reduce the cost of construction-related and incident-related delay to the motor carrier industry as a result of improved construction and incident management protocols.
- Increase the share of Transportation Trust Fund dollars that are returned to the transportation system.

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3.6 Guiding Principles

A set of guiding principles was developed by the Steering Committee, to guide both Plan development and evaluation of implementation alternatives. Guiding principles for Plan development include:

1. The overall approach to Plan development will balance organizational change, "low tech and no tech" solutions and appropriate ITS / CVO technology to achieve greater efficiency and effectiveness for all CVO stakeholders, including motor carriers, motor coach operators, the traveling public and other stakeholders.
2. Accommodate meaningful change, within the bounds of financial realism. As such, the Plan should reflect current and anticipated funding levels, taking into account the potential for special state and federal appropriations, and potential for new, increased and redistributed revenues resulting from changes in the dedications to the state's Transportation Trust Fund.
3. Address both long and short term needs and implementation requirements, focusing on lower cost / higher return activities in the short-term, with higher cost / high return activities phased in over the longer term.
4. Time significant investment in new technologies with stabilization and standardization of the technology, communication protocols, and standards for electronic data interchange.
5. Adopt only standards and technologies that are accessible to *all* carriers in *all* regions.
6. Use data exchange methods that ensure data integrity and security.
7. Integrate CVISN systems / processes into state process plans for CVO information exchange.
8. Use CVISN architecture with open standards for electronic information exchange among state systems, commercial vehicle operators and other authorized parties.
9. Integrate training and maintenance requirements in the evaluation of alternative approaches to goals implementation.

Guiding Principles for evaluation of alternative options for Plan / program implementation include:

1. The value-added of Plan activities should exceed the cost to implement those activities.
2. Focus on activities with multiple benefits / applications.
3. Focus on activities that add value *both* for the state and motor carriers / motor coach operators.
4. Proven, tested technologies are generally preferred over emerging / untested approaches.
5. Provide for interoperability in adopted standards and technologies.
6. Focus on projects / implementation activities that contribute to development of a "critical mass" at the corridor, regional or national level. For example, one automated port is an interesting demonstration project. Automated ports throughout a regional travel corridor or truck shed can provide significant operating efficiencies for both carriers and states.

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4.0 STRATEGY FOR ACHIEVING LOUISIANA’S CVO / ITS MISSION

4.1 Overview

This Chapter defines the program that was developed to address Louisiana’s CVO / ITS mission, goals and objectives. The basic program components are highlighted in Section 4.2. Each of the program elements is then described in more detail in Sections 4.3 through 4.5, with a summary of current processes, desired outcomes and an action plan for achieving desired outcomes. The integrated deployment program, with associated timelines and budgets, is defined in Chapter 5. Program funding scenarios are included in Chapter 6.

4.2 Program Framework

Louisiana’s CVO / ITS program includes the three interrelated goal areas and associated program elements as outlined in Exhibit 4-1. Program elements include “no-tech”, low-tech and technology-based applications to address priority needs that were identified by state and industry stakeholders in the business planning process.

Exhibit 4-1. Louisiana CVO / ITS Program Goals and Associated Program Elements.

Goal Area	Associated Program Elements
Increase Administrative Efficiency	• Streamline Credentialing / Tax Filing Requirements
	• Initiatives to Improve Motor Carrier Compliance
	• Electronic Credentialing / Tax Filing
	• Electronic Information Exchange
Maximize Operational Safety / Productivity	• Increase Efficiency of Existing Scale Operations
	• Electronic Clearance
	• Information-based Safety Assurance
	• Commercial Vehicle Rest Areas
Improved Freight Flows	• Mobility Improvements
	• Increase Funds Available for Mobility Improvements

Implementation of many of the program elements relies to some degree upon development of new business procedures and automated information exchange, requiring process re-engineering, new information systems linkages or networks, and leveraging national and regional investments in new technologies. The program includes a series of low-tech and “no-tech” components, which

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can be immediately undertaken, independent of any technology-based initiatives. However, these low-tech / no-tech components support and, in some cases, pave the way, for technology-based initiatives to follow. The technology-based initiatives build upon and leverage ITS / CVO activities and technologies underway regionally and nationally and conform to the national ITS / CVO principles, standards and protocols including:

- Open, modular and adaptable CVISN-compatible information systems architecture;
- Information exchange processes that ensure the integrity and security of data exchanged;
- Application of ANSI standards for unique carrier, vehicle and driver identification codes;
- Use of standard X12 transaction data sets and electronic data interchange (EDI) processes;
- Conformance with uniform transponder Dedicated Short Range Communication (DSRC) standards as they are defined; and
- Conformance with CVISN communication protocols in support of automated information exchange.

Each of the goal areas and associated program elements is discussed below in greater detail.

4.3 Administrative Efficiency

Improving administrative efficiency is the highest priority goal area for state agencies and motor carriers alike. As outlined in Chapter 2, administrative processes involving motor carriers include required annual motor carrier IRP, SSRS and IFTA registrations and renewals, intrastate registrations and renewals, monthly or quarterly IFTA tax reporting and payments, and vehicle-based permits providing limited operating authority (48-hour trip permits) or authorization to run oversize or overweight (OS / OW permits). Commercial drivers obtain and renew commercial driver licenses. States exchange monthly recaps and transmittal reports and payments with other IRP, IFTA and SSRS jurisdictions.

4.3.1 Inefficiencies in Current Process

As described previously, Louisiana's credentialing, permitting, tax filing and recap / transmittal processes are currently paper-based, resulting in a number of inherent inefficiencies for both the state and carriers. Some of the disadvantages or inefficiencies associated with current administrative processes from the state's perspective include:

- The potential for carriers to submit incomplete applications or incorrectly completed applications requires highly trained staff to review each line item of an application for routine errors. Where errors / omissions are encountered, additional staff time is required for follow-up and correction, or return of the application to the carrier if phone follow-up is unsuccessful;
- Supporting documentation also must be reviewed and matched with individual applications;
- Hard copy applications must be data entered into the state's legacy systems, requiring additional staff time, with the associated potential for data transcription errors;

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- Accompanying registration payments, typically by check, must be processed separately, usually by a separate section. Clearance of the payment instrument requires a subsequent data entry or process;
- Monthly recaps and transmittals require generating and printing separate reports for each participating jurisdiction, reconciling payments cleared with payments covered in the report, submitting check requests to the accounting unit for each jurisdiction state, receipt and reconciliation of the hard copy checks from the accounting unit, and preparation and mailing of recap / transmittal and payment packages for each participating jurisdiction;
- Each credentialing agency has a computerized database showing the registration status of all Louisiana-based carriers and vehicles. The PSC data enters the SSRS registration status of all carriers based in other jurisdictions but running in Louisiana. The IRP and IFTA units maintain hard-copy recaps and / or transmittals showing the registration status of all carriers and vehicles that are based in other states but IRP and IFTA-registered to travel in Louisiana. However, none of this information is currently available to enforcement personnel except via the telephone or dispatch contact during regular business hours.

From the carriers' vantagepoint, associated inefficiencies include:

- Access to credentialing services is generally limited to Monday through Friday, from 8:00 a.m. to 5:00 p.m. A vehicle which is stopped at a port in Louisiana on a Friday night because the driver has lost his or her credential book, is out of commission until the following Monday morning. With operating costs averaging \$50 per hour, and shippers paying for on-time delivery, idle vehicles can significantly impact carriers' profit margins.
- The turn-around time for credential issuance ranges from several minutes for some OS / OW permits to as much as six weeks for IRP credentials. Carriers would like to minimize the turn-around time for all credentials, to get new vehicles on the road in a matter of minutes rather than weeks;
- Routine carrier errors are easy to make on a hard copy form, and can significantly increase turn-around time;
- State data entry errors can invalidate a credential;
- Requirements for certified funds such as cashiers' checks can be cumbersome and can slow down the application process;
- Some supporting documentation requirements are difficult to comply with, or may be difficult to produce for every vehicle in a fleet at the time of registration / renewal;
- Some supporting document or application information requirements do not appear to serve a valid purpose; information is required because "it has always been required";
- Some credentialing or permitting requirements are confusing, ambiguous or contradictory, and it can sometimes be difficult to find a consistent interpretation, as different state experts will provide different answers / interpretations.

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The program elements associated with increasing administrative efficiency are designed to address these problems.

4.3.2 Administrative Efficiency - Planning Scenario

Under the planning scenario, or desired state, credentialing, permitting and tax filing requirements would be streamlined. Any unnecessary requirements would be eliminated. Unproductive requirements would be modified to better meet both state and carrier needs. Rules and statutes regulating CVO credentialing, permitting and tax filing would be clear and consistent.

Credentialing and permitting systems would be automated. Motor carriers with access to a PC, modem and a phone line would enter all required application information using a "Carrier Automated Transaction" (CAT) system. The CAT system would check the application information for accuracy and completeness, calculate fees, and would then electronically transmit the application information along with any required payment to the appropriate state agency using the Internet or a Value Added Network (VAN). The carrier would be able to obtain an annual or temporary credential or permit within minutes.

On the state end, the automated credentialing or permitting system would upload the carrier application information to the appropriate legacy system(s). Both application data and electronic payment information would be uploaded and processed. The application information would be complete and free of routine errors as the CAT system would already have checked for these items and would not allow the application data to be transmitted to the state with these errors.

Monthly IRP recaps and IRP, IFTA and SSRS transmittals and associated payments would be automated, using the national clearinghouses. Recaps, transmittals and payments would be exchanged electronically and payments would be netted out by the clearinghouse.

Finally, the vehicle and carrier credential status information residing in the IRP, IFTA, SSRS and OS / OW legacy systems, and the drivers license information residing in the CDL database would be available to enforcement staff, not only in Louisiana, but in any state desiring to access information about a particular carrier, vehicle or driver. Louisiana's legislatively established Motor Carrier Advisory Committee (MCAC), whose membership includes state agencies involved in CVO operations and enforcement, as well as a cross section of the motor carrier community, will be a key force in designing, developing, testing and implementing the projects required to move from the current state to the desired state.

Exhibit 4-2, shown on the following page, summarizes the program of projects required to make this planning scenario the operating scenario. Implementation actions and budget required to implement and deploy these activities are examined following Exhibit 4-2.

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Exhibit 4-2. Program Elements Associated with Increasing Administrative Efficiency

Program Element Designed to Improve Administrative Efficiency / Associated Requirements	Regional / National Activities / Technologies Leveraged (1)
1.0 Streamline Credentialing / Tax Filing Requirements	
1.1. Streamline Forms, Supporting Document Requirements, Processes 1.2. Revise statutes / administrative rules to resolve conflicting / ambiguous CVO credentialing, permitting or tax reporting / filing requirements	• Other states' methods for streamlining credentialing, including HVUT verification
2.0 Initiatives to Improve Motor Carrier Compliance	
2.1. Position the Ongoing Motor Carrier Advisory Committee as an ITS / CVO Advisory Committee 2.2. Develop a regulatory handbook outlining both state and federal CVO regulatory requirements 2.3. Develop a state CVO Web site, with information on regulatory requirements (handbook), contact lists, permit and credential applications and tax filing forms, etc. 2.4. Develop a unique carrier identification system for interstate and intrastate motor carriers (Uniform Carrier Registry) and modify credentialing processes and associated legacy systems to capture unique identifiers	• Follow conventions in development by CVISN pilot states
3.0 Electronic Credentialing	
3.1. Review / revise administrative rules / statutes to pave the way for automation of CVO business functions; 3.2. Evaluate / acquire Carrier Automated Transaction (CAT) Software 3.3. Develop capabilities to upload carrier application data to existing legacy systems (Credential Interface (CI)) software 3.4. Implement associated electronic payment options (credit card, electronic funds transfer (EFT), debit card capabilities, etc.) and linkages to accounting systems 3.5. Add CAT access to State CVO Web page	• Coordination with other states with automated credentialing / tax filing processes in place • Commercially available, CVISN compatible CAT systems and CIs compatible with Polk IRP, VISTA IFTA

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Program Element Designed to Improve Administrative Efficiency / Associated Requirements	Regional / National Activities / Technologies Leveraged (1)
4.0 Electronic Information Exchange	
4.1. Automation of credential recap, transmittal and associated fee transfers	• National Clearinghouses (IRP and IFTA) • Standards, protocols, communication links developed by Polk and VISTA (Louisiana's IRP and IFTA service providers) to facilitate national clearinghouse linkages

Each of these initiatives is described in some detail below.

4.3.2.1 Initiatives Associated with Streamlining Credentialing / Tax Filing Requirements

1.1 - Process / Forms / Supporting Documents Requirements Analysis

Purpose: The purpose of this initiative is to improve the efficiency of the existing regulatory process prior to taking on new initiatives such as automated credentialing. This ensures that the state is automating already efficient processes.

Requirements: Agencies should conduct a "zero-based" review of forms, processes and supporting document requirements to identify real needs versus those things that are done more as a result of past practices and policies.

In addition, agencies can use this review process as the initial phase of re-engineering that will be required for implementation of electronic credentialing. Some credentialing processes require verification of paper forms prior to credential issuance, such as verification of the Heavy Vehicle Use Tax (HVUT) payment prior to IRP registration or insurance verification under SSRS and intrastate registration. These types of requirements can be documented, and ways to meet these requirements within an automated system environment can be evaluated.

Responsibilities: The Motor Carrier Advisory Committee shares responsibility for implementation of this action item. Each credentialing / permitting agency will have primary responsibility for reviewing / revising its own requirements and processes. The MCAC will serve as a

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review forum for the full range of recommendations. The full MCAC will establish appropriate subcommittees to solicit input at the beginning of the process, and comments on the proposed slate of revisions.

Cost: This is a low cost undertaking, budgeted at \$50,000 (spread over four agencies). Each agency's share is included within the general operating budget.

Implementation Timing: The requirements analysis can be undertaken in 1998, and is independent of other implementation activities.

