

Steve Albert

Mr. Steve Albert is the Director of the Western Transportation Institute (WTI) at Montana State University in Bozeman, Montana. Steve has been addressing transportation challenges for over 25 years in both the largest metropolitan centers and our nation's most rural settings. His experience managing the Houston transportation system (HOV, traffic management, ITS) and his pioneering rural research has allowed for a unique perspective of America's transportation needs. Steve has been involved in addressing rural and urban transportation and Intelligent Transportation Systems (ITS) research and development in over 35 states and has over 100 professional presentations and publications on related activities.

Prior to coming to MSU, Steve worked with PB Farradyne, in Washington D.C., Metropolitan Transit Authority of Harris County (METRO) in Houston, and Texas Transportation Institute, Texas A&M University System in Houston, Texas.

Steve serves on a variety of committees and organizations including ITS America Rural Stakeholders Interest Group, Chair, and past Chair of State Chapters Council and Rocky Mountain ITSA State Chapter, Past President, Council on University Transportation Centers Executive Committee and TRB Transportation Needs for Federal Lands and National Parks.

Statement by Mr. Stephen Albert, Director
Western Transportation Institute, Montana State University
to the
National Surface Transportation Policy and Revenue Study Commission
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Thank you for the opportunity to participate in the development of a plan for the future of America's transportation system. The Western Transportation Institute (WTI) respectfully submits the following comments to assist with your efforts to ensure that national transportation policy and initiatives meet all of the emerging needs of western states.

Currently, national transportation initiatives (and related funding) tend to focus on congestion issues in urban areas. For this reason, WTI would like to put forward for your consideration the transportation needs of rural and frontier America, and why they are an integral component of an efficient transportation system. I am not here today to advocate for specific funding formulas or recommend how to pay for rural roads; rather, I was requested to focus on identifying major challenges, explaining their relevance to national transportation priorities, and recommending potential solutions.

WTI has been working to improve transportation in rural areas for more than a decade. As the nation's largest transportation center focused on rural issues, WTI conducts research on transportation challenges such as safety, severe weather, mobility, maintenance, and road ecology, and develops potential solutions. We provide research and technical assistance to many departments of transportation, not only in largely frontier states such as Montana and Wyoming, but also in heavily populated states with large rural regions such as California, Washington, Pennsylvania, and Virginia. In fact, we have conducted projects in more than half the states in the country. As a result, we have a strong, current knowledge of the state of rural transportation throughout the United States, and are uniquely qualified to identify the most pressing issues and emerging needs.

To understand the scope and impact of traditional transportation policy on rural America, we find it helpful to visualize a slice of Swiss cheese. Urban areas are the random "holes" across the landscape that attract most of the attention. Rural areas are the large tracts of solid mass in between that do not stand out, but are essential to holding the cheese together. We suggest, therefore, that national transportation policy focuses on the "holes" in the system, but sometimes loses sight of the system as a "whole" (with a "w").

What would a "whole" transportation system look like? A complete, integrated, seamless transportation infrastructure would allow people, goods, and services to move safely and efficiently across and throughout every region of the country. Urban residents and interests may not immediately recognize the challenges of rural travel because of the absence of congestion. However, they may understand the impact of these issues when it starts to affect their daily lives. For example, a business owner whose inventory deliveries are three days late because of a snowstorm in Minnesota will start to see the value in improved road condition forecasting systems. Or, a family driving from their home in the suburbs to Mt. Rushmore, whose car breaks down on a two-lane highway with no cellular coverage, will gain a whole new appreciation for

upgrading rural communication systems. Rural transportation improvements serve important national priorities, such as:

- Reducing the number of accidents resulting in injuries or fatalities that occur as Americans drive throughout the country for business and recreational purposes
- Incorporating protection of wildlife habitats and natural resources into the transportation development process.
- Managing rapid growth in a coordinated, regional manner.
- Ensuring seamless and expedited transport of freight throughout the country to support business growth and development
- Facilitating access to national parks, tourist attractions, and recreational areas, which nurture economic development in the gateway communities
- Enhancing emergency preparedness and public safety resources, so that Americans have access to emergency response services and safe evacuation routes wherever they live or travel
- Addressing mobility and transportation needs of a rapidly aging population

