



SAFETY IS OUR DRIVING FORCE

**1995 TRUCK AND BUS
SAFETY SUMMIT**

SUPPLEMENTAL INFORMATION
FHWA DOCKET *MC-92-10*

REPORT OF PROCEEDINGS



U.S. Department of Transportation
Federal Highway Administration
Office of Motor Carriers

Kansas City, Missouri
March 12-15, 1995

OVERVIEW

Over the July 4, 1994 weekend there were over sixty fatalities on Texas highways. **Three** crashes involving **commercial** vehicles accounted for thirty-one of those fatalities. U.S. Department of Transportation Secretary **Federico Peña** and FHWA Administrator Rodney Slater were extremely concerned about the weekend's horrendous occurrences and sent Associate Administrator George Reagle to Texas to investigate the crashes. Administrator Slater then **called** a meeting of many of **OMC's** partners, not to cast blame on any group or industry but to discuss and plan pro-active approaches to problems in highway safety.

The meeting was very positive and the group agreed that a major, national forum highlighting **data, data analysis and the results** of **focus** groups should be held. Thus, the foundation was laid for the Truck and Bus Safety Summit

The Summit's Goals

The overriding goals of **the** Summit were to identify the major safety issues facing the motor carrier industry today and to establish a partnership for addressing these problems among the diverse organizations involved in motor carrier safety. It was the intent of the Summit that these goals be achieved by developing within these various communities:

A Safety Vision for the **Industry** -- The goal of a crash free environment can only be achieved if all of the constituencies involved in **motor carrier safety** work together under **a shared** vision. The Summit provided an opportunity for developing this shared vision.

Section I: Overview

An Understanding of the Role of Analysis -- The crash experience of motor carriers contains important clues to what must be done to improve the safety of this industry. **Understanding this crash experience** is critical to developing effective programs which move motor carriers toward the **goal** of a crash free **environment**.

A Recognition of the Importance of Human Factors -- Paramount among the many factors which affect the **safety** of **motor carriers** is the driver. To demonstrably improve **safety**, most of the effort must concentrate on the human factor.

Agreement as to Focus -- Without agreement as to those issues on which resources should be focused, it **will not** be possible to demonstrably affect the safety of this industry. To be successful, we must reach agreement among the various facets of the motor **carrier industry**, government organizations responsible for developing safety policy, and the wider highway safety community.

The Summit's goals were achieved because of the **willingness** of individuals representing the many facets of the motor carrier industry and highway safety community to give of their time and energy with the full knowledge that everyone, regardless of their particular interests, benefits from a safe and efficient motor **carrier** industry.

The Summit Process

The Summit **was** designed to identify critical safety issues from a wide range of perspectives representing, among other groups, the manufacturers of large trucks, shippers and carriers, drivers, highway **safety** advocates **and government** agencies including law enforcement. For the purpose of the Summit, these communities were defined as:

- Commercial Vehicle Drivers
- Government Organizations Involved in Motor Carrier Operations

- **Enforcement/Legal** Community
- Manufacturers/Suppliers of Truck and Bus Parts or Equipment
- Highway Safety Research Community
- Shippers/Carriers
- Highway Safety Community
- Professional Associations with Interests in the Motor Carrier Operations
- International Truck and Bus Community (including Canada and Mexico)
- Safety Management Systems

Participants representing **these** various **communities** were invited to attend the Summit on the basis of their **background**, particular **expertise**, reputation **and willingness** to work hard for three days to develop a shared vision of motor carrier safety.

Leadership Groups were **organized** around **these** various **communities** to serve as a focal point for identifying safety issues from each group's perspective. That is to say, the Drivers' Leadership Group concentrated on identifying motor carrier issues as viewed **from** the driver's perspective, the Manufacturers/Suppliers Leadership **Group identified** issues as seen from the manufacturers' and suppliers' perspective, etc. These groups were facilitated by nationally recognized experts familiar with each of the groups represented at **the** Summit. These facilitators were assisted by coordinators **from** the Office of Motor Carriers who possessed subject matter expertise in areas germane to the particular Leadership Group.

During the course of the Summit, each Leadership Group identified and prioritized the five most important motor carrier safety issues as they saw them. The issues of all ten groups were combined, and each **Leadership** Group **participated** in the voting and prioritization of the top safety issues developed from **all** the Leadership Groups. These rankings constitute the **Summit's** Motor Carrier Safety Issues. These issues are explained in Section IV of this report.

Section I: Overview

Plenary sessions were interspersed among daily working group sessions to provide information for further deliberation and to **share findings from** Leadership Groups. At the **initial** plenary session, participants heard **from** a number of government **officials** responsible for motor carrier safety.

Mr. Rodney Slater, Administrator of the Federal Highway **Administration**, reminded participants that:

*The solid improvement in safety we have **experienced** in the **past decade** has been due in large part to a **refocusing of commercial vehicle safety efforts nationally, beginning with the enactment of the Surface Transportation Assistance Act of 1982. The act launched an era of close federal-state and industry cooperation that has resulted in such new milestones as the creation of national testing and licensing standards for commercial drivers, nationally standardized roadside safety inspections of an average of 5,000 drivers and vehicles every day, standards for transporting hazardous materials and a safety rating system for motor carriers.***

It is time to build on** this achievement and **this is** reflected as a **goal of this Summit. We want to BUILD A SHARED SAFETY VISION which will take into consideration all aspects of the motor carrier safety equation. This Summit provides a significant opportunity to do just that.

Secretary **Peña** spoke of his commitment to safety, the Department of **Transportation's** work to ensure safety through partnerships and sensible initiatives, and the threat that pending legislation poses to reasonable measures to protect the public and **transportation** industry workers. The Secretary noted that:

President Clinton ordered all federal agencies to review their regulations by June 1 to determine which are obsolete or counterproductive, and to look for better alternatives.

As one example of the products of this review process, the Secretary **encouraged** Congress to repeal the requirement for pre-employment alcohol testing.

The repeal of this rule would save all affected modes an estimated \$28 inillion annually.

Mr. George Reagle, Associate Administrator of the Office of Motor Carriers **reminded** participants that:

In this room are assembled the top highway safety experts in the nation, representing government, private associations and groups that may not all agree with one another nor with the Office of Motor Carriers. Our collective goal is to build a consensus as to the truck and bus safety issues to be faced. If we can agree on the issues, it will direct us toward solutions.

Our task at this Summit is to work together to combine the various facts, opinions and experiences each of us has to begin the process of developing a shared vision of motor carrier safety. To do this, it is critical that we respect the value of this information and of our beliefs, but work together to decide where we must go from here.

Presentations of **motor carrier** crash data and the public's opinion of motor carrier safety were provided by Ms. Jill **Hochman**, Chief of **OMC's** Analysis **Division** and Ms. Sue Morris who **directed**

Section I: Overview

the opinion **survey**. In her remarks, Ms. **Hochman** pointed out that the motor carrier industry is as safe today as it has ever been. Her analyses of crash data indicate that the vast majority of fatal **crashes** involving **the motor carrier industry** are a **result** of collisions between cars and trucks and that preventing these collisions is the key to any real gains in motor carrier safety.

She stressed the importance of utilizing crash **data** to identify motor **carrier safety** issues advising the audience that:

Whatever direction we develop to focus on for tk future and for deciding what actions to take, we must define and understand problems based on what we know about perceptions and on what tk data show us about large truck and bus safety and tk causes of crashes. 'We can better define our problems by learning how the data and our perceptions are similar, where they may contradict, and how they may be completely different. This all helps us understand and know what our problems are.

In summarizing findings from her study of the driving public's opinions of large **trucks** and buses, Ms. **Morris** pointed out that:

In spite of the real gains that have been made, car drivers are concerned about their safety and sharing tk road with larger vehicles. Most passenger car drivers have considerable respect for tk skill and training of professional truck drivers. They like truckers but dislike trucks because they are so big, so heavy and obscure their view of tk road. Commercial drivers, on tk other hand, resent car drivers who cut in front of them or take other actions that create a hazard for them. Commercial drivers generally believe that "four-wheelers" make mistakes because they are ignorant of tk capabilities and limitations of these large vehicles.

Summit participants utilized this information and the **comments** of other **speakers** as background for their discussions. After **more** than a day of deliberation, each Leadership Group identified and **prioritized** what it considered to be the most important **safety** issues from its **perspective. These findings were** shared with all participants in a primary session. Subsequently, each Leadership Group evaluated the complete list of issues and **voted** on them to determine the most **important** issues. The outcome of these **votes** defined the Summit's views on the most important safety issues **facing** motor carriers.

SECTION II
PREPARING THE GROUNDWORK

PREPARING THE GROUNDWORK

In preparation for the Summit, a number of activities developed **information** for use by the participants during their deliberations. These activities included:

An Analysis of the Crash Experience -- of large trucks and buses addressing recent trends in the safety of their operation and major characteristics of their fatal crash experience.

An Examination of Opinions -- held by **the** general driving population, commercial vehicle drivers and police as to the factors influencing the safety of **large trucks** and buses.

Training Facilitators and Coordinators -- **in their Summit roles**, facilitation skills, techniques to be employed in identifying and prioritizing safety issues and the background for the Summit.

Interviewing OMC Leadership -- to **identify** safety issues they felt would be perceived by each Leadership Group as important to motor carrier safety and operations.

The underlying purpose of all of these activities was to provide participants, facilitators and coordinators with a common foundation of **knowledge** and a uniform process for carrying out deliberations. In this way, Leadership Groups were more certain of reaching objective decisions on which **safety** issues were important. In turn, this helped ensure that activities undertaken by the motor carrier community as a result of this Summit would, indeed, positively impact motor carrier safety.

Highlights from each of these activities are presented in the following pages.

Motor Carrier Crash Experience

Crash data were analyzed to establish the **significance** and major characteristics of fatal crashes involving huge trucks and buses. Collectively, these analyses indicated **that:**

- The motor carrier industry is as safe today as it has ever been.
- ‘The number of **fatal** crashes involving motor carriers has decreased 40 percent in the last decade.
- As opposed to fatal crashes involving only passenger cars, almost all fatal crashes involving motor carriers result from collisions with other vehicles.
- Large trucks, not buses, dominate the fatal crash statistics for large vehicles.
- In fatal crashes involving a light passenger vehicle and a large truck passenger vehicle drivers are more likely to be cited by police.
- Almost half of **all** single vehicle fatal crashes involving large trucks are the result of a collision **with a pedestrian.**
- Forty percent of truck driver fatalities in single vehicle crashes result from ejection.
- Alcohol use by the commercial vehicle driver is rarely a factor in fatal crashes involving large trucks and buses.
- Most fatal crashes occur in the forward field of view of the truck driver.

A **more** &tailed summary of **findings** from the analysis of crash-data are presented in an appendix to this report

Public Perceptions of Large Truck Safety

A sampling of the public's perceptions of motor carrier safety issues was obtained from a **series** of focus groups conducted in Atlanta, **Georgia**; Kansas City, Missouri; and Portland, **Oregon**. **Separate** sessions were conducted with automobile drivers, commercial vehicle operators and police. Among the opinions expressed by these groups were:

- Automobile drivers are a far more **frequent** cause of highway safety **problems** involving trucks than the driving environment, vehicle conditions or truck drivers.
- **Commercial** vehicle drivers are **superior** to car drivers in the utilization of safe driving practices.
- Truck drivers and passenger car drivers feel antagonism toward each other on the highway.
- Car **drivers** know very **little** about trucks and buses and this ignorance may be a factor in crashes involving these vehicles.
- **Commercial** drivers are concerned about regulations they regard as unworkable, out of date or hazardous.

A detailed summary of the focus groups' findings on the public's perceptions regarding **motor** carrier safety issues is presented in an appendix to this report

Facilitator\Coordinator Training

While some materials were provided to **facilitators** and coordinators prior to the **Summit**, their actual training took **place** during the two days **before** the Summit began. Topics addressed during training **included**:

- Background and rationale for the Summit
- Roles and responsibilities of **coordinators** and facilitators
- Techniques of facilitation
- An overview of the OMC Strategic Plan, the results of focus group interviews and the analysis of fatal crashes
- The results of interviews with OMC leadership
- Summit schedule and expected outcomes
- Techniques to be used in prioritizing issues

Interviews With OMC Leadership

Informal interviews **with** the senior management of the Office of Motor Carriers were performed to assist facilitators and coordinators in understanding the issues that were likely to **be** considered relevant to motor carrier safety by each of the **Leadership** Groups. Interviewees were asked their opinions on the most important issues associated with **each** Leadership Group: the results of **these interviews** were shared with **facilitators** during their training immediakly before the **Summit**.

Among the more important issues identified for each of the kn Leadership Groups were:

Drivers

- **Inadequacies** in driver qualifications, ksting and training
- Differences in qualification requirements for drivers licensed in other countries
- Lack of any standards or methods for **determining** if drivers are "**physiologically** fit for duty"
- Effects of financial incentives, scheduling and other "business" aspects of trucking industry on safe operations
- Lack of public awareness about the operating charackristics of large vehicles and how these characteristics limit drivers' abilities to adjust to the conditions of traffic

Enforcement

- **The** apparent low priority **traffic** law **enforcement** assigns to motor carrier regulations and its **general unfamiliarity** with motor carrier issues, operations and enforcement techniques
- Focus of enforcement activities on vehicle rather than the driver
- **Inconsistency** in training programs for law enforcement which could improve their impact on motor carrier safety
- Variations in fines and **fees and** the unwillingness of the judicial syskm to **enforce** violations of safety regulations by commercial vehicle operators

Shippers and Carriers

- Need for regulations to guide the behavior of shippers and their impact on motor **carrier safety**
- **Limited** awareness by shippers and carriers of their role in motor carrier safety
- **Cumbersome** and inconsisknt enforcement techniques for attaining compliance with safety regulations

Shippers and Carriers (cont.)

- **Difficulty** of obtaining and training drivers which produces a shortage of **qualified** drivers from which to draw

Highway Safety

- Need to improve the public's understanding of its role in sharing the road **with** commercial vehicles as a means of improving safety
- Lack of data for identifying motor carrier safety issues, developing **countermeasures** and managing motor carrier safety programs
- Unequal and **insufficient enforcement** of **motor** carrier safety regulations among **stakeholders** thereby motivating drivers to avoid "tough" **stakeholders**
- Inability of present driver qualifications and training programs to produce safe and capable drivers
- **Differences** in traffic regulations for passenger vehicles and commercial **vehicles** which produce different operating rules on road systems shared by both groups

Highway Safety Research

- Lack of objective processes to: **determine** how research funds are spent, establish motor carrier safety priorities, identify problems and develop programs
- Deficiencies in present data systems which inhibit their use for statistical analysis and for directing **OMC's** research programs
- **Lack** of sufficient crash data problem **identification, countermeasure** development and program management
- **Lack** of a viable process for disseminating the results of research important to motor carrier safety

Professional Associations

- **Over-regulation** of the motor carrier industry
- Need for partnering **among** elements of **the motor carrier** industry as a **means** of developing more effective and efficient regulations
- Formality of rule making process and the undue **influence** on the outcomes of this process by small segments of the motor carrier industry

International Community

- **Difficulty in getting full consideration** of **international issues** by U.S. and the lack of a process for resolving safety issues among Canada, Mexico and the U.S.
- Need for harmonization of **regulatory** and **enforcement programs**

Safety Management Systems

- Bureaucracy created by SMS legislation which, in effect, lessens funding and allows for undue involvement of federal **government** in **state/local safety initiatives**
- Lack of communication among all groups involved in motor carrier safety
- Tendency of SMS initiatives to focus on **engineering improvements, rather than** behavioral approaches, as the preferred approach to improving motor carrier safety

Government Organizations

- Many regulations **unrelated** to safety; tendency to establish regulations which constrain the profession of truck driving under the guise of improving safety
- **Inconsistency of regulations among states** and countries
- Difficulty in increasing voluntary compliance with motor **carrier** safety regulations
- **Incapacity** of **states** and local communities to respond to **hazmat** spills
- Effects of economics on industry behavior as it **relates to safety**

Manufacturers/Suppliers

- Difficulty of regulating **manufacturers** in present **government structure**
- Inadequacy of standards regarding motor carries and equipment **sold internationally**
- Trade-off between regulations and economic viability of the **industry**

SECTION III
FOSTERING A PARTNERSHIP

FOSTERING A PARTNERSHIP

The Summit was structured to foster an understanding of major safety issues from the viewpoints of various facets of the motor carrier industry, the organizations responsible for motor carrier safety, and **the general** public. For the **first time**, individuals representing the many and diverse aspects of the **motor** carrier community were brought together for the chance to voice their concerns about **safety** and address those raised by others. Each person brought his or her own understanding to the table, integrated these understandings with information presented on data analysis and public perceptions and, together, began developing a shared vision on the safety issues facing the motor carrier community.

Leadership Groups were the building blocks of the Summit. They were **facilitated** by some of the **most** knowledgeable and **prominent** persons in highway safety today. These individuals, along with coordinators representing OMC, were trained on consensus building, **familiarized** with **OMC's** strategic plan, educated as to the crash experience of motor carriers and the public's concerns with respect to their **safety**, and trained in the **specific method** for achieving consensus used at the Summit. They were well equipped to address issues that might be raised in the Leadership Groups they were **to** direct. A list of the Leadership Groups, their facilitators and coordinators can be found in an appendix to this report

Chronology of Proceedings

The Summit alternated between plenary and working group sessions throughout its two and a half days.

Plenary Sessions

The plenary sessions were open to **all** individuals who attended the Summit. At these sessions, prominent members of the transportation community addressed **participants** and **shared** their thoughts with the audience on safety as well as on the impact that **the Summit's** deliberations would have on the future of transportation in general and motor carriers in particular.

Working Group Sessions

The working group sessions were closed to everyone but the members of each **particular** Leadership Group. Alternating with the plenary sessions, each Leadership Group **met**, prioritized its issues, and responded to the issues presented by the other groups. Their **findings** were the result of blending their experiences in motor carriers with the public's perception about safety issues presented in **the focus** groups, the data presented on crash experience, and their knowledge of **OMC's** programs and highway safety. The following is a summary of the events of the Summit.

Day. One

The **first full** day of the Summit opened with a plenary session. George **Reagle**, Associate Administrator for Motor Carriers, greeted the participants and introduced the Honorable Emanuel Cleaver II, Mayor of Kansas City, who welcomed Summit participants to the city. Mr. Reagle then introduced Thomas J. Donohue, President and CEO of the **American Trucking Association**, who stressed the importance of partnerships and pledged to continue the support of his organization's efforts to enhance the safety **of** motor carrier operations.

After a short recess, Rodney E. Slater, Administrator of the U.S. DOT Federal Highway Administration, spoke to the participants about the importance of developing a shared vision of motor carrier safety. Mr. **Slater** was followed by Mr. Reagle who outlined his goal of a crash free **environment** and discussed the importance of the task about to be undertaken by participants.

Mr. Reagle's remarks were followed by a presentation on **Facts, Perception, and Reality** by Jill **Hochman**, Chief of the OMC Analysis Division and Sue Morris of Global Exchange, **Inc.**

Following this presentation, Mr. Reagle closed the morning's session by charging the Summit to answer this question: ***What do we really need to examine and understand if our goal is to make a significant impact on safety--to achieve a crash free environment?***

That afternoon, the participants were convened in another plenary session to hear **Secretary Peña** share his desire to develop only those safety regulations which are sensible and to eliminate those that are **not**. At the conclusion of his speech, Secretary **Peña** announced an extension of the present moratorium on pre-employment alcohol testing.

Immediately following the Secretary's speech, the working groups **met** for several hours to begin identifying and discussing safety issues that must be addressed in order to achieve a crash free environment. After their initial **identification** of **issues**, each group assigned smaller groups to work on the justification for the selection of each issue.

Day Two

The working groups continued their meetings on the morning of the second day. By the end of their discussions, each group voted to determine their top five or six issues and agreed on the justification for each.

After lunch, a second plenary session was held at which the facilitators of the Leadership Groups presented the results of their discussions for review by the rest of the **participants. The findings** of each group (as they were presented during the plenary session) **can be** found in an appendix to this document,

At the conclusion of the plenary session, each participant returned to his or her **Leadership** Group to **review** and **comment** on the **findings** presented by each of the **other** nine Leadership Groups. Near the end of the working **group** session, participants began voting on and ranking the issues to determine the most important ones.

Day Three

The working group sessions continued into the **final** morning of the Summit. At the conclusion of the sessions, the **facilitators** reported his or her **group's** voting on the top safety issues. These votes were tallied and the results provided to Mr. Reagle.

The **final** plenary session began when Mr. Reagle introduced speakers representing various parts of the motor carrier community: **Rita Bontz** from Independent Truck Drivers Association; Jim Johnston from **OODA**; John Collins from the American Trucking Associations; Gene Bergoffen **representing** the National Private Truck Council; Arthur Fox representing CRASH; and Terry Gainer representing law enforcement. At the conclusion of their **comments**, Mr. Reagle presented the Summit participants' consensus findings on the top **safety** issues in rank order. These **findings** are discussed in the next section of this report.

SECTION IV
THE PARTNERSHIP'S FINDINGS

THE PARTNERSHIP'S FINDINGS

The process used to develop the ranked safety issues was designed not only to reach a conclusion, but also to gradually develop a **consensus** among Summit attendees and, **consequently, among** constituencies of the motor carrier community. With the consensus came an **understanding** that the issues **originally** thought to be 'unique to each constituency were actually common to almost every constituency. The participants found that, rather than resulting in division, the process and Summit design promoted unification and the' development of a partnership between different constituencies and a greater partnership among all constituencies.

After two and half days of discussion, the Leadership Groups completed their discussions and voted to **determine** what they believe are the top safety issues affecting the safety of motor carriers. They identified 17 issues. These issues, in priority order, are:

Fatigue. 'There are multiple factors associated with fatigue that are inherent in' existing operations. Drivers, dispatchers, trucking company management, and OMC need more factual information about fatigue, and how factors under their control affect fatigue impairment risks.

Data/Information. There is a lack of comprehensive data on trucks and buses, specifically a lack of information regarding truck and bus crashes and their related causes. There is an insufficient exchange of data among Canada, the U.S. and Mexico.

Driver Training (Professional and Public).' It is necessary to ensure **adequate** and continuing education for all drivers--both commercial drivers and motorists.

Technology. The development and deployment of emerging, practical, safety technologies are key to improving truck and bus **safety**.

Uniform Regulations. The lack of uniformity across states in, safety regulations and procedures causes non-compliance, a perception of inequity and a poor attitude toward **safety**. Included in this issue are concerns about uniformity among **Canada, Mexico** and the U.S.

Enforcement. A crash-free highway **system** depends on **effective** testing and **licensing, traffic** enforcement and **adjudication of** all highway user violations.

Carrier/Shipper Responsibility. Carriers, **shippers** and receivers must share responsibility for the effects of their demands on drivers which result in driver violation of **laws** and regulations.

Communications/Public Information. There are needs to: develop a comprehensive national marketing campaign for motor carrier safety; expand and enhance motor carrier public information education efforts; and educate motor carriers and the public about techniques for sharing the road with large vehicles.

Partnership. Motor **carrier** safety activities, cannot be **effective** in isolation--coordination and communication among **all** players lead **to** effective use of resources.

CDL Deficiencies. Current CDL testing and licensing procedures do not always ensure a **qualified** driver and allow some **unqualified** drivers on the road

Funding. Adequate funding promotes safety. Government at **all** levels **has** the lead in developing alternative funding sources.

Size and Weight. Standards must take into account the impact of different vehicle sizes and **configurations**, as well as the impact of road design on the safety of **commercial** vehicle operations.

Working Conditions. The working conditions of drivers can affect safe operations. Standards and industry practices need to account for the total workload **demands** on the driver.

Regulatory Reform Regulations to ensure safety and efficiency must be based on common sense and science as well as be consistent across government agencies.

Infrastructure. The infrastructure is part of a system which serves a variety of modes, organizations and needs. Close coordination is **critical**.

Safety Management Systems. Resource Allocation. Safety management systems must be used to set priorities and allocate scarce resources. Motor carrier safety must be elevated in SMS decision-making.

Accident Countermeasures. Research must be targeted to seek and define proactive and non-punitive countermeasures that prevent accidents.

The identification of these issues is key in completing the third part of the needs analysis for OMC. OMC now has feedback on the identification of issues from **three** major sources: statistical analysis of data on the crash experience of motor carriers; findings of the focus groups conducted with CDL holders, law enforcement **officers**, and adult, **non-commercial** drivers in the general populace; and, the opinions of individuals representing the motor carrier **community**. With this information, OMC will further **develop its** analytic capability and measure the effectiveness and appropriateness of its programs and standards.

SECTION V
NEXT STEPS

NEXT STEPS

The results **from** this Summit provide the entire motor **carrier** industry and highway safety communities with consensus on new strides **toward improvements** in safety witnessed in the past decade. OMC has already begun the task of **organizing** its activities in response to the priorities identified in this Summit. These actions include the following:

- **Immediately** following the Summit, OMC issued a pamphlet outlining the motor **carrier** safety issues that were identified.
- On March 24, George Reagle appeared before the National Press Clubs transportation round table to provide members of the press with an overview of the Summit's findings and the Office of Motor Carrier's response to them.
- OMC is **modifying** its strategic plan for improving motor carrier safety to reflect the Summit's findings.
- The **Analysis** Division has renewed its focus to implement a strategic analysis plan **which** includes **establishing** new crash information systems and methods for integrating analysis **results** in **OMC's** overall program for enhancing motor **carrier safety**.
- OMC has assigned Mr. John Grimm the responsibility for coordinating the Office's efforts to improve safety with its many partners in the motor **carrier** industry and highway safety community.

Section V: Next Steps

- To **enhance** the public's understanding of the safety issues **identified** at the Summit, OMC will develop an expanded series of issue papers which explain in **more** detail tk Summit's **findings from OMC's perspective**, the state of **OMC's** knowledge with aspect to each issue's impact on safety and how the issue relates **to OMC's** mission.

These actions represent **only** the first of many steps that will move **OMC** and its partners toward the ultimate goal of a crash free environment for motor **carriers**.

APPENDIX. A
LEADERSHIP GROUPS

LEADERSHIP GROUPS

Following is a list of the Leadership Groups and the **facilitators** and coordinators assigned to each:

Commercial Vehicle Drivers

Facilitator Robert Nicholson
Coordinator Linda Taylor

Robert Nicholson is a Human Factors Engineer who in his career with the National Highway Traffic Safety **Administration** directed much of the contemporary driver performance oriented research including the initial studies of **truck driver** fatigue;

Government Organizations Involved in Motor Carrier Operations

Facilitator Larry Neff
Coordinator Dale Sienicki

Larry Neff directs planning and budget&g for **FHWA's** Information Resources Management' program and information management reviews of agency-wide functions as well as conducts workload, workflow, organization, and program effectiveness reviews for Headquarters and field offices.

Enforcement/LegalCommunity

Facilitator **Terrance** Gainer
Coordinator Ronald **Havelaar**

Terry Gainer is the Director of the Illinois State Police (**ISP**) where he has introduced a number of innovative enforcement programs including motorcycle and **Wolfpack** patrols, seat belt **blitzes, mobile** cominand **vehicles**, and a forensic science laboratory. Prior to his ISP appointment, Mr. Gainer served **as** special assistant to the U.S. **Secretary** of Transportation in charge of drug policy.

Manufacturers/Suppliers of Truck and Bus Parts or Equipment

Facilitator **James Kolstad**
Coordinator **Larry Minor**

James Kolstad is the former Chair of the National Transportation Safety Board and was responsible for many of the ongoing recommendations for improving motor carrier safety developed by that organization.

Highway Safety Research Community

Facilitator Patricia Waller
Coordinator Robert Davis

Dr. Waller is Director of the University of Michigan's Transportation Research Institute and one of the more experienced researchers in highway safety and driver performance.

Shippers/Carriers

Facilitator **William Coyle**
Coordinator Donald Harris

Bill Coyle's long history of working with motor carriers ranges from operating a truck fleet to developing hazardous material regulatory improvements during his tenure as special Assistant to the Associate Administrator for Motor Carriers.