1.2 Statutory / Administrative Rules Revisions

Purpose: In addition to seeking better ways to operate within the existing regulatory environment, carriers and state agencies alike are interested in improving the regulatory framework itself. Conflicting or ambiguous regulatory requirements can make carrier compliance difficult. This review would serve to identify and eliminate or modify these requirements to better serve the needs of the regulatory community, as well as regulated carriers and motor coach operators.

Requirements: This project would be undertaken concurrently with statutory and administrative rules reviews to pave the way for automation of existing CVO processes (Initiative 3.1) , review of CVO operating limitations / restrictions (Initiative 9.4) and review of rules / statutes to determine the potential for redirecting a larger share of highway user fees to the state's Transportation Trust Fund (Initiative 10.1). Implementation of this initiative will likely require legislative action.

Responsibilities: Each credentialing, taxing and / or regulatory agency and their respective legal staff is ultimately responsible for identifying which statutes / rules are in need of revision, and the type and extent of revisions to be conducted. The MCAC will provide a forum for multi-agency discussion, review and recommendation regarding desired changes. Consultant assistance may also be required, both to review existing state statutes / rules and provide expert advice regarding approaches undertaken by other states.

Cost: Assuming that costs of all of the statutory / administrative reviews are bundled, this is a moderate cost undertaking, budgeted at \$150,000 over a two-year period. Costs to each agency are included within their general operating budgets.

Implementation Timing: The review will be initiated in 1998, with requirements for legislative change addressed in the 1999 legislative session.

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4.3.2.2 Implementation Initiatives Associated with Improving Motor Carrier Compliance

2.1 Position the Ongoing Motor Carrier Advisory Committee as an ITS / CVO Advisory Committee

Purpose: To ensure significant carrier, shipper and related industry involvement in deployment and implementation of the state's CVO / ITS program, continued involvement of the legislatively established Motor Carrier Advisory Committee (MCAC) in the ITS / CVO planning and implementation process is required. The MCAC includes all state agencies with CVO responsibility, as well as industry representation. To assist in planning for and deployment of the state's CVO / ITS Plan initiatives, a series of subcommittees will be formed with specialized interest, expertise and advisory authority for such CVO / ITS implementation areas as incident management, mobility, electronic clearance, electronic credentialing, safety assurance, regulatory reform, etc.

Requirements: The MCAC will provide a multi-agency forum for discussion of CVO / ITS planning and implementation issues. Each agency will maintain ultimate authority and decision-making power over funding, implementation timing, design / development or selection of automated systems, linkages, communication networks, and any other aspect of CVO / ITS initiatives affecting their existing legacy systems, processes and activities. The role of the MCAC is to bring all affected agencies and industry together on a routine basis to maximize opportunities for appropriate cost sharing, coordinated implementation, information sharing, and to ensure that the needs and requirements of all state agencies and the private sector are considered in the implementation activities of any one agency.

Responsibilities: The Department of Public Safety and Corrections is responsible for coordinating the MCAC, scheduling meetings and subcommittees, etc. The MCAC includes representatives from the DOTD, Department of Public Safety and Corrections, Department of Revenue, Public Service Commission and the Louisiana Motor Transport Association (LMTA). Metropolitan Planning Organizations (MPOs), individual motor carriers representing Less than Truckload (LTL), Truckload and specialized haulers; shippers, and ports (as related to intermodal operations) will be involved in subcommittees as appropriate.

Cost: Establishment and continued operation of the MCAC is a low cost undertaking, estimated at less than \$12,000 per year, with costs absorbed through the general operating budgets of participating agencies and business entities.

Implementation Timing: MCAC operation will be ongoing throughout deployment of the state's CVO / ITS program.

2.2 Regulatory Handbook

Purpose: A regulatory handbook outlining the state's CVO standards, credentialing and permitting requirements, operating limitations and restrictions, state agency contacts, and providing

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application forms, etc. should be provided to assist carriers in understanding and meeting the state's regulatory requirements.

Requirements / Responsibilities: The Department of Public Safety and Corrections, Office of Motor Vehicles is responsible for producing this document, in coordination with the MCAC. The OMV is responsible for production and dissemination of the handbook. Each agency with regulatory authority for various aspects of CVO will prepare the chapters of the handbook relating to their area of responsibility. The MCAC will be responsible for input re: format, topics to cover, etc., and for review of interim drafts.

Cost: Development of the handbook is estimated at \$60,000. Each agency's costs will be covered by general operating budgets.

Implementation timing: Handbook development will be initiated in 1998, with completion scheduled for 1999, following completion of the statutory review / revisions.

2.3 State Web Site Development

Purpose: A state CVO Web site provides an easily accessible means for carriers to obtain information about regulatory requirements. The site would include an electronic version of the handbook, with capabilities to access and download the full handbook or specific segments of interest to a particular carrier - tax requirements, for example, or IRP applications and a list of supporting document requirements, size and weight regulations, contact lists, etc.

Requirements: Web site establishment requires establishing an Internet site home page, that links DOTD, LSP, Department of Revenue, PSC and other existing CVO Web sites. Required activities include:

- Identifying home page functionality requirements;
- Developing that functionality;
- Establishing processes for modifying home page functionality or contents as requirements change; and
- Publicizing home page availability to the carrier community.

Responsibilities: The Web site would be established and maintained by the DOTD or DPS, as recommended by the MCAC.

Cost: Establishment of the Web site is estimated at \$25,000. Annual maintenance costs would be absorbed in the responsible department's annual operating budget.

Implementation Timing: The Web site would be implemented in 1999, pending completion of the handbook. Web site planning, however, would occur concurrently with handbook development in 1998.

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2.4 Unique Carrier Identification System

Purpose: Ultimately, electronic clearance and automated safety assurance functions will require the ability to access information using unique carrier identification codes that are uniform across credential and permit types. Such codes already exist for the vehicle - VIN and license plate number; and driver - CDL number. However, at the carrier level, different states and different agencies use different codes. For example, SSRS credentials may reflect an ICC number associated with the carrier. IFTA credentials may reflect a state account number, and IRP credentials may be keyed to an account number and / or a US DOT number. Typically, carriers with an intrastate registration are not assigned any unique identifier. The lack of a unique, consistent identifier that is associated with all registration types presents a problem for clearance and safety assurance personnel. Further, the USDOT number of the registrant may not be the same as the DOT number of the carrier with responsibility for safety. Without expending considerable effort to cross check specific registrations, enforcement personnel have no way of knowing if "Western Trucking" with a particular ICC number is the same Western Trucking with a particular US DOT number to whom they issued a citation one week previous. The unique carrier identification system would provide enforcement personnel with the ability to correctly identify any carrier and assign vehicles to the appropriate carrier.

Requirements: This initiative would be developed in phases. Phase 1 would include:

- Development of a unique carrier identification coding scheme for interstate and intrastate carriers registering in Louisiana that is consistent with similar efforts in other states (at present, Louisiana favors assigning US DOT numbers to intrastate carriers and capturing US DOT with all forms of interstate registrations);
- Determine the impacts of assigning the code to each of the agencies and legacy systems involved (IRP, intrastate registration, IFTA, SSRS and OS/OW);
- Develop a strategy for assigning codes;
- Prepare plan to assign and communicate new codes to all Louisiana-based carriers;
- Develop strategy for modifying legacy systems to accept codes. Presently, the Louisiana OMV does not maintain any intrastate motor carrier account information. To do so will require significant process and legacy system modifications / investment.

Phase 2 would include implementing the legacy system modifications and staff training to accommodate process / legacy system changes.

Responsibilities: The MCAC will provide a forum for discussion of each agency's needs, and the benefits / constraints, legacy system requirements / limitations associated with various alternatives for unique carrier codes. The MCAC will develop a recommended / preferred coding scheme. Each agency would be responsible for implementation of the legacy system modifications.

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Cost: Phase 1 is a low cost initiative, under \$20,000 and is included within existing operating budgets. The costs of Phase 2, legacy system modifications, would be included in other legacy system modifications associated with electronic credentialing or electronic information exchange for interstate registration / licensing. Identification of costs of legacy system modifications / development to accommodate intrastate carrier information will require additional analysis, to be completed during the Phase 1 Planning activities.

Implementation Timing: The timing of implementation of this initiative is dependent upon development of a national consensus regarding format of the unique carrier identification codes.

4.3.2.3 Electronic Credentialing

Electronic credentialing provides advantages to both the state and carriers. On the state side, electronic credentialing reduces costs by eliminating data entry requirements and associated data transcription errors. Because the automated system checks application data for accuracy and completeness, a variety of line item reviews currently conducted manually also can be eliminated. Cash management is improved via the electronic payment options associated with electronic credentialing. From the carrier's point of view, an electronic process makes credentials available 24 hours a day, seven days a week. The turn-around time for obtaining credentials is significantly reduced, as are the costs of credential acquisition. Implementation of electronic credentialing involves a number of substeps, each of which is outlined below.

3.1 Statutory / Administrative Rules Revisions

Purpose: This initiative paves the way for automation of the credentialing functions, as well as supporting electronic clearance and automated safety assurance functions. Many state statutes and administrative rules governing CVO were written many years ago, prior to widespread use and acceptance of electronic processes. As such, these rules and regulations may include requirements for paper documentation, original signatures, certified checks, bonds, waiting periods, limitations on electronic funds transfer and other requirements which are no longer appropriate. These requirements may need to be changed to allow for options consistent with the original intent, but compatible with electronic medium and processes. Conversely, electronic processes may have requirements for data integrity and data security which are not reflected in current statutes. This initiative provides for review and revision of statutory and administrative requirements to ensure compatibility with electronic processes.

Requirements: This project would be undertaken concurrently with reviews related to resolution of conflicting / ambiguous CVO requirements (Initiative 1.2), review of CVO operating limitations / restrictions (Initiative 9.4) and review of rules / statutes to determine the potential for redirecting a larger share of highway user fees to the state's Transportation Trust Fund (Initiative 10.1). Implementation of this initiative will likely require legislative action. Implementation activities include:

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- Identification of rules / statutes which may require revision to ensure compatibility with electronic processes;
- Review of these statutes and identification of the types of changes required;
- Development of specific wording to effect the desired changes;
- Completion of the legislative / administrative actions required to implement the changes.

Responsibilities: Each credentialing, taxing and / or regulatory agency and their respective legal staff is ultimately responsible for identifying which statutes / rules are in need of revision, and the type and extent of revisions to be conducted. The MCAC will provide a forum for multi-agency discussion, review and recommendation regarding desired changes. Consultant assistance may also be required, both to review existing state statutes / rules and provide expert advice regarding approaches undertaken by other states.

Cost: Assuming that costs of all of the statutory / administrative reviews are bundled, this is a moderate cost undertaking, budgeted at \$150,000 inclusive of all revisions.

Implementation Timing: This review will begin in 1998. Changes requiring legislative action will be undertaken during the 1999 session.

3.2 Evaluate / Acquire Carrier Automated Transaction Software

Purpose: This initiative provides for selection, pilot-testing and implementation of automated credentialing processes for IRP, intrastate vehicle, IFTA and SSRS registration and IFTA tax filing.

System Functionality: The selected Carrier Automated Transaction (CAT) software will be made available to carriers (via the Internet, a third-party value added network (VAN), direct connect with the state system or some other means as appropriate). The carrier, using a PC, modem and telephone line at the location of his or her choosing (this could be the carrier's office, the state trucking association offices, public places such as a library with computers available for public use or via a third party agent), will enter required application data as prompted by the CAT system. The selected system will address IRP, IFTA, SSRS and intrastate registration and tax filing requirements and will meet state information requirements for these processes.

The CAT system will check application data for completeness and conformity with state requirements and will calculate required fees. The system will allow for electronic payment of credential and tax payments. CAT transactions, including application data and associated payments, will be sent electronically to the appropriate state agency via a direct connection, VAN or the Internet for further processing. CAT transactions will be sent to the state in the X12 ANSI transaction data set format (the CVISN standard). In planning for system implementation and evaluating available systems, each agency will

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decide whether and under what conditions the system will electronically generate credentials back to the carrier.

Requirements: The project scope outlined below will be undertaken for each of the registration / tax filing types to be addressed by the system. Requirements include:

- Evaluate and recommend CAT software package with MCAC input;
- Analyze options and recommend preferred method to exchange information electronically with carriers / motor coach operators (Internet, VAN, direct connect or other option);
- Develop plan for pilot test and pilot test evaluation with a limited number of carriers;
- Select software package and motor carriers to participate in test;
- Pilot test training for both motor carriers and state staff;
- Implement pilot test and evaluate test results;
- Identify user support requirements under full scale implementation;
- Develop training program for state staff for full scale implementation;
- Develop full scale implementation plan; deploy.

Responsibilities: Each agency will ultimately be responsible for selection of the credentialing system / vendor which best meets its specific needs. The MCAC will provide a forum for multi-agency discussion / evaluation / pilot-testing of alternative systems. There are a variety of commercially available software packages which address IRP, intrastate, SSRS and IFTA credentialing and tax filing requirements in an integrated fashion, although any such package would likely require some level of customization to meet Louisiana agencies' specific needs. Input and concurrent pilot testing is required from each of the agencies with CVO registration / tax accounting responsibilities to ensure that the selected package(s) meets the needs of all agencies.

Cost: The cost for software acquisition and pilot testing is estimated at \$150,000. This does not include potential costs for user support under full scale implementation, nor does it include state staff training. If different agencies implement different vendors' systems, costs would likely exceed \$150,000 for IRP, IFTA and SSRS combined. It is possible that user support would be provided by the software vendor. CAT acquisition / pilot-testing and full scale deployment will be funded via specific line items in future budgets. Subsequent Plan updates will address whether this should be via department-specific line items, or whether it would be in the state's best interest to establish a multi-departmental funding pool to accommodate automated credentialing.

Implementation Timing: Planning for this initiative will begin in 1998. Louisiana uses Polk software for processing IRP applications and VISTA (Lockheed) software for processing IFTA applications. The SSRS system was developed in-house by PSC staff. It is likely that CAT software with linkages to the proprietary IRP and IFTA systems will soon be commercially available. Louisiana will time pilot testing and implementation of these systems with development and stabilization of the CAT software with Polk and VISTA

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system linkages. Implementation of this initiative will occur concurrently with implementation of the legacy system upload capabilities and electronic payment capabilities (Initiatives 3.3 and 3.4).