With these goals in mind, it is important to understand the nature of transportation challenges in rural and frontier areas, as well as the potential solutions that are available:

Increase Safety on Our Rural Highways

Based on statistics from FHWA, 60% of crash fatalities occur on rural highways, while only 39% of the vehicle miles traveled occur on these roads, a very disproportionate relationship. Further analysis of these numbers suggest that a driver is four times more likely to be killed on a non-interstate roadway than on an interstate freeway. Analysis also finds that approximately 60% of the rural fatal crashes are single-vehicle run-off-the-road incidents and that in general 80%-90% of all crashes are a result of driver error or behavior, not the quality of our roads or the environmental impacts. Therefore, safety is a critical issue for all drivers as they travel in rural areas.

Secondly, by all accounts, travel in rural areas is expected to increase. According to data from the Western Governors' Association, 42 million more people and cars will be added to the western transportation system by 2030. Recent migration and land use studies indicate an increase in rural and frontier populations based on "ex-urban flight," described as urban residents who are bypassing moves to traditional suburban areas in favor of rural destinations that offer greater quality of life. As travel continues to grow on secondary highways, it is inevitable that accidents will increase as well, unless safety initiatives are directed to these roadways. As such, increased attention will need to be directed at our typical 2-lane rural highways that address capacity, operational, and driver behavior issues to ensure the safety of the users of those facilities.

Conserve Wildlife Habitats and Environmental Resources

As population growth in the western states explodes, land use is changing dramatically, and with it wildlife habitats are shrinking or even disappearing. The changing rural landscape is leading to a growing number of conflicts between drivers and wildlife, which present safety dangers for both. A forthcoming national Wildlife Vehicle Collision Reduction Study authored by WTI

estimates that there are between one and two million collisions between cars and large animals every year in the United States. Wildlife Vehicle Collisions (WVCs) are a growing problem, and represent an increasing percentage of the total accidents on our nation's roads.

Increasing traffic on rural roads can also have adverse impacts on the air and water quality in the surrounding area. Transportation agencies face conflicting demands to expand travel capacity without irreparably damaging environmental resources. There are a variety of proven and potential new measures and technologies that provide cost effective methods to reduce the impact of rural roads on natural resources. Three examples of techniques being applied are: **Wildlife underpasses and overpasses** which provide safe road crossing opportunities for a wide array of species, allowing them to continue to move across the landscape and reducing WVCs by 80% or more. **Fish passage** or maintaining connectivity for aquatic species is being pursued with new techniques to design and retrofit culverts under our roads. Advanced technologies such as **animal detection systems** have reduced WVCs in excess of 80%; they use sensors to detect large animals that approach the road and activate warning signs to inform the drivers that a large animal may be on or near the road at that time.

Expand Land Use and Transportation Planning at the Regional Level

Six of the ten fastest growing states are in the West, with the majority being large rural states. As rural America becomes more populated and developed, land use and related transportation impacts will have an increasing effect on service levels.

To conduct effective, comprehensive planning, the decision making will need to move from a local level to a regional level and in some cases multi-state corridor level. With these changes transportation agencies will need to play a more pro-active role in the future, and there may be the need for regional transportation and planning authorities to be created similar to metropolitan planning authorities.

Coordinate Freight Movement at Regional level

According to the American Association of State Highway and Transportation Officials (AASHTO), domestic freight tonnage by ton-mile for all modes of transport is expected to increase by 50% by 2020; freight movement by trucks alone is estimated to increase by nearly 60%. There is considerable concern about the impact this increase will have on urban ports. Rural America may be able to offer innovative solutions by providing locations for regional inter-modal and staging centers. These centers could offer opportunities to coordinate, manage, and schedule deliveries to our ports. These regional models are beginning to appear in some of our rural states and it is anticipated that this trend will increase; rural America may actually hold the key to some of our urban port, highway and truck congestion issues.

