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**NORTH DAKOTA'S TRANSPORTATION NEEDS
TO FURTHER ECONOMIC DEVELOPMENT:
A USER'S PERSPECTIVE**

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ABSTRACT

The overall objective of this study was to capture the critical transportation and infrastructure issues which influence economic development in North Dakota. The issues were identified through three conferences held within one year. Results were conveyed to the Hubert Humphrey Institute of Public Affairs in Minneapolis, Minnesota. The Humphrey Institute received a grant from the Federal Highway Administration to explore transportation and infrastructure finance policy in a multi-state region. Five states were included in the study. The states include North and South Dakota, Iowa, Minnesota, and Montana. The Midwest consensus was being developed to be presented before Congress in 1993.

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INTRODUCTION

Economic development commonly refers to the increase in real income within a state or community as a result of economic activity that is newly created and that does not eliminate the activity or reduce the income of some other area. Since the 1930s many state economic development policies have centered around recruitment of new businesses. Attracting new industry was an economic development panacea that was unrealistic for most small rural communities. Many rural communities do not have the resources and amenities to attract large industry. In the 1970s the unrealistic expectation of recruiting large businesses to rural areas led some state economic development officials to focus on "home-grown" economic development. The focus shifted to strengthening local businesses and promoting new business growth within the state (Horowitz and Watrus).

Economic turbulence in the 1970s and the severe recession in the early 1980s forced many states to broaden their economic development efforts (Foster). In the latter 1980s, economic development in some states shifted toward providing a "family of services" (Horowitz and Watrus). With a family of services, local entrepreneurs might receive state or local assistance from the first stage of product development through the final stage of product delivery. Some may question if transportation should be a part of the "family of services."

For over twenty years, researchers have been studying the relationship between transportation and economic development. They still do not clearly understand this relationship (Hough, Dooley, and Otto). One main argument has been that demand for transportation is a derived demand (Kraft, Meyer, and Valette). Other economists disagree, believing that transportation has locational effects and can generate its own demand. Wherever it may start, a chain of reactions between transportation and development follow (Wein).

Whether economic development occurs through recruiting new business, building and strengthening local businesses, or providing a family of services, transportation is essential to the

movement of goods. Despite arguments and debates, raw materials and finished products would not move to their designated markets without transportation. Therefore, transportation plays an important role in economic development.

In 1991, the United States Congress funded a grant to the Federal Highway Administration (FHWA) to explore transportation and infrastructure finance policy. The Hubert H. Humphrey Institute for Public Affairs of Minneapolis, Minnesota, was granted money by the FHWA to explore transportation and infrastructure finance policy in a multi-state region. The Humphrey Institute contracted with North Dakota State University's Upper Great Plains Transportation Institute, University of Minnesota's Center for Transportation Studies, University of Iowa's Public Policy Center, Montana State University's Local Government Center, and University of South Dakota's Governmental Research Bureau to become academic partners in the research study. Each academic partner's task was to determine the transportation and infrastructure needs as related to economic development within their state.

ORGANIZATION

First, the process the Upper Great Plains Transportation Institute used to identify the important transportation and infrastructure issues pertaining to economic development in North Dakota is explained. Second, the priority of important transportation and economic development issues and reasons officials and citizens of North Dakota selected these issues is given. Finally, the report concludes with the overall regional recommendations formed by the Humphrey Institute steering committee. These recommendations were developed to be heard before Congress in 1993.

PROCESS IN IDENTIFYING IMPORTANT TRANSPORTATION ISSUES

In the fall of 1991 the Upper Great Plains Transportation Institute (UGPTI) selected 12 people from state agencies, trade associations, and private industry to serve on a steering committee. The role of the steering committee was to help conceptualize and guide the identification and prioritization of state transportation and infrastructure issues relating to economic development. The steering committee members were selected because of their knowledge of transportation and their willingness to be involved in the policy setting process.