Staffing Requirements / Specialized Expertise Required: It is expected that the CVISN planning workshops will assist the state in developing the expertise required to evaluate alternative credentialing systems. However, evaluation of various automated credentialing systems and their ability to meet the state's needs may require specialized consultant expertise to ensure that the state knows what questions to ask and understands how to evaluate the vendor responses.

3.3 Develop Legacy System Upload Capabilities

Purpose: The CAT software will deliver application and payment information to the appropriate state agency in the ANSI X12 format. The data received must then be uploaded to the appropriate legacy system(s) using a Credential Interface, or CI.

System Functionality: The CI will include a communication link to receive the automated transaction (VAN, Internet or direct connect). The CI will collect CAT transactions, manage (route) the transactions to or from the appropriate legacy system(s), archive the transactions, translate the CAT data into a format that can be accepted by the appropriate legacy system(s), allow for automatic data upload to the appropriate legacy system, verify to the carrier that the CAT transaction has been received and provide required data firewall security.

Requirements: CI development and implementation will be conducted in two phases. Phase 1 will include:

- Identifying and evaluating communication link options to receive carrier applications and send state confirmation notices;
- Developing requirements for the data management system;
- Defining local area network (LAN) requirements for accessing / routing application and payment information;
- Defining criteria for translating SSRS X12 transactions to a format acceptable to the state's legacy system and identify interface requirements (because IRP and IFTA are proprietary software, the translation and interface should already be standardized);
- Defining "firewall" security requirements;
- Establishing the confirmation process for CAT transactions; and
- Preparing the CI test and acceptance plan.

Phase 2 will include design and implementation of components described above, and related staff training.

Responsibilities: Some aspects of the CI design will be constant, regardless of the credential or tax type included in the CAT transaction. These include the communication link, routing and

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archiving functions. These decisions will be made jointly by participating agencies via the MCAC. Other aspects of the CI design are specific to each credentialing agency, and each agency will take the lead on design and implementation of these elements.

Cost: CI planning and implementation costs are estimated at \$75,000 to \$150,000. These costs would be covered as described for Initiative 3.2.

Implementation Timing: As part of its overall evaluation and planning for electronic credentialing, Louisiana will begin planning for CI implementation (Phase 1) in 1998. Phase 2, deployment, timing will depend on the timing of development and stabilization of the commercially available CI software with Polk, VISTA and Illinois system linkages.

Staffing Requirements / Specialized Expertise Required: It is expected that the CVISN planning workshops will assist the state in developing the expertise required to evaluate alternative CAT / CI systems and approaches. However, evaluation of various approaches and their ability to meet the state's needs may require specialized consultant expertise to ensure that the state knows what questions to ask and understands how to evaluate the vendor responses.

3.4 Electronic Payment Options

Purpose: To fully automate CVO credentialing and tax payment processes, carriers must be able to submit registration and tax payments electronically, using electronic funds payment, debit cards and / or credit cards. Through this initiative, the state will evaluate alternative methods of electronic payment and test and implement the preferred alternatives.

System Functionality: The electronic payment capabilities will allow motor carriers and motor coach operators to submit registration payments associated with IRP, intrastate, SSRS, OS / OW and initial IFTA registrations (there is no fee for IFTA renewals) as well as monthly and quarterly IFTA tax payments. On the state end, the system will accept and route electronic payments and payment records to the appropriate state legacy system(s). The system will provide capabilities for payment and payment record posting and tracking by the accounting entity and payment record posting by the credentialing / taxing entity. Additionally, electronic payment capabilities (generating and posting) will be provided in association with the bimonthly IRP recap and transmittal process, as well as IFTA transmittals.

Requirements: Phase 1, the planning phase, will include:

- Identifying, evaluating and selecting the preferred options for electronic payment that the state will accept;
- Identifying the required content of electronic payment records;
- Defining the processing requirements for electronic payments and payment records for both accounting and credentialing legacy systems to ensure that payment records can be associated with individual registrant and taxpayer accounts;

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- Pilot test design.

Phase 2 would include implementation and evaluation of the pilot test, full deployment and related staff training.

Responsibilities: In Phase 1, The MCAC EFT subcommittee, in conjunction with the State Treasurer's Office, State Audit Division and the state's banking institution(s) would work together to identify and evaluate preferred electronic payment options and associated requirements. Each credentialing / tax entity will develop requirements for electronic payment records, in association with their accounting groups. These entities will also identify processing requirements to ensure that payments are associated with individual taxpayer accounts. The MCAC will identify carriers to participate in the pilot test. In Phase 2, the pilot test will be conducted and results evaluated by the MCAC. Agency IS staff will work with the Treasurer's Office to design and develop the process to capture electronic payments and processes, and each credentialing / taxing entity will modify their legacy systems to generate and post electronic payment records.

Cost: Phase 1 costs are estimated at \$20,000. Phase 2 costs are estimated at \$75,000 to \$125,000. Phase 1 costs are included in general operating budgets. Phase 2 costs would be separate line items.

Implementation Timing: Phase 1 activities would begin in 1998. Identification and evaluation of preferred IRP, IFTA and SSRS electronic payment options will be conducted concurrently with planning, evaluation and pilot testing of electronic payment options associated with the ongoing PERBA project (automation of the OS / OW permitting process). Phase 2 activities are expected to begin in 1999.

Staffing Requirements / Specialized Expertise Required: There is a freeze on all financial systems / new applications until Louisiana completed its required Year 2000 system modifications. These modifications are expected to be completed in July of 1999, but could run through December of 1999. This could potentially affect implementation timing of electronic payment options associated with automated credentialing / tax filing.

3.5 Add CAT Access to CVO Web Site

Purpose: This initiative will be undertaken if a preferred means of electronic data interchange is via the Internet. Louisiana plans to allow carriers to access the PERBA OS / OW automated credentialing process via the Internet. Access to other CAT software at the same site would provide one-stop remote carrier access to all credentialing / tax filing processes.

System Functionality: The Web site will provide carriers with the option of preparing and submitting applications over the Internet. Application and payment data will be forwarded to the appropriate state legacy systems in the ANSI X12 format. Posting the CAT system on the Internet provides the state flexibility in modifying application requirements, notifying

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carriers of changes in requirements, and will ensure that all CVO information can be accessed through the same home page.

System Requirements: Phase 1, the planning phase, will involve:

- Examining other states' home pages and identifying the features needed to support electronic carrier applications and electronic payment;
- Evaluating available software with Internet capabilities;
- Identifying methods to capture and edit electronic application data submitted via the Internet;
- Identifying legacy system interface requirements;
- Pilot test program development.

Phase 2 will include system acquisition, customization, pilot and full scale implementation.

Responsibilities: The MCAC will share responsibility for defining overall system requirements and functionality. Each credentialing agency will be responsible for the customization required to interface with their specific legacy systems.

Cost: Costs are estimated at \$100,000 to \$250,000, depending on the number of systems being linked and whether the link is part of a commercially available software package or being designed expressly for Louisiana. Costs of the Web site integration would be a line item in association with the CAT / CI / EFT line item.

Implementation Timing: Phase 1 planning will begin in 1998. Pilot testing and deployment would be conducted in parallel with other CAT and CI projects.

Staffing Requirements / Specialized Expertise Required: It is anticipated that the Web site integration would be provided by a vendor(s) as part of the credentialing / CI software.

4.3.2.4 Initiatives Associated with Electronic Information Exchange

CVO credential status information is routinely exchanged among states. Bi-monthly or monthly IRP recaps and transmittals and IFTA and SSRS transmittals provide a record of vehicle registrations, carrier fuel tax and operating registrations and change in registration status for all interstate carriers and vehicles operating within any state. However, because these are currently paper transactions, the information they contain cannot be accessed by enforcement or used productively by credentialing agencies for administrative purposes. Electronic data exchange can significantly improve the administrative productivity of credentialing agencies by reducing the time required to prepare and transmit monthly recaps and transmittals, and can significantly improve cash management functions by automating state to state funds transmittal and processing.

National clearinghouses are under development for IRP and IFTA to streamline and simplify the transmittal reporting and fund transfer processes between states. The clearinghouses will use electronic data interchange (EDI) to eliminate the paper transmittals and paper checks that are

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currently transferred among states. The IRP Clearinghouse proposes to accommodate funds transfers among participating states and to maintain a database of commercial vehicle registrations and supporting data. The IFTA Clearinghouse will maintain a master repository of IFTA licensed carriers. Member jurisdictions can query this database to verify IFTA registration status. At present, there are no plans for the IFTA Clearinghouse to provide fuel tax reporting or state to state funds transfer as with IRP.

Louisiana's CVO / ITS initiatives associated with electronic data exchange in support of enhanced administrative productivity build upon the national clearinghouse projects and are described below.

4.1 Provide for Electronic Data Exchange for Credential Recap, Transmittal and Associated Fee Transfers

Purpose: National clearinghouses are being developed for electronic transfer of IRP and IFTA recap and transmittal reports and associated payments. Electronic transmittal of these reports and payments will significantly reduce time spent compiling monthly and bimonthly reports, reconciling associated payments, preparing checks and packaging / mailing reports for as many as 57 other jurisdictions, will improve cash management functions and support timely distribution of information and payments. (There is no similar national effort underway for SSRS transmittals).

Requirements: Phase 1 will involve:

- Identifying requirements to generate electronic transmittal reports and payment information for IRP and IFTA;
- Identifying processes to send and receive report and payment data to the national clearinghouses; (the COVE EDS model, in which Louisiana is presently participating provides a possible alternative for electronic data and fee transfer to the national clearinghouse approach, should an alternative be required);
- Identify processes to post payments received into the appropriate legacy systems (which may include accounting and credentialing systems).

Phase 2 will involve design, development, implementation and related staff training.

Responsibilities: The Department of Public Safety and Corrections, OMV will be responsible for requirements analysis, testing and implementation of the interface with the IRP Clearinghouse, with support provided by Polk. The Department of Revenue, Excise Tax Division will be responsible for requirements analysis, testing and implementation of the interface with the IFTA Clearinghouse, with support provided by Lockheed.

Cost: Costs for this initiative are estimated to be low in that payment tracking can be integrated with the legacy system work conducted under Initiative 3.4, electronic payment options. It is assumed that the IRP and IFTA system vendors will bear costs associated with clearinghouse data interface and reporting, or that these costs will be shared among all states using each vendor's system, keeping the costs to any one state low.

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Implementation Timing: Louisiana will begin working with Polk on the IRP Clearinghouse pilot test in early 1998. Timing for completion of requirements analysis, pilot test and deployment for both the IRP and IFTA Clearinghouse linkages are dependent upon development and implementation of the national IRP and IFTA Clearinghouses.

4.4 Improve Operational Safety and Productivity

Improving the operational safety and productivity of Louisiana's commercial vehicle operations is a critical component of the state's overall CVO / ITS program. Improving operational safety is related to improving the efficiency and effectiveness of the safety assurance function. Improving motor carrier and enforcement operating productivity is related both to improvements in safety assurance functions and improvements in the efficiency and effectiveness of clearance activities.

As outlined in Chapter 2, safety assurance functions include roadside inspections, carrier compliance reviews conducted at a carrier's place of business, enforcement of traffic laws and crash investigation. The CVO clearance function involves assessing commercial vehicles at fixed and mobile scales to ensure safe and legal compliance with state operating regulations, including size and weight limits and registration and permit requirements. The primary purpose of both safety assurance and clearance functions are to ensure that commercial carriers, vehicles and drivers are operating in a safe and legal manner.

4.4.1 Inefficiencies in Current Processes

Louisiana's safety assurance and clearance functions, as in most states, currently require that a vehicle be taken out of mainline traffic and stopped for weight inspection and / or physical inspection of the vehicle, driver and credentials before enforcement personnel can make a determination about the safety / legality of operation. This results in a number of inefficiencies for both the carrier and the state, as outlined below.

With current resources and processes, it is virtually impossible to focus inspections on higher risk carriers. Officers at roadside have virtually no information about carrier, vehicle or driver safety status except their own experience and expertise, or some particular aspect of the vehicle appearance or operation that strikes them as questionable. Officers making inspection selection decisions are skilled in their judgments, but, the sheer volume of commercial vehicle traffic renders this ad hoc approach an unsatisfactory means of targeting inspections toward higher risk carriers.

This ad hoc approach results in a relatively high proportion of unproductive inspections. For example, in FY 1996, almost 6,500 person hours were expended by drivers and TESS officers (13,000 total person hours) in MCSAP inspections where no citations were issued. Almost 5,000 person hours were expended by drivers and PSC officers (9,907 total person hours) in inspections to verify operating authority where no citations were issued. Both state staff and the motor carrier industry would prefer that these resources be focused on high risk carriers, correcting and

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eliminating high risk practices and operations, and allowing carriers, vehicles and drivers with good safety and compliance records to continue traveling.

A vehicle inspected one hour previous and found to be safe and legal, may be stopped for another inspection 40 miles down the road, while a driver placed out of service may illegally proceed undetected. Until an officer stops a vehicle and inspects paper documents, he or she has little information about recent inspection activities or results. Inspection results are recorded roadside on a paper form or using a laptop or pen-based computer with Aspen software for electronic upload to SAFETYNET. However, this information is not available or accessible to officers until days or even weeks later.

In 1996, commercial vehicles traveling through Louisiana spent 86 person years - 758,600 hours - stopped at fixed scales for weight inspections. Only 0.16 percent of these vehicles were found to be out of compliance. The weight inspection process is highly efficient, within the bounds of the current process. Each inspection requires only three to five minutes of a driver's time, including waiting time at the ramp and scale time. But multiplying that three minutes by more than 11 million vehicles weighed annually reveals a tremendous cost to industry.