Improved freight movement from rural to urban areas serves another national priority – alternative energy development. The agricultural source materials that make many biofuels possible – like corn and safflower – are grown in America's heartland. For alternative energy development to prosper, growers must have effective means to move their product to refineries and to the market.

Integrate Transportation and Tourism to Promote Economic Development

Many National Parks, tourist attractions, and other outdoor recreation destinations are located well-outside urban areas. Local "gateway" communities encourage and depend on the ability of tourists to reach these attractions. Rapid growth in leisure travel by retired Americans and the

growing popularity of driving vacations indicates that visitation to these areas will continue to increase, which nurtures economic development. When WTI studied the impact of tourism along the “CANAMEX” corridor, the interstate and highway routes that create a corridor from Canada to Mexico through five western states, researchers found that improvements to the road, communication, and information infrastructures along this corridor could generate \$400 million in increased tourism revenues in the five states over a ten year period. Examples of these improvements include providing travelers with expanded access to real-time road condition and tourism information, completing cellular coverage along the entire corridor, and improving coordinated emergency response services.

Improve Communications Coverage to Facilitate Emergency Response

Communication coverage is critical to achieve a level of detection on rural highways to improve safety and emergency response. Currently, the time to detect, respond, and provide service at an incident is typically twice that of an urban area. If we are to manage our rural roadways in a safe and prudent manner, it is essential to create and deploy a basic infrastructure to detect problems and a communication system to transmit that data. Critical to the basic level of detection needed is a communication backbone.

Approximately twenty-five thousand Americans die each year on our rural highways because the promise of the technology has yet to be fully realized. Emergency medical personnel refer to the time immediately following a crash as the “Golden Minutes and Golden Hour.” It is estimated that 40% of all 911 call are now cellular based. Given that rural America has large pockets of “dead zones” (no cellular wireless service), a new or improved model will need to be developed to increase communications coverage. This new model may be similar to the Rural Utility Service, but at a minimum it may require a federal subsidization for private carriers that cannot achieve the return on investment that the high volume urban subscriber models deliver.

Communication coverage in rural areas is also an integral part of emergency response to large-scale disasters. Recent natural disasters, such as Hurricane Katrina, have revealed several weak links in the emergency preparedness infrastructure of our nation. Evacuations of major cities resulted in major bottlenecks once large numbers of urban residents reached the lower capacity corridors leading to rural areas. What’s more, at times emergency responders were unable to communicate with one another or coordinate services due to gaps in communication coverage in remote areas. Effective emergency response requires seamless access to transportation and communication throughout a region, not just in the largest cities.

Address Aging Population and Public Mobility Solutions

In urban areas, public transportation service is implemented primarily to provide transportation for employment purposes or as a means of reducing congestion. By contrast, in rural areas public transportation service has a direct impact on the quality of life and access to medical services for many rural residents. According to the Federal Transit Administration (FTA), approximately 38 percent of the rural population has no access to public transportation and another 28 percent has little access. Even when public transportation exists, little or no information is available about the services. Furthermore, service is sometimes restricted to weekends, evenings, or designated days of the week.

SAFETEA-LU is to be commended for recognizing the need for rural transportation services, and providing increased funding. While this is a good starting point, there needs to be increased

focus on coordination and consolidation of services to provide economies of scale and implement basic "life-line" service. Also, as rural America is aging faster than urban counterparts, new accessibility and service models will need to be created. Finally, while rubber tire local service is important for rural residents, there is also a need to reach our most remote "frontier" populations through additional modes such as train or airline service. For example, the northern tier Amtrak service (the "Empire Builder") is an option, and the Essential Air Service program could be modified to include incentives for "life-line" services from small rural (or "frontier") communities to larger cities. These alternative mode solutions can provide an important long distance solution to our most isolated communities.

Create Rural/Frontier Advisory Board

State departments of transportation do an excellent job of voicing state highway issues at the national level. In rural America, though, there are many stakeholders and representative groups such as tourism, tribal groups, public safety agencies, and federal lands, all of which play a significant role in shaping the future of transportation. Because of the range of stakeholders, a blue ribbon board should be created that provides input to USDOT on the changing frontier/rural transportation landscape. This board would complement the role of state departments of transportation.