Highway Safety Community

Facilitator **Jim Swinehart**
Coordinator Judy Van Luchene

Before becoming President of **Public** Communication Resources; Jim Swinehart served a 17 year tenure at the University of Michigan in the Survey Research Center and the Highway Safety Research Institute.

Professional Associations with Interests in the Motor Carrier Operations

Facilitator Noel Bufe
Coordinator Kenneth Rodgers

Dr. Bufe is a former Deputy Administrator of the National Highway Traffic Safety Administration and is presently Director of the **Northwestern** University Traffic Institute. He has been responsible for developing highway safety policies and programs for more than two decades.

International Truck and Bus Community (including Canada and Mexico)

Facilitator Carole **Bedwell**
Coordinator Robert Kelleher

Ms. **Bedwell** is Chief of the Program and Policy Administration Division of the California Department of Motor Vehicles where she is **responsible** for program and policy issues involving vehicle registration, driver licensing and the department's research program.

Safety Management Systems

Facilitator John **Zogby**
Coordinator Frederick McGraw

John Zogby is the former Deputy Secretary of Transportation for Pennsylvania and is now actively engaged in educating states in the Safety Management System process.

**APPENDIX B
FINDINGS OF EACH
LEADERSHIP GROUP**

DRIVERS

ISSUE 1 EDUCATIONAL NEEDS

- LACK OF ENTRY-LEVEL DRIVER TRAINING
- LACK OF PERIODIC IN-SERVICE TRAINING
- LACK OF MANDATORY STANDARDS OR CURRICULUM FOR SUCH TRAINING
- LACK OF MANDATORY STANDARDS OR CURRICULUM FOR LAW ENFORCEMENT OFFICIALS CONDUCTING TRUCK INSPECTIONS
- LACK OF ADEQUATE EDUCATION FOR AUTOMOBILE DRIVERS REGARDING SHARING THE ROAD WITH TRUCKS
- LACK OF TRAINING AND LICENSING REQUIREMENTS FOR RECREATIONAL VEHICLE DRIVERS

Justification.

Training is essential to operating a **motor** vehicle but it is also essential that drivers as well as law enforcement **officials** are aware of the requirements and limitations of **others** we share the road with as well as changes in rules and technology. Therefore we feel that training at all **levels** is, necessary.

ISSUE 2 F A T I G U E

- INTERRUPTIONS DURING TOUR OF DUTY
- IRREGULAR SCHEDULES
- SAFE REST PLACES

Justification

The current 15 hour **on-duty time should** be 15 consecutive hours. Drivers are forced **to drive when tired, forced to sleep when rested.** There is a lack of fair compensation for non-driving **functions.** Tend to push drivers beyond the **limit** thereby compelling drivers or allowing employers to violate current **regulations.** There are inadequate rest areas especially on state highways. Drivers are disturbed to **participate** in roadside **inspections.** When **fatigue** strikes, drivers have limited options between rest areas which can be fatal.

ISSUE 3 **ENFORCEMENT-SHIPPERS/CONSIGNEES/BROKERS ARE PRESENTLY NOT HELD JOINTLY ACCOUNTABLE FOR VIOLATIONS OF THE REGULATIONS BY DRIVERS.**

Justification

Presently, according to the regulations, the driver is held solely responsible for violations, even when ordered to violate by shippers, carriers, consignees, and/or brokers. The present system of non-standardized audit procedures is some of the cause of this overwhelming problem. The driver is the most powerless individual in the equation.

ISSUE 4 **HOURS OF SERVICE/WORKING CONDITIONS**

Justification

- Scheduling of runs does not take circadian rhythms into account
- Drivers are not subject to the Fair Labor Standards Act (time required to be spent isn't compensated)
- The hours of service don't meet the needs of owner-operators and company drivers or today's working environment.
- Drivers don't have legal protection when they refuse to do anything illegal or unsafe without fear of reprisal.
- Drivers are subject to split time **off...i.e.,** breakdowns, waiting for loads, etc.

ISSUE 5 INCONSISTENCIES IN VEHICLE AND HIGHWAY REGULATIONS

Justification

- Two-tiered speed limits
- Inconsistencies in penalties and fines for minor safety violations (**unjust** and unfair in the driver's perception)
- Inconspicuous railroad car markings
- **Non-uniformity** of lighting on private vehicles

Speed limits which require different vehicles to travel at different speeds cause fluctuations **in traffic** flow as well as frustration on the part of the faster traveling vehicle driver. Current regulations require unfair fines for minor violations which change radically from **area to** area. Railroad crossings, especially 'where unmarked, could be **safer** if railroad cars **were** required to use **markings** similar to the conspicuity of tractor trailers. Many state and federal regulations do not sufficiently address the need for better installation and alignment of lighting and safety equipment on **four-wheelers**.

ENFORCEMENT/LEGAL

ISSUE 1 THE FOCUS OF ENFORCEMENT RESOURCES IS NOT ON CRASH CAUSING VIOLATIONS DUE TO INADEQUATE CRASH CAUSATION DATA AND POST ACCIDENT INVESTIGATION AND ANALYSIS.

Justification

- Current NGA accident data elements do not focus on all accident causation factors.
- All states do not currently require post-accident investigations which results in insufficient data for analysis
- Failure to analyze post-accident data will inhibit the states **from** developing effective crash-reduction countermeasure programs.

ISSUE 2 THERE IS INSUFFICIENT ENFORCEMENT FOCUS ON MOVING VIOLATIONS COMMITTED BY DRIVERS OF LARGE TRUCKS (GVWR 10,001 AND GREATER).

Justification

A high percentage of accident statistics show that moving violations cause the **greatest** number of truck at-fault accidents.

Many officers are inadequately trained or informed about large trucks, are intimidated by **them, and** are reluctant to stop them

Current national efforts to gather uniform accident statistics (**NGA**) do not identify what the accident causes are. Therefore, adequate information may not be available for traffic enforcement **managers to** use in deploying enforcement **personnel** to address accident causing violations.

Experienced traffic enforcement officials agree that certain moving violations can be indicators of driver fatigue:

Driver fatigue is a **significant** factor in crashes involving large trucks. A recent study conducted by the NTSB identified fatigue as the number one killer of truck drivers and may be a factor in 30% to 40% of truck involved crashes. Driver fatigue was the primary cause in 4 1% of all truck-related crashes according to a study conducted by the American Automobile Association (AAA) foundation.

A 1989 study found that many drivers falsify their log books or even keep multiple log books to hide hours-of-service violations.

ISSUE 3 **THE FAILURE OF CONGRESS TO FULLY APPROPRIATE AND MAINTAIN MCSAP AUTHORIZATION AS SPECIFIED BY ISTEA WILL CONTINUE TO HINDER THE STATES' EFFORTS TO SUSTAIN EFFECTIVE COMMERCIAL VEHICLE ENFORCEMENT PROGRAMS.**

Justification

Increased personnel and their **associated** costs incurred by **states**. Increased mandatory MCSAP requirements whose effects have not been proven, out of service verification, off peak hour inspections.

Increased recommendations for federal highway programs which compete with basic inspection and enforcement programs for limited in MCSAP funds. Programs such as: **roadside computerization**, public information and education; accident data analysis and compliance reviews.

Increased mandatory MCSAP requirements whose effects on increasing highway safety is unproven (e.g., drug interdiction covert operations, out of service verification and off peak hour inspections).

ISSUE 4 **ESSENTIAL ROADSIDE LEVEL I DRIVER/VEHICLE INSPECTIONS HAVE BECOME TOO COMPLEX AND TIME CONSUMING.**

Justification

- Current Level 1 inspection requirements and procedures emanak in large part from the **international** out-of-service **criteria**. During the last 10 years this **criteria** has grown from a **document** of **approximately** 10 pages, to a document of nearly 60 pages. The expanded out-of-service crikania is the primary reason for both the complexity and time requirements associated with today's Level 1 inspections.

- Simplicity will help with uniformity and will encourage a reduction in time for each inspection to allow for more inspections and less down time for the industry.
- critical items to be **inspected** should be tied to data driven (historical) crash causation factors.

I S S U E 5 CARRIERS AND SHIPPERS DO NOT SHARE APPROPRIATE RESPONSIBILITY FOR THE EFFECTS OF THEIR ECONOMIC PRESSURE ON DRIVERS WHICH CONTRIBUTE TO DRIVER VIOLATION OF LAWS AND REGULATIONS.

Justification

- Highway safety is impacted by the lack of shared responsibility among driver, carrier and shipper.
- Unworkable delivery demands and schedules encourage drivers to violate safety laws and regulations.
- There are insufficient laws and regulations to address shipper and carrier responsibility for safe transportation of goods.
- Unreasonable demands and economic pressures contribute to driver retention and hiring problems.
- **Economic** pressures lead many drivers to drive while fatigued

GOVERNMENT ORGANIZATIONS

ISSUE 1 PARTNERSHIPS WILL ENSURE THE “BUY IN” OF EVERYONE AND FACILITATE WORKING TOGETHER COOPERATIVELY TOWARD ESTABLISHING AND ACHIEVING COMMON GOALS.

- **SHARING INFORMATION**
- **COMMON GOALS**
- **EFFECTIVE ENFORCEMENT**
- **PARTNERSHIPS INCLUDE ALL HIGHWAY USERS**

Justification

Partnerships are essential to creating a **crash-free** environment for **CMVs** because only by working together can government, industry, and the public achieve this goal. **All** partners in highway transportation have a direct **interest in effective** enforcement, compliance programs, and sharing information. Partnerships **will** ensure the “buy in” of everyone to working towards establishing and achieving common goals. The value of effective partnerships is demonstrated by CVSA, Cooperative **HazMat** Enforcement Program and MCSAP, which have brought together government and industry to improve safety. It is imperative to broaden the scope of existing partnerships and to include public **interest** groups.

ISSUE 2 VARIOUS GOVERNMENT ORGANIZATIONS LACK ACCESS TO INFORMATION NEEDED TO DIRECT AND MANAGE THEIR PROGRAMS .

Justification

Present data **tends** to be deficient, non-uniform or inaccurate, and present techniques to gather data need improvement. This results in **difficulty** with compiling, analyzing, and sharing data with responsible parties. Government leadership is essential to set necessary data standards and investigate **alternatives** for improved data gathering techniques.

**ISSUE 3 UNIFORMITY: UNIFORM COMMERCIAL VEHICLE LAWS,
REGULATIONS, ENFORCEMENT, AND ADJUDICATION
THROUGHOUT NORTH AMERICA WILL MAXIMIZE HIGHWAY
S A F E T Y**

- **FACILITATE COMPLIANCE**
- **LEVERAGE EFFECTIVENESS OF INDIVIDUAL PROGRAMS**
- **ELIMINATE DUPLICATION**
- **COST SAVINGS FOR INDUSTRY, GOVERNMENT AND PRIVATE SECTOR**

Justification

Government has the responsibility for establishing and enforcing safety standards. Uniformity among government agencies **facilitates** compliance for drivers and the **industry** by eliminating **conflicting requirements**. **Lack** of uniformity **results** in enforcement delays, which may be overcome by **increased** speed and excess hours. Uniformity among government programs **maximizes** the effectiveness of their individual programs because it eliminates duplication and allows them to share **information**. Uniformity **will** result in cost savings by increasing efficiency for industry, private sector, and **government** programs.

**ISSUE 4 ENSURE ADEQUATE EDUCATION AND PUBLIC AWARENESS FOR
ALL DRIVERS, COMMERCIAL AND NON-COMMERCIAL.**

Justification

Accidents **involving** commercial' motor vehicles are mostly caused by driver error and other human factors by both commercial and other MV drivers. Car drivers lack an understanding and appreciation for the problems, **equipment** capabilities, **and situations** commercial drivers must deal with. Some commercial drivers lack aduqak **skills** and driving **techniques**. They also don't take into consideration drivers' lack of understanding as it **relates to the** operation of a **CMV**.

ISSUE 5 FUNDING

Justification

Historically, government funding (Le., Highway Trust Fund and similar funding sources at state and local levels), has been the primary source of transportation system improvements and the correction of **safety** problems. There is a need to ensure adequate future funding to promote safety. Government has a leadership role in developing alternative funding sources.

ISSUE 6 REGULATORY REFORM & STREAMLINING OF GOVERNMENT PROCESSES, INCLUDING REORGANIZATION OF U.S. DOT

Justification

Government is responsible for the development of regulations that ensure the safe and efficient operation of **transportation** systems. We need to assure efficiency in regulatory efforts (i.e., sharing with other governments: avoiding contradictions and duplications, and eliminating unnecessary regulations) In reforming regulations, however, we need to ensure that needed regulations are not eliminated (“don’t throw out the baby....”). Use sound science and common sense in developing regulations.

Currently there is duplication and inconsistency among levels of governments in developing regulations, standards, processes, etc. There is a large volume of regulations which imposes significant costs on industry and the public. The cost-effectiveness of all government regulations must be ensured.

ISSUE 7 PROMOTE, SUPPORT, AND ENSURE SAFETY IN THE DESIGN AND OPERATION OF TRANSPORTATION INFRASTRUCTURE.

Justification

Government sets highway design, safety, and operations standards, (**e.g.**, lane widths and rest areas) as well as setting standards for other modes (**e.g.**, mass transit). Government transportation programs need to work together to promote safety effectively. There is a need to focus on the whole transportation system. Analysis of safety and infrastructure data supports the need to look at the whole operating universe of all highway and other transportation users.

HIGHWAY SAFETY COMMUNITY

ISSUE 1 DATA

Justification

- Lack of data to support **appropriate** decisions relating to **CMVs**
- Inadequate collection of data on **truck** crashes
- Inadequate sharing of data
- Inability to link databases (medical, records, licensing, citations, etc.)
- Lack of easy access to data
- Lack of training for accident investigators
- Lack of emphasis on data collection training
- Little or no validation of data on **fatals** (need for separate accident sampling studies)
- Lack of uniform data **definitions**, including uniform classification of trucks
- Inadequate collection of data on **all** vehicles (including passenger cars) involved in crashes
- **Base** of data too narrow (e.g., no data on injuries, particularly serious injuries)
- Lack of emphasis on importance of data collection and analysis
- Lack of adequate funding for data collection and analysis
- Lack of coordination between efforts to **refine** different databases
- Data on cost of **CMV** fatalities and injuries are not **collected, not** linked with other databases.
- Inadequate follow-up data on CMV crashes (e.g., no linkage to medical databases such as **ambulance** run reports and hospital discharge data)

ISSUE 2 FATIGUE

Justification

- Numerous studies have shown that driver fatigue is a **significant** factor in' fatal crashes involving drivers of **commercial** vehicles. In a **recent** study, NTSB found that 40% of fatal crashes involving commercial drivers were a result of driver fatigue.
- The current system of delivering cargo from point A to point B contributes **specifically** to commercial driver stress a&fatigue.
- **Shippers**
- Dispatchers
- Hours of Service
- Speed
- Driver Compensation
- Rest Areas
- Drivers' Physical Conditions
- **Brokers**
- Driver Motivation

ISSUE 3 SAFETY TECHNOLOGY

Justification

Existing and developing technology

- Monitoring systems:
- ▶ Drivers

Issue: fitness monitoring supplement to hours of service

Justification: fatigue research

- ▶ Vehicles

Issue: monitoring of status of safety systems, such as antilock brakes, lighting, etc.

Justification: studies show trucks with defects are **twice** as likely to **be** in crashes

- ▶ Operations

Issue: speed

Justification: NHTSA studies show speed to be a factor in **1/3** of fatal crashes

Issue: monitoring proximity of vehicles

Justification: OMC data **show** that for almost **2/3** of fatal multiple vehicle crashes, the point **of** impact is in front of truck

Issue: hours of service

Justification: fatigue research

Issue: inspection information, vehicle identification (such as weight) available from transporter

Justification: Need for continuous availability of inspection **information**

- ▶ Underride protection

Issue: approximately 190 deaths annually; technology available but not implemented

Justification: NHTSA crash testing shows available technology can **reduce** intrusion and injuries.

- ▶ Retrofitting of Existing Technology

Issue: vehicle conspicuity enhancements

Justification: NHTSA rule established for new vehicles, needs to be adopted by **FHWA** for older vehicles.

ISSUE 4 **CDL DEFICIENCIES**

Justification

It is recognized that the CDL process **still allows** unsafe and undesirable drives to **drive** on our nation's highways. The following are some of the deficiencies identified by this group:

- Lack of unique identities
- Current CDL testing does not ensure a qualified driver
- Multiple licenses (some drivers still have them)
- Judicial and law enforcement
- **Medically unqualified** drivers are able to obtain **CDLs**
- Lack of timeliness by states in **notifying CDLs** of convictions
- Standard of training reduced to minimum level established by CDL testing
- Non-uniformity of **finest** and penalties
- No penalty for cumulative non-serious moving violations in some states
- Lack of uniformity of states' **DMVs** in complying with the minimum CDL compliance **requirements**
- **Definition of** **CMV**

ISSUE 5 EDUCATION AND TRAINING FOR CMV DRIVERS IS INADEQUATE.

Justification

- Driver training **and** education is a necessity
- No industry or government mandate
- Limited perception of value and benefits of training
- Industry climate (**funding/driver** shortages) not conducive to training
- Training to CDL test minimums reduces training
- **CMV** small vehicle drivers not even subject to CDL test minimums

HIGHWAY SAFETY RESEARCH

ISSUE1 COMMERCIAL DRIVER FATIGUE RESEARCH

Justification

Fatigue should be a very high priority issue because it is probably the most important human factor in commercial motor vehicle crashes. There are multiple causes of fatigue inherent in existing operations, and immense accident and long-term medical effects. Drivers, dispatchers, trucking company management, and OMC all need more information about fatigue. Each group needs to know how the factors under their control affect the fatigue impairment risk. Simple predictive techniques or decision aids can and should be developed to permit the non-scientist to **use** scientifically sound information in making decisions about scheduling work and rest in commercial driving.

Furthermore, methods are emerging that could test the impact of fatigue on a specific driver at a given **time**. These tests **could** show when the driver may be performing below par. Development of such performance probes should be strongly encouraged.

Finally, methods of real-time monitoring of driving behavior offer promise of detecting fatigue impairment while driving. This is a technically challenging but potentially **high-payoff** area. Specific application and tests of these methods to commercial motor vehicle operation should be made.

The fatigue study nearing completion by OMC will offer much new data, but will not answer all the questions. This database should be further exploited by extracting more complete driver behavior and vehicle **control** data aimed at the decision-aiding concepts described above. Fatigue research should be extended to consider sleeper berth use, **pickup-and-delivery** operations, and the effects of cargo **loading** and unloading.

When dealing with driver fatigue, we must also consider long-term medical problems which occur in a high percentage of drivers at a relatively early age. We are looking at general morbidity factors which are probably indirect results of sustained stress factors they encounter. As we look to the future growth of commercial vehicle operations we must counteract driver fatigue so that a healthier driver force is available **to** meet the exponential growth of this industry.

ISSUE 2 WE NEED TO ORGANIZE WHAT WE KNOW ABOUT CRASHES

- Justification

We know numerous risk factors for crashes:

- time on task
- time-of-day
- driver age
- mad type
- traffic** conditions
- truck characteristics

We don't know how to weigh these factors and put together all the information we now have.

Different groups understand **parts of** the truck crash problem (e.g., human factors researchers and carrier managers). We need a structure to combine their knowledge,

Overall **goal** is predictive models for how external conditions and driver work load factors affect risk of crashes.

If we had this structure, we could identify high risk conditions that **warrant** investigations into countermeasure.

And the industry could make more rational decisions about work force, routing, scheduling, etc. .

ISSUE 3 **LACK OF EXPOSURE DATA**

Justification

There is currently no readily available data base with adequate truck exposure data for **performing valid** accident analyses. Such data are needed to compare accident rates among various truck configurations (e.g., semis vs. Tin trailers **vs. LCV** doubles vs. triples) operating on different classes of roadways (e.g., **2-lane** vs. multi-lane, divided vs. undivided, **rural vs.** urban, etc.)

The exact exposure measure needed will depend on the research question. However, two basic measures which are needed for almost any analysis of truck accident **rates** include number of miles traveled by truck configuration and type of roadway. The need for these measures results from the fact that various truck **configurations** operate differently, and perform **differently** within **various** traffic volumes and vehicle mixes, and that various classes of roadways are designed differently from a **geometrics** standpoint, **and** controlled differently via signs, markings, and other **traffic control** devices.

Supplemental exposure measures may include other vehicle measures such as trailer length, cross weight, axle spacings, or cargo type. Driver measures may include age and experience, vehicle or fleet types, and commodities carried

Current truck travel data at the **desired levels** noted above are either insufficient or nonexistent. A review of several national and state data bases was included in **TRB** Special Report 228, "Data Requirements for Monitoring Truck Safety." None of the data bases reviewed contained **adequate** truck travel data for conducting detailed truck safety studies. Recommendations were made regarding steps to be taken to improve truck travel data and the data elements that should be included.

ISSUE 4' ON THE NEED FOR DATA COLLECTION ON PRE-COLLISION EVENTS

Justification

Until relatively recently, accident analysis has focused on injury prevention measures and crashworthiness issues. Accordingly, crash data **files** have historically been designed to address crashworthiness issues, collecting data on vehicle damage and injury severity. It **has** been argued that crashworthiness research is approaching its limits in **terms** of future advances **to make** significant impacts on traffic safety. The next big frontier for traffic safety lies in preventing the collision in the **first** place.

At the same time, there have been major advances in the technological 'capability represented by the whole area of Intelligent Transportation **Systems**, (ITS). Advances in sensing and data processing have made it feasible to **outfit** both the vehicle and highway with systems **that may** make it possible to identify incipient collision situations in time to lessen the severity of the collision or even to avoid it altogether. Currently, many technical solutions have been offered (e.g., advanced headway control, near-obstacle **detection** systems, smart braking **systems**, and even anti-lock braking systems) with the promise of collision avoidance. But these are solutions in search of a problem. While it is increasingly **technically** feasible to attempt collision avoidance, the data do not exist on pre-collision events which would help to identify the most productive targets for the **technologies, or** those points in the accident sequence where intervention might occur.

Accordingly, we have identified a need for data to support research on crash avoidance. This encompasses data on pre-collision events, including the pre-crash **configuration** of vehicles, their relative position and velocities, and the accident sequence. Such data will allow us to identify and sort through **the major** crash modes and thus identify the big targets for crash avoidance **interventions**. **Characterizing** the accident sequence, relative position of the vehicles, and other pertinent parameters will **allow** us to identify points in the accident sequence for intervention, 'and even to **evaluate whether** particular interventions are **technically** feasible. **In** sum, in order to realize **traffic** Safety gains from **collision** avoidance, it is necessary to identify and **evaluate** the primary opportunities. Data on pre-collision configurations and the accident sequence are essential in this process.

ISSUE 5 NON-PUNITIVE COUNTERMEASURES

Justification

As long as we have accidents, we need to conduct research that seeks and defines proactive countermeasures that prevent accidents. Some of the research questions that must be asked are:

1. What are the risk factors upon which to base **countermeasures** design? e.g.,
 - A. Time of day?
 - B. Length of duty period?
 - C. Weather?
 - D. Traffic density? Etc.

2. What are the real-time sensors and feedback mechanism? e.g.,
 - A. In-cab fatigue monitors based on driver performance and physiology?
 - B. Rumble strips?
 - C. Headway detectors (radar)? Etc.

3. What are the pre-drive countermeasures?
 - A. Regular work/rest schedules?
 - B. Adequate sleep/nap periods and facilities?
 - C. Semi-automatic vehicle controls? Etc.

4. How do we keep the countermeasure data from being used **punitively**? e.g.,
 - A. Educate **management and law** enforcement that sleeping drivers in rest areas are preferred over accidents?
 - B. Allow off-duty drivers to sleep uninterrupted?
 - C. Educate management to avoid using fitness-for-duty **test** results as tools for driver selection or bonuses?
 - D. Pay drivers for taking appropriate naps? Etc.

5. Are the countermeasures cost effective? e.g.,
 - A. Who pays?
 - B. How do we measure benefits?
 - C. How do we measure costs?
 - D. Do specific **countermeasures** provide accident prevention with acceptable cost?

INTERNATIONAL

ISSUE 1 THE LACK OF ADEQUATE DRIVER TRAINING LEADS TO POOR SAFETY

Justification

Research indicates that the quality and **level of commercial** driver training correlates with the subsequent safety record of the driver.

- While there are a few highly regarded training programs, there is no comprehensive or uniform approach to commercial driver training to improve **driver safety performance** anywhere in North America, although some initiatives are underway.
- Focus group comments as well as collision data provided at this summit indicate that with the **proper** training, drivers increase their operating skills and their safe driving performance.

ISSUE 2 UNIFORMITY OF REGULATIONS AND PROCEDURES

Justification

There is a lack of uniformity within the three countries of North America in safety regulations and procedures in the **areas** of enforcement, **driver safety** standards, vehicle safety standards and operational safety standards. The resulting incompatibilities lead to non-compliance, a perception of inequity and a poor attitude toward safety.

- Uniformity narrows the field of learning for operators, carriers and enforcement officials and established carrier performance standards using the same **criteria**, thereby providing a level playing field for all jurisdictions.
- Simpler uniform programs like the CVSA out-of-service **criteria** programs, which increased international uniformity and improved highway **safety**, leads to a higher level of compliance among operators and carriers. Additionally, enforcement efforts and inspections are more efficient and equitable since carriers have come to suspect that they will be required to meet a higher level of training and **internal** safety programs.

ISSUE 3 THE COMMERCIAL VEHICLE SIZE, WEIGHT, CONFIGURATION AND DESIGN IMPACTS HIGHWAY SAFETY.

Justification

- When sizes, weights, **configurations**, and designs exceed **certain levels**, safety can be adversely affected
- Certain configurations, lower functional classification and design of roads can often adversely impact safety.
- **Inconsistency in size and weight laws** among jurisdictions can contribute to **illegal operation**.
- The lack of definitive accident data and performance based standards. allows the continuation of marginal or acceptable commercial vehicle operations.

ISSUE 4 EFFECTIVE ENFORCEMENT AND SAFETY PERFORMANCE MEASURES CANNOT BE SECURED TRILATERALLY WITHOUT A TIMELY EXCHANGE OF ACCURATE, ACCESSIBLE DRIVER, VEHICLE AND MOTOR CARRIER DATA AMONG CANADA, THE U.S. AND MEXICO.

Justification

- **To provide** essential information (inspection, accident, licensing, etc.) to target drivers and carriers who pose safety risks.
- To deter use of fraudulent documents such as licenses and insurance certificates.
- To provide a foundation for the evaluation of enforcement measures and safety performance.
- To facilitate the development of **ITS** technologies through the use of common data elements.
- To facilitate the **integration** of data bases leading to **the more efficient** enforcement of safety, customs, and other agency requirements, while promoting expeditious traffic flow.

ISSUE 5 TRILATERAL, SCIENTIFICALLY SUPPORTABLE, ENFORCEABLE AND UNIFORM HOURS OF SERVICE NEED TO BE ESTABLISHED;

Justification

- data shows that fatigue **contributes** to fatal crashes. There is a need to establish a uniform standard to **minimize** crashes.
- A trilateral hours of service standard will facilitate the movement of goods and people in a safe environment
- Uniform hours of service could enhance the use of technology to promote increased compliance and safety.

MANUFACTURERS AND SUPPLIERS

- ISSUE1 DEVELOPMENT AND DEPLOYMENT OF ADVANCED TECHNOLOGY SAFETY SYSTEMS

- DRIVER PERFORMANCE MONITORING
- COLLISION WARNING
- INCIDENT/CRASH RECORDING
- TRACTOR TRAILER POWERING AND SIGNALING
- ROLLOVER WARNING

Justification

There should be development of functional and performance requirements for **these systems as well as driver interface/display characteristics that adhere to** established human factors design principles.

The challenge is to **integrate** these **systems** with Intelligent Transportation **Systems** (ITS) and Commercial Vehicle **Operations technologies since they will co-reside in** the same physical space.

These technologies would help provide important crash and pre-crash information we all agree is badly needed. They will help make trucks **better** partners with other highway users.