Registration status of most carriers, vehicles, drivers is not verified at fixed scales. Typically, a current apportioned plate is taken as proof that vehicle and carrier registrations are current and legal. Generally, a driver is called in to the scale house for inspection of permits and credentials only if a vehicle is above the legal weight limits, if it does not exhibit a current apportioned plate, if the vehicle has been randomly selected for an inspection or if the appearance of the vehicle has triggered an inspection decision. Thus, there is no effective means in place of uniformly verifying registration status through the existing clearance process.

Back-up at weigh stations onto the mainline can be a significant problem at some scales during peak periods. Peak period back-up results in safety hazards to mainline traffic and results in scale closures, allowing vehicles to bypass the weight enforcement process.

Unsafe / illegal carriers find ways to avoid fixed scale locations. Louisiana operates 32 mobile scales in an effort to deter weigh station bypass by unsafe or illegal carriers, but these operations are limited to some degree by the same factors as ad hoc inspection selection decisions.

The CVO / ITS initiatives associated with improving safety assurance and operational productivity are designed to address these problems.

4.4.2 Operational Safety and Productivity - Planning Scenario

Under the planning scenario, MCSAP and PSC enforcement officers would have roadside access to carrier, vehicle and driver safety and credential status information that would allow them to

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"separate the good guys from the bad". Officers could still make inspection selection decisions based on their own experience and expertise, but they would have roadside access to additional information to assist in identifying high risk carriers, vehicles or drivers. These information bases could be accessed by carrier name, US DOT number, license plate number or other unique identifiers. The available information would provide crash and inspection histories, carrier safety ratings and credential status information. Flags on the record would indicate that the carrier, vehicle or driver may warrant inspection. Drivers or vehicles operating out of service could be readily identified, as could vehicles which had been recently inspected with no violations found.

Interstate and other high volume fixed scales would include mainline weigh-in-motion scales (WIMs) that allow commercial vehicles to be weighed in mainline traffic. Vehicles equipped with transponders could be cleared through the fixed scale without leaving mainline traffic. A transponder (or license plate) reader at roadside would pick up the vehicle's unique identifiers from its transponder (or read the license plate number), check associated credential and permit status, and electronically clear the vehicle for weigh station bypass. Only those vehicles with problems or without transponders will be directed off-road to the fixed scale for further inspection.

4.4.3 Market Issues

There are a number of market issues associated with this scenario. Several types of transponders are currently available - read only, read / write, read / write with external interfaces, and read / write with an integrated smartcard device. Transponder type standards have not yet been adopted. Transponders issued by various technology vendors and associated readers are not necessarily interoperable, meaning that a transponder issued for use with technologies deployed in Louisiana might not be compatible with the technologies in use in another state.

Resolution of these issues is being pursued at the national level. However, until these issues are resolved, industry will be understandably reluctant to invest in transponders. Even after resolution, transponder use is expected to be voluntary and, at present, the extent to which carriers would choose to equip their vehicles with transponders is unknown. License plate readers, which can be used to identify vehicles that are not equipped with transponders and which may offer an interim or alternative solution, are not nearly as reliable as transponder readers.

Louisiana's response to these issues is to phase automation of clearance and screening functions, investing initially in WIM installations and AVI readers, and to phase in automated credential / safety status checks as transponder technology standards and interoperability issues are resolved.

4.4.4 Implementation Actions Associated with Improving Operational Safety and Productivity

Exhibit 4-3, below, summarizes the program of projects Louisiana will undertake to make the planning scenario the operating scenario. The purpose of each initiative, expected outcome, implementation activities and budget required for deployment are examined following Exhibit 4-3.

4.0 STRATEGY FOR ACHIEVING LOUISIANA'S CVO / ITS MISSION**Exhibit 4-3. Program Elements Associated with Improving Operational Safety and Productivity**

Program Element Designed to Improve Operational Safety and Productivity / Associated Requirements	Regional / National Activities / Technologies Leveraged (1)
5.0 Increase Efficiency of Existing Scale Operations (1)	
5.1. Joint Port Operations 5.2. Routine Scale Calibration Program 5.3. Fixed Scale Computer / Communication Links Upgrade	
6.0 Electronic Clearance	
6.1. Weigh-in-motion Capabilities at Select High Volume Fixed Scale Facilities 6.2. Quality Controlled Sampling at Select High Volume Facilities 6.3. AVI Systems Evaluation / Implementation 6.4. Credential and Safety Status Data Available to the Roadside 6.5. Transponder Marketing / Incentives Program	• SAFER • CVIEW • Advantage CVO • MAPS • HELP
7.0 Information-based Safety Assurance	
7.1. Automated Safety Inspections Data Collection and Exchange 7.2. SAFER Connection and Enrollment / Enhancements 7.3. Automate Crash Reporting 7.4. Evaluate Capabilities of "Smart" Mobile Scales	• ASPEN, AVALANCHE, etc. • SAFER • CVIEW
8.0 Increase Available Commercial Vehicle Rest Areas	
8.1. Private Sector Incentives 8.2. Public Sector Initiatives	

(1) Project numbering is sequential, with projects designed to increase administrative efficiency numbered 1-4.

Each initiative is described in more detail below.

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4.4.4.1 Initiatives Associated with Increasing Efficiency of Existing Scale Operations

5.1 Joint Port Operations

Purpose: Louisiana is negotiating with Mississippi for joint operation of ports at the Louisiana / Mississippi border. Currently, both states have fixed scales on each side of the road at the state border. Joint operation of fixed scales at border locations, with one state operating a scale for northbound traffic, and the other state operating the scale for southbound traffic, would reduce operating costs of each state, and would reduce the number of stops required by carriers and associated carrier delays, improving both state and carrier operating efficiencies.

Requirements: Requirements include:

- Plan for facility requirements, equipment and cross-training needs;
- Negotiate and prepare legal agreement and MOA addressing joint port operating and enforcement requirements;
- Research existing joint port operations in Arizona, Idaho, Utah and Montana;
- Plan for and implement pilot test;
- Develop facility design;
- Conduct full-scale cross training;
- Implement facility and equipment improvements;
- Pass legislative changes to allow Louisiana to enforce Mississippi rules regulations and to allow Mississippi to enforce Louisiana rules and regulations;
- Full scale deployment.

Initial joint port operations will focus on the Kentwood Port on I-55. A second possible site would be a superport site at the I-10, I-12, I-59 intersection.

Responsibilities: The DOTD, Weights and Standards Program is responsible for planning and implementation of the joint ports initiatives.

Cost: Costs associated with this initiative will be absorbed in existing operating budgets.

Implementation Timing: Pilot testing with Mississippi will begin pending passage of required legislation in 1998, with full implementation slated by 1999.

5.2 Routine Scale Calibration

Purpose: Louisiana typically calibrates scales at least once annually. However, carriers report some problems with different recorded weights as they move through the state, and among neighboring states with the same vehicles and loads. This may be due to load shifting or other factors. To determine whether scales are in need of calibration, Louisiana will implement a project in collaboration with carriers. Participating carriers will maintain trip logs and examine logs for discrepancies in recorded weights at multiple scales within

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the same trip. DOTD will then examine / calibrate scales where discrepancies are apparent.

Requirements: Identify carriers to participate in the program; working with these carriers, design develop, pilot test and implement the calibration program.

Responsibilities: The DOTD, Weights and Standards Program will be the lead agent for design and implementation of the calibration project. They will work with the MCAC / LMTA to recruit carriers to participate in the project and will also work with Arkansas and Mississippi's DOTs to institute similar programs in those states following the pilot test.

Cost: This is a low cost item, essentially redirecting scale calibration efforts which are already provided for under existing operating budgets.

5.3 Fixed Scale Computer / Communications Links Upgrades

Purpose: Louisiana is in the process of upgrading the computer and electronic data interchange capabilities at its fixed scales, converting from dumb terminals to PCs, for several reasons:

- To enhance operating efficiencies by reducing the time required to produce and upload activity reports and accounting information to the central office;
- To increase access to central permit databases, providing 24-hour a day capabilities to issue OS / OW permits using the automated PERBA system and to access central databases to check OS / OW permit status / limits from roadside.
- Further, these capabilities will allow fixed scales to exchange information, potentially reducing the number of times a driver is called into the scale house for permit verification, for example.
- Finally, the computer / communications upgrade currently underway will position Louisiana's fixed ports to take advantage of CVISN information and data exchange systems currently under development such as SAFER and CVIEW.

Requirements: The DOTD has completed its requirements analysis and implementation planning and is presently in the implementation phase, starting with the PERBA implementation and training as the first phase.

Responsibilities: The DOTD, Weights and Standards Program is responsible for planning and implementation of the computer / communications links upgrade.

Cost: Approximately \$1.5 million is budgeted for these efforts in FY 1998 / 1999.

Implementation Timing: The PERBA system is expected to be online with some capabilities in the second quarter of 1998. Full fixed scale computer upgrades are expected to be completed in 1998.

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4.4.4.2 Initiatives Associated with Electronic Clearance

6.1 Weigh-in-motion (WIM) Capabilities at Select High Volume Fixed Scale Facilities

Purpose: Weigh-in-motion scales (WIMs) provide capabilities to weigh vehicles in mainline traffic, without requiring the vehicles to exit the roadway for weight inspections at static scales. This reduces the total number of vehicles coming through static scales, thus reducing back-up potential during peak hours and potentially allowing for redirection of some scale personnel to other activities, increasing productivity on the state side. By reducing the number of times commercial vehicles must exit mainline traffic for static scale weight inspection, carrier operating productivity is also increased. Louisiana plans to install WIM facilities at three high volume port locations: Breaux Bridge (I-10), Baptist (I-12) and Greenwood (I-20).

Requirements: Louisiana's port automation activities will be staged. The initial stage will include WIM and AVI installation only. Subsequent stages will include automated credential verification, as described under Initiative 6.3. Each stage will be conducted in phases. The first phase of WIM / AVI installation will include:

- Requirements analysis for WIM and associated AVI installations;
- Preparation of specifications and bid documents;
- Contract development and contract letting.

The second phase will include:

- Operations planning;
- WIM installation design and construction;
- Pilot test and evaluation planning; and
- Implementation and evaluation of the pilot test and associated staff training at the Breaux Bridge site.

Implementation of the Baptist and Greenwood sites will be phased following completion of the Breaux Bridge pilot test.

Responsibilities: The DOTD Weights and Standards Program and other divisions are responsible for implementation of the port automation program.

Cost: The state's Long-Range Transportation Plan calls for an annual appropriation of \$3 million for port automation, physical improvements and reconstruction, to be funded as line items using Surface Transportation Program (STP) funds.

Implementation Timing: WIM / AVI installation is scheduled as follows: Breaux Bridge: 1998 - 1999; Baptist: 2000-2001; Greenwood: 2001-2002.

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6.2 Quality Controlled Sampling at Select Weigh Station Facilities that are not Scheduled for WIM Installation

Purpose: Kentucky has piloted a controlled sampling program that is available for use by other states. This system includes fixed scales which are not equipped with WIMs, but are equipped with AVI readers and software providing quality controlled sampling algorithms. Carriers enrolled in the program will be assigned a sampling rate informally based on their historical safety and weight compliance record. Enrolled carriers' vehicles will be equipped with transponders carrying the carrier's unique ID.

The AVI readers and associated software will pull the carrier's vehicles in to the weigh station or bypass them, based on the assigned sampling rate for that carrier and sampling algorithms contained in the software. This type of system rewards carriers for good safety, weight and regulatory compliance, in that the number of times they are called in for weigh station inspection is directly related to their performance history. The system reduces the number of vehicles that must be pulled from the mainline for static scale weighing, without necessitating WIM installation at each automated clearance site, improving both state and carrier productivity while maintaining regulatory safeguards.

Requirements:

- Identify fixed scale locations for pilot implementation;
- Identify enrollment process and process for assigning sampling rates;
- Develop operational testing / training plan;
- Acquire AVIs for selected fixed scales;
- Acquire software from Kentucky; publicize program with carriers;
- Implement pilot test; evaluate results;
- Deployment training;
- Implement full scale program;
- Work with the Kentucky Transportation Center (KTC) to identify means to refine sampling rate assignment.

Responsibilities: The DOTD Weights and Standards Program will be responsible for implementing this program. They will work with the LMTA to publicize the program to carriers and will work with the KTC in planning, designing, pilot testing and refining the program.

Cost: Approximately \$400,000 for AVI readers, installation, management planning and training at the LaPlace I-10 and Toomey fixed scales, to be funded as a budget line item.

Implementation Timing: The system will be pilot-tested and evaluated in 1998, with deployment and expansion to other ports scheduled for 1999.

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6.3 Credential and Safety Status Data Available to the Roadside

Purpose: The purpose of this project is to provide capabilities to electronically share timely and accurate CVO credentialing and safety status information between state agencies and other authorized users. At present, information on IRP and IFTA registration status of carriers based in states other than Louisiana is available in paper form only, and thus does not provide a resource for clearance or safety assurance. Further, although Louisiana-based credential and safety status information, as well as SSRS status of all carriers running in Louisiana, is computerized, each database resides on a different hardware and software platform (legacy system), none of which can be accessed by roadside enforcement.

To provide roadside data access, data link connections will be created between state legacy systems housing IRP, IFTA, SSRS, OS / OW and safety status information and authorized users. This system also will exchange information with national systems, to obtain credential and safety status information on interstate carriers based in states other than Louisiana, and to upload state credential and safety information to the national system.

Background: Through its CVISN efforts, FHWA is developing two data exchange vehicles which will support EDI for safety assurance and clearance purposes. These are the Safety and Fitness Electronic Records System (SAFER) and the Commercial Vehicle Information Exchange Window (CVIEW). SAFER is planned to provide safety information about interstate carriers, vehicles and drivers in a standard "snapshot" format. Future enhancements of SAFER also will provide credential status information - essentially the equivalent of the paper registration documents and decals currently carried in the commercial vehicle.