In closing, thank you for your time. This is the third time I have been invited to provide field or Washington DC testimony on rural transportation, and I appreciate the opportunity to contribute to the national dialogue. I hope this means that the federal government is beginning to recognize the relevance of rural issues to the national agenda. In the past, when I have approached national agencies about many of these concerns, the response was that rural transportation issues were not a "mission critical need". However, if we are going to look beyond the Swiss cheese holes, and provide a complete transportation system for the entire country, it is my hope that this Commission will recognize the value and potential of rural America.

Thank you.

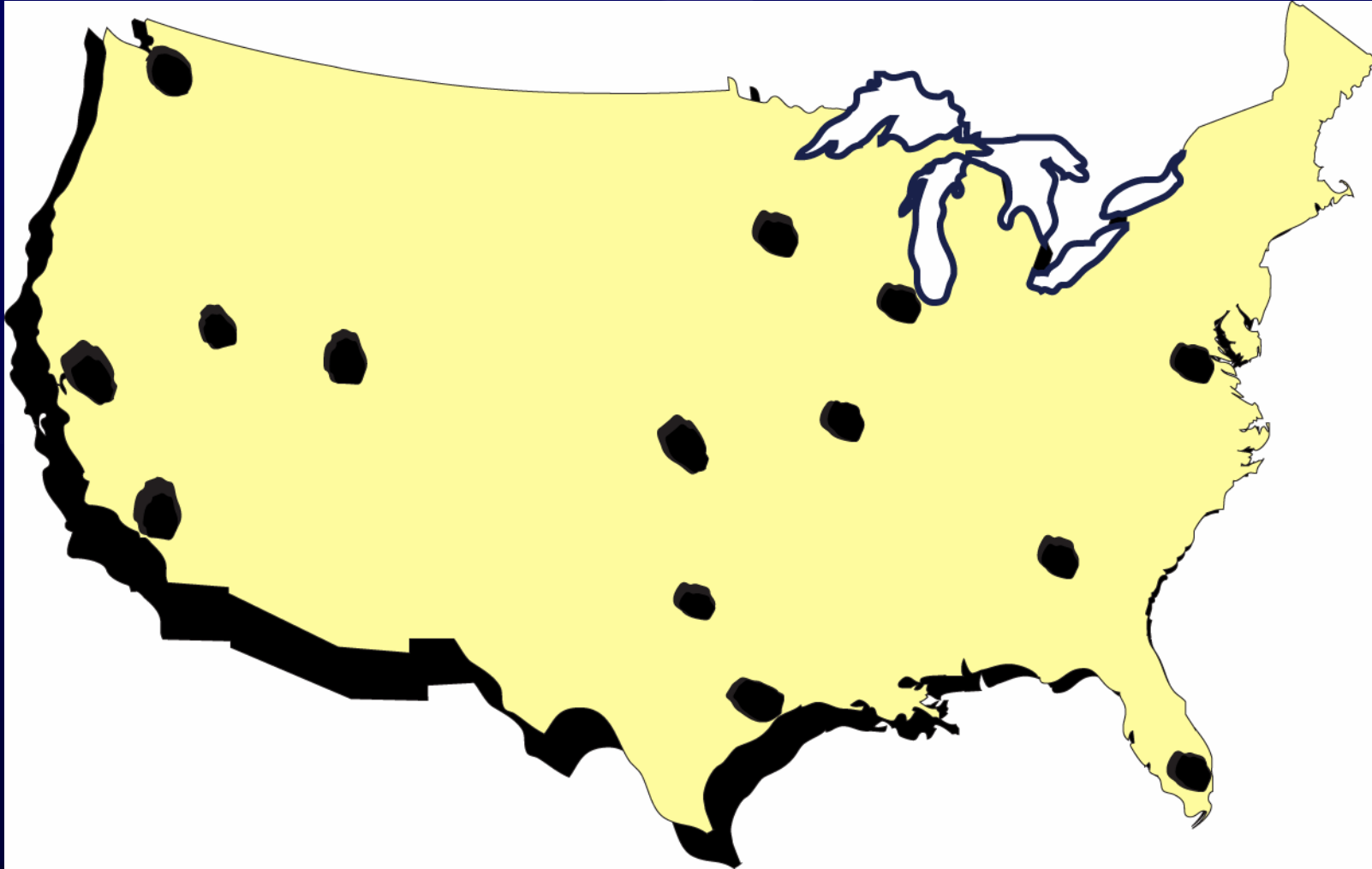
Meeting Rural Transportation Needs

Prepared for National Surface Transportation Policy
and Revenue Study Commission

By

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Swiss Cheese



Rural Challenges and Opportunities

Increased Safety on Rural Highways

- 60% of all crash fatalities are on rural highways
- Driver is 4 times more likely to be killed on a non-interstate roadway
- 60% of rural fatal crashes are single-vehicle run-off-the-road incidents
- 80-90% of all crashes are due to driver error or behavior
- Anticipate 42 million more people and cars will be added to western transportation system by 2030

It is essential that we increase our attention on 2-lane rural highways to address capacity, operational and driver behavior issues.

Conserve Wildlife Habitats and Environmental Resources

- Population growth and development threaten wildlife habitats and environmental resources
- Changing rural landscape is leading to greater conflicts between drivers and wildlife
- Est. between 1 and 2 million collisions of cars and large animals every year in the US

Proven and potential new mitigation measures include wildlife underpasses and overpasses, fish passages, and animal detection systems.

Expand Land Use and Transportation Planning at the Regional Level

- 6 of the 10 fastest growing states are in the West, with the majority being large rural states

Need to move comprehensive planning and decision making from local to regional level and in some cases to multi-state corridor level. Transportation agencies must be more pro-active in the future.

Coordinate Freight Movement at the Regional Level

- Est. 50% increase by 2020 in domestic freight for all modes of transportation