The UGPTI hosted three conferences in Bismarck throughout the spring and fall of 1992. The first conference was held on April 15, 1992. Seventy-six individuals attended the conference and were split into six focus groups. The focus groups categorized the participants according to their interests and expertise which included highway engineering, highway finance, aeronautics, agriculture, truck regulatory, and railroads. At the first conference, members of the six focus groups identified 49 important issues impacting transportation and North Dakota's economy. For example, the truck regulatory focus group identified the need to eliminate artificial barriers that restrict trade.

At the second conference, August 25, 1992, 75 participants identified an additional 19 transportation issues that impact North Dakota's economy. These 68 transportation issues facing North Dakota's economy provided the foundation for prioritizing transportation policy recommendations.

The third conference, held November 17, 1992, attracted 61 participants to discuss and prioritize the 68 transportation issues (more could be added). Each focus group selected their top five issues impacting North Dakota. In all, 29 issues were prioritized at the third conference.

Following the third conference, a questionnaire containing the 29 policy issues and reasons why they were important were mailed to everyone who participated in at least one of the conferences. One hundred twenty-four questionnaires were mailed and 73 were returned for a response rate of 58.9%. The responses were used as a consensus to rank each of the policy issues.

The highest ranked issues from each of the six focus groups were designated as North Dakota's final transportation policy and economic development recommendations.

PRIORITY OF IMPORTANT TRANSPORTATION POLICY

The following issues were selected and ranked by consultation participants as the transportation factors most important to North Dakota's economic development. North Dakota's policy recommendations, and the reasons for each, are presented below.

Highway Engineering

- **There is a need for interstate consistency in maximum load limits in order to provide adequate protection of the road and highway system.**

Different load limits exist in surrounding states and in Canada. The possible increase in traffic moving north and south, as a result of the North American Free Trade Agreement (NAFTA), could cause problems for the transportation system (Highways 85 and 83 are good examples). Many of our state highways were not designed to carry increased volumes of heavy loads. Uniform design standards would provide consistency in load carrying capacity from state to state and promote the infra- and interstate movement as well as international movement of goods and services.

- **There is a need to improve design standards (geometric designs, e.g., width of lanes) in an effort to reduce the cost of construction in all areas.**

Consistent geometric design standards would alleviate the need for funds to develop a specific design for each construction area. We need to look at the life cycle cost estimates in determining the most effective long-term design standards. There may be instances where the up-front costs may be more, but the long-term benefits would be cost-effective.

Highway Finance

- **Need for increased funding for all levels of government for matching federal aid and maintenance.**

The North Dakota Department of Transportation (NDDOT) will need about \$21 million in additional state funds to match additional federal aid and provide an adequate maintenance program during the next biennium. In addition, the DOT will have to pay back about \$12 million in federal funds that it borrowed to match federal-aid during fiscal years 1992 and 1993. The counties and cities

also received an increase in federal funding through the new highway bill and must match the available revenue. Because roadway construction needs at all levels of government are approximately double what can be taken care of with available construction dollars, *additional maintenance dollars are needed to hold together an aging infrastructure and cover accelerating costs.*

- **The Diversion of transportation funds must be eliminated.¹**

The diversion of transportation funds for other purposes has been occurring at the federal and state level. At the federal level, highway user fees have been used to help alleviate the federal deficit and subsidize the ethanol industry. Currently, 2.5 cents of the federal motor fuel tax goes towards deficit reduction. The new Intermodal Surface Transportation Efficiency Act (ISTEA) also allowed use of traditional highway construction funds for transportation enhancement improvements which are non-traditional highway construction activities. At the state level, during the 1991-93 biennium about \$18 million will go to fund the Highway Patrol and \$1.3 million to fund state radio.

Truck Regulatory

- **Eliminate artificial barriers that restrict trade.**

We need to promote economic efficiency in intra- and intermodal competition in an effort to create a more level playing field for industries located in the interior of the United States. This is critical in an era of development in a global economy. Artificial barriers that restrict motor carrier commerce militate against integrating the development of the regional economy into a global economic network.