CVIEW is designed to provide comparable information about intrastate carriers, and to provide the state interface with the national SAFER system. Each participating state will be provided the standard CVIEW system (currently under design and development by FHWA) at no cost. CVIEW will provide standard functionality in terms of accessing, flagging and viewing data, but states will design or fund design of custom linkages that interface with the state's legacy systems. States taking advantage of the SAFER / CVIEW systems will use CVIEW to interface with the national SAFER system. CVIEW is planned to interface with credentialing, permitting and tax legacy systems, to receive proactive updates from those systems at the time of credential application / issuance, and to update the national SAFER database with this information. SAFER will then disseminate this information to jurisdiction states, via the CVIEW interface. CVIEW also will provide access to the state legacy systems that store information about intrastate carriers.

SAFER will initially include safety snapshot data from all states, as all states are presently participating in the MCSAP program and uploading data to SafetyNet, which then goes to MCMIS, from which SAFER will pull its snapshot information. At present, there can be

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considerable delay between inspection / crash event and upload of related data to the SafetyNet system in a number of states. As a result, the information currently available via SAFER may not be timely. Accuracy of data keyed from hard copy reports to the SafetyNet database also can be a problem in some states at present.

Credential status information will be available via SAFER in future enhancements to the system. However, data transfer methods and communication linkages for credential status are not as uniform or as evolved as with transfer of safety data. For these reasons, credential status information via SAFER will be limited for some time. FHWA is working to resolve these issues, but it will be some time before credential and safety status information available through SAFER / CVIEW will be uniformly available, accurate and timely.

A number of parallel or interim systems are under development or existing. These include the HELP, Inc. PrePass database system, which provides state enforcement with a credential status database keyed to a HELP issued unique identifier which is coded to an individual vehicle transponder. The HELP database, however, includes only IRP, IFTA and SSRS registration status information. It does not address safety status or driver information, and covers only those carriers who elect to enroll in HELP Inc.'s PrePass program. The PrePass program also assists states with design, installation and funding of the hardware, software and other infrastructure required for automated screening and clearance.

Oregon has developed the Greenlight Program and Oregon, Utah, Washington and Idaho are participating in a pilot project called MAPS, for the preclearance of longer combination vehicles. Transponders will be issued on several thousand Oregon, Idaho and Utah-based trucks. The transponders are coded with a unique identifier which serves as a key to Oregon IRP, IFTA, SSRS, intrastate registration and OS / OW permit data and to Utah / Idaho LCV permit and IRP, IFTA and SSRS registration data. LCV permit and other registration data for enrolled carriers is being electronically shared among the MAPS states, to provide a database to against which to check the transponder ID.

The COVE project in which Louisiana is participating will provide data mapping from the participating states' legacy systems to the X12 standard, and will provide a legacy system interface to proactively poll the legacy system for updates or changes, extract records with changed fields, reformat them to the X12 standard and upload them to a data sharing interface (DSI). The DSI will encrypt the records for security purposes and electronically transfer data to other states. The data sharing interface in the receiving state will decrypt the records and translate them from the X12 format into a standard format, making them available for access by roadside enforcement of other credentialing agencies. This model can be used to exchange data with other states within the region, and to move Louisiana credential information from the legacy systems to the roadside. This model may provide a stop-gap solution until full CVIEW functionality, or even an alternative to the CVIEW

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approach. This type of approach provides a system which can later be modified to meet the needs of the full CVIEW environment .

Advantage CVO is a multi-state project along the I-75 corridor which uses Mainline Automated Clearance Systems (MACS) at 29 sites on I-75 and Route 401. Vehicles enrolled in the program are equipped with transponders and are identified and weighed using AVI and WIM technologies. At present, carrier and vehicle credentials are verified at the time of enrollment and enrolled carriers are put on a "go list". The carrier's base state is responsible for informing project staff of any change in credential status, which is then reflected by a flag on the "go list". As enrolled vehicles pass MAC-equipped stations, the MACS system electronically checks the transponder ID against the go list as a proxy for credentials verification. This type of approach also can serve as an interim solution as SAFER and CVIEW functionality evolve, although this approach does not assist in making a state "CVIEW ready".

Requirements: The electronic data interchange project will be implemented in several phases. In the initial planning phase, alternative clearance strategies and management approaches will be evaluated and the preferred strategy for long-term implementation will be identified. This will likely result in a hybrid, evolutionary approach, perhaps starting with a simple "go list" type interim solution, then developing electronic interface capabilities with in-state legacy systems, and finally migrating to a richer CVIEW capability with access to the national SAFER and / or third party system over time, which will house data for states in addition to Louisiana and the southeast region. An integral component of this phase is the evaluation of various AVI systems (read only transponders, read/write systems, license plate readers, etc.). The type of AVI system selected will have a direct impact on the types of information and specific data elements that must be available to roadside. SAFER enrollment and connection will be completed during this initial phase.

The second phase will involve implementation planning for the preferred long-term solution. This will include:

- Identifying the legacy systems and data elements that will interface with the data exchange window (Louisiana has already initiated this process through the COVE study);
- Developing a data communication plan to link agency legacy systems, fixed scales and LSP TESS mobile units and SAFER;
- Identifying data security requirements;
- Identifying hardware and software requirements; and
- Developing a phased implementation plan, including testing, evaluation and training processes.

The third phase will involve design, development and implementation of the preferred solution(s). This will include deployment of interim solutions concurrently with design and development of the legacy system interface that will extract information from existing legacy systems and transmit the data to CVIEW (and / or interim systems) and

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implementation of communication links to connect CVIEW (and / or interim systems) to agency legacy systems, TESS systems, DOTD Weights and Standards systems and SAFER.

Responsibilities: The Department of Public Safety and Corrections will be responsible for managing the initiative for making credential and safety data accessible to fixed scales and mobile enforcement units. Significant involvement of and coordination among the LSP, its TESS unit and the DOTD will be required to coordinate data access / communication needs. The legacy systems interface will require significant coordination with the agencies responsible for IRP, IFTA and SSRS credentialing systems and OS / OW permitting systems. Louisiana will work with the regional forum in identifying / implementing interim solutions to take advantage of opportunities for regional implementation of interim solutions. Other agencies responsible for involved legacy systems also will be involved. The MCAC will also be involved to ensure carrier buy-in to the data exchange strategy.

Cost: Associated costs will vary depending on the alternative selected. Interim solutions which do not involve legacy system interface are low cost items, generally under \$100,000. Interim solutions involving legacy system interfaces may run on the order of \$400,000 to \$500,000. The cost of full scale implementation is dependent on the extent of legacy system interface completed during the interim period. If legacy system interfaces have been fully developed with all required legacy systems, the additional costs of full scale implementation of electronic data exchange / data access will be relatively low. Also, if Polk and VISTA compatible legacy system interfaces become commercially available within the next two years, the costs of interim solutions and Louisiana CVIEW implementation could drop considerably, or Louisiana could choose to go with a third party system where database costs are absorbed by the vendor. SAFER enrollment costs are estimated at approximately \$30,000 for the Weights and Standards Program.

Implementation Timing: Phase 1 will begin in 1998. Implementation of low cost interim solutions will occur in 1998 / 1999, in conjunction with the Breaux Bridge port automation pilot project. Planning for long-term solutions will begin 1999, with full implementation anticipated by 2003, assuming that technologies and standards stabilize by this time.

6.4 Increase Voluntary Participation in Transponder Programs

Purpose: At present, there are a number of disincentives to industry's voluntary participation in transponder programs. The limited number of weigh stations which can conduct electronic clearance, industry's fear that transponder equipped vehicles will be subject to a higher degree of scrutiny than vehicles not equipped with transponders, industry apprehension over long-term use of the data for non-clearance purposes (for example, to track vehicle speeds or driver in-service time, mileage tracking in support of national weight distance tax implementation, and other factors) and current problems with interoperability all serve as disincentives to industry participation. This project is designed to better identify those disincentives, and to work with the carrier community (and other states who are further

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down the pike) to identify market strategies and incentives to maximize voluntary installation of transponders.

Requirements: Work with the Southeast Regional Mainstreaming forum and the MCAC to identify both disincentives and market strategies to increase voluntary carrier participation. Survey other states with transponder programs in place and access other states' research / results to identify strategies which have been implemented successfully elsewhere. Work with the MCAC to set targets for carrier participation and develop pilot programs for implementation in Louisiana. Publicize these programs through the LMTA and other outlets.

Responsibilities: The DOTD's Weights and Standards Program will be the lead for this project, with substantial participation by the MCAC and LMTA.

Cost: Research and planning costs are estimated to run \$20,000 to \$40,000. Implementation costs will depend on the types of incentives to be pursued, but are estimated at a minimum of \$140,000, to provide transponders free of cost to at least 2,000 vehicles. Costs will be covered through STP funds dedicated to port automation.

Implementation Timing: 1999.

4.4.4.3 Information-Based Safety Assurance

7.1 Automated Safety Inspections Data Collection and Exchange

Purpose: This initiative will provide Louisiana's TESS unit with 100% access to pen-based or laptop systems which will be used both to record results of safety inspections and to access timely carrier, vehicle and driver safety and credential status information to support the goal of focusing safety assurance efforts on high risk carriers.

Requirements: This initiative will be conducted in four phases. The first phase involves acquisition of 19 laptops and associated ASPEN / AVALANCHE software, to equip 50 percent of the TESS unit with automated inspection capabilities. System training and implementation of automated inspection processes are also included in this phase. Inspection results will be uploaded to data processing at the end of each shift, and will be available for download to the laptops in two to three days following the original inspection. Officers will also be equipped with digital cameras, providing the ability to record log book and other violations in a manner acceptable for court access. The digital pictures will be electronically stored with the inspection record.

The second phase includes a pilot project to test the efficacy and performance of a mobile data transmission system, by adding hardware to existing radio towers in the Baton Rouge / Lafayette area. Mobile data terminals (MDTs) in conjunction with ASPEN / AVALANCHE systems will be provided to as many as six TESS officers operating in this area. The specially equipped radio towers and MDTs will provide TESS officers with capabilities to

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transmit inspection results from the patrol unit to data processing, and to access safety status and driver information stored in central legacy systems from the mobile units. Phase 2 involves evaluation of the pilot test results and planning for expansion of radio transmittal capabilities to other parts of the state.

The third phase involves laptop, software and digital camera acquisition for the remaining 18 TESS officers, as well as expansion of the MDT connectivity to other areas of the state.

The fourth phase involves expanding MDT access to SAFER / CVIEW systems as they are implemented in Louisiana.

Responsibilities: The TESS unit is responsible for implementation of this effort, in coordination with the LSP, with the Department of Public Safety and Corrections responsible for expansion of radio communication infrastructure.

Cost: Costs for laptop / software and digital camera acquisition and related officer training are estimated at approximately \$2,300 per officer or \$44,000 per phase, and are included within the TESS unit's operating budget. MDT acquisition and connectivity is included within the LSP's five-year program budget. Costs of CVIEW / SAFER implementation are documented under a separate initiative in Section 4.4.4.2, Initiative 6.3.

7.2 SAFER Connection and Enrollment

Purpose: The information currently available to TESS officers via FHWA distributions from MCMIS is updated only quarterly. Safety ratings and inspection history available through the CD ROM distributions is thus out of date even after it is updated. SAFER will replace the periodic CD ROM update process. SAFER will make updates possible on demand, and will provide carrier safety performance snapshots on line, thereby providing more timely access to safety information to assist officers in inspection selection decisions. Further, SAFER will provide a connection to NLETS and CDLIS, and will ultimately allow officers to access intrastate safety data and intrastate / interstate credential information (after implementation of Louisiana's CVIEW system).

Requirements: This initiative requires:

- Establishing a SAFER user account and completing enrollment procedures;
- Identifying and establishing communication link options;
- Developing / implementing a user training program;
- Establishing a process for periodic review of system use / officer input to ensure data quality; and
- Periodic update installation and associated training.

Responsibilities: The LSP TESS unit will be responsible for this activity.

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Cost: Costs are estimated at approximately \$30,000 including updates and update training and are included in general operating budgets.

Implementation Timing: The initial SAFER enrollment is scheduled for second quarter of 1998, with updates scheduled as they become available.

7.3 Automate Crash Reporting

Purpose: The TESS unit is responsible for CVO crash reporting as well as other safety assurance functions. Crash reports are currently completed on a hard copy form. Certain data elements are then data entered into the SafetyNet system for upload to MCMIS. This initiative will evaluate the feasibility of acquiring commercially available crash reporting systems that are SafetyNet compatible. Such systems have the capability to eliminate dual data entry requirements, thus reducing associated data entry error potential and reducing the turn-around time required to get crash data into the SafetyNet / MCMIS / SAFER systems. These systems also can interface with citations, transferring the citation information from the crash form to the citation.

Requirements:

- Evaluate commercially available software in terms of its ability to meet Louisiana-specific requirements as well as SafetyNet requirements / compatibility;
- Evaluate required customization and interface requirements;
- Pilot test;
- Evaluate pilot test results.

Responsibilities: The TESS unit will be responsible for implementation of this initiative.

Cost: Costs for the evaluation and pilot test are low, covered by existing operating budgets.

Implementation Timing: Implementation of this initiative will begin after implementation of the first phase of laptop / MDT capabilities, in 1999.

7.4 Evaluate Capabilities of "Smart" Mobile Scales

Purpose: Louisiana's TESS unit operates 32 portable mobile scales used in association with weight and safety inspections throughout the state. These units are effective, identifying a much higher proportion of overweight / unsafe operations than identified through fixed scales (fixed scales, of course identify a much higher number of unsafe / overweight vehicles because they process more than 11 million vehicles annually). The efficiency of mobile scales is limited, however, because of the nature of their operation and scale technology. Smart mobile units, equipped with portable WIMs, license plate readers, portable signs and computer / MDT capabilities may provide for more efficient and even more effective operations. This initiative will monitor and evaluate the requirements and

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results of other states who are implementing similar initiatives. Depending on the results of the assessment, similar operations may be instituted in Louisiana.

Requirements: Survey other states regarding requirements, results of smart mobile unit deployment; evaluate costs / benefits of Louisiana application.