ISSUE 2 SIZE AND WEIGHT POLICY ISSUES AS THEY RELATE TO VEHICLE DESIGN AND PERFORMANCE

Justification

Traditionally, **size** and weight standards have been established to protect and be compatible with the available highway and bridge infrastructure. Often there are unintended consequences relating to vehicle safety and operational performance. **Examples** include overall length limits which sacrifice cab space for cargo capacity and bridge formula effects on axle placement and steering and maneuverability. Future configurations must consider safety, operational performance, and infrastructure effects in concert

Longer combination vehicles have special safety and operational performance characteristics which need to be considered Performance based standards could be developed and applied to **mitigate any negative performance aspects. Vehicle dynamics issues include braking, handling and stability with multiple articulated trailingunits.**

Incentive-based measures need to be considered alternatives to traditional mandates as productivity gains can more than offset technology costs and have proven acceptance in other countries. (Examples are weight allowances in Mexico and in some European countries for air suspensions. Also, Canada provides weight allowances for vehicles with more stable coupling devices.)

ISSUE 3 ADVANCED TECHNOLOGY BRAKE SYSTEMS

- **ELECTRONIC: BRAKING SYSTEMS (EBS)**
- **BRAKE PERFORMANCE MONITORING**
- **RELIABILITY, DURABILITY, MAINTAINABILITY**
- **DISC BRAKES**
- **COMBINATION VEHICLE COMPATIBILITY**

Justification

Current heavy truck brake systems are too maintenance-sensitive for the harsh environment in which they operate. Problems with maintaining brake systems are still found far too often at roadside inspections. There are modern technological solutions to these problems; however, the motor carrier industry is slow to adapt to **new** technology.

Poor brake maintenance is a problem and technology advances should improve their safe operations. New brake technology will improve roadside inspections and the ability to verify compliance. Such items as electronic braking systems, electronic brake monitoring and disc brakes should be studied and promoted. The potential problems of combination vehicle compatibility need to be solved. These solutions will vastly improve brake performance, reliability, durability and maintainability. It should be emphasized that current **antilock** braking **systems (ABS)** technology is not a substitute for advanced brake technology. This technology will also enhance the braking capability of multiple trailer combinations. Government sponsored field demonstration programs for new braking technology should be implemented. Advanced brake technology could possibly be a trade off for improved vehicle productivity.

ISSUE 4 TRUCK AND BUS OCCUPANT PROTECTION

- . ADVANCED RESTRAINT TECHNOLOGY
- . 'RESERVATION OF OCCUPANT SPACE
- **FRIENDLY INTERIORS**
 - . AIR SUPPORTED PROTECTIVE DEVICES
 - . BUS PASSENGER RETENTION

Justification

Basic technology for improving occupant protection exists. Given the time spent on the road, truck and bus driving is an inherently dangerous occupation. The driver/driving team is frequently in a safety vulnerable environment. The target population is around 600 to 700 lives per year. Better protection will also reduce suffering and economic loss associated with many serious injuries.

ISSUE 5 ADVANCED TECHNOLOGY STEERING AND SUSPENSION SYSTEMS

- . ELECTROHYDRAULIC STEERING
- **STEER BY WIRE**
- . ADAPTIVE SUSPENSION SYSTEMS

Justification

Improving the steering and suspension systems and reducing the likelihood of rollovers will improve the safety of operation for commercial motor vehicles (CMVs) especially tank trucks, longer combination vehicles, and buses. Near term **improvements are** possible by improving the rollover threshold particularly as it **pertains** to trailers. Improvements in these systems will provide the potential for integration with ITS collision avoidance technologies, improved maintainability; and increased stability and control. Advanced technology, steering and suspension systems will also provide the driver with the opportunity to react in a more effective and efficient manner when confronted with a variety of highway conditions.

PROFESSIONAL, ASSOCIATIONS

ISSUE 1 REVISIT EXEMPTIONS

Justification

Federal uniform standards are seen as essential to ensure safety. Such standards **promote** compliance, level the playing field, and enhance enforcement. For various reasons, certain entities, including public entities, are exempt **from** such standards although they operate the same equipment and transport the same cargo **as** those entities that are subject to these standards. The risk presented by similar equipment and/or cargo in transportation cannot be distinguished by ownership, size of company, range of operation, or scope of business activity. Entities presenting similar risks should be treated the same in terms of safety and hazardous materials standards. DOT should revisit the appropriateness of each exemption from safety or hazardous materials requirements.

ISSUE 2 COORDINATION OF ASSOCIATIONS AND ORGANIZATIONS TO MAXIMIZE COMMUNICATIONS

Justification

Associations are a vital resource for the gathering and dissemination of information. Associations stand ready to assist DOT in reviewing policy changes, **facilitate** focus groups as requested, and provide a source for expertise and research. Associations are DOT's best conduit to the transportation industry.

ISSUE 3 INADEQUATE TRUCK PARKING AND REST FACILITIES

Justification

The Professional Associations group has identified the issues of inadequate availability of truck parking and rest facilities. We feel **this** is a significant factor effecting commercial vehicle safety. Space and time limitations of existing highway rest areas and the limitations of commercial truck stops to provide adequate parking facilities combine to create an almost impossible situation for truckers seeking to **find** a safe and **secure** place to park their rigs to obtain necessary and required rest. The problem is further exacerbated by government restrictions from rest areas of certain types of cargo. (NIMBY)

The problem is particularly severe in **the** most heavily populated areas. These areas **tend** to demand a higher price for **real-estate** which limits the expansion of these types of facilities. We therefore feel it is incumbent on the **state** and federal governments to work together to develop the necessary facilities to **correct** the situation. The **ultimate** objective is to eliminate fatigue by providing **the driver** adequate opportunity to obtain rest.

ISSUE 4 PERFORMANCE-ORIENTED STANDARDS

Justification

To the **extent** possible and reasonable, performance criteria should be substituted for design **criteria** in the development of highway safety regulations and in statement of regulatory objectives.

In today's economy, operational flexibility is a **mandate** for all carriers of goods and people; customers, pick-up points, consignees and **terminals** -- even carrier ownership -- change on a daily basis.

Yet, safety regulation of the motor carrier community is bound to a rigid set of regulatory "do's and don'ts" many of which originated in the 1930s. Subsequent research in both engineering and the human factors disciplines has **demonstrated that**, in many cases, baseline performance **criteria** is preferable to "one size fits all" regulation. Marketplace flexibility should be matched by regulatory flexibility.

ISSUE 5 **THE NEED** FOR BETTER BRAKE SYSTEMS FOR TRUCKS AND BUSES-BRAKES **THAT** ARE MORE RELIABLE, EASIER **TO** MAINTAIN AND IMPROVE BRAKE PERFORMANCE.

Justification

According to **FHWA** and **CVSA**, brake problems are the hugest cause of commercial vehicles being put out of service. Roadside safety inspections have consistently **identified** brake defect as a major problem- 50% to 60% of vehicles put out of service are because of brake defects. NHTSA has said "brake system performance could play a contributing role in **approximately 1/3** of all heavy/medium truck/bus crashes."

The air and hydraulic braking systems used in today's trucks and buses are highly reliable. However, they have been improved over the years with incremental additional technologies that add to safety, but increase the complexity of maintaining and operating the vehicle. These **technologies** include automatic slack adjusters and recent requirements for anti-lock brakes.

The process should involve manufacturers, drivers, mechanics, associations, industry, the public, and government (both **FHWA** and **NHTSA**) in efforts to improve the reliability, maintainability, and performance of current **systems**. This effort should consider the best current **technology** components (e.g., automatic slack adjusters, long-stroke brake chambers and low deflection components) to create a **system** which requires little or no adjustment or maintenance. **This** effort should also consider performance standards for future braking systems, such as electronic braking systems.

ISSUE 6 THE NEED TO IMPROVE DOT'S SAFETY COMPLIANCE AND REVIEW PROCESS SO THAT THE "UNSAFE" CARRIERS, VEHICLES, AND DRIVERS, AND THOSE THAT VIOLATE THE REGULATIONS ARE IDENTIFIED AND PROPERLY TARGETED FOR A COMPLIANCE REVIEW, AND THOSE MOTOR CARRIERS WITH SOUND COMPLIANCE PROGRAMS ARE NOT UNNECESSARILY TARGETED.

Justification

The current selection process is flawed. Many "unsafe" carriers go undetected because they are not captured by the current selection process. Fifty percent of the carriers on the road don't have a rating and have never been reviewed. If DOT is going to have a **rating system** that is meaningful and **useable**, every carrier must be **rated** and **treated** periodically; If every carrier cannot be **rated**, then **DOT** should develop a new approach to its safety compliance program

SHIPPERS AND CARRIERS

ISSUE 1 FATIGUE

URGENT NEED FOR FACT BASED INFORMATION CREATED BY FATIGUE RESEARCH AND APPLICATION OF RESEARCH FINDINGS FROM ALL STUDIES IN REGULATORY CONSIDERATIONS

Justification

Inconclusive and conflicting evidence/information. Conclusions are subjective and contentious. If continued problem/questions - use results to advance **further** research. Complete fatigue studies and **determine** results.

ISSUE 2 TRAINING/EDUCATION

NEED FOR ALL STATES TO REQUIRE BASIC DRIVER TRAINING INCLUDING HOW TO SHARE THE ROAD WITH A COMMERCIAL MOTOR VEHICLE IN HIGH SCHOOL OR A CERTIFIED DRIVER TRAINING SCHOOL PRIOR TO ISSUING A DRIVER'S LICENSE. THERE SHOULD BE RETRAINING (OR A "REFRESHER COURSE") AFTER A SPECIFIED PERIOD OF TIME. THE SAME REQUIREMENTS SHOULD APPLY TO CDL'S AS WELL.

Justification

As a lead in to the **Justification**, we **quote from** the results of the OMC focus groups:

All three categories of participants regarded automobile drivers as a far more frequent cause of highway safety problems involving trucks than the driving environment, vehicle conditions, or truck drivers.

All groups agree that car drivers know very little about trucks and buses, such as the turning radius they need, their blind spots, the **stopping distances** they require, and the time it takes for them to **accelerate** or decelerate.

As a long **term** solution they recommend better training of new drivers and periodic re-testing to **qualify** for license renewals.

19 percent of the passenger vehicle drivers kskd positive for some amount of alcohol. Truck drivers kskd positive in only 3 percent of these crashes.

ISSUE 3 MANDATORY EXCHANGE OF DRIVER INFORMATION

NEED FOR MANDATORY EXCHANGE OF DRIVER INFORMATION
WITHOUT RECOURSE

Justification

To help identify unsafe drivers.

To end current conflicts **between** other regulatory agencies and OMC requirements retaining OMC as the lead of all **related** motor carrier safety issues.

To get more timely, **complete**, and **accurate** information about driver applicants that can be used to access qualifications of the applicant

ISSUE 4 MOTOR CARRIER RELATED SAFETY TECHNOLOGY

DEVELOP NEW AND USE EXISTING **TECHNOLOGY** TO IMPROVE
MOTOR CARRIER SAFETY.

Justification

In this age of modern **technology** all systems that can be developed to help ensure motor **carrier** safety should be considered.

The Office of Motor Carriers already has a mission statement, in part, to promote **technological** and operational advancements to support an efficient, economical and **safe** transportation system.

Some areas already under consideration (and we support) include:

- biometric identifier
- electronic location **system** and logging
- touch-sensitive steering wheel to ensure **alertness**
- **intelligent** highways
- lactic acid wrist watch to measure fatigue

ISSUE 5 INCREASED UNIFORMITY

NEED FOR INCREASED UNIFORMITY m ASSESSMENT OF COMPANY COMPLIANCE PROTOCOLS, IN TRAINING, ENFORCEMENT AND FINING DEALING WITH MOTOR CARRIER REGULATIONS.

SPECIFICALLY, UNIFORMITY NEEDS TO BE ACHIEVED IN MOTOR CARRIER COMPLIANCE REVIEWS, EQUIPMENT AND DRIVER INSPECTION RELATED TO ROADSIDE INSPECTIONS. IN ADDITION, WHEN CARRIER COMPLIANCE REVIEWS ARE CONDUCTED, THE REVIEW SHOULD BE BASED ON RANDOMLY SELECTED RECORDS. WHEN FINES ARE APPLIED IN AREAS OF NON-COMPLIANCE, THE UNIFORM FINE SCHEDULE ESTABLISHED BY CVSA SHOULD BE AGGRESSIVELY PROMOTED AND USED BY THE JUDICIARY.

Justification

Concept of highway safety to achieve maximum results requires the trust and confidence of the regulated community to engender a sense of equity.

Limited amount of resources for government relaxed compliance activities requires **voluntary** compliance. Voluntary compliance is vastly improved when regulations are uniformly developed and applied .

SAFETY MANAGEMENT SYSTEMS

ISSUE 1 HIGHWAY SAFETY INFORMATION SYSTEMS THAT EXIST TODAY WERE DEVELOPED WITHOUT AN OVERRIDING PLAN FOR THE TOTAL (INTEIUNTRA) COMMERCIAL MOTOR VEHICLE, CARRIERS, AND DRIVERS ARCHITECTURE; THEY ARE CHARACTERIZED BY LACK OF UNIFORMITY AND CONSISTENCY.

Justification

Data in one **system** should be open and accessible to all **appropriate** users. There is a need for positive uniform identification of drivers, vehicles, and fleets. Therefore, better coordination, planning and development is needed to unify systems and reduce redundant development. The information data exchange is achieved via common data definitions, message formats and communication protocols. These enable development of inkroperable systems by interdependent parties.

ISSUE 2 THE ISTE A SAFETY MANAGEMENT SYSTEM IS A TOOL FOR SETTING PRIORITIES AND ALLOCATING SCARCE RESOURCES. THE PROFILE OF MOTOR CARRIER SAFETY NEEDS MUST BE RAISED IN SMS DECISION-MAKING. MOTOR CARRIER SAFETY IMPROVEMENTS ARE OFTEN NOT CONSIDERED, EITHER BECAUSE OF COST (E.G., GEOMETRIC IMPROVEMENTS, ADDITIONAL REST AREAS) OR LACK OF AWARENESS OF THE PROBLEMS OR POTENTIAL BENEFITS OF SOLUTIONS. HOWEVER, THE COSTS ASSOCIATED WITH MOTOR CARRIER CRASHES MAY BE SO HIGH THAT THESE IMPROVEMENTS WILL HAVE A POSITIVE BENEFIT-COST.

J u s t i f i c a t i o n

To achieve positive benefits, motor carrier safety needs must be included in the SMS process:

- Knowledge of MC safety needs can be used to leverage solutions in the **context** of larger programs or the design of highway capital projects (e.g., add a pullout to a highway reconstruction).

- Safety highway capital investment choices can be skewed by too great a focus on fatal crashes, while treating other locations may have greater benefits.
- Capturing all costs of MC crashes (including not only injuries and property damage, but also congestion and delay) demonstrate the true benefits of crash prevention programs and projects.

ISSUE 3

MOTOR CARRIER SAFETY ACTIVITIES COVER A BROAD SPECTRUM WITH NUMEROUS PUBLIC AND PRIVATE ORGANIZATIONS INVOLVED AND INDIVIDUAL INITIATIVES WITH A COMMON GOAL. IDENTIFYING INDIVIDUALS AND ORGANIZATIONS, COMMUNICATING AND COORDINATING AMONG THEM IS A CONTINUOUSLY EVOLVING PROCESS. THIS PROCESS PROVIDES A FORUM FOR IDENTIFYING EMERGING ISSUES; A MECHANISM FOR BETTER PROBLEM SOLVING, AND A MEANS TO FOCUS RESEARCH TO INCREASE THE RETURN ON OUR INVESTMENTS.

Justification

Coordination and communication among all players leads to sharing resources and avoiding duplication. We can do more together than we can do alone. Motor carrier safety activities cannot be effective in isolation. They must be pursued through strong coalitions in a systematic way. Coordination and communication of safety initiatives, to include motor carrier safety, is an **integral** part of an **effective safety** management systems.

ISSUE 4

DEVELOP COMPREHENSIVE NATIONAL ON-GOING MARKETING CAMPAIGN FOR MOTOR CARRIER SAFETY; EXPAND AND ENHANCE MOTOR CARRIER PUBLIC INFORMATION EDUCATION EFFORTS.

- **EDUCATE PUBLIC IN GENERAL ABOUT TECHNIQUES NEEDED TO SHARE THE ROAD SAFETY WITH OVER-SIZED VEHICLES.**
- **EDUCATE PUBLIC REGARDING MAGNITUDE OF SAFETY PROBLEMS INVOLVING COMMERCIAL MOTOR VEHICLES.**
- **IDENTIFY, EXPAND, AND FULLY UTILIZE DELIVERY SYSTEMS TO REACH TARGET AUDIENCES (E.G., HIGH SCHOOLS TO REACH YOUNG DRIVERS)**

Justification

Most motorists are readily intimidated by large trucks, buses, and **over-sized** vehicles. They are unaware of the **driving** techniques needed to share the road safely. According to the FHWA and expressed in the focus group results, as much as 85% of the traffic crashes are the result of driver error. Driver behavior must be improved if crash experience is to be reduced.

According to the **National** Highway Traffic Safety Administration, the number of fatal traffic crashes edged up slightly in 1993, but the overall fatality **rate** remained the same. Trucks over 10,000 pounds were involved in **4,320** fatal crashes in 1993, up from 4,035 in 1992. These crashes killed 4,849 people up from 4,462 in 1992. Further review of motor vehicle crash data indicates that almost **two-thirds** of the crashes involving trucks are caused by the driver of the passenger vehicles.

ISSUE 5 THE PUBLIC DEMANDS A 'CRASH-FREE HIGHWAY SYSTEM. A CRASH-FREE HIGHWAY SYSTEM IS DEPENDENT UPON EFFECTIVE LICENSING, TRAFFIC ENFORCEMENT, AND ADJUDICATION OF ALL HIGHWAY USER VIOLATIONS.

Justification

- An effective, crash-free highway **system** will improve the public's sense of safety on the highway.
- Well trained law enforcement personnel at all levels (local, county, and **state**) will result in more uniform **traffic** enforcement of all highway users (both commercial and non-commercial).
- A well informed/trained judiciary will more fully appreciate the gravity of 'CMV related violations (whether CV or passenger vehicle) and will assess appropriate sanctions.
- An effective licensing **system** will improve the reporting of conviction data **from** the courts to the driver licensing agency in that **state** and between individual **state** licensing agencies.

APPENDIX C
OVERVIEW OF MOTOR CARRIERS'
CRASH EXPERIENCE

OVERVIEW OF MOTOR CARRIERS CRASH EXPERIENCE

The **crash experience** of motor carriers provides us with many insights into what must be done to maintain the safety of this industry. To better understand the major safety issues affecting motor carriers, fatal crash data and **information** describing motor carrier performance available from the **Federal Highway Administration** were examined. The results of these analyses provide an overall perspective of the safety of motor carrier operations and the factors which may contribute to their crash experience. They are being used by participants in the National Truck and Bus Safety Summit to develop ideas for improving the safety of the motor carrier industry.

The number of fatal cmshes involving motor carriers has improved 40% in the last decade.

As an industry, motor carriers are safe users of our transportation system. **In** fact, today, truck and bus transportation is as safe as it has been **in the** past kn years. Overall, the number of fatal crashes involving these vehicles has declined from 4.1 per 100 million miles traveled in 1984 to an estimated 2.6 in 1993, an improvement of almost 40 percent. In fact, today, fatalities from crashes involving large vehicles represent only about kn percent of the 40,115 traffic related fatalities that occurred in 1993.

Almost all fatal cmshes involving motor carriers result from multi-vehicle crashes.

Unlike the **fatal crash experience** of passenger vehicles, 84 percent of fatal crashes involving large trucks or buses in 1993 were the result of multi-vehicle crashes. This phenomenon is largely a consequence of the large **difference** in **size** between a truck or bus and the passenger vehicle with which it collides. A typical fully loaded large truck can weigh 80,000 lbs. or more, compared with about 3,000 lbs. for a passenger vehicle. This difference in weight presents, perhaps, the **greatest** challenge for our efforts to improve safety. If we are to dramatically improve motor carrier safety, we must prevent these crashes **from** occurring.

Large trucks dominate the fatal crash statistics.

Almost three quarters of the large vehicles involved in fatal motor carrier crashes in 1993 were large **articulated** trucks (trucks pulling trailers). Only three percent of these fatal crashes involved buses.

In fatal crashes involving a passenger vehicle and a truck, passenger vehicle drivers are more likely to be cited by police.

Although **fatal** crash data suggests that both the truck and passenger vehicle drivers contribute to the occurrence of these crashes, passenger vehicle drivers are almost three times more likely than **truck** drivers to be cited for failing to **yield** the right of way. About 14 percent of passenger vehicle drivers involved in **fatal** car/truck crashes in 1993 were legally intoxicated and only 45 percent were wearing their safety belts.

Forty percent of truck driver fatalities in single vehicle fatal crashes result from ejection.

This statistic suggests that safety belt use is relatively **low** among truck drivers. Further, while alcohol use among truck drivers involved in fatal crashes is **extremely** low (1.7 percent in 1993), truck drivers involved in single vehicle fatal crashes are more likely to be intoxicated than those involved in multi-vehicle crashes. Police also report that reckless behavior by the trucker is a factor in about half of the single vehicle crashes. Perhaps most interesting is that almost half (**48** percent) of all single vehicle fatal crashes involving large trucks are pedestrian crashes.

At the Truck and Bus Safety **Summit**, ten leadership groups having unique perspectives on motor carrier safety will be using these data and other information to develop ideas for improving safety in partnership with one another. Constituencies comprising these leadership groups include:

Drivers	Shippers and Carriers
Enforcement and Legal Profession	Manufacturers and Suppliers
Highway Safety Community	Government Organizations
International Representatives	Professional Associations
Safety Management Systems	Highway Safety Research

APPENDIX D
FOCUS GROUP RESULTS

FOCUS GROUP RESULTS

Purpose and Method

During December 1994, 18 two-hour focus groups were conducted to obtain information about highway safety issues relating to commercial motor carriers (trucks and buses). The study was developed by Global Exchange, Inc. at the request of the Federal Highway Administration Office of Motor Carriers (OMC), primarily to identify issues for consideration at the Truck and Bus Safety Summit to be held in March 1995. This meeting was prompted in part **by** the fact that fatalities in crashes involving heavy trucks increased last year **after** a steady decline in the number of fatal crashes involving trucks over the last ten years.

Focus groups are structured discussions that typically involve eight to ten people. **In this** particular study, participants in the groups were asked to describe their concerns about highway safety, then to discuss in detail a number of specific questions regarding commercial and non-commercial drivers, the driving **environment** and roadway, vehicle-related hazards, and possible ways to make travel safer.

The sessions were conducted with representatives of three populations that have an interest **in** the safety of commercial vehicles: **commercial** drivers (holders of **CDLs**), police officers who deal at least in part with **traffic** enforcement, and the general public or non-commercial drivers (adults who drive passenger cars, light trucks, etc.). Commercial drivers are directly affected by OMC policies and regulations, and have a large stake in maintaining both their livelihood and a reasonably safe working environment. Police often are directly involved in the enforcement of laws governing commercial vehicles (as well as traffic in general), and many have duties which include vehicle inspections and accident investigations. The general driving public necessarily interacts with various kinds of commercial vehicles on highways and city streets, and therefore can be a cause or a victim of collisions involving freight or passenger carriers.

The sites for the groups were located in three regions of the country: the Southeast (Atlanta), the Midwest (Kansas City), and the Northwest (Portland). Of the six groups conducted in each city, **two** were comprised of commercial drivers, two of police officers, and **two** of drivers of passenger vehicles: A total of 60 truck and bus drivers, 39 police officers, and 58 automobile drivers participated in the study. All three kinds of groups had both men and women, considerable variation in terms of age and education, and some representation of ethnic minorities.

The **commercial** and **non-commercial** drivers were **recruited** by research **firms** in the three cities using **specifications** developed by Global Exchange, Inc. and the Office of Motor Carriers. The **firms** used their own databases and various other sources to identify possible candidates for the groups, who were screened by telephone in advance of the sessions. All participants in these two categories were

offered a cash payment as an incentive to take part in the study. The police were recruited through letters from the OMC and calls from Global Exchange staff to various departments. No officers were paid for participating, as the sessions were held during their normal duty hours.

As in all studies of this kind, the results reflect the opinions and attitudes of a limited number of people, and, therefore should be regarded as suggestive rather than definitive. The research is not intended to be quantitative or to provide a probability sample of the various populations from which the participants were selected.

Driver Error

All three groups reported that driver error is the most important cause of safety problems. They believe that passenger car drivers, rather than commercial drivers, are responsible for most car/truck collisions and that most collisions could be avoided if car drivers were more knowledgeable and cautious. Although the groups regarded commercial drivers as far more knowledgeable than car drivers, all groups said that there is a need to upgrade the CDL through longer training, certification of instructors, higher performance standards, and periodic re-testing.

Perceptions of Commercial Drivers and Car Drivers

Most passenger car drivers have considerable respect for the skills and training of professional truck drivers. Automobile drivers tend to like truckers but dislike trucks. They resent the fact that large vehicles obscure their view of the road, and feel intimidated by the sheer size and weight and speed of the trucks. Commercial drivers resent car drivers who commit errors that create a hazard for large vehicles and generally believe that “four-wheelers” mistakes are due to ignorance of the capabilities and limitations of large vehicles.

Police officers share the public’s view of commercial drivers as superior to car drivers in terms of safe driving, skills, and cooperativeness on the road. This clashes with the view of commercial drivers who say that police often hold them responsible for car/truck collisions that are not their fault

Driver Impairment

All three categories of participants believe that impairment from alcohol or other drug use is a significant problem with regard to drivers of passenger cars, but occurs rarely among commercial drivers. However, all three groups also say that economic pressures lead many truckers to drive while fatigued, and this is regarded as a potential hazard.

Perceived fault in car/truck collisions

All groups agree that car drivers know very little about trucks and buses, such as the turning radius they need, their blind spots, the stopping distances they require, and the **time** it takes for them to accelerate or decelerate. Truck drivers, car drivers, and police believe that **this** ignorance accounts in large part for the most frequent collisions between trucks and cars, which they say are usually caused by car drivers driving into trucks' turning lanes or cutting in front of trucks too closely. (Truck drivers say that although they are seldom at fault in such crashes, they are routinely blamed by car drivers and the police.)

As a long-term solution they **recommend** better training of new drivers and periodic re-testing to qualify for license renewals. In the near term, they see a need for public education programs of all kinds to inform current drivers about ways to **increase** their safety when sharing the road with large vehicles.

Views of buses

Very few people express any concern about buses in relation to safety. Some note that **inter-**city buses often speed on the highway, but the drivers are generally regarded as competent and **careful**. Most **comments** about city bus drivers are unrelated to safety. Special concerns are expressed about school bus drivers, who are seen as more likely than others to receive insufficient training and monitoring.

The driving environment

Some of the actions proposed to improve safety regarding commercial vehicles **deal** with the characteristics of roadways, such as:

- increasing the visibility of lane markings and pavement edges
- providing wider shoulders and more rest stops that can accommodate large trucks
- providing more space for large vehicles to go through construction zones
- banking the **turns** on access ramps
- eliminating left-side, entrances and exits on highways
- giving drivers clearer guidance on how and where to merge when a lane ends
- placing signs so as to give earlier notice of upcoming exits or lane changes

Vehicle-related hazards

Among the hazards identified as related to commercial vehicles are spray and rocks thrown up by tires, loads that are uncovered or unbalanced or unsecured, debris from recapped **tires**,

double or triple nailers that are hard to control, taillights that are too small or too **dirty** to be seen, and the lack of rear bumpers on trucks.

A hazard **related to** passenger vehicles, according to truck drivers, is that cars are often hard to see, **especially** when weather reduces visibility.