- **Development of national standards to guide the development of technology.**

The use of national standards would enhance efficiency in the technological and regulatory environments in which Intelligent Vehicle Highway System (IVHS) and Commercial Vehicle Operations (CVO) users could operate under "seamless borders."

Aeronautics

- **Encourage regional air transportation and multi-modal planning.**

This would facilitate problem solving in an intermodal infrastructure. For example, North Dakota regional air carriers rely on Minneapolis as a hub and it would be beneficial for the regional carriers to be included in the planning process of Minneapolis' new or existing airport. Multi-modal accessibility is also a key item to consider in the development of airport facilities in the region.

¹ Diversion of funds is also a problem within the aeronautics industry.

- **Development of intra- and interstate air cargo and air passenger service is important to overcome isolation from economic growth.**

This is critical if the region's economic communities are to compete in the national-international economy by sustaining and enhancing business growth, medical services, shipment of commodities, and marketing of state value-added agricultural products (e.g., high quality processed beef).

Railroads

- **Need to promote the inherent advantages of all modes and to reflect the interrelationships among modes in transportation decisions.**

A multi-modal approach to transportation planning and operations would improve public investment and regulatory decisions. This is imperative in an era of a global economy that is dependent upon an efficient and cost-competitive transportation network.

- **Need to develop policies to promote adequate service and carrier viability.**

The public and private sectors need to work together to develop and promote policies in the global market place to be sure there are adequate transportation services and equipment available to sell agricultural products in the national markets.

Agricultural Transportation

- **International trading agreements will have an increasing impact on rural economies; effects on trading patterns need to be analyzed to determine appropriate policy decisions.**

We must recognize the role of transportation within the context of international trade because of its importance to competition. Transportation and economic policies must be developed and updated that take into consideration changes in world markets and that promote the efficient movement of commodities.

REGIONAL POLICY RECOMMENDATIONS

The Humphrey Institute steering committee condensed and integrated policy recommendations from five states into the following seven regional policy recommendations. Within the policy recommendations for Congress, a rationale, a model for implementing the policy, and action steps to implement the recommendations were given.²

- Improved efficiency and productivity should determine federal, state, and local governments' allocations of transportation resources.
- Federal, state, and local governments must analyze revenue transfers within transportation systems in order to make informed investment decisions.
- States should enact legislation to enable joint public and private investment in transportation infrastructure.
- Organize regional cooperative efforts in infrastructure planning investment to achieve the most efficient allocation and use of resources.
- Encourage uniformity of regulations and implement a national/international electronic data interchange system to allow transparent borders between states and nations.
- Consider intermodal and international effects in infrastructure planning and investment.
- Enhance emerging trade corridors between the United States, Canada, and Mexico by targeting infrastructure investment resources and removing unnecessary customs barriers.

² For a complete listing of the rationale, models, and action steps, see Hubert H. Humphrey Institute of Public Affairs. *Transportation and Economic Development in the Upper Midwest: New Models for Federal, State, and Local Cooperation in Infrastructure Investment* Minneapolis, Minnesota, 1993.

SUMMARY

Economic development occurs when there is an increase in real income within a state or community. However, the income should not have been diverted from another community. Transportation and infrastructure are important for economic development. Without transportation, inputs and outputs would not move to their designated markets.

The Hubert Humphrey Institute of Public Affairs received a grant from the Federal Highway Administration in 1991 to explore transportation and infrastructure finance policy in a multi-state region. The Humphrey Institute contracted with five state universities to become academic partners. North Dakota State University's Upper Great Plains Transportation Institute (UGPTI) became an academic partner in the fall of 1991. The task of UGPTI and the other academic partners was to determine the transportation and infrastructure needs as related to economic development within their state.

The Upper Great Plains Transportation Institute hosted three conferences to identify and prioritize North Dakota's transportation and infrastructure needs. Sixty-eight transportation and infrastructure issues facing North Dakota's economic development were identified. These issues were narrowed to 11 policy statement recommendations through a mail survey of conference participants.