- Est. 60% increase for freight movement by trucks alone

Rural America may be able to offer innovative solutions by providing locations for regional inter-modal and staging centers while incorporating alternative energy development.

Integrate Transportation and Tourism to Promote Economic Development

- National Parks, tourist attractions, and other outdoor recreation destinations are located well outside urban areas
- “Gateway” communities encourage and economically depend on tourism

Improvements to roadways, communication, and information infrastructures along the CANAMEX corridor could generate \$400 million in increased tourism in the 5 states over a 10 year period.

Improve Communications Coverage to Facilitate Emergency Response

- Current time to detect, respond, and provide service at the site of a rural incident is typically twice that of an urban area
- 25,000 Americans die each year on rural highways
- 40% of all 911 calls are now cellular based
- Rural America has large pockets of “dead zones”
- Lower capacity corridors in rural areas can result in bottlenecks when urban areas must evacuate during large scale disasters

Effective emergency response requires seamless access to transportation and communication through a region.

Address Aging Population and Public Mobility Solutions

- Public transportation in rural areas has a direct impact on quality of life and access to medical services
- Approx. 38% of the rural population has no access to public transportation, 28% has little access

Increase focus on coordination and consolidation of services to provide economies of scale and implement basic “life-line” services.

Create Rural/Frontier Advisory Board

- Rural America stakeholders are comprised of very broad and representative groups such as tourism, tribal, public safety, and federal lands
- Play a significant role in shaping the future of transportation

A blue ribbon board should be created to provide input into the changing frontier/rural transportation landscape .

Investment Benefits

- Reduce accidents resulting in injuries or fatalities
- Protect wildlife habitats and natural resources
- Manage rapid growth in a coordinated, regional manner
- Ensure seamless and expedited transport of freight
- Facilitate access to national parks, tourist attractions, and recreational areas
- Enhance emergency preparedness and public safety resources
- Address mobility and transportation needs of a rapidly aging population

Swiss Cheese – the rest of America