Vehicle-related suggestions to alleviate some of the problems include:

- installing closed-circuit TV on large vehicles to cover blind spots
- placing large reflectors or flashing lights **halfway** along the sides of trailers (rather **than** only on the end)
- requiring all vehicles to have **headlights** on whenever wipers are in use (or at all times)
- prohibiting or limiting the use of recapped tires
- banning triples
- increasing **enforcement** and **penalties** for load violations (uncovered, overweight, etc.)
- replacing the common sign “This vehicle makes wide turns” with one that car drivers will understand better (possibly “This vehicle **needs two** lanes to turn, so please stay back”)

Drivers’ handling of freight

Many truck drivers say that if they want to keep their jobs, they have to help load or unload **freight—and** then have to misrepresent the hours spent in loading or unloading as rest time in **their** log books. This presents a misleading picture of their **working** conditions, and the circumstances tend to undermine safety by producing drivers who are tired, resentful, and in a hurry. They feel that companies and shippers should not expect or require drivers to handle freight

Delivery schedules and log books

Many truck and bus drivers feel pressured by their companies to drive long hours or exceed speed limits. They say that log books are frequently falsified; sometimes under pressure from companies., Many drivers and police share the view that log books are, not to be taken seriously.

Regulations

Many truck and bus drivers object to regulations that they regard as unworkable or **out-of-date**, and particularly to laws that they **feel** increase their risk of having a collision. Examples are lower-speed limits for commercial vehicles (which, when observed, require **frequent** lane changes by other vehicles); lane restrictions which require the largest and least-maneuverable vehicles to stay in the right lane where cars entering or leaving the roadway cause the most **frequent** adjustments in **speed**; and certain rules governing truck configurations. Commercial drivers also object to the regulation governing hours of rest and to other rules that they regard as inappropriate. Many recommend updating the requirements regarding rest and log books to take account of modern roadway and vehicle characteristics. They also feel that the rationale for various regulations should be made clearer.

Vehicle inspections

Many commercial truck drivers believe that inspections at the state and local levels are frequently conducted to generate revenue from fines rather than to improve safety, and they are troubled by what they say are variations **from** place to place in the way violations are defined. For these reasons many drivers **say** they would rather have their vehicles inspected by Federal officials than by state or local officials.

Some police say that vehicles should be inspected more often, and that penalties for violations should be 'increased. This applies particularly to vehicles with uncovered loads that are potentially hazardous (e.g., gravel, sand, crushed autos), which officers feel should be impounded or ruled out-of-service rather than merely fined.

Weigh stations

Commercial drivers are concerned about the fact that waiting lines at weigh stations **sometimes** extend into an active roadway, posing an obvious risk to the drivers in line as well as to oncoming **traffic**. They **recommend** that weigh stations be located off the road, and that those now located in median strips be closed.

Enforcement

Police **officers** express **strong** concerns about inadequate funds for equipment and personnel, pressure in some departments to limit citations, and lack of training in how to conduct truck inspections. They also regard many penalties as too slight to deter violations, but some officers note that making penalties too severe can increase court cases and result in fewer convictions.

Some car drivers say it might be helpful to have an 800 number that motorists could call to report unsafe driving or violations of laws by commercial vehicles.

Company size and safety

In the view of many police officers and passenger car drivers, large trucking companies are more **likely** than small independents to hire capable drivers, provide adequate driver training, maintain vehicles properly, and arrange trip schedules that do not require drivers to work excessive hours.

Views regarding the Office of Motor Carriers

Few commercial drivers, police officers, or passenger car drivers have heard of the FHWA Office of Motor Carriers. Although they have no clear picture of the agency's mission, all three categories of participants are able to **list** numerous actions (noted throughout the report and **this** summary) **that** they feel could be taken by this agency or others to improve highway safety. One general suggestion is that OMC track the use of innovative policies or procedures throughout the country, identify those that seem most promising, and encourage others to try them.

APPENDIX E :
LIST OF PARTICIPANTS

List of Summit Attendees

Pane: 1

Number of Contacts: 207

Nominee	Affiliation	Leadership Group
Alder., Joseph	National Head injury Survivor Council	Highway Safety Community
Badger, Joseph		Highway Safety Research Community
Ballas , Joseph	COHMED	Highway Safety Community
Barnes, Frederick		Drivers
Beaton , Glen	Transportation and Public Works	International
Bedwell , Carole	California Dept. of Motor Vehicles	I n t e r n a t i o n a l
B e l l , U l y	Roadway Express	Drivers
Bergoffen, Gene	National Private Truck Council	Safety Management Systems
Besse, Retta	OMC	Highway Safety Community
Blower, Daniel	Center for National Truck Statistics	Highway Safety Research Community
Boerner, Thomas	Minnesota Dept. of Public Safety	Safety Management Systems

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Number of Contacts: 207

Nominee	Affiliation.	Leadership Group
Bontz, Rita	Independent Truckers & Drivers Assn.	Professional Associations
Brooks, Bob	Public Service Cmsn of West Virginia	Enforcement/ Legal
Bryant, Sue	Texas Dept. of Transportation	Safety Management Systems
Bufe, Noel	The Traffic Institute	Professional Associations
Burkert, Jack	Lancer Insurance	Highway Safety Community
Burnham, Archie	ABA Engineers	Safety Management Systems
Buschjost, Larry	Missouri State Highway Patrol	Enforcement/Legal
Byrd, LaMont	International Brotherhood of Teamsters	Drivers
Calvin, Michael	AAMVA	Highway Safety Community
Campbell, Kenneth	Center for National Truck Statistics	Highway Safety Research Community
Campbell, Stephen	American Trucking Associations	Professional Associations

List of Summit Attendees

Number of Contacts: 207

Nominee	Affiliation	Leadership Group
Carr, Richard	Montgomery Tank Lines, Inc.	Shippers/Carriers
Chamberlain, John	Giant Food, Inc.	Drivers
Christensen, James	Georgia Pacific Corporation	Shippers/Carriers
Clarke, Robert	NHTSA	Manufacturers/Suppliers
Claunch, Paul	Arkansas Highway Police	Enforcement/Legal
Claybrook, Joan	Public Citizen	Highway Safety Community
Cloutier, Jean-Claude	Dossier Transporteurs	International
Collins, John	American Trucking Associations	Enforcement/Legal
Coltrane, Don	Yellow Freight System	Drivers
Conger, John	NAGHSR	Highway Safety Community
Cook, Doug	Yellow Freight System, Inc.	Shippers/Carriers

List of Summit Attendees

Number of Contacts: 207

Nominee.	Affiliation	Leadership Group
Cotton, 'Major	Maryland State Police	Enforcement/Legal
Coyle, Bill	CECO Entry Systems	Shippers/Carriers
Crowe, Eddie	Penn State University	Highway Safety Research Community
Culpepper, Thomas	American Automobile Association	Highway Safety Community
Daecher , Carmen	Pennoni Associates, Inc.	Highway Safety Community
Darr, Linda	American Trucking Associations	International
Davis, Jeff	Jet Express, Inc.	Shippers/Carriers
Davis, Ritchie	Michigan Truck Safety Commission	Highway Safety Community
Davis, Robert	OMC	Highway Safety Research Community
Dawson, Donald	International Brotherhood of Teamsters	Highway Safety Research Community
DeBoard , Lee	Independent Driver	Drivers

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Number of Contacts: 207

Nominee	Affiliation	Leadership Group
Desch, Ron	Kansas Highway Patrol	Enforcement/Legal
DeWitt , R a l p h	Commercial Vehicle Enforcement Office	government organizations
Dinges, David	School of Medicine	Highway Safety Research Community
Donscheski, Doug	Nebraska CVSA Data Cmte	Government Organizations
Doyle, Gary	Nat'l Law Cntr--Inter-American Free Trade International	
Driscoll, Robert	OOIDA	D r i v e r s
Durbrow , Bruce		Highway Safety Community
Echols , Thomas	OOIDA	Drivers
Emrick , Diane	Georgia Motor Trucking Association	Safety Management Systems
Eschmann, Gerard	United Van Lines, Inc.	Shippers/Carriers
Esler, Robert	OOIDA--Michigan	Drivers

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Number of Contacts: 207

Nominee	Affiliation	Leadership Group
Farrell, Robert	National Automobile Transporters Assn.	Shippers/Carriers
Fezell, D	OMC	Safety Management Systems
Finkel, Karen	National School Transp. Assn.	Professional Associations
Fiste, William	Commercial Vehicle Safety Alliance	Professional Associations
Forman, Robert	American Bus Association	Professional Associations
Fox, Arthur	Kator, Scott, & Heller	Drivers
Freund, Debbie	OMC	Highway Safety Research Community
Gaillard, Bernard	Interstate Commerce Commission	International
Gainer, Terrance	Illinois State Police	Enforcement/ Legal
Gayle, Steven	Binghamton Metro Transp.Study	Safety Management Systems
Gemma, Tony	Roadway Express, Inc.	Drivers

List of Summit Attendees

Number of Contacts: 207

Nominee	Affiliation	Leadership Group
Giermanski, James	Division of International Trade	International
Gillan , Jacqueline	Advocates for Highway & Auto Safety	Highway Safety Community
Goleman, Barry	AAMVAnet , Inc.	'Safety Management Systems
Gould, Stephen	Pepperidge Farm, Inc..	Shippers/Carriers
Gregory, Darrell	OMC	Enforcement/Legal
Griffin, Gene	Upper Great Plains Transportation Institute	Highway Safety Research Community
Grimm, John	OMC	Manufacturers/Suppliers
Grush, Ernest	Ford Motor Company	Manufacturers/Suppliers
Gudenkauf, Kenneth	Kansas DOT	Government Organizations
Hamilton, Arthur	FHWA	Government Organizations
Harkey, David	University of North Carolina	Highway Safety Research Community

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Number of Contacts: 207

Nominee	Affiliation	Leadership Group
Harris, Donald	O M C	Shippers/Carriers
Harsha , Barbara	NAGHSR	Highway Safety Community
Hat-visor-r, Cliff	Nat'l Tank Truck Carriers	Professional Associations
Havelaar , Ronald	OMC	Enforcement/Legal
Henry, Paul	Oregon Public Utility Commission	Enforcement/Legal
Herndon, George	Florida DOT	Government Organizations
Herster, William	OMC	Highway Safety Community
Hilton, Cynthia	Assn. of Waste HazMaterials Transporters	Professional Associations
Hoemann , Warren	Yellow Corporation	Enforcement/Legal
Hopps , David	Ryder Truck Rental, Inc.	Shippers/Carriers
House, Milton	Transport Canada	International

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Nominee	Affiliation	Leadership Group
Householder, Linda	Professional Drivers of America, Inc.	Drivers
Hoyt, Tim	Nationwide Insurance Enterprise	Highway Safety Community
Hugel, David	AAMVA	Professional Associations
Hughes, Gary	Arizona Dept. of Public Safety	Enforcement/ Legal
Hughes, Gerald	Roadway Services, Inc.	Shippers/Carriers
Izer, Daphne	Parents Against Tired Truckers	Highway Safety Community
Jain, Prakash	Rockwell International	Manufacturers/Suppliers
Jennings, Supt	IACP Division of State & Provincial Police	Enforcement/Legal
Jensen, William	OMC	Professional Associations
Johnston, Jim	OOIDA	Professional Associations
Johnston, Paul	Midland-Grau Heavy Duty Systems	Manufacturers/Suppliers

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Jones, Ruth	O O I D A	Drivers
Karlsson , Leif	VOLVO-GM Heavy Truck	Manufacturers/Suppliers
Kasperek, Robert	Assn. of Recovering Truckers, Inc	Drivers
Kelleher , Robert	O M C	International
Kindya, Bill	USDA	Government Organizations
Kolstad , Jim	VORAD, Incorporated	Manufacturers/Suppliers
Kozlowski, Thomas	OMC	International
Krall , Farrel	Navistar Internat'l Trans. Corp.	Manufacturers/Suppliers
Kundu, Jai	ATA Safety Management Council	Safety Management Systems
Kynaston , Edward	PTDIA	, Highway Safety Community
Lammlein, Steven	Personnel Decision Research Institute	Highway Safety Research Community

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Nominee	Affiliation	Leadership Group
Leese, Gail	PACCAR Inc	Manufacturers/Suppliers
Levine, Ronald	Nevada Highway Patrol	Enforcement/Legal
Lindgren, Norm	Utah Dept. of Transportation	Safety Management Systems
Littler, Charles	Motor Coach Industries	Manufacturers/Suppliers
Loveday, Paul	Jefferson Pacific	Shippers/Carriers
Magby, Clinton	OMC	Enforcement/Legal
Malinowski, Maureen	Assn. for Advancement of Auto. Medicine	Highway Safety Research Community
Markison, Marlene	NHTSA--Regional Operations	Safety Management Systems
Marson, David	Alberta Trucking Indust. Safety Assn.	International
Martin, David	OMC	I n t e r n a t i o n a l
Mayer, David	N T S B	Government Organizations

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Nominee	Affiliatioti	Leadership Group
McCauley, James	OMC	Safety Management Systems
McGraw, Federick	OMC	Safety Management Systems
McPherson, Norman	NHTSA	Government Organizations
Mears, Sandra	Department of Revenue	Enforcement/Legal
Miller, James	Evaluation Systems, Inc.	Highway Safety Research Community
Mills, M a j	Texas Department of Public Safety	Enforcement/Legal
Minor, Larry	OMC	Manufacturers/Suppliers
Mitchell, Debra	OMC	Safety Management Systems
Mitler, Merrill	Scripps Clinic and Research Foundation	Highway Safety Research Community
Montelione, Anthony	5th Municipal District Ct. of Cooke Cnty	Enforcement/Legal
Morris, Joseph	Transportation Research Board	Highway Safety Research Community

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Nominee	Affiliation	Leadership Group
Neff, Larry	FHWA	Government Organizations
Nicholson, Robert	Consultant	Drivers
Oesch, Stephen	Insurance Institute for Highway Safety	Highway Safety Community
Osborn, Jon	Great West Casualty Company	Highway Safety Community
Osiecki, David	FHWA OMC	Shippers/Carriers
O'Connell, Michael	Collier, Shannon, Rill & Scott	Enforcement/Legal
Peluso, Randy	Can. Owner Operator Drivers Assoc.	International
Pena, T h e	U.S. Department of Transportation	Speaker
Peterson, Bob	International Brotherhood of Teamsters	Drivers
Petty, Susan	OMC	Government Organizations
Picher, Gedeon	Maine Department of Transportation	International

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Nominee	Affiliation	Leadership Group
Pritchard, Edward	OMC	Shippers/Carriers
Putman, Gary	Amoco Fabrics and Fiber Co.	Shippers/Carriers
Reagan, Doreen	National Private Truck Council	Professional Associations
Reagle, George	OMC	Staff
Rich, David	Commercial Vehicle Safety Alliance	Highway Safety Community
Riley, Lee	Ranger Transportation	Drivers
Roberts, Alan	FHWA RSPA	Government Organizations
Robinson, Allen	ADTSEA	Highway Safety Research Community
Robinson, Harvard	California Highway Patrol	Enforcement/Legal
Rode, William	RO-DE Trucking Inc.	Drivers
Rodgers, Kenneth	OMC	Professional Associations

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Nominee	Affiliation	Leadership Group
Rogers , Bill	ATA Foundation	Highway Safety Research Community
Rohrbaugh, William	Rohrbaughs Charter Service	Shippers/Carriers
Roods, Diane	Missouri Dept. of Public Safety	Safety Management Systems
Rose, Milbert	Maryland State Police	Enforcement/Legal
Rossow, Gary	Freightliner Corporation	Manufacturers/Suppliers
Rottmund, Charles	BOC Gases	Shippers/Carriers
Ryan, Matthew	Division of Traffic and Safety	Enforcement/Legal
Sawin , Doug	OMC	Government Organizations
Schmidt, Milt	OMC	International
Sears, John	Indiana Bureau of Motor Vehicles	Government Organizations
Seifert, Robert	IACP Division of State & Provincial Police	Enforcement/Legal

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Nominee	Affiliation	Leadership Group
Sheehan, Michael	NHTSA	Enforcement/Legal
Sheridan, John	Conwal, Inc.	Highway Safety Research Community
Sienicki, Dale	OMC	Government Organizations
Sims, Olin	West Point Stevens, Inc.	Drivers
Skelton, Dennis	International Brotherhood of Teamsters	Drivers
Slater, Rodney	Federal Highway Administration	Speaker
Small, Fred	FHWA--Safety Management Team	Safety Management Systems
Smalls, Douglas	UPS	Shippers/Carriers
Snyder, Dave	American Insurance Association	Professional Associations
Sodhi, P r a b h j o t	TRW Commercial Steering Division	Manufacturers/Suppliers
Sonefeld, Otto	AASHTO	Professional Associations

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Nominee	Affiliation	Leadership Group
Steinhoff, John	OMC	Safety Management Systems
Stockton, Bruce	Contract Freighters, Inc.	Shippers/Carriers
Stout, Bill	Governor's Highway Safety Program	Government Organizations
Strandquist, John	AAMVA	Professional Associations
Swinehart, Jim	Public Communication Resources Inc.	Highway Safety Community
Tamburelli, Paul	XTRA Corporation	Manufacturers/Suppliers
Taylor, Linda	OMC	Drivers
Taylor-Horton, Pam	Wyoming State Legislature	
Teece, Wayne	National Assn. of Fleet Administrators	Professional Associations
Thompson, Ted	Kansas Turnpike Authority	Government Organizations
Tullos, Don	Federal Express Corporation	Shippers/Carriers

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Nominee	Affiliation	Leadership Group
Van Luchene, Judy	OMC	Highway Safety Community
Van Steenburg, John	New York State Police	Enforcement/Legal
Vasquez, Philip	Colorado Dept. of Revenue	International
Waldorf, Stephen	CSX Intermodal Inc.	Shippers/Carriers
Wallace, Loyd	J.B. Hunt Transport, Inc.	Shippers/Carriers
Waller , Patricia	Transportation Research Institute	Highway Safety Research Community
Walsh, Nicholas	OMC	International
Watkins, Robert	Consolidated Safety Services, Inc.	Government Organizations
Weigler , Master	Illinois State Police	Enforcement/Legal
Weiland, Betty	J.J. Keller & Associates	Highway Safety Community
Weiss; Walter	Leaseway Transportation Corp.	Shippers/Carriers

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Nominee	Affiliation	Leadership Group
Wilcox , Linda	U.S. Customs	International
Williams, Jeff	Indiana Mills Manufacturing	Manufacturers/Suppliers
Wilson , Eugene	University of Wyoming--Civil Engr.	Safety Management Systems
Woodman , Mary	OMC	International
Wycliffe, Rudi	Compliance Branch	International
Wylie, Dennis	Essex Corporation	Highway Safety Research Community
Yungfer, Timothy	Michigan State Police	Enforcement/Legal
Zogby, John		Safety Management Systems
Zwonechek, Fred	Nebraska Dept. of Motor Vehicles	Highway Safety Community

- Driving erratically or unpredictably, presumably While impaired by alcohol or other drugs (CDL drivers say this is a major problem for car drivers, but that it is no longer a problem for truckers because of random testing by companies)

“You used to see a lot but those guys are off the road now.”

- Bad merges-waiting until last minute and cutting in lane, especially when lane ends; jumping lines, using the shoulder to pass

Other problems mentioned with regard to car drivers:

- Many don't know how to drive on snow or ice, and fail to equip their cars for such conditions
- People don't understand the regulations concerning school buses; they pass buses with flashing red lights, or won't pass a school bus when it's legal and thus cause unnecessary delay for a line of cars

A tour bus driver said that he has the same problems as truckers on the highway. Car drivers cut into his front safety space, which is a big problem, especially with people on board. Cars also take his lane space when he is attempting a wide right turn. 'He said that despite his sticker warning other drivers about his wide turns, if there is a collision it is still regarded as his fault by both the 'car driver and the police.

Commercial Drivers

There was consensus that a large majority of collisions between cars' and' commercial vehicles, probably four out of five, are caused by car drivers. However, some of the focus groups felt that a small proportion of commercial drivers are a hazard to others on the road. They **attributed** most problems with commercial drivers to driver fatigue from overwork, and a lack of training and experience. They said that while speeding occurred, this was not a major safety hazard. They also felt that drug and alcohol use was no longer a problem with regard to truckers, largely because of random testing and the threat of losing the CDL.

Concerns about the Driving Environment

Commercial drivers voiced the following concerns attributed to the driving environment:

- Lack of lane markings and edge-of-pavement markings (especially on two-lane roads, and new or repaved roads, where it may be months before lane markings are replaced); some lane markings don't show up in rain or at night; need more use of reflective paint and more reflectors, especially at side of road, and more frequent replacement of worn paint

- Debris from uncovered loads, and from recapped tires (“alligators”)
- Signs that are unclear, too small, obscured by dirt or snow, have too much information to read, or provide insufficient notice of lane changes or exits ahead (if a lane is closed, tell which lane and whether to merge left or right, and give earlier warning than one mile)
- Bad roads, potholes, poor construction, inadequate maintenance
- Bad planning or design, e.g., exit or entrance lanes on the left side of the highway, exit and **entrance** ramps or lanes in conflict or too close together
- Weather, e.g., low visibility in rain and snow, traction on ice or snow (CDL holders agreed that weather can make road conditions hazardous, but felt that people should adjust their driving to the circumstances or stay home)
- Some curves are not banked properly; large vehicles tend to overturn
- Construction-lane shifts in construction areas are not gradual enough for trailer trucks; they’re engineered for cars, and don’t take into account the length of trucks; also speed limits for lane shifts in construction areas are set for cars but are too fast for trucks or buses; lanes are too narrow, warnings are not early enough, too many barrels, arrow lights that are too bright
- Not enough room, particularly on shoulders-narrow, ill-placed, dangerous for large vehicles
- Not enough rest areas (particularly in metropolitan areas and in the South), and inadequate space for trucks in existing areas
- Not marking overpass heights, or not re-marking after street surface is raised by new paving
- Non-standard highway ramps
- Poor markings on ramps-don’t see sign soon enough
- Access ramps and merge lanes that are too short for trucks to reach highway speed
- Frontage roads without stop signs
- Placing weigh station in median (between roadways)
- Gridlock, congestion, delays/pressure

- Lines at weigh stations--sometimes require trucks to stop in traffic lane

All of the CDL groups mentioned a problem at weigh stations: trucks having to wait in a line that backs up into the traffic lane on a highway. They said this is risky for truck drivers and for other motorists. They commented that the only states that permit trucks to skip weigh stations if lines are too long are states where people in cars have been killed in accidents resulting from truck lines extending onto a highway. There was general agreement that this is a problem in many states.

“Tennessee finally said-you know, they drew a line on the pavement and said, ‘If the ramp’s full to here you may back out,’ but somebody had to get killed before they did that. Somebody in a passenger car was killed before they did that.”

Concerns about Vehicles

There was general agreement that vehicle failure causes few accidents because of mandatory inspections, better equipment, and better maintenance. Drivers felt that most trucking companies, buscompanies, and school districts were fairly conscientious about vehicle maintenance. However, there were a few concerns about trucks and other vehicles:

- Truck size or configuration (agreement that triples are unsafe, and some say doubles as well, especially on city streets)

“I don’t care who you are, or how long you’ve been driving, three 50-foot trailers is no good.”

- Cars that are not equipped properly for snow and ice (trucks are required to have chains etc., but cars are not)
- Uninspected/unsafe cars
- Occasionally, trucks in bad condition (though they say fewer substandard trucks are on the road now than four or five years ago because of mandatory inspections)
- Newer “headache racks” are of poor quality-won’t stop anything from coming through the back of the trailer and landing in the bunk

Concerns about Work Requirements

Company policies that drivers say affect safety adversely are running overweight trucks, especially in the city; not providing adequate training for new drivers; scheduling that does

not permit sufficient rest; and requiring drivers to handle freight without pay, and counting time loading or unloading freight as rest time.

All groups felt that driver fatigue is the most common cause of accidents where a truck driver is at fault. Many truckers say that driver fatigue is caused by dispatchers making unrealistic schedules, and the fact that drivers often have to use rest time to load or unload. They feel that there is often too much pressure from the employer to make a schedule. The fact that most drivers are paid by the mile or load also creates pressure to exceed speed limits or to drive long hours. (A few drivers expressed concerns about the effects of deregulation on the trucking industry, and said that economic pressures sometimes lead to safety problems as drivers are pushed to drive illegal hours with overweight loads.)

“We’re told ‘Safety before schedule,’ but the only thing they say if you get behind is, ‘Why are you late?’ ‘Well, I was trying to be safe.’ ‘Well, hmp-h-you want that, too?’”

“Too much pressure from the employer to ‘Go - go - go.’ He’s pushing you to get in a bad situation-typically, running triples when you shouldn’t.”

“It seems like when the dispatching unit gives you your load, they want it at this destination the next forty minutes. A lot of times they fail to give you the proper paperwork. My experience of it has been they don’t think of safety along the way. It is always, ‘Hurry up and get there.’”

Drivers are paid by the mile and by the drops, but not paid for unloading time on “fingerprint drops” (deliveries where the receiver requires the driver to unload the goods). This may take six to eight hours. The driver is not paid for this time, and the company will not count this as work time when making out the trip schedule, so this goes into the log as rest time. Thus the driver may drive eight hours, spend eight hours unloading, pick up another load and drive another eight hours.

“Talk about safety-one of the biggest issues in safety with truck drivers, especially route drivers, is having to touch the freight.”

“Regardless of whether you pay a guy to load or unload, that’s not the point. The point is driver safety. When you leave Kansas City to go to Oklahoma City, and you have to unload and come back that same night-load and unload-you’ve got four hours loading and unloading and ten hours driving right there. That’s 14 hours during a day. You’re not going to log it that way. That’s illegal, so you log 15 minutes to load it and 15 minutes to unload it.”

The drivers say that dispatchers will overload trucks and will make up schedules which don't give drivers enough rest time, and then tell them to run three logbooks. Drivers who object can be fired and given a bad reference when they apply for work elsewhere.

"They give you extra logbooks every month, and tell you that's why they give them to you."

"If we refuse to help unload, then they refuse the load. Then, your company's going to get rid of you."

"If we wrote down the time spent loading and unloading in our logbook like we're supposed to do, people would starve to death because there wouldn't be anything in the grocery store for them to buy. Everything moves by truck, one way or another, and it wouldn't get delivered."

"If you spend four hours on the dock, if you back your logs up you can show an eight-hour break; but you weren't sleeping."

"Five-hundred-mile runs are the worst. You will spend ten hours getting out there, and you get unloaded, and then you drive 50 miles or so and get reloaded, because if you don't get there by a certain time you don't get reloaded. Then you've spent all that time unloading, and the customer looks at that and says, 'It's only 500 miles away. I want that in the morning.' You might get a couple hours nap on the way back, and then you might not."

"We're putting in 100-hour weeks, easy."

"They need to put more back on the shipper. More of the liability on the shippers than there is right now. Now everything goes on the drivers."

Concerns about Regulations

There was agreement that some regulations now in effect have paid off-for example, inspection standards that have reduced the number of unsafe vehicles on the road. However, several drivers expressed concerns about the way that certain regulations are written or implemented. As an example, one driver mentioned that it was not possible to follow the CDL book's direction to start a right-hand turn from the right lane.

"The laws don't mirror reality, because the people who are making the laws don't know what the hell they're talking about."

"It's not a matter of needing any more regulations, or any less. We need somebody with enough brains to figure out what we're trying to regulate to"

write the regulations so that they make sense, because currently we have so damn many that do not.

Some drivers said they feel they have no rights, at least in relation to safety regulations that apply only to CDL holders. They believe that such regulations should also apply to others. The permissible level of marijuana in a blood sample was mentioned as an example.

The new alcohol-containing-product law was also viewed as unrealistic and pointless by some CDL holders.

"The laws don't make common sense. Just like your new alcohol laws. I just finished taking all the cough syrup, Nyquil, shaving lotion, everything, out of my truck. I was a little irritated about it, but January 1, I get caught with shaving lotion with alcohol in it in the cab of my truck, I will be cited for Open Container. That is the law."

"Unsafe" Regulations

Some drivers were angry about rules they regarded as making the work of driving a truck riskier rather than safer:

- Restricting trucks to the right lane is hazardous because of the exit/entrance ramps. Truck drivers say they often have to hit their brakes or swerve to avoid hitting a car that cuts in front of them to reach an exit, or to avoid a car that enters the roadway immediately in front of them. They feel that if trucks are restricted it should be to the left lane, rather than where traffic merges.

"They put us in the right lane. Put us in the left where we don't have to fight with people coming off and on the ramps."