Each of the five academic partners reported their findings in the form of policy statement recommendations. The Humphrey Institute steering committee worked to combine each state's recommendations into a consensus of multi-state recommendations for Congress.

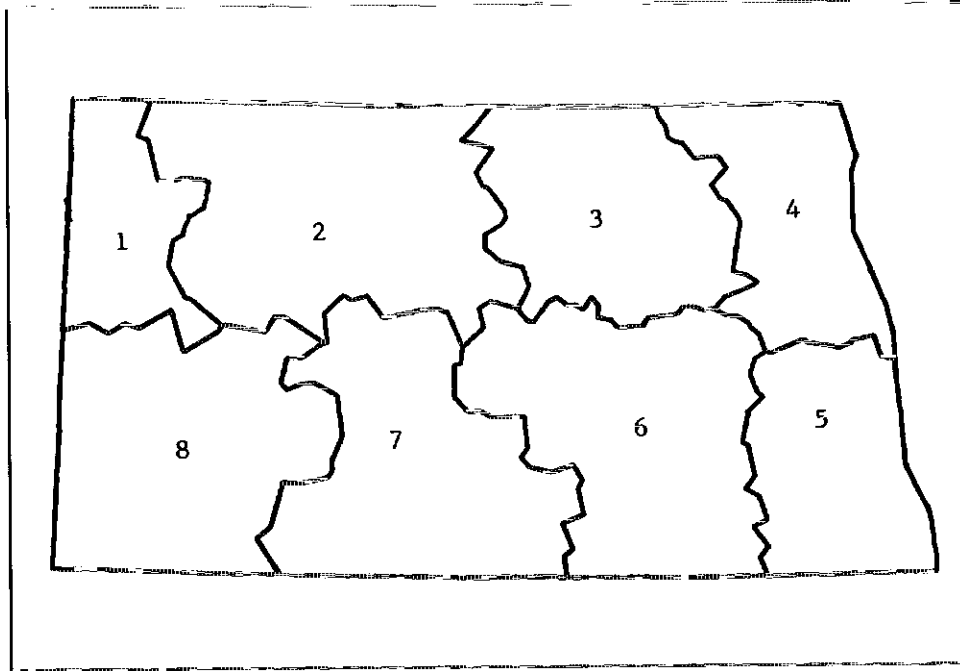
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APPENDIX A: MAIL SURVEY

**TRANSPORTATION POLICY:
OUR CHOICE FOR THE FUTURE**

WHICH REGION (1-8, OR 9 FOR OUT-OF-STATE) IS YOUR BUSINESS HEADQUARTERS LOCATED IN? (Refer to map below) _____



WHICH ONE OF THE FOLLOWING CATEGORIES BEST DESCRIBES YOUR INVOLVEMENT WITH TRANSPORTATION? (circle number)

- | | |
|-----------------------------------|----------------------------|
| 1. State/Federal Transp. Planning | 5. Academic |
| 2. Motor Carrier | 6. Economic or Development |
| 3. Railroad | 7. Policy or Legislative |
| 4. Aeronautics | 8. Agricultural |

WHICH CONFERENCE(S) DID YOU ATTEND IN THE LAST YEAR? (circle all that apply)

- | | |
|--------------|----------------|
| 1. April 14 | 3. November 17 |
| 2. August 25 | |

WHICH FOCUS GROUP WERE YOU IN FOR THE LAST CONFERENCE YOU

ATTENDED? (circle number)

- | | |
|------------------------|--------------------------------|
| 1. Railroads | 4. Agricultural Transportation |
| 2. Truck Regulatory | 5. Highway Finance |
| 3. Highway Engineering | 6. Aeronautics |

THE FOLLOWING TOPICS WERE SELECTED BY EACH FOCUS GROUP. PLEASE CIRCLE THE NUMBER (1-4) WHICH INDICATES HOW IMPORTANT THAT TOPIC IS TO YOU. (1=least important; 4 = most important)