Responsibilities: The DPS is responsible for mobile scale operation and enforcement.

Cost: This is a low cost item, to be undertaken within existing operating budgets. This project does not include implementation planning and deployment costs, which are estimated at \$100,000 to \$150,000 per unit, excluding any associated permanent WIM installations.

Implementation Timing: 1999 - planning phase.

4.4.4. Increase Availability of Commercial Vehicle Rest Areas

Louisiana's existing supply of commercial vehicle rest areas is insufficient to meet demand. Commercial vehicle rest areas are an important component of overall operational safety. These rest areas provide a safe parking location for large commercial vehicles where drivers can nap to relieve fatigue, or sleep to avoid exceeding maximum in-service hours. Driver fatigue is a major factor associated with commercial vehicle crashes. Parking on road right of way is also a major safety hazard. The initiatives outlined below are designed to increase the supply of rest areas, thus improving drivers' ability to comply with hours of service requirements and reducing operational safety hazards associated with driver fatigue and roadside parking.

8.1 Private Sector Incentives

Purpose: Rest areas associated with other services such as restaurants, showers, etc. are attractive to drivers. Increasing commercial vehicle parking availability associated with these facilities may be attractive to business owners to increase customer volume. This initiative will examine incentives available to private sector business and property owners to increase commercial vehicle parking spaces. Incentives could be tax-based, might include shared costs of facility construction with the DOTD, and / or could involve joint use of state-owned land or DOTD rights of way in locations meeting required safety criteria and other factors.

Requirements:

- Identify the shortfall in CV rest area spaces;
- Prioritize locations by highway segment;
- Identify and evaluate private sector incentives by researching activities of other states and working with the MCAC and private property owners;
- Identify limitations, opportunities, costs and required statutory / regulatory changes as part of the evaluation process;
- Pilot test preferred options with the private sector;
- Full scale implementation.

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Responsibilities: The DOTD Planning Division will have primary responsibility for this initiative, working closely with the MCAC and an advisory group of private land owners.

Cost: Planning costs for this activity are estimated at \$15,000 and are included within the DOTD operating budget. Costs of implementation will vary based on options selected.

Implementation Timing: Planning for this activity will begin in 1999.

8.2 Public Sector Initiatives

Purpose: The DOTD currently plans to expand available CVO rest area spaces from 400 to 600. However, there may be opportunity for provision of additional state-owned rest areas throughout the state. This project will involve an inventory of excess rights-of-way and state-owned lands that meet required safety and locational criteria. In addition, this activity will institute measures to ensure that CV parking areas already provided by the state are available for CV use.

Requirements:

- Examine DOTD excess right-of way, closed rest areas and other state-owned lands to identify parcels which are within the high demand location areas for additional CV rest areas;
- Evaluate sites in terms of suitability / potential for alternative uses;
- Determine the number of spaces which can be provided by the public sector, using these sites;
- Plan for and implement CV rest / parking space construction;
- Examine / modify enforcement processes to ensure that designated CV spaces already existing are routinely available for CV use, rather than use by general traffic.

Responsibilities: The DOTD, Planning Division will be responsible for implementation of this activity, with assistance of the LSP and MCAC.

Cost: Planning costs for this activity are estimated at \$15,000 and are included within the DOTD operating budget.

Implementation Timing: Timing of this initiative will be concurrent with planning for private sector initiatives.

4.5 Improve Freight Flows

Improving freight flows is key to Louisiana's efforts to improve overall CVO operational productivity. As outlined in Chapter 2, Louisiana's major freight corridors are expected to experience significant congestion by the year 2020. Program elements associated with improving freight flows are designed to ensure that projected truck volumes can be safely and productively accommodated by the states major highway network. Exhibit 4-4 summarizes the program of projects Louisiana will

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undertake to address future freight flow needs. The automated clearance and safety assurance activities detailed in Section 4.4 also are key elements of the state's efforts to improve freight mobility.

Exhibit 4-4. Program Elements Associated with Improving Freight Flows

Program Element Designed to Improve Freight Flows / Associated Requirements	Regional / National Activities / Technologies Leveraged (1)
9.0 Mobility Improvements	
9.1. Bring key freight corridors to target quality / service levels	
9.2. Improve mobility in and around construction sites	
9.3. Statewide incident management plan	
9.4. Revise CVO operating restrictions to maximize operational efficiencies while maintaining operational safeguards	
10.0 Increase Available Funds for Mobility Improvements	
• Review dedications to the Transportation Trust Fund	

Each of these initiatives is described below.

4.4.4.1 Initiatives Associated with Mobility Improvements

9.1 Bring Key Freight Corridors to Target Quality / Service Levels

Purpose: As in most states, system preservation and new construction needs cannot be fully accommodated under existing appropriations. Even with special appropriations, there are a number of needs competing for limited dollars. This initiative is designed to focus a portion of highway construction / system preservation dollars on high priority freight corridors within the state, including the interstate system, as well as some US and state highways and key landside access routes to rail and port facilities.

Requirements:

- Identify priority freight corridors and key landside access routes to port and rail facilities based on heavy and medium truck volumes, VMT, economic and other factors;
- Identify target benchmarks for system quality / facility performance;
- Identify improvements required to meet benchmark targets;
- Set aside dedicated funding on an annual basis to address these needs;
- Develop a phased implementation plan for design, construction and system preservation activities;

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- Implement phased design / construction / system preservation program.

Responsibilities: The DOTD, Planning Division will lead this activity. Local government and MCAC input will be solicited in key freight corridor identification, evaluation of improvement needs, and development of a dedicated funding source.

Cost: Louisiana's Long-Range Transportation Plan calls for \$5 to \$8 million annually for intermodal terminal access improvements over the next 25 years. The State Transportation Plan also calls for several billion dollars in investment for expanding the freeway system. Further, the Transportation Infrastructure Model for Economic Development (TIMED) calls for major improvements to many principal arterials in Louisiana, paid for through a dedicated four-cent fuel tax.

Implementation Timing: This is a long-term initiative to be phased in over the next 25 years.

9.2 Construction Site Mobility Improvements

Purpose: The motor carrier community reports an unacceptable level of delay associated with peak and non-peak hour movements through and around roadway construction sites. This initiative will reexamine and modify Louisiana's construction management procedures to improve freight and general traffic through construction sites.

Requirements:

- Identify construction area throughput and safety performance benchmarks;
- Review current traffic management practices associated with construction sites and evaluate current throughput / safety performance during peak hours;
- Identify process changes which may be capable of improving performance;
- Pilot test under controlled conditions; revise manuals, administrative requirements as appropriate;
- Design and implement training program for staff responsible for preparing construction management plans;
- Implement process revisions.

Responsibilities: DOTD, Traffic Operations Division will be the lead agent for this initiative, but will work closely with the LSP, local governments and the MCAC in problem definition / resolution.

Cost: Analysis, pilot testing and training are estimated at \$85,000 and will require a line item appropriation or other separate funding.

Implementation Timing: This initiative will be implemented in 1999.

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9.3 Statewide Incident Management Plan

Purpose: This initiative is designed to reduce response times, costs of delay and duration of congested period associated with general and hazardous incidents.

Requirements:

- Develop a statewide incident management committee, with regional subcommittees to identify problems associated with both general and hazardous materials incident response;
- Identify process, equipment, training and other needs to better meet response needs;
- Identify budget, management, pilot testing and equipment acquisition / implementation process;
- Implement on a phased basis, beginning in highest incident regions / most congested segments.

Responsibilities: DOTD's Traffic Operations Division will lead this effort with significant input from the MCAC, local governments and the LSP.

Cost: Planning costs are estimated at \$175,000, to be funded as a separate line item.

Implementation Time Frame: Plan development will begin in 1999.

9.4 Revise CVO Operating Restrictions

Purpose: CVO operating restrictions are typically designed to maximize operational safety and minimize roadway damage. Some restrictions, however, may be outdated or unproductive, with little associated safety or pavement preservation benefits. This initiative will examine statutory and administrative operating restrictions to identify potential revisions which can maximize operational efficiencies, while maintaining the high level of operational safeguard required.

Requirements: As part of the overall statutory / administrative rule review and revision process described in Section 4.3.2:

- Review appropriate statutes / rules and identify unproductive requirements, as well as potential needs for operating safeguards which are lacking in the existing language;
- Identify desired changes;
- Pilot test and evaluate results;
- Implement those changes warranted by the evaluation results.

Responsibilities: The DOTD will lead this effort, with input from the MCAC, TESS unit, LSP and local governments.

Cost: Costs of this initiative are included in Section 4.3.2.

Implementation Timing: This initiative will be undertaken in 1998.

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4.4.4.2 Initiatives Associated with Increasing Funds Available for Mobility Improvements

10.1 Review Dedications to the Transportation Trust Fund

Purpose: CVO highway user fees were originally developed to cover the costs of commercial vehicle use of the state and national highways. Over the years, some of the funds collected in the form of highway user fees have been diverted to non-highway uses. Louisiana's motor carrier community has made it a priority to work with the state to redirect highway user fees paid by motor carriers to the state's Transportation Trust Fund. This initiative supports the effort to maximize the Transportation Trust Fund dollars available to improve freight mobility.

Requirements:

- Review allocation of CVO highway user fees to the Transportation Trust Fund and other funds. Identify desired reallocation of funds;
- Review statutes / administrative rules governing funds allocation;
- Identify legislative / administrative changes required;
- Develop support base and implement changes.

Responsibilities: The MCAC and its Legislative Subcommittee will have primary responsibility for this initiative.

Cost: Direct costs of this initiative are covered in the cost of overall statutory / administrative rule review / revision (Section 4.3). Indirect costs include the amount of funds currently going to other some programs, some of which may need to be replaced by other sources.

Implementation Timing: This initiative will be undertaken in 1998. Required legislative changes would be introduced in the 1999 session.

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5.0 CVO / ITS DEPLOYMENT PROGRAM SUMMARY

5.1 Program Summary

Louisiana's CVO / ITS program detailed in Section 4, is summarized below in Exhibit 5-1. Each program element is identified with the associated lead agency, support agencies, estimated costs, and implementation timing. Program elements were ranked by the Steering Committee according to implementation priority on a three-tier scale (A, B, C), with A indicating the highest relative priority. The following criteria were used in assigning rankings:

- Degree to which initiative benefits *both* carriers and state;
- Degree to which initiative supports increased administrative productivity, the number one goal area of both state agencies and carriers;
- Degree to which initiative supports increased operational safety and productivity;
- Degree to which initiative supports improved freight flows.

Exhibit 5-1. Louisiana CVO / ITS Program Summary

Program Element (Priority Level) / Associated Requirements	Lead Agency	Estimated Costs (1)	Implementation Timing
1.0 Streamline Credentialing / Tax Filing Requirements (A)			
1.1 Streamline forms, supporting document requirements, processes	MCAC, with:		1998
	IRP - DPSC, OMV	\$20,000	1998
	IFTA - DRT, Excise Tax Division	\$20,000	1998
	SSRS - PSC, Transportation Division	\$10,000	1998
	OS / OW - DOTD, Weights and Standards Program	Included in PERBA budget	
1.2 Statutory Revisions	MCAC	\$150,000	1998 - 1999 legislative session
Funding Requirements 1.0		\$200,000	1998
2.0 Improve Motor Carrier Regulatory Compliance (A)			
2.1 Motor Carrier Advisory Committee	Department of Public Safety and Corrections	Included in current operating budgets	1998, ongoing
2.2 Regulatory Handbook	Department of Public Safety and Corrections, OMV	\$60,000	Pending 1999 Legislative session

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Program Element (Priority Level) / Associated Requirements	Lead Agency	Estimated Costs (1)	Implementation Timing
2.3 State CVO Web Site	DOTD or DSP - to be decided by the MCAC	\$25,000	1999, concurrent with handbook development
2.4 Unique Carrier ID system	MCAC; each credentialing agency would have lead responsibility for implementation of required legacy system changes	Phase 1 - \$20,000 Interstate implementation costs included in other legacy system modification efforts Does not include intrastate motor carrier account system development	Dependent upon development of national consensus
Funding Requirements 2.0		\$105,000	1999
3.0 Electronic Credentialing (A)			
3.1 Statutory / Administrative Rules Revisions	MCAC and its Legislative Subcommittee	Included in 1.2	1998 - 1999 legislative session
3.2 CAT Software Evaluation / Implementation	MCAC and its CAT Subcommittee	\$10,000 \$75,000 - 150,000	Evaluation - 1998 Implementation: 1999-2001
3.3 Credential Interface	IRP - DPSC, OMV IFTA - DRT, Excise Tax Division SSRS - PSC, Transportation Division OS / OW - DOTD, Weights and Standards	\$20,000 \$75,000 - 150,000	Planning - 1999 Implementation: 2000-2001
3.4 Electronic Payment	Planning - MCAC and its EFT Subcommittee Implementation: IRP - DPSC, OMV	\$20,000 \$75,000 - \$125,000	Planning - 1999 Implementation: 1999 - 2000

5.0 CVO / ITS DEPLOYMENT PROGRAM SUMMARY

Program Element (Priority Level) / Associated Requirements	Lead Agency	Estimated Costs (1)	Implementation Timing
	IFTA - DRT, Excise Tax Division SSRS - PSC, Transportation Division OS / OW - DOTD, Weights and Standards		
3.5 Web Site CAT Access	DOTD or DSP and MCAC	Planning - \$15,000 Implementation - \$100,000	Planning - 1999 Implementation - 2000 - 2001
Funding Requirements 3.0		\$10,000 \$380,000- 580,000	1998 1999 - 2001
4.0 Electronic Data Exchange for Administrative Purposes (C)			
4.1 Automate recaps / transmittals / payments	IRP - DPSC, OMV IFTA - DRT, Excise Tax Division	\$50,000 \$50,000	1998 1999
Funding Requirements 4.0		\$50,000 \$50,000	1998 1999
5.0 Increase Efficiency of Existing Scale Operations (A)			
5.1 Joint Port Operations	DOTD, Weights and Standards Program	Included in DOTD operating budgets	Pilot - 1998 Expansion - 1999
5.2 Scale Calibration	DOTD, Weights and Standards Program	Included in DOTD operating budgets	1998, ongoing
5.3 Fixed Scale Upgrades	DOTD, Weights and Standards Program	\$1.5 million	1998
Funding Requirements 5.0		\$1.5 million	1998