The drivers argued that it would be much safer to have all through traffic, including trucks and buses, in the left lane or another through lane, rather than continuing to restrict large vehicles to the right lane. A few mentioned that the express lanes in the Newark (NJ) area are very safe because they are completely separate from local traffic; there are no exits and entrances.

- Log books, loading time, and rest requirements: There was considerable discussion regarding government regulations concerning hours driven. While there were few objections in principle to Federal regulation of driving time and rest time, truck drivers agreed that current requirements are generally ignored as too rigid and unrealistic, having been written before the advent of the interstate highway system. They said that all long-distance drivers falsify logs with company knowledge; logs are called "comic books" by police as well as drivers.

“Log books haven’t been changed since the 1920 ‘s-70 hours in eight days. You can work four days and get your 70 hours and take three days off and still not be able to go back to work, because you haven’t dropped hours from those previous days so you can start working again. If you have one day off, you should get a fresh 70, just like a pilot. If you have one day off, you’re rested. You can go back to work again.”

“We’re allowed to drive for ten hours in a day. If I’ve been out and am coming back, and I’m within, say, 50 or 60 miles of my home, and thinking of sleeping in my bed versus sleeping in the truck-I’m going to run illegal for an extra hour to get to my bed; But I’m going to log it legal, and say, ‘Oh, yeah, I stopped up there.’”

“You are made to lie. Not only that, but when you get to a destination you make your delivery on time and you have to unload that truck. But you can’t count those hours on your active duty time because otherwise when you get empty you can’t pick up another load. An then you are so tired. But you still got to go 150 miles to pick up another load and have it at its destination.”

“You can drive a run in the prescribed amount of time and be out of hours, but it may take you-I’ve unloaded trucks up to 14 hours, and then you have to show [unloading time] off-duty, because you are expected to get back in that truck and drive to pick up another load and deliver another one.”

“The logs do not allow for normal body cycles. If I’m in a hurry-if I leave Portland Saturday morning and I’ve got to be in Chicago Monday morning-I can legally do that. It can legally be logged. But I can guarantee you that what I drive is not what’s on that log. I’ve got to go to bed four hours, drive five, sleep four, drive four, sleep four, drive five. You ever try doing that?... I am forced by the law to either drive in a fatigued manner to fit the log regulations, or don’t drive, or risk a big ticket if they catch me.”

- Someone noted that an Oregon regulation says that in a combination of triples, the heaviest trailer must be in the front. But for a double,

“You can have a combination of 28,000 in the back trailer and 6,000 in the front, and it’s legal. But it’s dangerously unsafe. It’s unsafe all the way around, and you can talk to your company about it and they may even have rules that say ‘We don’t do this,’ but there’s no compliance, and you talk to DOT and they say, ‘Well, you should have the heavy

one in front, but when you write it into the laws so that it will protect us, that maybe will save your life.’”

“We have one that says, Section 70 says that the shortest trailer in any combination must be in the rear. We have companies that the longest trailer is, sometimes in the rear because it has a lift gate and doesn’t have a hook and there’s no way you can put the longest trailer in the front. It will have 16 to 18 thousand pounds and your front trailer will have six. That’s the way you have to pull it, because there’s no way you can pull it the other way. But it’s unsafe. If you have to hit your brakes, the inertia says, the weight’s got to go someplace. So you’re going to jackknife, and there’s nothing you can do about it.”

- Licensing and renewal: the fact that no re-testing or re-certification is required to renew a car driver’s license; poor training for some truckers, and a lack of solid training for new drivers; need for refresher courses at intervals for all drivers; the fact that car drivers can get a license despite having no knowledge about trucks

There was general agreement that people need more safety training for a driver’s license than they get now, and that license renewal for car drivers is a joke. Most felt that there should be a retest for renewal and that people should not be allowed to renew a license by mail. In particular, senior citizens were regarded as a **high-risk** group that should be retested periodically for renewal. Some also suggested raising the minimum license age to 18 because they felt that many 16-year-olds were not mature enough to drive.

Several people commented that training for a CDL is sometimes not as good as it should be, and that consequently there is no assurance that commercial drivers will have an adequate level of skill. Others said that although all major carriers have training systems, the government does not impose a ‘minimum amount of training or other requirements, so companies can do pretty much as they please. As a result, some companies have good training systems while others are not so good.

“Some of the trucking companies are grinding people up, and just using up their CDLs, and turning them loose once their CDL’s gone. That’s a serious problem. We’ve got a driver shortage here of a sort, but it’s manufactured by the major carriers who are grinding these people up. They’re putting them through two weeks of school, sending them out there with another guy for two weeks, and letting them catch their tickets, use up their license, and then they’re gone.”

“They train these guys for a certain amount of hours. There’s no mandatory amount of training from the government or from anybody else-certifiable training-that these guys go through. So let’s say one guy

goes through jive weeks of training. Another might get two weeks. Then they stick him in with another guy who just got out of school and they call that a team and they go on down the road. There's not enough training there for anybody. I wouldn't let a guy in my truck with two weeks of experience."

The drivers recommended looking into the certification of CDL driving schools, and upgrading procedures as needed. In general, they felt that new drivers need to spend more time behind the wheel under the supervision of an experienced trucker.

- **Waking** truckers in rest areas to do inspections
- No training or certification required to drive motor homes or tows; no training required to drive U-Hauls or rental trucks
- Different speed limits for commercial and non-commercial vehicles •

Almost all of the drivers objected strongly to the use of a lower speed limit for trucks and buses than for cars. Many felt that it was another form of discrimination against commercial drivers, like the confiscation of radar detectors ("bird dogs") and the lower BAC limits, and that it was used in many areas to generate revenue. They also said that rather than contributing to safety, differential speed limits actually constitute a hazard; as one said, "You have to go with the traffic flow to stay alive."

"When you're held to a lower speed than the flow of traffic you can't pass, change lanes, or do anything without speeding, and you're a safety hazard at all times."

"Common sense will tell you that you can't go slower than the traffic flow, but that cop will still write you a ticket, and it costs you money, and if you get too many of them it costs you your job."

"I think everybody will agree that this split speed limit is just for generating revenue. That's exactly what it's for. It has nothing to do with safety whatsoever. In fact, it's unsafe."

"You have a great potential for rear-end collision, or people coming out from behind you and getting rear-ended themselves from higher-speed traffic."

“The differential speed limits are atrocious. It’s just a revenue producer for each state that has it, because there you have a target. You’re a hazard and people in cars go by you and act like you’re doing something wrong.”

- State-to-state variations in rules: e.g., differences in requirements for certification.’ as a school bus driver
- Holding commercial drivers to higher standards than passenger car drivers

Drivers believe that traffic violations and tickets incurred while driving a car in private life count against their CDL, and feel that this is unfair.

Some mentioned that the BAC level for truck drivers is now .04. They feel that if a commercial driver is ,a hazard at .04, then car drivers are also and should be subject to the same standard. They feel it is not fair to single out truck drivers in this case, or to make it illegal for truck drivers but not motorists to have radar detectors.

‘A doctor can make as many surgeries or operations as he wants to make in any given day. The government doesn’t come in and tell him he can only work ten hours a day. But they say we can only work a certain amount of hours a day, so that’s not fair. And if a doctor goes to a football game and has a beer and a hotdog, and driving home somebody hits him and he gets a DWI, he doesn’t lose his livelihood. He still gets to be a doctor. So when I’m in my car, I don’t think my profession and my private life should intertangle. They should be separate.’

- Vehicle inspections

Drivers agreed that inspections are a good thing and are important for safety and reliability, but that some municipalities use truck inspections as a revenue source. They also said that vehicle checks are often inconsistent, varying from inspector to inspector and from one day to another.

“Something that’s not a problem for one inspector is a ‘shut-down offense for another.”

Someone suggested providing a tag or window sticker to show when a vehicle was last inspected so the truck will not be stopped repeatedly. [Apparently drivers are unaware of the CVSA decal used for this purpose. It was not mentioned in any of the groups.]

Most Commonly Perceived Kinds and Causes of Car/Truck Crashes

The commercial drivers mentioned several kinds of collisions that occur fairly often, and indicated that these typically result from an error on the part of the passenger car driver:

- A truck and a car collide in the right lane while the truck is making wide right turn (car driver is at fault for ignoring truck's turn signal, and probably a "wide turns" sign on back)
- A truck changing lanes pushes a car sideways (car driver is at fault for riding in blind spot of trucker)

"The most dangerous place in the world is to the side of a truck, but ordinary drivers don't know that."

- A car runs into the back of a truck (car driver is at fault for tailgating)
- A truck runs into the back of a car (car driver is at fault for cutting in or slowing down too quickly; if other lane is occupied, the truck driver has no place to go and usually can't slow down enough to avoid a crash)

'A lot of the four-wheelers, they're going to make a right-hand turn, they run right up in front of you and cut in front of you, and then they stop and make their right-hand turn, where it would have been just as easy just to wait a second and get behind me. I weigh 80,000 pounds. I don't stop like they do. I've had several situations where I've had to drive somebody else off the road to keep from rear-ending this guy.'

Many drivers said that car drivers know very little about large vehicles, and in particular that they feel safe cutting in front of a large truck because they overestimate its ability to maneuver or stop quickly.

"They think we can haul 40,000 pounds and stop on a dime."

"They think that if you've got 18 sets of wheels you've got 18 sets of brakes."

"I've heard, 'You have more brakes than us; you can stop quicker.' People actually believe this."

The drivers also mentioned that in heavy rain or fog, it is hard to see cars because of the spray from the truck or bus. Sometimes a truck or bus driver may hit a car that could not be seen. They say that cars are much easier to see in bad weather when their lights are on. Several mentioned that a law in some states requiring that lights be on if wipers are on is a good one and should be enacted in all states. Drivers say that side skirts (placed along wheel

wells to reduce side spray) should not be made mandatory because they're ineffective; drivers say it is much better to require that headlights be turned on in rain and fog.

Most Commonly Perceived Kinds and Causes of Car/Bus Crashes

The kinds of collisions involving cars and buses are essentially the same as those listed above for cars and **trucks**, since buses have the same problems regarding wide turns, and with cars following too closely or trying to pass and cut in. City bus drivers say they have an additional problem: pedestrians may be hit or cause a sudden stop when they run in front of a bus.

How CDL Holders Think the Driving Public Views Them

"They hate us." [Said in several groups.]

"What it basically comes down to is, nobody really cares about the guys in this room. There are no rules for us, there are only rules against us. Everything is kind of leaning against the trucker today."

Some school bus drivers said that the public view of them is also quite negative—as people who are incompetent, poorly trained, and can't get jobs doing anything else.

Several people said there is a need for a program to help the general public see things from the point of view of the truck driver, so that they realize what truckers have to do in order to maneuver around them, or safety precautions truckers have to take.

"I always thought that it would be interesting to everybody, before they get their driver's license, to take a day in a tractor-trailer. Just to get in it, and to see what it's like, and how big it really is, and how much it really weighs, and to get the feel of what we have to do—I always thought if they had a chance to get in one, and get in the passenger seat to see how thin that road really is, and how you've got to watch the mirror—you've got to watch everything. I just always thought that might be a good idea, because they'd get a new respect for us. We're not out there to jerk their life around, but what they don't realize is: I'm sitting behind the wheel, I'm at work, and they're jacking with me. I don't go to their job, to their office, and start jacking with them, and move everything around on their desk or whatever would really hack them off."

A number of drivers noted that media coverage of truckers has been overwhelmingly negative—stressing major wrecks, or picturing truck drivers as alcoholics, drug users, and customers of prostitutes. There was agreement that in any accident, both the public and the police assume that it is the truck driver's fault, and that accidents are reported this way in the media (e.g., "Truck Hits Car," never "Car Hits Truck"). Drivers feel the public does not realize or appreciate how important truckers are to the economy and how many goods are moved by trucks. Some cited a lack of organization as the reason they have little or no

political influence or public respect. A few said they would like to take some kind of action to show how important they are.

"You don't have to strike; you don't have to do anything. All you'd have to do is drive legal. Drive legal and drive the speed limit. You'd have a line of trucks all across the state of Kansas."

How CDL Holders Think the Police View Them

Most (but not all) of the drivers agreed that no matter what happens in an accident involving a truck, the truck driver is always blamed. They say that police will cite truckers for accidents and that insurance companies will accept this, even when the truck driver is clearly not at fault, because it's cheaper to pay off claims. Several people said they had been ticketed for tailgating when cars had cut in front of them and taken their safety space.

"Cops are the first ones to say it's the trucker's fault."

"I've been where people have hit me sitting still, parked in parking spots-I've gotten tickets."

"I was making a right-hand turn into a parking lot, and a guy went up on the curb to get around me on the right-hand side, hit me in the front, and I got the ticket."

Some drivers commented that police are more willing to stop trucks than cars.

"A cop told a buddy of mine that the reason why he stopped trucks, he didn't have to worry about a fellow getting out with a gun. We're safe. And we're going to pay the ticket, because if we don't we have no job."

Drivers complained that inspectors can always find something wrong with a vehicle, even one straight off the assembly line. A couple of people said that police had told them they looked for an excuse to write tickets-and could always find one-because it was a good source of revenue. Most of the drivers believed that trucks are not ticketed for safety reasons; some referred to frequent and capricious roadside inspections. The consensus was that police are much harder on trucks than on cars, and that both police and courts single them out to make money from tickets.

"A cop pulled me over, and I said, 'You sure you got me? I'm just going with the flow of traffic. There's cars all around me, passing me,' and he said, 'I picked you out. I get a better reading on my laser with your big dash and big fenders.' He asked me ten questions about my truck, and told me several things he'd asked Kansas City DOT about checking trucks. He picked me out of the group, not because I was bigger, but because I was revenue. And he DOT'd my truck and wrote me three tickets."

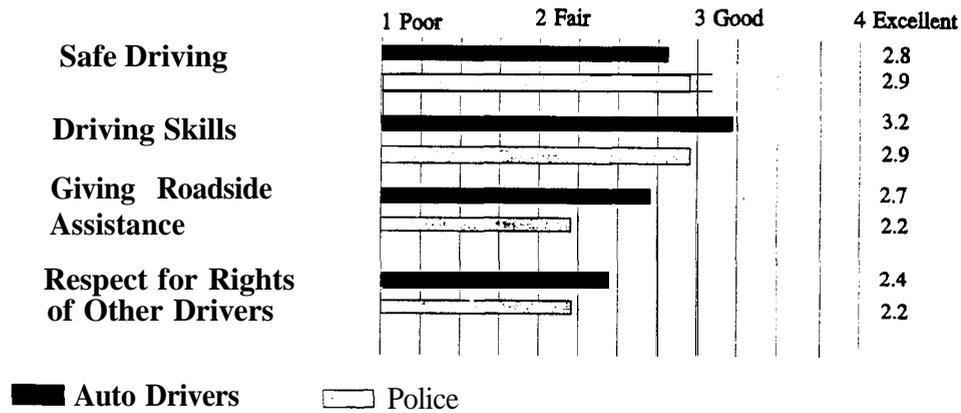
“The police-DOT out there is not for safety. We are a source of revenue.”

Conflicting Images: Truckers. as Seen by Themselves and Others

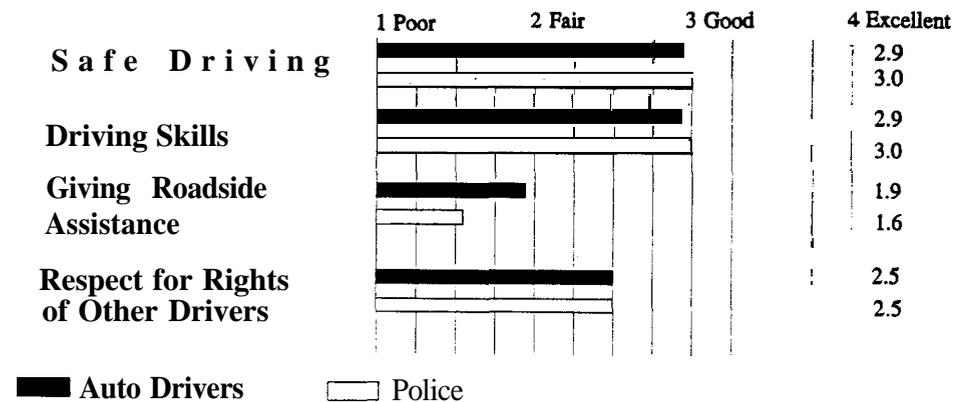
Most truck and bus drivers feel that they are disliked by motorists, in part because “we’re in their way. ” In fact, many said that they feel the same way about trucks and buses themselves when they are driving a passenger car. As noted above, they also feel that the police treat them unfairly. It is therefore striking that in the present study, truck and bus drivers were rated more favorably than auto drivers (safer, more skillful, more helpful to others) by both police and motorists. Truck drivers were rated best, bus drivers next, and auto drivers last on four dimensions. (See graph on page 24, “Ratings of Driver Categories by Adult Drivers and by Police. ”)

Ratings of Driver Categories by Adult Drivers and by Police

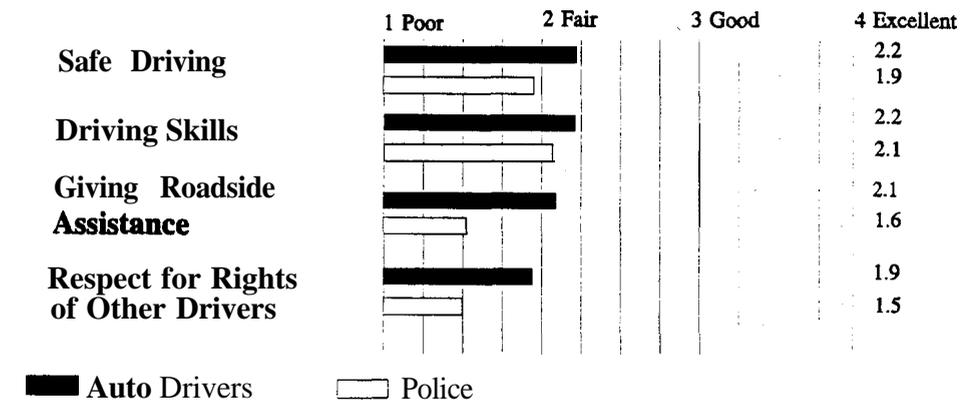
TRUCK Drivers (Average ratings: by auto drivers, 2.8; by police, 2.6)



BUS Drivers (Average ratings: by auto drivers, 2.6; by police, 2.5)



AUTO Drivers (Average ratings: by auto drivers, 2.1; by police, 1.8)



Recommended Actions That Car Drivers Can Take to Be -Safer

- Turn headlights on in rain or fog (and preferably at all times)
- Keep away from trucks
- Be alert
- Avoid driving in blind spots of large vehicles
- Don't cut in front of truck and slow down
- Use professional attitude in driving car-respect the vehicle and the other drivers
- Don't tailgate

"If a truck is in your way, when you're driving a car and a truck is in front of you, if it's in your way, you're following too close."

- Pass quickly, and don't slow down after passing
- Respect truck signals
- Either drive faster than truck and stay well ahead, or don't speed up when truck tries to pass
- Give truck room to turn

Recommended Actions That Commercial Drivers Can Take to Be Safer

- Be alert, use turn signals, etc., practice defensive driving
- Don't tailgate, stay in right lane, don't drive aggressively
- Put the sign on more trucks that says "If you can't see me in my mirror, I can't see you"

Recommended Actions That Carriers Can Take to Improve Safety

- Require shippers and receivers (not drivers) to handle freight
- Provide better maintenance for vehicles
- Reduce or eliminate incentives and pressures to drive excessive hours

Awareness of Federal Agencies and Their Roles

In general, there was very little awareness of the Federal agencies that have responsibilities concerning roadways and safety. A number of drivers knew of “DOT” or the Department of Transportation but could not describe its mission or activities. A few were aware of the Federal Highway Administration, the Interstate Commerce Commission, or the National Highway Traffic Safety Administration, but impressions regarding what these agencies do were very vague.

When the Department of Transportation was mentioned, some drivers volunteered comments about the functions of non-Federal agencies.

“[State and local] DOT is supposed to get as much out of you as they can. DOT does not care as much about us as I would a fly on the ceiling. We are a source of revenue.”

“They got no respect for us. They want that extra \$10, \$15 fine.”

Awareness of the Office of Motor Carriers

When asked specifically about the Office of Motor Carriers (OMC), about one-sixth of the drivers said they had heard of it but no one had a detailed picture of the agency’s mission or activities. One person mentioned the book, “Motor Carriers Rules and Regulations.”

Recommended Actions by OMC or Other Appropriate Agencies

Although various aspects of regulation and enforcement were mentioned, the most frequent response to this question involved some form of education or training-particularly to give car drivers more knowledge about how to drive safely around trucks and buses. Some drivers commented that it would be an excellent idea for people from DOT in Washington to spend some time riding in trucks, so that they can see what driving is like from the truck driver’s point of view. Others suggested using a simulator in driver’ education courses so students could get an idea of what driving a truck is like. Someone else mentioned working out programs with local trucking companies which would enable teenagers taking driver education to ride in a truck cab for a day as part of the course. The most often recommended actions by OMC or other appropriate agencies were:

- Education through the media, especially TV
- Federal regulation of training for commercial driver’s license

People voiced support for a longer period of training for truck drivers, including mandatory driving with someone who has at least two years of experience as a

commercial driver. The CDL holders in the focus groups also said that the Federal government should certify truck-driving schools and instructors.

- More training for all drivers
- Better education of public regarding commercial vehicles

“I think there’s a screaming need in this country for some way to educate John Q. Public about sharing the road with tractors and trailers. They used to do these things on TV like, Safety Tests, years ago. Why couldn’t somebody put together a show that would be a safety test, like, ‘Do you know what this tractor-trailer is capable of? Do you know how long it takes it to stop? Can you gauge your driving accordingly?’ to educate the public on these things.”

There was agreement ‘that the public needs to know more about trucks and buses, and that the needed information is not taught in driver’s education classes or included in state driver manuals. Someone suggested producing a **film** of the driving mistakes people make, proper/improper driving, etc., and showing it on TV.

- Include questions about trucks and buses on driver’s license test (stopping distance, blind spots, etc.)
- Make it mandatory to know the law; make public aware of new laws
- Require defensive driving course. to renew license
- Impose stiffer penalties for driving under the influence of drugs/alcohol
- Write more tickets; stricter enforcement of basic traffic laws
- Mandatory on-going training/education for all drivers
- Periodic retesting of all drivers
- Further education and retesting for older drivers
- Impose special license requirements for different class vehicles for general public as well as for commercial vehicles
- Place monitors on all school buses

- Make automobile driver's license requirements and testing tougher

"You know what really galls me? They got all kinds of education we have to go to upgrade our Hazmat periodically. They got all this information designed for people that drive commercial vehicles, trucks, school buses, what have you. But the education that they give people that drive cars, or the young people coming up, is very, very minimal."

- Make drivers of all vehicles (including passenger cars) subject to random drug/alcohol checks
- . Make shippers accountable for the amount of weight on the truck, the hours of driving, and the condition of trucks,
- Require all vehicles to have lights on in rain or fog (and preferably at all times)
- Lengthen merging lanes and access ramps on highways so trucks have enough time to get to full speed before merging
- Have the same speed limits for all vehicles (rather than lower limits for trucks and buses)
- Do away with lane restrictions on trucks. Current restrictions keep trucks in lanes with cars and in lanes with entrance/exit ramps, which is dangerous. If any lane restrictions are used, putting trucks in through traffic lanes or in left lanes would be safer for everybody and easier for truckers.
- Consider instituting truck-only lanes

When the idea of truck-only lanes was discussed, some drivers approved but said this would work only if trucks would still be allowed to use another lane for passing. Some felt that lanes for exclusive use by all through traffic (including trucks) would be preferable to a truck-only lane.

Several drivers said that car drivers would not observe truck-only lanes. Others mentioned that there would inevitably be some slow trucks, and that the arrangement would work only if two lanes were available, or if trucks were allowed to leave the truck-only lane in order to pass.

- Impose controls on use of recapped tires: prohibit recapping a tire more than once, prohibit use of recaps in hot weather, and limit inflation pressure to safe level
- Ask companies to consider paying drivers by the hour while on a loading dock and by the mile while on the road (rather than only the latter)

- Explore with police the idea of banning or limiting truck inspections at rest stops
- Establish places for truck inspections-don't do it at roadside; it's hazardous. Don't do it in rest areas when trucker is trying to sleep. Drivers will sometimes avoid rest areas, and thus getting some needed sleep, because they **don't** want to be awakened by inspectors.

"They woke me up and told me to get out so they had room to do their safety inspections. I went back to bed and let them beat on the door for an hour and a half"

The drivers report that the law in at least one State says that by stopping at a rest area, the trucker has given officials the right to inspect and weigh the vehicle. Some interstate truckers say they try to avoid driving through any State with rest-area inspections.

- Take over the job of weighing and inspecting trucks on the road

There was agreement that the Federal DOT should preempt State and local DOTs for manning weigh stations and doing truck inspections. Many drivers distrust the motives of inspectors in local jurisdictions, and are angered by inconsistencies in judging vehicle violations.

"I don't mind taking my truck in three or four times a year to a Federal man and letting him go over it. He'll be fair. A Federal man will tell you anything that he thinks might be about to go wrong with your truck. He will not nitpick it."

Several drivers recommended that all interstate highways should be under Federal jurisdiction, with the same traffic regulations and laws, and with weigh stations and inspection stations, policing, etc., handled by Federal employees. Currently laws and policies differ from state to state and within states, and are not consistently enforced. In more than one group, there was consensus that State and local DOTs are unfair to truckers and do not care about their welfare.

"We need the Federal DOT to go in and man these dang weigh stations to give us legal inspections. I don't mind inspections-I've told them every time I got inspected. I've never got a ticket, either. I tell them, 'If you find something on this truck that's not right, I want to fix it. I want to live long enough to watch my grandchildren grow up and get married.'"

“I know, when I’ve got a semi puffing past at 45 miles an hour, he’s probably too heavy. This can be a problem. Drivers going 65-plus can rear-end him, but I can’t do anything about the overweight because I don’t have scales or the manpower to do an inspection.”

-- Comment by an officer in a suburban police department

POLICE FOCUS GROUPS FINDINGS

Salient Concerns about Highway Safety

Virtually all officers agreed that their biggest safety worry is drivers (rather than road conditions or vehicle defects). They say that road or weather conditions occasionally lead to collisions, but that accidents resulting from vehicle defects are rare.

The discussion touched on the effects of financial pressures on commercial driver scheduling, vehicle loading, and maintenance; drivers’ perception that they are unlikely to be stopped for various violations; officers’ belief that fines for vehicle defects are so low that many defects go uncorrected; and loads that aren’t safe in terms of other traffic on the road.

In general, police say they don’t regard trucks or buses as a particular safety problem, because their accident rates aren’t that high.

Concerns about Drivers

As noted above, driver-related factors were viewed as the most frequent causes of crashes for both commercial and non-commercial drivers.

Truck Drivers

Police say that passenger car drivers give them far more trouble than commercial drivers; what they regard as the risky types of drivers—alcohol/drug impaired, inexperienced teenagers, etc.—are not driving commercial trucks. They also feel that most truck and bus companies comply with safety regulations.

“Truck and bus drivers are professional drivers who have a lot to risk—it’s their occupation and their livelihood. It’s the people in the cars who cause most of the problems.”

- Driver fatigue

’ There was general agreement that the major problem for truckers is fatigue caused by long hours. However, concern about this varied from jurisdiction to

jurisdiction. Some municipalities had ordinances covering over-hours by truckers; some did not.

"If they're keeping their log books accurate, you can tell. You can stop a trucker any time and put him out of service for over-hours."

- Alcohol/drug use

Use of alcohol or other drugs by passenger car drivers is still a major problem, but it is no longer viewed as such with regard to commercial drivers. Officers say that most commercial drivers are responsible people, and that company policies and random testing help to keep them drug-free.

- Speeding

No one seemed to consider speeding by trucks as a safety problem. The officers said that most big trucks on interstates travel in the upper 50s or low 60s while passenger cars are doing 70 to 80 miles an hour. (They say that they don't ticket people unless they are going at least 10 miles over the limit, and many times not then. The speeders they ticket are going 85 to 90 mph. They don't have the manpower to enforce the speed limit to the letter, and so concentrate on the fastest [and presumably most hazardous] drivers. When they say that trucks and buses rarely speed, it's within this framework.)