	Importance of Topic			
	1=least	2	3	4=most
HIGHWAY FINANCE	1	2	3	4
<p>1. Need for increased funding for all levels of government for matching federal aid and maintenance. REASON: The NDDOT will need about \$21 million in additional state funds to match additional federal aid and provide an adequate maintenance program during the next biennium. In addition, the DOT will have to pay back about \$12 million in federal funds that it borrowed to match federal-aid during fiscal years 1992 and 1993. The counties and cities also received an increase in federal funding through the new highway bill and must match the available revenue. Because roadway construction needs at all levels of government are approximately double what can be taken care of with available construction dollars, additional maintenance dollars are needed to hold together an aging infrastructure and cover accelerating costs</p>	1	2	3	4
<p>2. Regulations imposed at the federal and state level that are not applicable / realistic or cost effective should be revised or eliminated. REASON: Although ISTEA provided flexibility in the use of federal highway dollars, there were many additional federal requirements that must be met. Many of the environmental, ADA, historical, archeological, and wetlands requirements have a major impact on the highway program. These regulations require additional staff, time, delay projects, and increase overall project costs.</p>	1	2	3	4

	1	2	3	4
<p>3. Diversion of transportation funds must be eliminated.</p> <p>REASON: The diversion of transportation funds for other purposes has been occurring at the federal and state level. At the federal level, highway user fees have been used to help alleviate the federal deficit and subsidize the ethanol industry. Currently, 2.5 cents of the federal motor fuel tax goes towards deficit reduction. The new ISTEA also allowed use of traditional highway construction funds for transportation enhancement improvements which are very non-traditional highway construction activities. At the state level, during the 1991-93 biennium, about \$18 million will go to fund the Highway Patrol and \$1.3 million to fund state radio.</p>				
	1	2	3	4
<p>4. Statewide intermodal plan should be developed in conjunction with local political subdivision to address transportation, economic, social needs in most efficient manner.</p> <p>REASON: The Intermodal Surface Transportation Act of 1991 (ISTEA) requires all states to develop a statewide intermodal transportation plan by January 1, 1995. There is a list of 20 factors that must be addressed in developing the plan. These factors take into consideration social, economic, and environmental impacts and require a great deal of public input in the planning and project selection process and encourages cooperation with the MPO's, cities, counties, and Indian Reservations.</p>				
	1	2	3	4
<p>5. Education and communication of transportation issues and needs must take place to create public awareness.</p> <p>REASON: If we are to implement the provisions of ISTEA and generate additional funds to match federal aid and maintain our system, a great deal of time and effort must be spent on educating the public on the need for additional revenue and the potential impacts if adequate funding is not provided. This should be an on-going process to promote public awareness.</p>				

AGRICULTURAL TRANSPORTATION				
	1	2	3	4
<p>6. International trading agreements will have an increasing impact on rural economies; effects on trading patterns needs to be analyzed to determine appropriate policy decisions.</p> <p>REASON: Must recognize the role of transportation within the context of international trade because of its importance to competition. NAFTA may not be 'free' trade because of transportation subsidies. We should seek the North American Fair Trade Act.</p>				
	1	2	3	4
<p>7. Assessment of transportation needs required in rural communities.</p> <p>REASON: We must understand demographic trends in rural America as well as trends in business development so as to plan a transportation system that efficiently meets these needs. In prioritizing transportation needs, it is also important to consider qualitative aspects (e.g., medical service, fire response time, etc.).</p>				
	1	2	3	4
<p>8. Increase funding for federal and secondary roads to maintain infrastructure.</p> <p>REASON: The secondary roads are now handling traffic beyond its design capabilities. Funding is required to upgrade the roads to accommodate the equipment in place.</p>				
	1	2	3	4
<p>9. Rail pricing and equipment issues are critical to rural communities.</p> <p>REASON: Some argue that the railroads should be re-regulated because they take unfair advantage of captive grain shippers. Others are concerned about the equitable relationship between singles and multiple care rates. Still others argue we must allow for a rail system that is efficient.</p>				
	1	2	3	4
<p>10. Standardized regulations are needed.</p> <p>REASON: Concur with Duane Cossette's comments, unnecessary regulations increase costs and reduce efficiencies and make ND based ag firms (and trucking firms) less competitive. Streamlined regulations would also speed up shipments which is important for just-in-time processing.</p>				