5.0 CVO / ITS DEPLOYMENT PROGRAM SUMMARY

Program Element (Priority Level) / Associated Requirements	Lead Agency	Estimated Costs (1)	Implementation Timing
6.0 Electronic Clearance (A)			
6.1 WIM Installations	DOTD, Weights and Standards Program	\$ 3 million, annually	1998 - 2001
6.2 Quality Controlled Sampling	DOTD, Weights and Standards Program	\$200,000 \$200,000	Pilot - 1998 Expansion to other ports - 1999-2000
6.3 Credential / Safety Status to the Roadside	Department of Public Safety and Corrections	Interim "proxy" solutions - \$40,000 Interim legacy system interfaces - \$300,000 Full CVIEW implementation - \$150,000 (2)	1st Quarter 1999 2000 - 2001 Dependent on national development schedule
6.4 Transponder Marketing Incentives	DOTD, Weights and Standards Program	Planning - \$30,000 Incentives - \$140,000 minimum	1999
Funding Requirements 6.0		\$3.2 million \$3.41 million \$3.3 million \$3.15 million	1998 1999 2000 2001
7.0 Information-based Safety Assurance (A)			
7.1 Inspection Automation	LSP, TESS	\$88,000 over two years MDT Communications	1998 - 1999 Budgeted
7.2 SAFER Connection / Enrollment	LSP, TESS	\$30,000	1998, and as updates are released

LOUISIANA CVO / ITS BUSINESS PLAN

5.0 CVO / ITS DEPLOYMENT PROGRAM SUMMARY

Program Element (Priority Level) / Associated Requirements	Lead Agency	Estimated Costs (1)	Implementation Timing
7.3 Evaluate Automated Crash Reporting	LSP, TESS	Included in existing operating budget	1999
7.4 Smart Mobile Unit Evaluation	LSP, TESS	Evaluation - \$10,000 Implementation - \$150,000 per unit (excluding potential for associated fixed WIM sites)	1999 2001, if undertaken
Funding Requirements 7.0		\$74,000 \$54,000 (3)	1998 1999
8.0 Additional CV Rest Area Provisions (B)			
8.1 Private Sector Initiatives	DOTD, Planning Division	Planning - \$15,000	1999
8.2 Public Sector Initiatives	DOTD, Planning Division	Planning - \$15,000	1999
Funding Requirements 8.0		\$30,000 (4)	1999
9.0 Mobility Improvements in Support of Improved Freight Flows (C)			
9.1 Key Freight Corridor Improvements	DOTD	Planning - \$100,000 Implementation in existing STIP, TIMED and Intermodal programs	1998 - 1999
9.2 Construction Site Mobility Improvements	DOTD, Traffic Operations	\$85,000	1999
9.3 Statewide Incident Management Plan	DOTD, Traffic Operations	\$175,000	1999
9.4 CVO Operating Restriction Revision	DOTD	Included in 1.2	1998 - 1999 Legislative session
Funding Requirements 9.0		\$50,000 \$310,000	1998 1999

5.0 CVO / ITS DEPLOYMENT PROGRAM SUMMARY

Program Element (Priority Level) / Associated Requirements	Lead Agency	Estimated Costs (1)	Implementation Timing
10.0 Increase Funds Available for Mobility and other Improvements (A)			
10.1 Review Dedications to Transportation Trust Fund	MCAC	Included in 1.2	1998 - 1999 Legislative session
Funding Requirements 1.0 - 10.0		\$5.08 million (5)	1998
		\$4.09 - \$4.15 million	1999
		\$3.43 - \$3.49 million	2000
		\$3.28 - \$3.34 million	2001

- (1) Costs are one-time unless otherwise indicated.
(2) Assumes legacy system linkages required for CVIEW are primarily in place.
(3) Excludes Smart Mobile Unit deployment.
(4) Excludes associated implementation activities.
(5) \$1.5 million already budgeted.

5.2 Program Benefits

Exhibit 5-2 documents estimated benefits over a ten-year period resulting from implementation of Louisiana's CVO / ITS program. Some benefits can be quantitatively estimated based on available data. Other benefits are illustrated qualitatively, as reliable data to support quantitative estimates are not available for these categories of saving or increased revenues. For this reason, a cost benefit ratio is not provided.

Estimated benefits to motor carriers associated with time savings related to mainline bypass and automated OS / OW permitting appear very large when taken as a whole. Is important to remember, however, that savings to any individual carrier, unless that carrier runs thousands of trucks, will be minimal.

Appendix A details the methodology and assumptions underlying the benefit estimates.

5.0 CVO / ITS DEPLOYMENT PROGRAM SUMMARY

Exhibit 5-2. Estimated CVO Program Benefits

Benefit Type	Estimated Ten -Year Benefit
Motor Carrier Costs Avoided / Saved	
Savings to motor carriers related to mainline bypass	\$68,450,000
Motor carrier administrative savings from electronic credentialing	\$600,000
Operational savings to motor carriers related to electronic credentialing (24 hour access to credentialing; getting vehicles on the road faster)	\$9,304,000
Operational savings to motor carriers resulting from automation of OS / OW permitting (assumes carriers get OS / OW vehicles on the road an average of one hour faster, 40% of the time)	\$57,683,000
Motor Carrier operational savings and direct costs saved by avoidance of motor vehicle crashes related to improved safety assurance	Quantitative benefit cannot be identified with available data
Reduced motor carrier fines due to improved fixed scale calibration efforts	Quantitative benefit cannot be identified with available data
Operational savings related to construction site and incident management improvements	Quantitative benefit cannot be identified with available data
Subtotal, Carrier Benefits	\$136,037,000
State Agency Costs Avoided / Saved	
Estimated reduction in DOTD fixed scale capital and maintenance costs	Quantitative benefit cannot be identified with available data
Administrative savings to state agencies related to electronic credentialing (includes electronic credentialing and tax filing, automated recap / transmittal, related electronic payments)	\$1,318,600
Administrative savings to DOTD Truck Permit Office related to automation of OS / OW permit functions	\$1,442,100
Administrative savings to LSP TESS related to elimination of data entry requirements for inspection reports	\$1,202,300

5.0 CVO / ITS DEPLOYMENT PROGRAM SUMMARY

Benefit Type	Estimated Ten -Year Benefit
Subtotal, State Agency Costs Avoided / Saved	\$3,963,000
Anticipated Revenue Increases	
Increased IRP, IFTA, SSRS and OS / OW revenues related to compliance and enforcement improvements	Quantitative benefit cannot be identified with available data
Estimated increase in safety citation fines	\$3,748,682
Total All Benefits	\$143,748,682

6.0 PROGRAM IMPLEMENTATION STRATEGY

6.1 Overview

Successful program deployment and implementation requires a number of related efforts, including:

- Funding;
- Agency, legislative, motor carrier and general support;
- Private sector participation in implementation of the initiatives outlined in the CVO / ITS Business Plan;
- Training to address new systems / new processes;
- Periodic Plan updates.

Each of these required implementation activities is addressed below.

6.2 Funding

Six primary funding sources have traditionally been available to Louisiana for funding transportation initiatives. These include the:

- Federal Transportation Trust funds;
- State Transportation Trust Fund;
- TIMED funds, a special fund created from an increase in fuel taxes to finance the Transportation Infrastructure Model for Economic Development;
- State General Fund;
- General obligation bonds under the Capital Outlay Program; and
- Special legislative appropriations.

The initiatives outlined in Louisiana's CVO / ITS Strategic Business Plan require an investment of almost \$16 million over the next four to five years. Almost ten percent of the required investment is programmed within existing budgets; 90 percent remains to be funded, meaning that the state must identify funding sources for \$14 million additional dollars over the next five to six years. In addition, these initiatives will require investments for system and facilities maintenance and upgrade for many years into the future. Potential funding sources for these activities include Federal ITS / CVO deployment program funding, special legislative appropriations, revenues which may be generated from redirected dedications of existing highway user fees. Each of these potential funding sources is examined below.

6.2.1 Federal ITS / CVO Deployment Program Funding

Reauthorization and new appropriations for the federal ITS / CVO program is expected to be included in the transportation budget reauthorization package which will be considered by the US Congress in the spring of 1998. The pending legislation includes deployment funding for CVISN

6.0 PROGRAM IMPLEMENTATION STRATEGY

activities, as well as CVISN planning funds. This CVO / ITS Strategic Business Plan provides the state with an action plan with which to approach FHWA for additional funds for more detailed planning and implementation / deployment of Plan initiatives.

6.2.3 State Legislative Appropriations

Initiatives with a clear public purpose and broad support are fairly well positioned to win legislative support. The initiatives contained in the CVO / ITS Business Plan have the support of all agencies with CVO responsibilities in Louisiana. In addition, initiatives such as automation of credentialling and permitting processes, targeted enforcement, WIM installation and redirection of existing highway user fees to the state's Transportation Trust Fund have strong industry support. The activities outlined in the Plan provide clear benefits for the state and motor carrier industry, and provide long-term operational savings for both the private and public sectors.

6.2.4 State Transportation Trust Fund Dedications

A priority implementation action contained within the Plan is to review the highway user fee dedication structure to determine whether there is potential to increase the proportion or type of CVO fees / taxes going to the state Transportation Trust Fund, and thus available for allocation to transportation initiatives. For example, CVO vehicle registration fees are currently not distributed to the Transportation Trust Fund. Redirection of registration fees to the Transportation Trust Fund could significantly increase revenues available for improving the efficiency of the registration process.

6.2.5 Other Factors

Any information systems projects undertaken by IRP, IFTA, SSRS, LSP TESS unit, Truck permits and others with responsibility for CVO credential and safety assurance information should be reviewed to ensure that the resulting changes / upgrades contribute to the state's long term vision and support CVISN architecture, standards and protocols to help make the state CVISN ready and to reduce future costs associated with implementation of CVISN technology and communication infrastructure.

Construction projects at DOTD fixed scales should also be reviewed to determine whether quality controlled sampling, WIM installation, etc. could be used to offset port physical expansion requirements.

Finally, the state should consider developing a "one source" funding pool for CVO / ITS projects such as CVIEW implementation and automated credentialing. Several agencies will be involved in each of these initiatives. To avoid funding problems which could affect scheduling / implementation in any initiative requiring multiple agency participation, this one-source funding pool would provide funds for project deployment for all participating agencies.

6.0 PROGRAM IMPLEMENTATION STRATEGY

6.3 Building Support

To ensure adequate funding availability for deployment and to ensure successful project / program implementation, it is critical to build a broad base of support for the state's CVO / ITS program. This involves education, information and outreach at the agency, legislative, motor carrier and general public levels.

Agency Support Base - This support base has largely been built at the policy and decision-maker level within the various state agencies responsible for CVO / ITS program implementation. Within many responsible organizations / divisions, there is also considerable understanding / support at the staff level as well. However, additional informational, educational and outreach efforts need to be initiated / expanded at the staff level, where a large share of the ultimate responsibility for successful program implementation resides.

Legislative Support Base - There have been a number of transportation and CVO initiatives successfully passed through the state legislature in recent years. As such, there is a core group of concerned and informed legislators with some level of awareness of ITS / CVO opportunities and needs. There is a need to expand this awareness, providing a greater understanding of the potential for ITS to reduce state and carrier costs, while improving CVO operational safety and compliance.

Motor Carrier Support - The motor carrier community is very diverse, including large, national firms and smaller regional and local operators. Some portions of the carrier community are highly sophisticated in terms of computer applications and understanding of ITS / CVO opportunities and limitations. Other segments of the industry are less aware. Some types of ITS initiatives have broad industry support - initiatives to increase the efficiency of administrative processes, for example, to target safety assurance activities toward higher risk carriers, to improve freight flows by improving operational efficiencies. Other types of initiatives - automated clearance, for example - are viewed with some skepticism. Industry support and buy-in to the state's overall CVO / ITS program is critical to its long-term success.

General Public Support - With few exceptions, the general public has very limited awareness of CVO / ITS activities or their potential to affect CVO and general traffic operational safety.

The MCAC is responsible for defining and implementing an ongoing, multi-faceted outreach program to build the base of support required for successful implementation of and investment in the state's CVO / ITS program.

6.4 Private Sector Involvement in Plan Implementation

Louisiana recognizes that private sector participation in its CVO / ITS program implementation planning and deployment is required to ensure that the program meets the needs of industry. The legislatively established MCAC will contribute to implementation of virtually every Plan initiative by providing a forum for multi-agency and industry discussion of needs and evaluation of alternatives

6.0 PROGRAM IMPLEMENTATION STRATEGY

to meet those needs. The standing MCAC includes state agency representatives from all of the public agencies involved in commercial vehicle operations, as well as Louisiana Motor Transport Association representation.

One of the Plan initiatives is to position the MCAC to ensure significant carrier, shipper and related industry advisory involvement in deployment and implementation of the state's CVO / ITS Plan. Toward this end, the MCAC plans to appoint a series of subcommittees focused on credentialing, electronic funds transfer, port automation, carrier and legislative outreach, funding strategy development and implementation, incident management, construction site mobility, legislative initiatives, etc. These subcommittees will serve in an advisory role in implementation planning, deployment testing and test evaluation of each of the Plan initiatives. The subcommittees will include state staff as well as motor carrier representatives. The LMTA will work with the Department of Public Safety and Corrections to identify appropriate motor carrier, shipper or other industry representatives to serve on each of the subcommittees responsible for CVO / ITS implementation planning and deployment.

6.5 Training

Each of the initiatives within this plan requires the state and carriers to change the current way of doing business. From the state's perspective, staff will be managing dual systems for some time. To successfully transition from the "old way" to the "new way" will require training, monitoring, feedback and more training with the testing, evaluation and deployment of each program element. The MCAC will be responsible for developing training programs and related programs for change management. This responsibility resides with the MCAC, rather than with each individual department or division to ensure that agencies learn from each others experience, developing the most effective and cost effective programs possible.