Some officers said there is a problem with large trucks speeding 75 to 80 mph, especially through construction zones with 45-mph speed limits. However, they say that trucks generally go at the speed of traffic-fast if cars are fast, and slow if cars are slow. Some said that when they had grants dealing specifically with speeding, they stopped both cars and trucks but concentrated on the latter. Several officers volunteered the comment that trucks from big companies are better at observing the speed limit than trucks from smaller companies or independents.

"We won't write anybody under 80 because there are so many."

"Since the Federal grants went away, a lot of our highway programs-our traffic enforcement programs-went away also. We've lost people in our unit that have not been replaced. They are doing other stuff. I think the motoring public knows-because the only time they see cops on the interstate is if we are doing a big patrol or if there is a big wreck."

Bus Drivers

Opinions about various kinds of bus drivers were mixed. Interstate bus drivers often speed (though not as much as a few years ago, some say) but otherwise are regarded as safe. Metropolitan bus drivers elicited little comment. School bus drivers were viewed as uneven; some are untrained and inexperienced, and may be tired because they drive a school bus after a full day on another job. (Several officers said that school bus drivers tend to be part-time, mostly housewives and retirees, who make careless errors and then feel police are harassing them. The accidents they are involved in are usually minor, occurring at low speeds and with no injuries or fatalities.)

Car Drivers

Drivers of passenger cars are viewed as a safety problem because of their ignorance about trucks and buses. For example, most are unaware of a truck driver's blind spots and have no idea how much distance a large truck needs to stop at highway speeds.. They also tend to be unaware of basic traffic laws, such as that the left lane is for passing only, because they have little or no driver training and no continuing education is needed for license renewal. Concerns about car drivers included:

- Common driver errors

The factors cited most often as accident causes were driver inattention, following too closely, and lane-change violations. Many people noted common driver distractions: eating, using car phones, CB radio, and headphones. Several officers commented that car drivers are not as well trained now because many schools have discontinued driver's education courses.

"I enter all of our accident reports in the computer, and so I know what all the contributing circumstances, or what the officer thought were the contributing circumstances, and by far inattention is the highest contributing circumstance. Vehicle defect is probably one of the lowest."

- Other driver-related factors

Officers mentioned rudeness and a lack of consideration for other drivers; use of radar detectors to enable drivers to speed and escape detection devices; and failure to adjust driving to road conditions involving weather or traffic congestion. Some said that very young and very old drivers both present problems.

Farm vehicles were described as a major problem in some areas. The police said that grain haulers of up to 42,000 pounds are exempted from CDL regulations, and because these vehicles are only used one or two months of the year, farmers

don't know how to handle them. Problems also arise because other drivers are not used to encountering slow-moving vehicles on the highway.

Concerns about the Driving Environment

The officers in some groups expressed little concern about several potential hazards that they were asked about specifically—road design, **signage**, splash or spray from trucks and buses, the number of trucks on the highway, and trucks breaking apart. However, some of these were regarded as safety hazards by people in other groups. Although environmental factors were generally regarded as much less important than actions by drivers, a number of such factors were mentioned spontaneously:

- Confusing **signage** (e.g., when a lane ends drivers are not sure where or how to merge)
- Inadequate lane markings
- Standing water after rain because of improper drainage
- Not enough passing zones on two-lane highways
- In some areas, highway entrance and exit ramps are designed only for cars, and are not banked adequately for trucks
- Bad signal lights
- Hard-to-see colors
- Deer were mentioned as a problem in some areas because people hit them or try to dodge **them** and thus lose control of the vehicle
- Surprise storms, and late or poor clearing of snow
- Wet, slick roads

Officers commented that drivers should adapt their driving to road conditions, and they regard failure to do so as driver error rather than an environmental problem,

"It boils down to the driver. If they're inattentive and they're driving too fast because of the rain, or whatever, it may be bad road conditions, but it's still the driver's fault."

- Congestion

In all areas, police officers said traffic congestion had increased in recent years. Congestion was not viewed as a major safety hazard in itself, but police said that the delays it causes contribute to crashes because some drivers get impatient and take risky actions that they would normally avoid. In some places, officers noted that truck traffic had increased substantially in the last five years, and that some local roads were already carrying more traffic than had been projected by the end of the decade.

Concerns about Commercial Vehicles

In general, most officers seemed to think that vehicle defects were a minor cause of accidents; however, several mentioned, that without conducting an inspection, which they are not equipped to do, they can't tell, whether a vehicle has bad brakes, steering or tires. (Post-accident inspections are routinely done for commercial vehicles, and are also done for cars when there is 'a death or serious injury.)

"There's always going to be equipment problems and equipment failures, and usually we're not going to find out about them until we're picking up the pieces from a crash. Chances are, we're not going to have cause to suspect there's a problem, or to stop somebody and do an inspection. It's got to be up to the driver to check that."

Urban, suburban, and State officers agreed that a small group of independent operators cause most of the problems with faulty equipment, overloaded vehicles, and unsecured loads. The police say that independents are more likely to hire inexperienced or irresponsible drivers and to do inadequate maintenance on their trucks. As a rule, bigger companies are better equipped, and their drivers are better trained and work fewer hours. They have greater liability and conduct business accordingly. Drivers of semis are generally regarded as higher-quality drivers.

A variety of vehicle-related factors were mentioned as safety problems:

- Lights not visible on back of truck (too small, too dirty, etc.)
- Blind spots
- Truck length and configuration

Police were more concerned about weight. than length, but felt that trucks over 60 feet long and doubles and triples are risky. Trailers in tandem are dangerous because the driver can't control the last trailer, and needs more time to stop.

There was consensus that triple rigs are very dangerous and should not be on the highway.

- Uncovered loads

Uncovered sand and gravel trucks were regarded as a common problem. Some are exempted from covering their loads; especially those hauling for interstate construction, and this results in debris and mud ending up on the road.

- Poor loading: not secured, loose, unbalanced

“There’s a possibility for it to dislodge. We have that all the time-trucks losing their load, busting windshields, doing damage to vehicles and everything else.”

“The load that they’re carrying could be improperly tied down, creating a traffic hazard. That’s an out-of-service violation. You see a lot of material on the highway that comes off commercial vehicles and strikes cars behind them, or creates a problem.”

- Trucks blowing tires

Recaps and retreads are a hazard on two counts; they are more likely to blow and cause driver to lose control, and they leave debris on highway

- Overweight loads

Police say overweight trucks are not only a hazard because of overloading; they feel that companies or drivers that are willing to exceed load limits are likely to commit other safety violations as well.

“In Kansas City, we just participated in what we call the WEST Program [Weight Enforcement for Safer Trucks] for the Federal Highway Administration, and we found that overweight trucks had a 70% chance of having out-of-service violations. The heavier the truck, the worse the condition.”

Overloaded grain trucks were seen as a special problem in some rural areas (as overloaded logging trucks were elsewhere).

Several officers noted that trucks hauling sand and gravel from quarries in the area, especially those hauling fill for local highway construction, are almost always overloaded. The quarries will pay their tickets because they want to move material quickly, so the truckers keep hauling excessive loads.

- Problem with bumpers: some cars can go under trailers from the side even with the special bumpers
- Saddle tanks on sides of tractors are not properly protected
- Vehicles not properly maintained

An officer who did random roadside inspections full time with a mobile unit said the number of substandard vehicles has increased in last five years, because some companies won't spend money to maintain them.

“Companies are businesses. They want to put that dollar in their pocket. They don't want to put that money back into the equipment that they're operating.”

‘Imagine that our out-of-service violations run anywhere from 42% to 45 %. Just about every other truck that comes down the highway is going to have an out-of-service violation. There is a defect that makes that truck unsafe to continue down the road in the condition that it's in. What we go by is the out-of-service criteria set up by the CVSA, the Commercial Vehicles Safety Alliance. They have specific items-greater than 20% of the brakes out of adjustment is an out-of-service violation. It could be steering tires, tie rods, ball joints, flat tires.’

Some officers feel that trucking companies regard tickets for **vehicle defects** as a part of the cost of doing business, but if the drivers share responsibility and their license is on the line they are more likely to maintain vehicles in a safe condition.

Officers noted that every driver is required to inspect his or her truck daily before taking it on the road, and at other times throughout the day. If an inspection finds that the vehicle is defective, it's the driver's responsibility, but sometimes this may involve conflict with a company.

“That's the idea behind the Federal motor carrier safety regulations-it's the companies' responsibility to keep them maintained. It's the drivers' responsibility to tell the company if a truck is defective.”

“Sometimes the company tells the driver, ‘Hey, you take that truck out of service, you can go look for another job.’”

Several officers said that a driver who gets a ticket for an out-of-service violation will often **find** it cheaper to pay the fine and get back on the road than to repair the vehicle. They mentioned that many such violations call for only a \$50 **fine** and no points on a license.

“It’s his thing to get away with it and it’s our thing to catch him. Ninety percent of the time he’s going to get away with it before we catch him. How long can he operate, and how much money can he make, with this piece of junk equipment before he gets caught and fined for a \$50 equipment violation, which doesn’t even result in any points on the driver’s license?”

Officers mentioned following and stopping a large number of semis that skip weigh stations. They will do random inspections of trucks that come in, especially if they’re overweight or rundown, and a lot of truckers may want to skip the scales for this reason.

“Years ago, I had a part-time job at a weigh station, the southbound rest area on 95. They would pay us \$10 an hour to chase the trucks’ down that didn’t stop and issue them a citation. We’d have to take them to the county jail and they had to post a cash bond. After a while, I got to feeling a little sorry for the truck driver-the guy that’s a decent driver and has a schedule to make. He’s got a repair that has got to be made and he doesn’t have the money, especially if he’s independent. And I guess the same applies to the company trucks. They don’t pay that much attention to a turn signal being out or whatever,”

All of the groups said that most smaller cities do not have the trained personnel or the equipment to inspect trucks, and have to depend on the State Highway inspectors and mobile units for this. The States do not have enough units for adequate coverage, and officers say that some companies will run substandard trucks in the knowledge that they are unlikely to be stopped.

Many people commented that independent dump trucks that haul sand and gravel are almost all unsafe, particularly those used by owner-operators or small companies with two or three trucks.

“If they can make ten hauls in one day and not get stopped, they’re making their money up. In a town [that doesn’t have an inspection unit], unless the Highway Patrol comes there-and they are all over the state, working their scales at different places-unless they come there, they’re not going to get caught. There’s no way they’re going to get caught. We don’t have the portable scales, we don’t have the people that are trained to find these defects, and those guys can make ten hauls a day and never get caught.”

“If an officer stops a truck, and it has no brake lights, or a defective steering tire that’s obvious it’s worn out-cords exposed, he probably just writes a traffic ticket for a minimal fine-\$25, \$30, something like that. The drivers of these trucks feel, ‘Well, I’ll take that \$25 or \$30 fine, because the chances of you stopping me again are probably very slim.’ He’s not going to go out here

and buy a \$350 tire or a \$400 steering tire for that equipment. He can pay off a lot of \$25 tickets and still run with that tire. "

Most Commonly Perceived Causes of Car/Truck Crashes

Most of the officers felt 'that passenger car drivers do not respect trucks or buses because they don't know much about them. They have very little awareness of such things as the turning radius or blind spots of large vehicles.

"I don't think they respect the fact that you've got however quadrillion tons right behind you. I think the public largely is oblivious to the damage these great big trucks and buses can do and how long it takes to stop them."

"It is like riding on a stick of dynamite. I mean, it is big. It's heavy. It don't stop. It don't maneuver. You can get a guy out here in a little Toyota and he can zip in and out, but one zip, and that truck, it takes him a thousand feet to stop, where that car can do it in ten. And people just don't realize. They cut him off and the next thing you know that truck driver is inching over on that guy. I've seen people pull over in front of a truck and slam the brakes. And make a left-hand turn or a right-hand turn and this truck is hauling 80,000 pounds and they expect him to stop on a dime."

There was general agreement that car/truck crashes occur most often when a car is in one of a trucker's blind spots. The truck driver is unaware of it and changes lanes, running into the side or front of the car. The police regarded this as an error on the part of the car driver, but also blamed it partly on vehicle design.

"They don't know their own blind spots to begin with, and they don't have the slightest idea what that driver in that truck-they think that because he's sitting up higher, he can see more."

"The operator of a car is not cognizant of the driver of the truck's visibility -whether he can see them. The driver of the truck, he's aware of this. Most professional drivers try to use their mirrors and operate safely within the confines of what their equipment will do. It's the guy driving the car who doesn't realize how blind this truck driver is to him. He' can see a car on the left side-he can just look down and see if he s got somebody running up alongside him there. But on the right side, he's totally blind, and a car will get right up alongside that tractor, right underneath the mirrors, and the truck driver can't see a thing."

Officers say that car/truck collisions also occur fairly often when a truck sneaks through a stop light (or can't stop in time), or is turning at an intersection and hits cross traffic. Sometimes cars changing lanes around a truck cut in too quickly (police say drivers often

misjudge the time needed to pass a truck) and cause accidents by forcing the truck to brake too hard or swerve.

"They don't have any concept of what that truck is capable of doing, and they don't realize that truck driver can't see where they are, or that the truck can't stop as quickly as they do, and they come up and cut them off-they don't allow them that cushion between the car in front of them."

"And following too close. That poor truck driver. He is driving here and they don't stop. If he follows far enough behind a car for safety, they'll be three cars cut over there and you couldn't put a mosquito between the bumpers. It is just impatience."

"Most of the truck drivers that I've dealt with try to signal ahead, and they try to guard the lane that they're going to turn across, and at the last minute try to swing out and do it, but a car will zip right up there and try to beat them to it . "

Police Perceptions of Truck and Bus Drivers

Most of the officers thought favorably of commercial drivers in general. They were pleased that truck and bus drivers, unlike car drivers, do not regard driving as a right. The police generally have more respect for truck and bus drivers than for car drivers. Police rated both categories of commercial drivers as better than auto drivers in terms of safe driving, driving skill, and cooperativeness on the road (see graph on page 24). Most of the officers seemed to have had very little experience with buses.

"I think overall, I'd rather deal with a trucker or a bus driver than people driving those cars. They're willing to help us out, and they understand the kind of job we're doing. I think that overall, they're good drivers."

"I bet that the truck drivers would be amazed to hear how sympathetic this particular group is to them."

Someone commented that in some respects commercial drivers may be better trained than police officers. For example, both truck and bus drivers receive training in vehicle driving and in equipment inspection.

"Truck and bus drivers have courses they have to go through. It's not Mom and Dad training them-it's a professional school for somebody who is a professional. They learn about their equipment and know how to use it."

Of course, the comments were not entirely favorable to truckers.

"I have some officers that would rather write a ticket to a truck driver than they would lock up Charles Manson."

The officers mentioned some important distinctions between various kinds of drivers and companies. They regard independent truckers, as more likely to do poor vehicle maintenance, to be overworked and thus to drive while tired, to keep dual logs, and to show little concern with liability. They feel that independents are "not necessarily bad people," but that they often cut corners to make a living in a tough business. They also say that many young independents drive only until they have enough experience to join a big trucking company.

"I don't think anybody's trying to be a full-time billionaire. I think these independents are trying to feed their families, and pay their bills, and the mortgage, and things like that. It's such a competitive thing that they have to cut every corner and cheat every way they can in order, to get by."

"There is a noticeable difference among truck drivers. I've had more problems with dump truck drivers than any other driver on the road. The short-haul dump-truck driver-they're racing back and forth-they're total cowboys. They think that is their horse, and nobody's going to tell them how to license it or drive it, and you'll end up in a big argument over nothing."

"When they deregulated the trucking industry, I don't think there was enough thought given to the total ramifications of what they did and what kind of monster they're creating. They created all these independents, and now they're going to get their shoddy equipment out here. Young people who don't have the slightest idea what they're doing out there are getting into these trucks."

Police say that city and intercity bus drivers are generally competent; some speed on the highway but most do a good job. School bus drivers are regarded as low-quality drivers-police say that a part-time job at low pay does 'not attract competent people.

Enforcement Problems

There was consensus that not enough money is available for personnel, equipment, and training, in part because traffic work usually has a lower priority than other areas of law enforcement. Some officers said this was their biggest problem. (Most of their funds for traffic work come from Federal grants which are earmarked for specific purposes.)

For example, both cars and trucks speed frequently, but are rarely ticketed because the police don't have enough people to enforce the law. Officers say they have to concentrate on high speeders and often ignore anyone driving under 80 mph.

"We don't get the support from the politicians, the courts, to do what we are supposed to do, but yet, when we don't do it, our hand is slapped."

"I punch you in the face, that's serious. But I go out here and kill a couple of people in a car, it's a motor vehicle accident. It's the attitude of the American public that needs to change more than anything."

The police say that most car drivers consider driving as a right, not a privilege, so they, resent restrictions on what they can do with their vehicles. Education and testing for licenses are inadequate, and while some recent laws (e.g., regarding DUI) have made license revocation easier, the impact may be slight because people without licenses continue to drive. Many officers feel there is a need for stiffer penalties for violations for both truckers and car drivers. They believe that present penalties are too slight to act as deterrents; people pay fines, drive on suspended licenses, and are a traffic hazard because they continue to practice the unsafe habits that got them ticketed in the first place.

"The problem is, people are not afraid of committing traffic violations. Crank them up two or three more notches-the fines, and the sanctions against drivers-towing cars, and all kinds of economic sanctions, and jail-and your accident rate is going to plummet so fast you won't know what to do about it."

"The Federal government's got some input on that, because they have standards, for example, mandatory license revocations, and no plea bargaining for DUIs, and things like that, that they threaten the states with. But they don't put the pressure on hard enough to get it done."

"If you get caught driving without insurance, we take your license. So what you then have is an unlicensed driver driving an uninsured car."

"If you have to pay money, that's one of the deterrents. 'I'm embarrassed by being stopped by a police officer'—that doesn't go very far. But if this means that my insurance is going to double, or my boss is going to cut me off—that has an impact."

"You stop this guy-whether it's defective equipment, or the truck's overweight, or whatever, if the fine's big enough, you're going to get his attention. But you've got to get that fine imposed. But I figure if he has to pay a lawyer a \$1,000 to get that \$1,000 fine kicked down to \$300, it's still costing him \$1,300. It still got in his pocket."

“Instead of fines, take their time away from them. Put them more into community service. When you start taking their time away, and they’re having to go and wash the police cars, and sweep up the city streets, and do the drudge work, that teaches a bigger lesson than somebody saying, ‘Okay, here’s \$50. See you later.’ That doesn’t teach anything.”

“Our city started a program where we tow and impound the cars of drivers that are suspended and don’t have insurance-that kind of stuff. That’s been pretty effective for us-at least it gets the car off the road and inconveniences him. Make them walk, and they aren’t out there crashing their cars. But then it goes back to the officer’s time. It takes a certain amount of time. You have to wait for a tow truck to get there. What’s the call look like? You’re making all the other officers out there on the street pick up all your calls while you’re sitting there doing a car. It gets to be a real Catch-22. I think it’s a great law, but sometimes we don’t have the time to enforce it.”

Some of the police suggested that instead of impounding someone’s car for a violation, take the license plates and increase the penalties for improper use of plates. The absence of plates gives any officer probable cause to stop the car, so it is likely to be checked fairly often.

“Take the license plates off the car and make a license plate violation about a \$1,000 ticket and you’d have some impact. These people are just yakking it off, and they don’t care.”

One person said the DMV should put flyers out and conduct other public education efforts to notify police and the public when a law changes.

“Every time there’s a law change, traditionally, we find out about three months after it’s been signed.”

Fines are generally ineffective as a deterrent but do provide useful income for municipalities. Although police officers would generally prefer that penalties be increased, they are concerned about the risk of having more contested cases clog the legal system and about the fact that conviction rates may drop-since raising the level of penalties can lead to a reluctance on the part of judges to impose them, and juries may be less willing to convict.

Police say the trick is to make the penalty high enough but not too high.

‘When you make the penalties too severe, nobody gets convicted. When it becomes more advantageous to them to hire an attorney and to go through all the things to beat the system-if you had an absolute, no-holds-barred, six months in jail for every person convicted of DWI, the only thing you would ensure is that nobody would be convicted of DWI.’

Officers say they are sometimes told that enforcing traffic laws too vigorously, writing too many tickets, will alienate the public. They claim this is especially true of elected officials such as county sheriffs.

Another **officer** said that you can write all the policies you want, but if you don't have the people to enforce them it does no good.

Most of the officers in Oregon said that there was a need for more and stronger enforcement, but that the State appeared to be going in the opposite direction. The State recently decriminalized a number of license suspensions, thereby taking away a lot of enforcement power from police.

Some officers are troubled by the fact that their units are used as much to generate revenue as to protect public safety.

"I'll give you a classic example right here in Independence. If you have an expired state license on your car, and you take the license off another car and throw it on this car, which do you think would be the greater violation? You're Joe Blow who's allowed your license to be expired for maybe two weeks. But now, you're Tom Smith, and what you do is you swap that license to another car. You never paid a sales tax on that car—you never do anything. Which violation do you think should carry the greater penalty? In Independence, it's the expired license, because you'll see more of them and you'll catch more of them. Therefore they've got greater fines. It's a \$55 fine for having an expired license and a \$45 fine for having an improperly registered automobile. Now you tell me they ain't money-making suckers?"

One state trooper said his department has a Federal grant which requires them to do a certain number of truck inspections. To help keep that money coming in he pulls over every truck he can to do a walk-around inspection.

'I would rather write a trucker than a four-wheeler, unless the four-wheeler is actually driving recklessly or something like that, or is way out of line. My rationale for that statement is that we are required to do a certain number of truck inspections, and any opportunity I have to pull over a truck, I try to do that so that I can do a walk-around truck inspection.'

"I just know that my department needs a certain number of these every year to pay for a number of troopers, and so every advantage that I have in having a truck pull over, I try to take advantage of that time to do a truck inspection, because I know that I'm doing another tick mark for another truck inspection—finding out that something's wrong with that truck, maybe."

Several people said that new officers receive very little training in traffic enforcement. Some of the officers were concerned that in local agencies they have no training in truck inspection or vehicle safety. They have a keen interest in learning how to inspect HAZMAT trucks for safety because there are more of them on the highways now.

“There is a lack of education on the part of the enforcement officer when it comes to the truck and driver.”

‘I don’t want to pull over a truck that looks legal and do an inspection on him just to screw with the guy, but I’d like to be able to look at it and say, ‘Yeah, it’s not just a bald tire, but we ‘ve got other problems here.’”

“Right now at the training facility they only do about four hours of traffic law and four hours of accident investigation. That’s a farce. Ninety percent of what a police officer’s going to do is going to be out of his car, stopping another car. Ninety percent of all arrests are going to come out of a traffic stop.”

A State traffic specialist agreed there was a need for educating more officers in how to check for vehicle defects. He noted that the State Highway Department will send instructors on request to local police departments, but the initiative must come from local officials. He offered an easy way to upgrade the inspection skills of police in many departments.

“I’m stationed inside a city police department, and I’ve found that city officers talk with me about trucks a lot. So I’ve gone out, and said, ‘Okay, you look for this and that’-and this is not a two-day class: this is a one-hour, on-the-road crash course. ‘Check their gauges, look for this, look for that, fire extinguisher ‘--just a couple of simple things that they can check for and kind of gauge the guy, and sound like they know what they’re talking about, sniff around a little bit—just some real basic stuff. And they’re out there knocking trucks dead. A very quick little crash course; a little street justice out there; and these guys are rockin’ and rollin’, and stopping the trucks. They’re not writing big tickets; when they get over their head they’ll call OSP or DMC. But at least they know they ‘ve got something. They don’t know what they ‘ve got, but they know they’ve got something.”

Stationing State police officers in city police stations has been very successful in terms of truck enforcement, and very popular where it has been done. This was not the reason for having State officers work in city departments, but the residual effect has been highly beneficial.

That’s something we could do pretty informally. We could go to a truck lot and have a State trooper come over and give a 30-minute crash course on what

to look for. It would take no money. It would be productive, and we'd cut down on the accidents and the spills."

Police in Oregon mentioned that many logging trucks are overloaded and too long, but they avoid the scales. If local police knew what to look for when inspecting a vehicle, these trucks could be stopped.

Awareness of the Office of Motor Carriers

Fewer than half the police officers said they had heard of OMC. Most had no clear idea of the agency's mission or activities, but one had a grant from OMC and another mentioned a book of regulations concerning commercial vehicles.

Recommended Actions by OMC or Other Appropriate Agencies

"Their effort should be more on-the-road involving drivers than it is now."

"Their contact with the on-road operation of trucking companies is very limited. They do the audit, the compliance review. They go in and look at the books and the qualifications of the drivers, but nothing is done on the road."

The police officers offered the following recommendations to OMC or other appropriate agencies:

- Agree to do or fund more roadside inspections and weigh stations
- Sponsor classes for local police on how to inspect and enforce regulations pertaining to commercial vehicles

"They could train so many cops so fast.. ."

- Offer courses on truck inspection and vehicle safety at police academies
- Make test for a driver's license stricter, harder
- Require retesting for license renewal

Many officers agreed that every few years, drivers should be tested on their knowledge of current laws and should also have a physical examination in order to qualify for a license renewal.

'I believe that there should be mandatory testing and medical evaluations of drivers on a regular basis, maybe every five years or so. People don't know what the law is. They are a hazard out there because they don't know what the

law is, so that everybody is orderly and doing the right thing. We have a lot of crashes because of that."

- When people are getting or renewing a driver's license, require them to demonstrate knowledge of how to drive with trucks and buses and what to be aware of when on the road with them (include this information in State driver manuals)
- Educate young people going for their first 'driver's license; work with drivers ed programs, etc., to teach safety in general and particularly as it relates to trucks and buses

"In ten or 15 years, you've made an impact. I would not restrict it totally to educating first-time drivers, but I would consider that primary, because there are a lot of 16-year-old kids who are driving cars out here at 80 or 90 miles an hour, and having no idea how much trouble they can be in-how much mayhem they can cause, particularly as it relates to trucks and buses; what these other people need, and what their dangers are."

- Prohibit the use of triples
- Clarify the definition of HAZMAT-make the language simpler, clearer
- Raise the minimum driving age to 18, and require re-testing for license renewal when older applicants are past a certain age
- Consider instituting truck-only lanes (and no-truck lanes in same areas)
- Enforce the passing-lane-only regulation
- Provide stricter regulation of tires to eliminate recaps (police say that this would have to be an out-of-service violation or a very stiff **fine** to be effective, because truckers would just pay the tickets and continue to use the cheaper retreads)

"All it would take is for the Federal government to put that in one of their out-of-service guidelines-you can't use retread tires."

- Consider using strobe lights (as are now used on some school buses) as turn lights on the sides of trucks and buses to attract attention of car drivers
- Prevent companies from pressuring drivers to meet schedules by speeding and by driving overtime

- Try to reduce state-to-state variations in the laws or the way that they are applied

“You go from one state to another and what is legal in Georgia is illegal in Alabama. What is legal in Alabama is illegal in Mississippi. All the way across the country. There is no uniformity in the Federal, and of course the state usually has a modified or a modifier there or something. I’m not throwing rocks or anything, but it seems like all the states are—they are picking to make money.”

- ‘Provide warning signs for hills, intersections, and stretches of highways that cause particular problems for trucks. This could warn them outside of town that they should avoid certain streets or areas.
- Provide better guidance to drivers on how and where to merge when a lane ends
- Provide more grant money to local enforcement agencies for training, manpower and equipment to enforce existing regulations
- Provide special training for non-commercial drivers of large vehicles. Some officers expressed dismay that no special training is required for driving motor homes, even though some are bigger than many trucks. They also mentioned that there should be specialized training for someone who wants to drive a trailer, a rental truck, or any other oversize vehicle.