RAILROADS				
	1	2	3	4
<p>11. Need to promote carrier viability. REASON: Given the regulatory environment and funding realities, carrier profit levels will, in part, dictate the level of system maintenance and line retention within our national and state rail system - main lines & branch lines. Adequate transportation services are absolutely vital if ND is going to sell its agricultural production into national and world markets.</p>				
	1	2	3	4
<p>12. Need to promote the inherent advantages of all modes and to reflect the interrelationships among modes in transportation decisions. REASON: To improve public investment and regulatory decisions. To improve the efficiency; and cost-effectiveness of the transportation network.</p>				
	1	2	3	4
<p>13. Ensure adequate service - equipment supply issues and the equitable distribution of can when demand is high. REASON: ND needs equipment to allow its farmers and businesses to sell grain when demand (and prices) are strong.</p>				
	1	2	3	4
<p>14. Collect, analyze, & disseminate market information to influence carrier decisions, promote competition, and protect the public interest. REASON: Promote rational decisions on the part of shippers, carriers, government, and the public.</p>				
	1	2	3	4
<p>15. Build a public / private partnership to encourage all of the above.</p>				
TRUCK REGULATORY				
	1	2	3	4
<p>16. Eliminate artificial barriers that restrict trade. REASON: We need to eliminate the competitive disadvantage of ND carriers while promoting productivity and efficiency (while) promoting economic development in a global environment.</p>				

	1	2	3	4
17. Efficient collection and use of public funds with the focus being to offset increased costs with offsetting productivity gains. REASON: Assure total collection of funds through colored fuels or adoption of electronic vehicle identification.				
	1	2	3	4
18. Assure regulation promotes education and training. REASON: Utilize the resources at Dickinson State to participate in the development of national training standards and target development of a career path for persons leaving high school.				
	1	2	3	4
19. Explore the development of IVHS to promote efficiency, reduce administrative costs and assure better collection of funds.				
	1	2	3	4
20. Development of national standards to guide the development of technology.				
AERONAUTICS				
	1	2	3	4
21. Development of intra and interstate air cargo and air passenger service. REASON: This is critical for the regions economic community to compete in the national-international economy.				
	1	2	3	4
22. Encourage regional air transportation and multi-modal planning. REASON: This would facilitate problem solving in intermodal infrastructure.				
	1	2	3	4
23. Prevent diversion of trust fund monies to nontransportation uses.				
	1	2	3	4
24. Educational effort to explain meaning of ISTEA Legislation. REASON: Utilization of technology available provided by university research efforts.				

HIGHWAY ENGINEERING				
	1	2	3	4
25. Eliminating liability problems to protect against lawsuits resulting from design changes.				
	1	2	3	4
26. Improving consistency in design standards in an effort to reduce the cost of construction in all areas.				
	1	2	3	4
27. Expanded research to reduce the present and future expense of road systems. Improved pavement management and better management of county systems new product development.				
REASON: These and more are needed to get the best long-term use for our dollar. It sometimes pays to spend a little extra now to save in the future.				
	1	2	3	4
28. Consistency in road classification all across the state regardless if it is federal, state, county, or township.				
	1	2	3	4
29. Interstate consistency in load limits at maximums which provide adequate protection of the road and highway system.				
REASON: Considering NAFTA, with different load limits in surrounding states and Canada, the possible increase in traffic moving north and south could cause design problems for system (Highways 85 and 83 are good examples).				