6.6 Plan Update Process

The state views the Plan as a living document. The Plan will be amended annually to reflect changes in the CVO operating and regulatory environment, implementation of the state's CVO / ITS program, and revisions to that program to reflect changing opportunities regionally and nationally. The Plan will also be reviewed upon completion of the Southeast Regional ITS / CVO Plan to determine opportunities to leverage state activities with regional initiatives. Finally, the Plan will be reviewed after any national CVO / ITS program changes such as ISTEA reauthorization.

APPENDIX A -

Derivation of Quantitative Benefits Estimates

**Exhibit A-1. Derivation of Estimates of Number of Vehicles Bypassed / Stops
Avoided as a Result of Port Automation, Joint Port Operation
and Quality Controlled Sampling, Year 1-10**

Port	Vehicles Through Port Annually	% Transponder- equipped, Year 1-5	% Transponder- equipped, Year 6-10	Vehicles Bypassed Annually Year 1-5	Vehicles Bypassed Annually Year 6-10
<i>Ports Scheduled for Automation</i>					
Breaux Bridge	1,842,155	3%	7%	55,265	128,951
Baptist	1,715,471	3%	7%	51,464	120,083
Greenwood	1,554,497	3%	7%	46,635	108,815
Total	5,112,123	3%	7%	153,364	357,849
<i>Ports Scheduled for Quality Sampling System Installation</i>					
LaPlace	994,379	1%	5%	9,944	49,719
Toomey	1,906,328	1%	5%	19,063	95,316
Total	2,900,707	1%	5%	29,007	145,035
<i>Ports Scheduled for Joint Operation with Other States</i>					
		% Stops Avoided			
Delta	1,298,920	50% (1)		649,460	649,460
Kentwood	722,256	50% (1)		361,128	361,128
Slidell	944,262	50% (1)		472,131	472,131
Total	2,965,438	50% (1)		1,482,719	1,482,719
Total Stops Avoided				1,665,090	1,985,603

(1) Joint port operation will reduce carrier stops by 50%; rather than stopping at each states' port, carriers will stop at one port where the inspection will cover both border states' requirements. The 50% indicates percent of stops avoided. It does not refer to percent of vehicles that are equipped with transponders. Joint port operation does not require vehicles to be transponder equipped.

**Exhibit A-2. Derivation of Estimates of Dollars Saved by Carriers in
Stops Avoided as a Result of Port Automation, Joint
Port Operation and Quality Controlled Sampling**

Port Location	Stops Avoided Year 1-5	Stops Avoided Year 6-10	Average Time Savings Per Avoided Stop (1)	Total Dollars Saved, Year 1-5 (2)	Total Dollars Saved, Year 6-10 (2)	Total Dollars Saved, Year 1-10 (2)
<i>Ports Scheduled for Automation</i>						
Breaux Bridge	55,265	128,951	4.5	\$ 1,036,212	\$ 2,417,828	\$ 3,454,041
Baptist	51,464	120,083	4.5	\$ 964,952	\$ 2,251,556	\$ 3,216,508
Greenwood	46,635	108,815	4.5	\$ 874,405	\$ 2,040,277	\$ 2,914,682
Total	153,364	357,849		\$ 2,875,569	\$ 6,709,661	\$ 9,585,231
<i>Ports Scheduled for Quality Sampling System Installation</i>						
LaPlace	9,944	49,719	4.5	\$ 186,446	\$ 932,230	\$ 1,118,676
Toomey	19,063	95,316	4.5	\$ 357,437	\$ 1,787,183	\$ 2,144,619
Total	29,007	145,035		\$ 543,883	\$ 2,719,413	\$ 3,263,295
<i>Ports Scheduled for Joint Operation with Other States</i>						
Delta	649,460	649,460	4.5	\$ 12,177,375	\$ 12,177,375	\$ 24,354,750
Kentwood	361,128	361,128	4.5	\$ 6,771,150	\$ 6,771,150	\$ 13,542,300
Slidell	472,131	472,131	4.5	\$ 8,852,456	\$ 8,852,456	\$ 17,704,913
Total	1,482,719	1,482,719		\$ 27,800,981	\$ 27,800,981	\$ 55,601,963
Total, All Initiatives	1,665,090	1,985,603		\$ 31,220,433	\$ 37,230,056	\$ 68,450,489

(1) 4.5 minutes

(2) Assumes average vehicle operating costs of \$50 per hour.

**Exhibit A-3. Estimates of State Savings Over a Ten-Year Period
Associated with Automated IRP, IFTA and SSRS
Credentialing**

Activity	Vehicles Registered	Carriers Registered	Minutes Saved Per Transaction	Per Hour Labor Cost (Loaded)	Total Dollars Saved Annually	Total Dollars Saved Over a Ten-Year Period
Data entry time						
IRP	19,293		3	\$ 18.75	\$ 18,087	\$ 180,872
IFTA / SSRS		2,254	8	\$ 18.75	\$ 5,635	\$ 56,350
IFTA Quarterly Return		1,440	15	\$ 18.75	\$ 27,000	\$ 270,000
Checking Time						
IRP		4593	10	\$ 18.75	\$ 14,353	\$ 143,531
IFTA / SSRS		2254	8	\$ 18.75	\$ 5,635	\$ 56,350
Payment Processing						
IRP		4593	30	\$ 18.75	\$ 43,059	\$ 430,594
IFTA / SSRS		2254	30	\$ 18.75	\$ 21,131	\$ 211,313
IFTA Quarterly Return		1440	30	\$ 18.75	\$ 54,000	\$ 540,000
Renewal Processing (Includes printing / mailing records / forms to each carrier)						
IRP		4593	10	\$ 18.75	\$ 14,353	\$ 143,531
IFTA / SSRS		2254	6	\$ 18.75	\$ 4,226	\$ 42,263
Package and Mail Credential Back to Carrier						
IRP		4593	5	\$ 18.75	\$ 7,177	\$ 71,766
IFTA / SSRS		2254	3	\$ 18.75	\$ 2,113	\$ 21,131
Postage Costs Avoided						
IRP		4593		\$ 3.00	\$ 13,779	\$ 137,790
IFTA		1440		\$ 1.00	\$ 1,440	\$ 14,400
SSRS		814		\$ 0.32	\$ 260	\$ 2,605
Recap and Transmittal Costs Avoided (Preparation, mailing and Payment Processing)						
		Number Annual Transmittal Cycles	Hours per Cycle			
IRP		25	12	\$ 18.75	\$ 5,625	\$ 56,250
IFTA		12	12	\$ 18.75	\$ 2,700	\$ 27,000
SSRS		12	8	\$ 18.75	\$ 1,800	\$ 18,000
Recaps / Transmittals (IRP, IFTA and SSRS) Postage		2450		\$ 0.55	\$ 1,348	\$ 13,475

Total Credential Savings, assuming 100% of applications are electronic	\$ 232,249	\$ 2,831,108
Total Credential Savings, assuming 5% of applications are submitted electronically in Year 1, with electronic applications increasing to 50% by Year 5 and remaining at 50% through Year 10		\$ 1,217,377
Total Credential and Recap Savings, assuming 5% of applications are submitted electronically in Year 1, with electronic applications increasing to 50% by Year 10		\$1,318,626.53

Assumes:

Participating carriers are provided with self-issue plates and IFTA decals.
System issues cab cards, IFTA license and SSRS registration receipt to carrier.
System includes functionality to check common application errors, reducing staff time requirements for application review.
System uploads application data and EFT records to legacy system(s), eliminating all data entry requirements for CAT transactions.
Payment processing time estimates reflect 15 minutes for credentialing group, as well as 15 minutes for accounting group.
IRP recaps and transmittals are prepared / mailed twice monthly.
IFTA and SSRS transmittals are prepared / mailed once monthly.
Assumes 2% annual increase in number of vehicles / carriers
Labor cost average \$15 per hour, with additional 25% for insurance, payroll taxes, etc.

**Exhibit A-4. Estimates of Motor Carrier Administrative Savings
Over a Ten-Year Period Associated with Automated
IRP, IFTA and SSRS Credentialing**

Activity	Vehicles Registered	Carriers Registered	Minutes Saved Per Transaction	Per Hour Labor Cost (Loaded)	Total Dollars Saved Annually	Total Dollars Saved Over a Ten-Year Period
Application preparation						
IRP	19,293		3	\$ 18.75	\$ 18,087	\$ 180,872
IFTA / SSRS		2,254	8	\$ 18.75	\$ 5,635	\$ 56,350
IFTA Quarterly Return		1,440	15	\$ 18.75	\$ 27,000	\$ 270,000
Costs avoided due to increased accuracy of applications (fewer returned applications)						
IRP		459	45	\$ 18.75	\$ 6,459	\$ 64,589
IFTA / SSRS		225	20	\$ 18.75	\$ 1,409	\$ 14,088
Payment processing						
IRP		4593	15	\$ 18.75	\$ 21,530	\$ 215,297
IFTA / SSRS		2254	15	\$ 18.75	\$ 10,566	\$ 105,656
Renewal processing (Includes checking state records against carrier records)						
IRP		4593	15	\$ 18.75	\$ 21,530	\$ 215,297
Postage costs						
IRP		4593		\$ 0.32	\$ 1,470	\$ 14,698
IFTA / SSRS		2254		\$ 0.32	\$ 721	\$ 7,213
Total motor carrier administrative savings assuming 100% participation					\$ 114,406	\$ 1,144,059
Total administrative savings, assuming 5% of applications are submitted electronically in Year 1, with electronic applications increasing to 50% by Year 5 and remaining at 50% through Year 10						
					\$	599,679

Assumes:

System includes functionality that allows carriers to generate a report comparing state renewal data to carrier's data on file in system, eliminating manual check of renewal data.

System checks for application completeness / conformity with state rules and regulations reduces application return rate by 90%.

**Exhibit A-5. Estimates of Motor Carrier Operational Savings
Over a Ten-Year Period Associated with Automated
IRP, IFTA and SSRS Credentialing (1)**

Activity	Vehicles Potentially Affected	Run Time Gained per new Vehicle through Immediate Access to Credential (2)	Per Hour Cost (Loaded)	Total Dollars Saved Annually	Total Dollars Saved Over a Ten-Year Period
Add new vehicles to IRP registration base					
	3,859	8	\$ 50.00	\$ 1,543,440	\$ 15,434,400
Replace lost credentials / plates					
IRP	579	8	\$ 50.00	\$ 231,516	\$ 2,315,160
Total operational savings, assuming 100% of carriers use automated system				\$ 1,774,956	\$ 17,749,560
Total administrative savings, assuming 5% of applications are submitted electronically in Year 1, with electronic applications increasing to 50% by Year 5 and remaining at 50% through Year 10					\$ 9,303,744

(1) Costs avoided due to 24-hour access to credentials; getting vehicles on the road faster

(2) Time shown in hours

Assumes:

20% of vehicles are replaced by carriers annually

Assumes 2 % annual increase in vehicles registered

**Exhibit A-6. Estimates of Motor Carrier Operational Savings
Over a Ten-Year Period Associated with Automated
OS / OW Permitting (1)**

Permits Issued Annually	Permits Capable of Automated Issuance	Run Time Gained per Vehicle through Access to Automated System (2)	Per Hour Cost (Loaded)	Total Dollars Saved Annually	Total Dollars Saved Over a Ten-Year Period
275,116	220,093	1	\$ 50.00	\$ 11,004,640	\$ 110,046,400
Total operational savings, assuming 100% of permits issued using automated system				\$ 11,004,640	\$ 110,046,400
Total administrative savings, assuming 5% of applications are submitted electronically in Year 1, with electronic applications increasing to 50% by Year 5 and remaining at 50% through Year 10					\$ 57,682,757

(1) Costs avoided due to 24-hour access to credentials; getting vehicles on the road faster

(2) Time shown in hours

Assumes:

80% of permits issued are for envelope vehicles

Assumes 2 % annual increase in vehicles permitted

**Exhibit A-7. Estimates of State Administrative Savings
Over a Ten-Year Period Associated with Automated
OS / OW Permitting**

Permits Issued Annually	Permits Capable of Automated Issuance	State Staff Processing Time Saved (1)	Per Hour Cost (Loaded)	Total Dollars Saved Annually	Total Dollars Saved Over a Ten-Year Period
275,116	220,093	4	\$ 18.75	\$ 275,116	\$ 2,751,160
Total operational savings, assuming 100% of permits issued using automated system				\$ 275,116	\$ 2,751,160
Total administrative savings, assuming 5% of applications are submitted electronically in Year 1, with electronic applications increasing to 50% by Year 5 and remaining at 50% through Year 10					\$ 1,442,069

(1) Time saved shown in minutes

Assumes:

80% of permits issued are for envelope vehicles.

Assumes 2 % annual increase in vehicles permitted.

Does not include estimate of savings associated with automated shift reporting / citation tracking.

**Exhibit A-8. Estimate of State Administrative Savings
Over a Ten-Year Period Associated with
Elimination of Inspection Report data Entry**

Inspection Reports Prepared Annually	Data Entry Time Saved (1)	Labor Cost (Loaded)	Total Dollars Saved Annually	Total Dollars Saved Over a Ten- Year Period
41,221	7	\$ 25.00	\$ 120,228	1,202,279.17
Total administrative savings			\$ 120,228	\$ 1,202,279

(1) Time saved shown in minutes

**Exhibit A-9. Estimate of Increased Citation Revenues
Over a Ten-Year Period Resulting from
Targeted Inspections**

Violations Issued Under Current Conditions	Current Citation Revenues	Estimated % Increase in Productive Inspections	Annual Revenue Increase Anticipated	Annual Revenue Increase Over a Ten- Year Period
17,728	\$ 3,748,682	10%	374,868.20	3,748,682.00
Total increase in citation revenues			\$ 374,868	\$ 3,748,682