“In the summer on the freeway, by far the most frequent accident we have is vacationers with a travel trailer, hooked up to either a pickup or a van, so what you’ve got is an articulated vehicle. Not so much the motor homes, though I get a lot of them, but the articulated combinations, with Mom and Dad in their pick-me-up truck or a van, loaded to the hilt with every ounce of food they can get and every stick of clothes they’ve got, and a couple of tools and everything else. It’s overweight; its not balanced. Usually Mom’s driving, and Mom hasn’t dn’veen that thing, ever, because they just bought it, and Mom slams on the brakes because somebody cuts in front of them, and it’s goodbye.”

"The difference is that they 're large, and they 're intimidating because they're large, and they can hurt you badly. If you hit a truck, the truck does fine. You don't do so fine. I think that's what scares people--it's not that the trucks are doing something wrong."

-- Comment by a woman who drives a small sedan and a station wagon

CAR DRIVERS Focus GROUPS FINDINGS

Salient Concerns about Highway Safety

Other drivers, particularly in passenger cars, were regarded as far more of a problem than road conditions or commercial vehicles. However, hazards in all three categories were mentioned in all of the groups.

Most drivers said that certain groups of passenger car drivers posed the greatest safety hazard on the highway. These groups included drunk drivers, speeders, and rude or reckless drivers; poor drivers (whether driving cars, trucks, or buses); distracted or inattentive drivers; foreign drivers who can't read signs and don't know U.S. traffic laws; very young drivers; and elderly drivers.

Concerns about Drivers

All of the groups thought that a majority of accidents were caused by driver errors. The following kinds were mentioned:

- Poor concentration, doing other tasks, being distracted (kids in back seat, car phone, putting on makeup, reading)
- Driving at too slow a speed
- Inappropriate lane changing; changing lanes without signalling
- Speeding-defined as going more than 10 miles over the limit in a school zone
- Discourtesy-cutting other vehicles off, refusing to let another vehicle in a lane, selfish attitude, tailgating
- Driving in an improper lane-staying in passing lane, refusing to move over and allow others to use a lane
- Aggressive driving, both trucks and city buses

- Possible drug use (some car drivers think that truck drivers may use amphetamines to stay alert, but most feel this is not a problem or not that common)

“It’s probably more dangerous for them to be exhausted.”

“I feel that the way the world is now-present company excepted-somebody next to me is probably on drugs or drunk any time, wherever I go.”

- Impairment-fatigue, drugs/alcohol-any drivers
- Inexperience
- Inadequate training-sometimes too short or poorly done; requirements for CDL are not strict enough; some companies have better training programs than others
- Elderly drivers
- People driving with no license or a suspended license
- Uncooperative drivers-hostile
- Fatigue, particularly in commercial drivers

“Most long-haul drivers run three books in conjunction with one another. The first book states when they left. The second book states they left a little later, and the third book states they left even later than that. If they keep them updated as they go through the day, they can drive about 20 hours a day and appear legal. They just need to know whether it is the red one, the black one, or the green one they got to hand out when they stop and pull over.”

(There was disagreement over. whether driving excessive hours is the responsibility of the company, which sets schedules and may fire drivers who don’t meet them, or of the drivers, who should get off the road when they’re tired.)

“The ultimate responsibility is the driver. If he is speeding, has an accident, no matter what deadlines, it is not someone else’s fault. It is his fault.”

“But you shouldn’t be forced to drive- ‘If you want to keep your job, take truck 617 and take it to Santa Fe yesterday.’”

Concerns about Trucks

Passenger car drivers said that most truck drivers were competent and courteous, but that some were neither. Many non-commercial drivers noted that large trucks pose certain safety hazards to other vehicles simply because of their size and weight.

“The bigger trucks represent more potential for hazard, just because of the physical size and the nature of the vehicle, but they are more professional drivers. So it’s kind of a tradeoff.”

The most serious problems associated with commercial vehicles are listed below. Other problems, mentioned by the groups appear later in this section in the portions dealing specifically with drivers, vehicles, and the environment:

- trucks and buses speeding on the highway

Many people mentioned that trucks often seem to exceed the speed limit.

“What bothers me sometimes is I’ll be doing the limit, or maybe even a little above the speed limit, and their speed limit is 55 and they’re all doing 65 or above, always. I wonder about that, sometimes-there’s a reason they’re supposed to go slower and yet they don’t go slower, and they’ll come right up on you, and that seems dangerous.”

People said that interstate buses are not a major safety concern, but that they always speed.

“They never go too slow.”

- triple trailer trucks

“The three-trailer rigs are very scary. When they get that momentum going, you know and I know that they’re not doing the speed limit that is designed for trucks. When they get going, this trailer’s going this way, and that trailer’s going that way, and it looks very, very unsafe.”

- trucks changing lanes and forcing cars to move away

“I think trucks and buses are real bad on the highway. They just change lanes: ‘I’m big and you’re going to have to get over,’ and that’s their attitude. It’s not safe.”

- rocks and gravel falling off trucks and chipping car windshields

- reckless driving
- trucks throwing up water in rain-no visibility
- trucks with faulty equipment, e.g., bad brakes, bad tires
- trucks passing and then slowing down

“One thing I don’t like is when they do decide to barrel on past you, and then they pull right in front of you on the way up a hill, and then all of a sudden they slow down, and then it’s just a cat-and-mouse game back and forth through the hills.”

- trucks tailgating

“My biggest gripe is la-wheelers riding right’ on your tail end. They just come right up on you, close enough that all you can see is bugs on the grill. That upsets me terribly.”

“They get right behind you. They push you over, or they zoom up behind you and push, push, push.”

- trucks blocking other drivers’ view

“Big trucks on the highway-you can’t see around them and they go too fast.”

Almost all of the group participants said that they drive differently when they were sharing the road with a truck or bus. They mentioned feeling intimidated because large trucks have difficulty stopping, so most try to get out of their way, give them extra space, and stay as far away from them as possible. A few mentioned staying out of blind spots. If they see a truck behind them, most will change lanes to get out of the way.

“I drive on the highway an awful lot, and I seem to be able to cooperate with the 18-wheelers. Knowing that they make a run at the hill, I get out of their way. They’re the big dogs on the highway, and I just avoid them. I have no problems. I don’t think there’s better drivers on the road than the 1 a-wheelers, as long as you just get out of their way.”

“I think they are bigger, and if they hit you, you are smaller, and I feel that they have difficulty stopping. A large truck has momentum to it, and I do stay out of their way.”

"I like to keep them as far away from me as I can; either in front of or behind me, because I like visibility down the road. I feel much more comfortable the farther I can see down the road, so I can know what to avoid. It doesn't have to be that big a vehicle. I can be stuck behind a panel van and feel 'just as trapped as if I was behind a semi, because I can't see around that van and know what's jive seconds ahead of me."

Concerns about the Driving Environment

Although most group participants thought that the most important factor in causing accidents was driver error, they had no difficulty naming a number of factors relating to road conditions that could result in collisions or traffic problems:

- Bad weather-most people said this was more a driver problem than an environmental one because sensible drivers would adapt their driving to the weather
- City streets that are too narrow for large vehicles

"Delivery for some of these large trucks in the downtown area-I wouldn't want to be driving that truck. You'd think they'd be off-loading them into smaller trucks; I think that's really the concept, that the big ones drop their loads off in a central location and they truck [goods into the city] in smaller trucks."

- Truck tires which blow out on the highway
- Rocks kicked up by trucks
- Debris, especially rocks and sand, falling off trucks (Drivers said that loads are often not covered, so this is a common, and fairly serious problem.)

"I've actually watched rocks fall off trucks, hit my windshield, and damage my windshield."

- Tire debris or other debris-especially dead animals

"Maybe some of you have seen policemen pick up debris on the highway. I never have. I've seen them drive by it. I hit a log yesterday. I don't know when the thing rolled off. I see stuff on the highways all the time. It's just sitting there. They ought to be instructed to stop their patrol car, go out there, and haul that thing to the side of the road. That's a hazard."

“Those tire carcasses-they’re a real hazard. You have to swerve to avoid them.”

- Water spray from truck wheels in the rain
- Not enough advance warning of upcoming exits
- Too much information on a single sign

“If those signs are so big, and there’s so much on them, you can’t decipher them. You don’t have time to sit down, take a look, pause, and reflect on what the sign is telling you.”

- Inadequate signs about road construction, e.g., not enough advance notice that a construction zone is ahead; not enough advance warning to reduce speed or change lanes
- Black ice-it’s invisible
- Changes in restrictions, e.g., construction zones or school zones where restrictions apply at some times but not at others
- Height clearance notices for trucks on overpasses-inaccurate, or not enough warning
- Sun glare
- Potholes
- Traffic lights-non-sequenced or too long
- Broken signals
- Confusing intersections-bad or conflicting or unclear traffic flow
- Entrance ramps that are too short to allow safe merging
- Exit ramps on left-confusing because they’re unexpected
- Congestion
- Disparate speeds
- Slow-moving farm equipment

- Hills
- Conflicting ramps or lanes, designed so that a car speeding up to enter the highway is too close to a car slowing down to exit
- Lane narrowing
- Lack of **shoulders** (to take wrecks)
- Lack of a slow lane
- Confusing signs
- Obsolete signs, e.g., around road construction sites, which refer to lanes that no longer exist, and Reader Boards on the highway with inaccurate or inconsistent information-not kept up to date with actual road conditions
- On-ramps on highways that are not banked correctly, causing trucks to tip or spill loads (drivers say that many roads and even interstate highways are not designed with trucks and buses in mind, so there are places where the road is too narrow or curves too sharp)
- Commercial vehicle congestion

“There’s too many trucks. I think if we redid the system, and took a look at it—we’re doing it for mass transportation. Maybe somebody ought to look into something called mass freight. There’s too much duplication. We’ve got six trucks going to the same place. Why doesn’t somebody get together and say, ‘Hey, lets take these six loads, put them on one truck, fill it up and take it down there?’”

- Street signs that are too small, or fail to identify cross streets (especially at comers)
- Signs that are not visible at night
- Lane lines are often not repainted for months after a surface is repaved. Reflectors are also needed—they are better than paint in fog and rain. Raised or depressed Jane lines enable a driver to feel it when crossing a lane line.

“After they ‘ve paved or resurfaced an area, they ‘11 put those little plastic, glow-in-the-dark flipflops that you run over, and no line. Absolutely no line on the right where your car’s lights are, no lines at all.”

- Truck-only lanes don't work; trucks don't stay in them
- Split speed limits don't work

Concerns about Vehicles

The groups listed a number of vehicle factors which they felt presented safety hazards:

- Unsecured loads
- Overloading
- Unbalanced loads
- **Difficulty** in stopping trucks with heavy loads
- Blind spots
- Smoky exhaust

"I've been behind some that have had smoke pouring out of them because the muffler is so bad that it hits the highway as they're driving down the street."

- Defective or inadequate brakes
- Extra lights-too many, too bright, or poorly aimed
- Lack of seat belts on buses
- Lack of **airbags** in the sides of vehicles and for passengers in the back seat, so all occupants are protected on all sides in the event of a side-impact collision
- Too-large trucks-trailer trucks, tandem trucks-"monster" trucks; extra large, extra-long vehicles; some drivers say doubles and triples should be banned

"There is a perceived lack of control of the second truck that's attached."

- Recreational vehicles (mobile homes and travel trailers)

'I don 't think the mobile homes or the 28-foot travel trailers are safe. I think they're worse than a tractor-trailer."

- Defective lights, defroster, wipers, etc.
- Wind force in passing large trucks
- Inadequate tail lights: not enough of them; too small; not visible when dirty
- Speed varies on hills

Most Commonly Perceived Kinds of Car/Truck or Car/Bus Crashes

People felt the most common kinds of collisions were front-to-rear; either a truck ran into the rear of a car, or vice versa. They believed that car drivers were usually at fault.

Sometimes a car driver will misjudge a truck's ability to stop in a short distance. In the case of a truck rear-ending a car, most people said this happens 'because the car pulls in front of the truck and the truck can't stop 'in time to avoid a collision.

'A car gets in the way of the truck, and either gets hit, or the car gets away and the truck breaks in two. I always wonder when they're jackknifing and spilling their very interesting loads on the highway if some car was involved and then got away, because they're so dinosaur-like.'

Among the reasons given for cars rear-ending trucks on the highway were: car driver inattention, distraction, or fatigue, and the fact that some trucks have small or dirty tail lights that are hard to see.

“In the event of a car running into the back of a truck or a bus, especially on the highway, generally you would find that there was other extremes involved, such as drunken driving, or a person fell asleep at the wheel, or something of that nature.”

Another kind of collision frequently mentioned involves a truck turning right from the left lane; a car attempts to pass on the right and runs into the truck. Everyone agreed that the car driver is at fault when this happens. Someone pointed out that people simply may not grasp the meaning of the truck sign that says, “This vehicle makes wide turns.”

Truck drivers were regarded as culpable in some instances. For example, some city streets (as in Portland) were not designed for large trucks and buses, and drivers sometimes underestimate the room needed to turn.

Car Drivers' Perceptions of Truck Drivers

Car drivers agreed that driving a truck or bus was considerably more difficult than driving a car. Most people were aware of at least one or two of the several reasons mentioned. The

vehicle is harder to maneuver, in part because it needs more room. It has blind spots; the brakes work **differently**; the driver has more State and Federal laws to follow; the driver has greater responsibility (especially bus drivers); the acceleration, deceleration, and stopping time are different; and there is a risk of jackknifing.

A majority of people in the groups said that as a rule, they thought that truck drivers' are courteous and helpful, and are better-than-average drivers. Others characterized them as rude and aggressive. Car drivers believe that many truck drivers are short on sleep, and that some may be taking amphetamines in order to stay awake, because they are under pressure from their employers or as a result of economic necessity (making a living wage) to drive longer hours than the legal limit. They feel this is the fault of trucking companies, and that the drivers don't have much choice if they want to keep their jobs.

"From truckers I have known, and articles I have read, what these guys have to do to make a living, the hours they have to drive-there is real danger there. These guys are behind the wheel 15, 16 hours a day. They're taking speed, or whatever it is, to keep themselves awake. One trucker told me he got stopped by a patrolman and he was so out of it he gave him the two sets of logbooks. He gave him the wrong logbooks. I think there should be something done. about that. From the articles I've read, the best thing to do is stay away from truckers, because you don't know if this guy has had any sleep for 15 hours, or if he's taking something. He could be dangerous for those reasons-he doesn't have the reaction time."

When asked to give specific ratings with regard to safety, competence and courtesy, car drivers rated both truck drivers and bus drivers higher than non-commercial drivers. (See graph on page 24.)

"I feel that truck drivers are more courteous, by and large, than passenger car drivers, and more careful. Of course, they go too fast, and they do some things like that, but it's just that they're so large and they intimidate us. But I think that they are more courteous."

"Some of the bigger companies that are self-insuring themselves are being real strict on their drivers. They're giving them drug tests regularly. They have computers in their trucks that will tell you how many hours it's driven, how many miles it's driven, when it's stopped, when it's running, when it's not running, and basically tell you what's been going on in that truck for the last however many hours. I think those are good things to have, and it helps them to regulate their drivers a little bit better."

"There are some companies that are set up so that a guy would just have to drive a lot longer than normal just to make a living."

"The truck-driving profession is sort of the job of last resort, almost. It seems like such a gruesome way to make a living that you feel bad, that maybe they're not educated, or maybe they got jired and had to take-like a job you take when you can't take anything else."

"I don't see them as the bottom of the barrel at all. I think they're nice guys. I've never had a bad experience. To me, they 're friends. If you can get in behind one, you can all go along at 80 miles an hour. Or, if you try to pass one, and he knows 'better, his hand will go out and you know better-and sure enough, there's that highway patrol car. I mean, they've been my friends. They 're just somebody trying to make a living."

"A lot of the truck drivers that I've run across say that they 'enjoy seeing the scenery, and they can say, 'I've seen every season in every state.' I see them as adventurous, and although they do drive excessive hours they're doing that to make a living."

"There's all of those assortments out there. You 're just playing pot luck or gambling, you don't know which one is in that vehicle that's ahead of you, behind you, beside you, or whatever. So you've got to give them a wide berth. They could be the perfect professional that's just had a good night's sleep and be nice and cheery and everything else, or it could be somebody who's been driving for 18 hours and is trying to get home before nine o'clock. You just don't know, so you 've got to treat them all with respect."

"When you 're on the freeway, if you're in their way, they'll come right up on the back end of the car, flash their lights, honk their horns-'Get out of my way.'"

‘There was agreement that trucks with a phone number on the back that could be called to comment on driving behavior were usually driven by competent, courteous drivers.

"I do like the commercial trucks that display that, 'Do you like, my driving?' And they have a number on there. I always, watch them really closely when they have them, and I think that they do a really good job. The ones I've seen that have that on there, I think their training is better."

How Auto Drivers Think Bus and Truck Drivers View Them

All motorists agreed that commercial drivers feel some resentment toward passenger car drivers.

"We don't like them and they don't like us."

“I think they see the average driver as being rude and inconsiderate, and I’m sure that they are cut off way more than I am cut off in a day. I would suspect they’re as concerned about stopping that big truck as we are about getting out of the way, and yet you have people cut him off, staying real close in front of him or getting right on their rear end and staying there. I would think, from the way I’ve seen people drive around trucks, that they don’t like us.”

“I feel they think, for the most part, we are not as experienced or capable. I look at truck drivers as being professional drivers because they have a different type of vehicle to drive. It requires different licensing and better training. They have a lot more training than we get. But I think they feel that we are inexperienced and untrained and therefore we should be on another road.”

Perceived Involvement of Various Commercial Vehicles in Crashes

Most people had no clear picture of the relative involvement of different kinds of vehicles in highway crashes. There was consensus that a school bus crash or a tractor-trailer crash will make the news, and many car crashes do not, so that commercial vehicles may be perceived as being involved in a greater share of highway crashes than is actually the case.

“If an 18-wheeler has a little fender-bender, it will tie up traffic, and it makes the news, so you hear about it. But a little van has a fender-bender, they pull off to the side and, you know, you don’t hear about it.”

“I’ve seen more U-Hauls broken down on the side of the road than any other vehicle.”

“I have yet to see, in this area travelling I-35 twice a day, a tractor-trailer in a wreck or a school bus in a wreck. It’s always cars.”

Recommended Actions that Car Drivers Can Take to Be Safer

- Yield right-of-way to trucks and buses
- Be more courteous
- Drive defensively-allow extra margin for somebody to do something dumb
- Buckle up
- Stay alert-watch everybody and everything
- Flash brake lights for tailgaters

- Stay out of trucks' way-change lanes, give clearance
- Flash headlights to increase visibility
- Be aware of special needs/limitations of trucks
- Don't tailgate
- Pass quickly (if possible, and where it's not dangerous)
- Avoid blind spots (People agreed that the sign on the back of some trucks, "If you can't see me in my mirror, I can't see you," is a good idea, because many drivers don't know how to tell if they are in a blind spot.)

"A lot of people don't understand that if you drive up behind an 18-wheeler and you can't see his mirrors, he can't see you. A lot of people assume that he can see."

"If I know a truck is going to change lanes and I'm behind him, I'll flash my lights, and I'll stay where he can see me and let him get over."

Recommended Actions that Truckers Can Take to Be Safer

- Obey speed limits
- Be more courteous
- Understand that car drivers are ignorant, respect them
- Don't drive too many hours without rest

Recommended Actions to Improve the Driving Environment

- Use more reflectors on edge of pavement
- Provide better road signs, with more warning of exits and lane or route changes
- Insure that mile markers and exit markers do not conflict
- Install emergency phones on the freeway
- Use ridged road edges
- Use more visible paint for lane markers

- Inspect trucks more often
- Make city maps more easily available for strangers, especially, and make the maps more informative, with exit numbers, etc.
- Add **pulloffs** to emergency lanes to enable people to pull over and read a map without getting off the highway—a shoulder extension that gets you out of the traffic
- Use bigger, brighter taillights on commercial trucks, plus taillights at the top of the vehicle, so following drivers will know it is a truck—maybe a particular pattern of taillights to identify trucks from a distance
- Put marked patrol cars back on the highways

“I don’t know why they have unmarked the highway patrol cars, but it used to be a comfort to be able to see one and know that if you needed help, you could follow that guy. Now you have no clue who they are.”

- Install raised reflectors along lane markers and along road edges that can be felt by the driver if his vehicle runs over them
- Restrict trucks to certain lanes

“I think a truck lane would be great. It would take care of all these problems.”

There was considerable support for the idea of having lanes or roads that are barred to trucks. The consensus was that this was a good idea but not feasible on all roads.

Beliefs Regarding Need for New Laws

Most people said that new laws would not be needed if there were greater enforcement of the laws already on the books. They felt this would not happen until funds are provided to put more officers on the road.

“We’ve got the law. We just don’t have enough people out there who get support and the funding to do anything about it.”

Several suggestions were offered regarding possible new laws:

- Retesting of drivers over age 65 or 70 for license renewal
- Periodic retesting of all drivers for license renewal-both written and road tests, with road tests most important for elderly drivers
- Require loads of sand, gravel, other debris or loose loads to be covered; require mud flaps and side skirts on trucks
- Require seat belts in all buses

Awareness of Federal Agencies Dealing with Highway Safety

‘When asked whether they had heard of any Federal agencies with responsibilities in the area of traffic safety, several people mentioned the Department of Transportation but only one was more specific, naming the Federal Highway Administration. Other entities mentioned by one or two people: OSHA, the Interstate Commerce Commission, the National Safety Council, and the “Department of Vehicles.”

Awareness of the Office of Motor Carriers

Only two people among the 58 non-commercial drivers said that they had heard of the Office of Motor Carriers; and one of these said that he had no idea what the agency did.

Recommended Actions by OMC or Other Appropriate Agencies

Non-commercial drivers made the following recommendations to OMC or other appropriate agencies:

- More education of both car and truck drivers, so that each group is aware to some extent of the problems faced by the other, and knows how to interact in a safe manner; teach everyone more about the characteristics and limitations of large vehicles
- Use TV ads to educate the public
- Do public education campaigns for young drivers

“I think they should be getting rock stars to do little spots on truck safety on MTV, about people dealing with, trucks-and buses too, because we all have some agonies about that. The younger the driver is, the less they know about that. There’s something in the training or something in the personality of younger drivers.”

- Enforce current laws more vigorously; drivers say it's too easy now to get away with breaking traffic laws, and people know it; police departments are overburdened and don't spend much time on traffic enforcement
- Provide funds for more law enforcement personnel on the highways
- Advertising-tell us what their services are and what they do
- Have a toll-free telephone number to call to report violators of laws
- Retain and perhaps expand use of weigh stations (in Atlanta only, the non-commercial drivers were asked about weigh stations; people in both groups agreed that they serve a useful purpose)
- Require trucking companies to enforce regulations about driver hours, driving speeds, etc.

“With regard to the truckers who are not driving responsibly due to what the company tells them they’ve got to be ‘driving-because I think this really stems back to the company; I don’t think it’s the driver at all-have the company enforce it and say, ‘Look, you’re not driving this many hours, and if you do, you ‘refired.’”

- Establish tougher licensing procedures, retesting for renewal of licenses, test for knowledge of safe driving and for knowledge of law; laws change from year to year and vary from State to State, and people may not know this
- Raise minimum age for driver's license to 18
- Teach all drivers to drive defensively
- Work with other divisions within DOT, because many of the problems with the commercial vehicles are apparently caused by the noncommercial drivers
- Look into the idea of truck-only lanes, and special speed limits that might apply if truck-only lanes turn out to be feasible (add a lane, don't take an existing lane)
- Set standards for commercial vehicles pertaining to safety, including things like mud flaps, vehicle design, mirrors, etc.
- Set standards regarding environmental safety, e.g., diesel fumes
- Regulate training of commercial drivers

- Regulate weigh stations and safety inspections
- Teach school kids safety as pedestrians, including how to behave around large vehicles: stopping distance, how to look at traffic before stepping off the curb
- Look into manufacture of school buses

"I think that' this Office of Motor Carriers should look more into the manufacture of school buses. Those things are the unsafest vehicles on the road. They put our children in them and paint them bright yellow. That's supposed to be a deterrent. "

- Revamp design of school buses
- Require seat belts in school buses
- If somebody comes up with a good idea or new piece of equipment regarding safety, OMC could see that it is done nationwide

CONCLUSIONS AND I&COMMENDATIONS

The opinions expressed in the focus groups should be interpreted with caution, since the numbers of sites and participants in this type of study are necessarily limited, and the participants do not constitute a representative sample. Collectively, however, they reflect considerable diversity (in terms of age, gender, driving experience, etc.), and their opinions turned out to be fairly uniform across three regions of the country. Given the variety of participants and the consistency of their views, the following tentative conclusions seem warranted.

Conclusions

1. Commercial drivers, police officers, and passenger car drivers all feel that driver error is the most important cause of safety problems. When they are asked specifically about the driving environment (lanes, signs, etc.) and about vehicles, they can easily cite numerous safety problems associated with these categories-but they believe that most collisions could be avoided if drivers were more knowledgeable and cautious. Their view implies that unless driving behavior can be improved substantially, the collision rate will remain essentially unchanged even if the roadway environment is perfected and vehicle defects are eliminated.
2. Automobile drivers resent the fact that trucks and buses obscure their view of the road, and feel intimidated by their sheer size and the fact that they sometimes go faster than the prevailing traffic speed. Many passenger car drivers have mixed feelings about truck drivers. They do respect the skill and training of professional drivers; on the other hand, there is the fear that economic pressures may cause some truckers to drive while fatigued. Commercial drivers resent car drivers who cut in front or commit other errors that create a hazard for large vehicles. Commercial drivers generally believe that most of these mistakes by "four-wheelers" result from ignorance of the capabilities and limitations of large vehicles. Each group (car drivers and CDL holders) believes there is only a small minority in the other group that deliberately takes risky actions on the road.
3. All three categories of participants believe that impairment resulting from alcohol or other drug use is a significant problem for drivers of passenger cars, but fairly rare in commercial drivers.
4. All groups agree that car drivers know very little about trucks and buses, and as a long-term solution they recommend better training of drivers and periodic re-testing to qualify for license renewals. In the near term, they see a need for public education programs of all kinds to inform current drivers about ways to increase their safety when sharing the road with large vehicles (such as avoiding trucks' blind spots, staying out of turning lanes needed by trucks or buses, and allowing plenty of space for them to stop or slow down).

5. Holders of commercial driver's licenses are regarded as far more knowledgeable than car drivers, but here also there is agreement on the need for longer training, certification of instructors, higher performance standards, and periodic re-testing.
6. Many truck and bus drivers feel pressured by their companies to drive long hours or exceed speed limits. They say that log books are frequently falsified, sometimes under pressure from companies. Many drivers, companies, and police share the view that log books are not to be taken seriously.
7. Many truck drivers say that if they wish to keep their jobs, they have to help load or unload freight. The hours spent in loading and unloading are frequently entered in their log books as rest time. This presents a misleading picture of their working conditions, and the circumstances tend to undermine safety-producing drivers who are tired, resentful, and in a hurry.
8. Many truck and bus drivers object to regulations that they feel increase their risk of **having** a collision. Examples are lower speed limits for commercial vehicles (which, when observed, require frequent lane changes by other vehicles), and lane restrictions which require the largest and least-maneuverable vehicles to stay in the right lane where cars entering or leaving the roadway cause the most frequent adjustments in speed. Commercial drivers also object to the regulation governing hours of rest and to others that they regard as outdated or inappropriate.
9. Many commercial truck drivers believe that inspections at the State and local level are frequently conducted to generate revenue from fines rather than to improve safety, and they are troubled by what they say are variations from place to place in the way violations are defined. For these reasons many drivers say they would rather have their vehicles inspected by Federal officials than by State or local officials.
10. In the view of many police officers and passenger car drivers, large trucking companies are more likely than small independents to hire capable drivers, provide adequate driver training, maintain vehicles properly, and arrange trip schedules that do not require drivers to work excessive hours.
11. Most commercial drivers, police officers, and passenger car drivers have not heard of the FHWA Office of Motor Carriers. Although they have no clear picture of the agency's mission, they can identify many steps that they feel should be taken by this office or others to promote highway safety.
12. Some of the actions proposed to improve safety regarding commercial vehicles deal with the physical characteristics of roadways-such as increasing the visibility of lane markings and pavement edges, providing wider shoulders and more rest stops that can accommodate large trucks, allowing more space for large vehicles going through

construction zones, and placing signs so as to give earlier notice of upcoming exits or lane changes.

13. Other suggested actions involve improved preparation of drivers, from early driver education through periodic and more stringent re-testing. of both commercial and non-commercial drivers. There was wide agreement that license renewals should not be automatic, and that special testing or restrictions should, be considered for very young and very old drivers. Public education efforts to provide more information about trucks and buses to all current drivers were also recommended. These efforts should emphasize actions that drivers could take immediately to increase their own safety while sharing the road with trucks and buses.
14. All regulations applicable to commercial drivers should be reviewed for appropriateness and efficacy. Compliance rates, enforcement costs, and safety consequences should also be assessed.

Issues for Possible Discussion at the Summit Meeting

In addition to discussing the foregoing conclusions, participants in the Summit might give some attention to evaluating the data used as a basis for establishing regulations and other steps intended to improve motor carrier safety. The adequacy of available data is a crucial consideration in determining not only whether certain problems exist, but also why they occur, how they might be reduced, and whether interventions undertaken are having the desired impact. The following topics may provide a starting point:

- Perceptions vs. reality: checking beliefs about the most frequent kinds of crashes against crash statistics; checking beliefs about the most frequent driver and vehicle violations against enforcement statistics
- Comparing qualitative and quantitative data: focus group results and anecdotal reports from various constituencies vs.. national, regional, and state sample surveys

Most important, the discussions should begin the process of assessing **the** feasibility and potential value of various steps that have been proposed to improve highway safety. Some of these steps would entail significant expense, while others could be implemented cheaply; some would engender considerable resistance, while others would gain easy acceptance; some could produce major reductions in injuries or deaths or property damage, while others might have only a negligible effect. Once agreement is reached on the parameters for making these comparisons, efforts can proceed to reduce the number of possible actions and to identify those that rank high in both acceptability and effectiveness. A “safety impact statement” might be prepared for each proposed solution.

The ideas suggested by participants in the focus groups are summarized below. The letters following the items indicate the groups which mentioned them: commercial drivers [C], police [P], or non-commercial drivers [N]. The study was not designed to provide strict comparability across the three kinds of groups, and some issues were not raised in all groups. (For example, a question about driver pay was asked only in the CDL groups.) Thus the absence of a letter should not be taken to mean that a particular group chose not to endorse an action; it may mean that the action was simply not discussed.

Regarding the Driver

- require periodic recertification (written and road tests) for all driving licenses, including test on how to drive around trucks and buses [C, P, N]
- monitor the quality of CDL training programs, and/or mandate standards in terms of length, content, experience of instructors, and road tests [C, N]
- teach auto drivers about trucks (via rides, simulators, films etc.) [C, P, N]
- impose license restrictions on very old and very young drivers [C, P, N]
- raise minimum driving age to 18 [P, N]
- require special training and certification before allowing someone to drive an **RV/motorhome**, rental truck, or farm equipment on a public road [C, P]
- pay drivers by the hour on the dock, and by mile on the road [C]
- revise regulations concerning log books and rest requirements (and in particular, change the rest requirements to match body cycles) [C]
- conduct a national public education campaign to inform car drivers about the characteristics and limitations of trucks and buses (stopping distance, turning radius, etc.) [C, N]
- allow commercial drivers to sleep at rest stops without interrupting them to examine the vehicle or a log book [C]
- provide an 800 number to call to report violations of laws by commercial drivers [N]

Regarding the Roadway and Driving Environment

- eliminate requirement that trucks stay in right lane except when passing [C]

- restrict trucks to left (through) lane except when entering or exiting roadway [C]
- allow both cars and trucks to use a “through traffic” lane [C]
- have the same speed limits for all vehicles (rather than lower limits for trucks and buses) [C]
- place lane markings and side-of-pavement markings on new or repaved road within a short time after opening road to traffic [C]
- increase the use of reflective markings on roadways [C, N]
- increase the use of reflectors and/or rumble strips on outer edge of pavement [C, N]
- eliminate, as feasible, left-side entrance/exit lanes on highways [C]
- provide earlier notice of exits, intersections, lane shifts, etc. (for large vehicles, at least one mile **ahead** if possible) [C]
- reduce tire debris on the road by one or more of the following means: declare recaps on trucks illegal; mandate higher standards for recaps so that separations will occur very rarely; impose high surcharges on recaps to eliminate their price advantage over new tires; limit use to low speeds, low temperatures, etc.; assign responsibility for debris removal to special road crews [C, P, N]
- consider trying truck-only lanes in some areas [C, P, N]
- place weigh stations off road (and close those now located in median strips) [C]
- eliminate weigh station waiting lines that extend into active roadways [C]
- provide more rest stops, and improve lighting/security [C, N]
- adapt more construction zone warnings and detours to the needs of large trucks and buses [C]
- enforce the passing-lane-only regulation in all areas where this applies [P]
- provide early-warning signs for hills, intersections, and stretches of highways that cause particular problems for trucks [P]
- provide better guidance to drivers on how and where to merge when a lane ends [C, P]

Regarding the Vehicle

- provide special training for police in how to inspect commercial vehicles [P]
- add more weigh stations [P]
- provide funds for more frequent roadside inspections [P]
- install closed-circuit TV on large vehicles to **cover** blind spots [C]
- increase inspection' frequency for commercial vehicles, and severity of penalties for violations [P]
- impound or rule out-of-service (rather than merely fining) any truck with a potentially hazardous uncovered load (e.g., gravel, sand, crushed autos) [P]
- place large reflectors or flashing lights halfway along the sides of trailers (rather than only on the end) [N]
- replace “this vehicle makes wide turns” sign with one that says “this vehicle needs two lanes to turn, please stay back” or something else that car drivers will understand [N]
- require all vehicles to use headlights whenever wipers are in use [C]
- require taillights on trucks that are highly visible to following vehicles (larger, brighter, cleaner than at present) [N]
- require seat belts in school buses [N]
- revamp the design of school buses [N]
- **limit** or prohibit the use of triples [C, P, N]

Other Suggestions

- track the use of innovative policies or procedures throughout the country, identify those that seem most promising, and encourage others to try them [N]
- try to reduce state-to-state differences in the laws or the way they are applied [C, P]
- re-regulate the trucking industry [C]

APPENDICES

APPENDIX A: MODERATOR'S GUIDES

APPENDIX B: RECRUITMENT SCREENERS

APPENDIX A
MODERATOR'S GUIDES

FEDERAL HIGHWAY ADMINISTRATION

OFFICE OF MOTOR CARRIERS

Moderator's Guide

Holders of CDLs

I. Introduction

A. Purpose of Group

Hello. My name is _____ and I will be leading our discussion today. We'll be here about **2** hours talking about highway safety and truck safety issues. I'm a research consultant-I don't work for any one company or organization. I do groups like this all over the country to find out what people think about different products, services, and ideas.

B. Ground Rules

In order to cover everything, we will have to stick to a few guidelines for keeping the discussion on track:

- Please speak one at a time in a voice at least as loud as mine. (Explain use of recording; observers)
- Research is confidential, only first names are used in discussion and no names are used in the report.
- I want to hear from everyone during our discussion-although. you do not have to answer all the questions.
- There are no right or wrong answers-I am interested in everyone's opinions. I'm looking for different points of view.
- The results of the study are dependent upon the honesty of your responses-so I hope that you will say what you really think or feel.
- There is a lot to **cover**, so please understand if I interrupt a discussion and move on to a different topic.
- There will be no smoking during the group. (Point out location of rest rooms and discuss any other administrative procedures for the facility.)

II. Participant Introductions/Warm Up

Before we get started, I would like everyone to introduce themselves. Would you all **state** your names, the type of vehicle drive, how long you have driven for a living and what endorsements do you have on. your CDL?

(List on flip chart)

III. Highway Safety Issues

- A. When we talk about highway safety, what concerns come to mind for you?
- B. Which is more of a problem in terms of highway safety: passenger cars, commercial vehicles, the road conditions (design, weather, **signage**) or do you think they are about the same?
- * C. Do you think that automobile drivers drive differently when they are around a truck or bus than at other times.? How so?
- * D. How do you think automobile drivers perceive the difficulties of driving a truck or bus?
- E. What do you think is the general public's perception of truck and bus drivers?

(PROBE: Safe, Careful Versus Rude, Reckless)

- F. What's your perception of automobile drivers?

(PROBE: Safe, Careful Versus Rude, Reckless)

- G. What do you think is the most common kind of crash involving a car and a commercial **truck**? A car and a bus?

(PROBE: Description of Crash--passenger Car Collides with Rear End of Truck, Vice Versa, Etc.)

- H. What do you think causes each kind of crash mentioned above?

1. How does the driver of the truck (or bus) contribute to each kind of crash mentioned?

(PROBE. After Mentions Ask about Those Not Mentioned from the Following List

Fatigue
Stress-from dispatcher (route assignments, loading/unloading time
Economic pressures-paid by the mile or load
Driving at night
Speed
Driver error
Age of driver
Driver experience
Medical condition of driver
Psychological condition of driver
. Drug/alcohol use) .

2. How does the driver of the passenger car contribute to each kind of crash mentioned?

(If the Following Are Not Mentioned for the Driver, PROBE for'

Fatigue
reckless driving-cutting in front of truck/buses, distance between vehicles,
sudden stopping or slowing, running stop signs or red lights
discourteous driving-failure to yield
Speeding
Inattention
Leaving the scene of an accident)
Alcohol **and/or** drug use
Lack of knowledge regarding truck/bus maneuvering
capabilities, stopping distances required, etc.)

3. -How does the carrier contribute to each kind of crash mentioned?

(If the Following Are Not Mentioned for the Carrier, PROBE for

Condition of vehicle
Policies
Training
Schedule
Pay)

4. How do road conditions contribute to each kind of crash mentioned?

(If the Following Are Not Mentioned for the Environment, PROBE for

Weather
Road Design
, **Signage**
Congestion)

- I. Of those issues we've discussed, do youth think that most of the problems you associate with cars and trucks/buses sharing the road are due to the roads, the automobile or the driver? What worries you more?

IV. What Can Be Done?

- * A. How do you feel about the way police deal with trucks and buses?

B. What are some of the things that automobile drivers can do to be safer when on the road with trucks/buses?

(PROBE: Not Tailgating, Passing Quickly, Avoiding Blind spots, Not Slowing down in Front of Trucks/Buses)

- C. What are some of the things that CDL drivers can do to be safer when on the road with automobiles?

(PROBE: Not Tailgating, Slowing Down, Staying in Right Lane)

- D. What can the carrier do to be safer?

(PROBE: Improve Scheduling and Other Policies, Vehicle Maintenance, Pay by the Hour vs. by the Mile)

- E. What can be done to improve the road conditions?

(PROBE: Better Signage, Improved Design)

- * F. How do you think some of these safety issues should be addressed? What kind of action needs to be taken?

(PROBE: More Enforcement, Better Education)

- * G. What regulations address some of these issues? How well are they working? How can they be improved?

V. Awareness of Federal Agencies and Their Roles

A. Are you aware of any federal agencies that deal with highway safety-and the safety of trucks and buses?

(PROBE: Specific Names and Functions)

B. (If not mentioned, ask) Have you ever heard of the Office of Motor Carriers in the U. S. Department of Transportation?

C. If yes, what do you think their mission is? How do they effect you,? What should they be doing?

(PROBE: Types of Actions--increased Enforcement (Roadside Inspections, Licensing, More Regulations), Better Education (of Truck/bus Drivers, of General Public) Change the Environment (Truck Only Lanes, Special Speed Limits))

VI. Wrap up

(Pass out participant information sheet).

Are there any other important issues that we haven;'t discussed that you'd like to mention?

Thank you.

PARTICIPANT INFORMATION SHEET

1. Age
 - 2.a How many years have you been a professional driver?
 - 2.b Briefly describe the amount/level of training you have received?

3. What city and state do you live in?

4. Are you an owner-operator? Yes No
If not, is your employer union or non-union?

5. What type of vehicle do you drive?

6. What kinds of freight do you transport, if any?

7. How many miles do you drive in an average year?
 - As a single
 - As a member of a team

- 8.a What is your biggest concern regarding highway safety?
 - 8.b How should it be addressed?

FEDERAL HIGHWAY ADMINISTRATION

OFFICE OF MOTOR CARRIERS

Moderator's Guide

Law Enforcement

I. Introduction

A. Purpose of Group

Hello, my name is _____ and I will be leading our discussion today. We'll be here about 90 minutes talking about highway safety and truck safety issues. I'm a research consultant-I don't work for any one company or organization. I do groups like this all over the country to find out what people think about different products, services, and ideas.

B. Ground Rules

In order to cover everything, we will have to stick to a few guidelines for keeping the discussion on track:

- Please speak one at a time in a voice at least as loud as mine. (Explain use of recording, observers)
- Research is confidential, only first names are used in discussion and no names are used in the report.
- I want to hear from everyone during our discussion-although you **do** not have to answer all the questions.
- There are no right or wrong answers-I am interested in everyone's opinions. I'm looking for different points of view.
- The results of this study are dependent upon the honesty of your responses-so I hope that you will say what you really think or feel.
- There is a lot to cover, so please understand if I interrupt a discussion and move on to a different topic.
- There will be no smoking during the group. (Point out location of rest rooms and discuss any other administrative procedures for the facility.)

II. Participant Introductions/Warm Up

- A. Before we get started, I would like everyone to introduce themselves. Would you all state your name, your department and current assignment.
- B. Are you currently, or in the past have you been, responsible for traffic enforcement?

III. Highway Safety Issues

- A. When thinking about highway safety, What are your biggest concerns?
- B. Which present more of a problem in terms of highway safety: passenger cars, commercial trucks or buses, road conditions (design, weather, **signage**) or are they about the same?
- C. Do you think that drivers of passenger cars drive differently when sharing the road with commercial vehicles?
- * D. What do you think makes driving a commercial vehicle more difficult than driving a car?

(PROBE: Blind spots, Right Hand Turns, Backing Up, Braking)

- E. What do you feel is law enforcement's perception of drivers of trucks? Buses? Of automobile drivers?

(PROBE: Safe, Courteous versus Rude, Reckless)

- * F. What do you think is the most common kind of crash involving a car and a commercial truck? A car and a bus?

(PROBE: Description of Crash--passenger Car Collides with Rear End of Truck, Vice Versa, Etc.)

- G. What do you think causes each kind of crash mentioned above?

How does the driver of the truck contribute to each kind of crash mentioned?

How does the driver of the passenger car contribute to each kind of crash mentioned?

How does the environment contribute to each kind of crash mentioned?

How does the condition of the vehicle contribute to each kind of crash mentioned?

H. (If not mentioned previously) When you think about highway safety, what **concerns** you about passenger cars sharing the road with commercial trucks and buses?

(PROBE: Differences in Concerns for Trucks vs. Buses)

(List All Concerns Mentioned on a Flip Chart. Divide Issues Associated with the Environment (Road Design, Weather, road Congestion), the Vehicle (Truck/Bus) and Those Associated with the Driver)

- I. I have listed those issues that you mention having to do with the roads, the truck/bus and those related to the driver. Do you think that most of the problems you associate with trucks are due to the roads, the truck or the driver? What worries you more?
- J. I would like to discuss the issues you mentioned about the truck and bus in more detail. First about the roads.

(PROBE: For Each Item on List)

(If the Following Are Not Mentioned for Environment, PROBE for

Road Design
Weather
Congestion
Signage)

(If the Following Are Not Mentioned for the Vehicle, PROBE for

Number of trucks on highway
Size of trucks
Debris falling from trucks
Splash and spray from trucks/buses
Trucks breaking in half
Trucks blowing tires
Trucks/bus going too fast or too slow
Truck/bus braking ability)

(If the Following Are Not Mentioned for the Driver, PROBE for

Fatigue
Reckless/careless driving -- sudden lane changes, inattentive
Rude/discourteous behavior -- following too closely
Inexperience
Speeding
Overworked/time pressures
Age
Training

Physical and 'mental health
Alcohol and/or drug use)
Leaving the scene of an accident

IV. What Can Be Done?

- * A. Do you think motorists feel you give special breaks to trucks and busses?
- * B. What do you think automobile drivers can do when on the road with trucks/buses?

(PROBE: Not Tailgating, Passing Quickly, Avoiding Blind spots, Not Slowing down in Front of Trucks/buses)

- * C. What do you think CDL drivers can do when on the road with automobiles?

(PROBE: Not Tailgating, Slowing Down, Staying in Right Lane)

- D. What can be done to improve the road conditions?

(PROBE: Better Signage, More Lanes, Automated Enforcement)

- E. How do you think some of these safety issues should be addressed?
What action needs to be taken?

(PROBE: More Enforcement, Better Education)

- F. Are you aware of any regulations that address some of these issues?

(PROBE: Are They Working? Are They Effective? How Can They Be Improved)

V. Awareness of Federal Agencies and Their Roles

- A. Are you aware of any federal agencies that are concerned about highway safety-and the safety of trucks and buses?

(PROBE: Specific Names and Functions)

- B. (If not mentioned, ask) Have you ever heard of the Office of Motor Carriers in the U. S. Department of Transportation?

- C. If yes, what do you think their mission is? Do they have any effect on what you do?

D. If you haven't heard of them, the office of Motor Carriers is the part of the U.S. Department of Transportation that is responsible for truck and bus safety. What should they be doing?

(PROBE: Types of Actions--increased Enforcement (Roadside Inspections, Licensing, More Regulations), Better Education (of Truck/bus Drivers; of General Public) Change the Environment (Truck Only Lanes, Special Speed Limits))

VI. Wrap up

(Pass out participant information sheet).

Thank you.

PARTICIPANT INFORMATION SHEET

1. Age

2. Sex Male Female

3. Education-Last year of school completed

Less than High School High School
 Some College College Post-Graduate

4. Thinking about people who drive trucks, what are your impressions about' truck drivers?

PLEASE USE THIS GUIDE TO ANSWER THE FOLLOWING QUESTIONS.

A = Excellent **B** = Good
C = Fair **D** = Poor

Please Circle the Appropriate Letter

5. Thinking about truck drivers, what grade would you give them regarding the following:

a. Safe driving **A** **B** **C** **D**

b. Driving skill **A** **B** **C** **D**

c. Giving roadside assistance **A** **B** **C** **D**

d. Respect for the, rights
of other drivers **A** **B** **C** **D**

6. Thinking about bus drivers, what grade would you give them regarding the following:

a. Safe driving , **A** **B** **C** **D**

b. Driving skill **A** **B** **C** **D**

c. Giving roadside assistance **A** **B** **C** **D**

d. Respect for the rights
of other drivers **A** **B** **C** **D**

7. Thinking about automobile drivers, what grade would you give them regarding the following:

a. Safe driving **A** **B** **C** **D**

b. Driving skill **A** **B** **C** **D**

c. Giving roadside assistance **A** **B** **C** **D**

d. Respect for the rights
of other drivers **A** **B** **C** **D**

FEDERAL HIGHWAY ADMINISTRATION
OFFICE OF MOTOR CARRIERS

Moderator's Guide

Adult Drivers

I. Introduction

A. Purpose of Group

Hello, my name is _____ and I will be leading our discussion today. We'll be here about 2 hours talking about highway safety and truck safety issues. I'm a research consultant-I don't work for any one company or organization. I do groups like this all over the country to find out what people think about different products, services, and ideas.

B. Ground Rules

In order to cover everything, we will have to stick to a few guidelines for keeping the discussion on track:

- Please speak one at a time in a voice at least as loud as mine. (Explain use of recording, observers)
- Research is confidential, only first names are used in discussion and no names are used in the report.
- I want to hear from everyone during our discussion-although you do not have to answer all the questions.
- There are no right or wrong answers-I am interested in everyone's opinions. I'm looking for different points of view.
- The results of this study are dependent upon the honesty of your responses-so I hope that you will say what you really think or feel.
- There is a lot to cover, so please understand if I interrupt a discussion and move on to a different topic.
- There will be no smoking during the group. (Point out location of rest rooms and discuss any other administrative procedures for the facility.)

II. Participant Introductions/Warm Up

Before we get started, I would like everyone to introduce themselves. Would you all state your names, the number of miles you drive in a week (on average) and how you feel about driving.

(PROBE: enjoy/hate, feel rushed, tense)

III. Highway Safety Issues

A. When you are driving for work or pleasure, do you have any particular concerns with regard to safety? When you are **driving** on the highway and you see a large truck or bus coming up behind you-how does this make you feel? What do you do?

B. Which is more of a problem in terms of highway safety: passenger cars, commercial trucks or buses, road conditions (including weather and **signage**) or are they about the same?

C. When you are on the highway and a truck or bus is nearby, do you drive differently than you would at other times?

* D. What kinds of vehicles have to have a commercial license?

E. Do you think driving a commercial vehicle is different from driving a car? In what ways? Is it harder to do?

* F. What do you think makes driving a commercial vehicle more difficult than driving a car?

(PROBE: Blind spots, Right Hand Turns, Backing Up, Braking)

G. What do you feel is the automobile driver's perception of truck and bus drivers?

(PROBE: Safe, Courteous vs Reckless, Rude)

H. What do you feel is the truck or bus driver's perception of the automobile driver?

(PROBE: Safe, Courteous vs Reckless, Rude)

I. When you think of all the vehicles that have to have a commercial license, are there any that you believe are involved in more than their share of crashes?

J. What do you think is the most common kind of crash involving a car and- a commercial truck? A car and a bus?

(PROBE: Description of Crash--passenger Car Collides with Rear End of Truck, Vice Versa, Etc.)

K. What do you think causes each kind of crash mentioned above?

How does the driver of the truck contribute to each kind of crash mentioned?

How does the driver of the passenger car contribute to each kind of crash mentioned?

How do road conditions, including weather and **signage**, contribute to each kind of crash mentioned?

L. (If not mentioned previously) When you think about highway safety, what concerns you about sharing the road with commercial trucks and buses?

(PROBE: Differences in Concerns for Trucks vs. Buses)

(List All Concerns Mentioned on a Flip Chart. Divide issues associated with the environment (road design, weather, road congestion), the vehicle (truck/bus) and those associated with the driver)

M. I have listed those issues you mentioned having to do with the roads, the truck/bus and those related to the driver. Do you **think** that **most** of the problems you associate with trucks are due to the road conditions, the vehicle or the driver? What worries you more?

N. I would like to discuss the issues you mentioned about the vehicles in more detail. First about the road conditions.

(PROBE: For Each Item on List)

(If the Following Are Not Mentioned for Environment, PROBE for

Road Design
Weather
Congestion
Signage)

(If the Following Are Not Mentioned for the Vehicle, PROBE for

Number of trucks on highway
Size of trucks
Debris falling from trucks
Splash and spray from trucks/buses
Trucks breaking in half
Trucks blowing tires
Trucks/bus going too fast or too slow
Truck/bus braking ability)

(If the Following Are Not Mentioned for the Driver, PROBE for

Fatigue
Reckless/careless driving-sudden lane changes, inattentive
Rude/discourteous behavior-following too closely
Inexperience
Speeding
Overworked/time pressures
Age
Training
Physical and mental health
Alcohol and/or drug use)
Leaving the scene of an accident

IV. What Can Be Done?

- * A. How do you feel about the way police deal with trucks and busses?
- * B. Some people say that truckers sometimes drive too fast or drive too many hours at a stretch. When this happens, who is more responsible-the drivers or their companies?
- * C. Along various highways, you've seen weigh stations where truckers are required to stop. Do you think these stations serve a useful purpose?
- D. What can car drivers do to be safer when on the road with trucks/buses?

(PROBE: Not Tailgating, Passing Quickly, Avoiding Blind spots, Not Slowing down in Front of Trucks/Buses)

- E. What can commercial vehicle drivers do to be safer when on the road with automobiles?

(PROBE: Not Tailgating, Slowing Down, Staying in Right Lane)

- F. What can be done to improve the environment?

(PROBE: Better Signage, More Lanes)

- G. How do you think some of these safety issues should be addressed? What actions need to be taken?

(PROBE: More Enforcement, Better Education)

- H. Are you aware of any regulations that address some of these issues?

(PROBE: Are They Working? Are They Effective? How Can They Be Improved)

- I. We've all heard the phrase "There ought to be a law." Can you suggest any laws that should be passed to help eliminate the unsafe actions now taken by some drivers-automobile and commercial drivers.

(PROBE: Those for All Drivers. Those for Trucks/busses. Those for Automobiles.)

V. Awareness of Federal Agencies and Their Roles

- A. Are you aware of any federal agencies that are concerned about highway safety-and the safety of trucks and buses?

(PROBE: Specific Names and Functions)

- B. (If not mentioned, ask) Have you ever heard of the Office of Motor Carriers in the U. S. Department of Transportation?
- C. If yes, what do you think their mission is? What should they be doing?
- D. If you haven't heard of them, the Office of Motor Carriers is the part of the US Department of Transportation that is responsible for truck and bus safety. What do you think they should be doing?

(PROBE: Types of Actions--increased Enforcement (Roadside Inspections, Licensing, More Regulations), Better Education (of Truck/bus Drivers, of General Public) Change the Environment (Truck Only Lanes, Special Speed Limits))

VI. Wrap up

(Pass out participant information sheet).

Thank you.

PARTICIPANT INFORMATION SHEET

1. Age _____
2. Sex Male Female
3. Education-Last year of school completed
- Less than High School High School
- Some** College College Post-Graduate
4. Thinking about people who drive trucks, what are your impressions about truck drivers?
- _____
- _____

PLEASE USE THIS GUIDE TO ANSWER THE FOLLOWING QUESTIONS.

A = Excellent	B = Good
C = Fair	D = Poor

Please Circle the Appropriate Letter

- 5 . Thinking about truck drivers, what grade would you give them regarding the following:
- | | | | | |
|--|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| a. Safe driving | <input type="checkbox"/> A | <input type="checkbox"/> B | <input type="checkbox"/> C | <input type="checkbox"/> D |
| b. Driving skill | <input type="checkbox"/> A | <input type="checkbox"/> B | <input type="checkbox"/> C | <input type="checkbox"/> D |
| c. Giving roadside assistance | <input type="checkbox"/> A | <input type="checkbox"/> B | <input type="checkbox"/> C | <input type="checkbox"/> D |
| d. Respect for the rights of other drivers | <input type="checkbox"/> A | <input type="checkbox"/> B | <input type="checkbox"/> C | <input type="checkbox"/> D |

6. Thinking about bus drivers, what grade would you give them regarding the following:

- a. Safe driving **A** **B** **C** **D**
- b. Driving skill **A** **C** **D**
- c. Giving roadside assistance **A** **B** **C** **D**
- d. Respect for the rights of other drivers **A** **B** **C** **D**

7. Thinking about automobile drivers, what grade would you give them regarding the following:

- a. Safe driving **A** **B** **C** **D**
- b. Driving skill **A** **B** **C** **D**
- c. Giving roadside assistance **A** **B** **C** **D**
- d. Respect for the rights of other drivers **A** **B** **C** **D**

8. Do you wear a seatbelt?

- Always Sometimes Never

9. After this discussion, what is your biggest concern regarding sharing the road with commercial vehicles?

10. What should be done about it? By whom?

A more detailed summary of findings from the analysis of crash-data are presented in an appendix to this report.

Public Perceptions of Large Truck Safety

A sampling of the public's perceptions of motor carrier safety issues was obtained from a series of focus groups conducted in Atlanta, Georgia; Kansas City, Missouri, and Portland, Oregon. Separate sessions were conducted with automobile drivers, commercial vehicle operators and police. Among the opinions expressed by these groups were:

- Automobile drivers are a far more **frequent** cause of highway safety problems involving trucks than the driving environment, vehicle conditions or truck drivers.
- **Commercial vehicle** drivers are **superior** to car drivers in the utilization of safe driving practices.
- Truck drivers and passenger car drivers feel antagonism toward each other on the highway.
- **Car drivers know very little about trucks and buses and this ignorance may be a factor** in crashes involving these vehicles.
- **Commercial** drivers are concerned about regulations they regard as unworkable, out of date or hazardous.

A detailed summary of the focus groups' findings on the public's perceptions regarding **motor carrier** safety issues is presented in an appendix to this report