This is an uncorrected draft as submitted by the contractor. The opinions and conclusions expressed or implied herein are those of the contractor. They are not necessarily those of the Transportation Research Board, the Academies, or the program sponsors.

Theme #15: Funding, Policy and Economy

Crisis Management

- 1. Document funding and strategies for past transportation crisis management.
- 2. Identify barriers to expanded use of the FM Radio Data System (RDS) to disseminate rural traffic and emergency management information through text messages visible on nearly all existing automobile radios. (RDS is currently used mainly for station identification and song titles, but also supports traffic incident reports).

Economic Impact/Performance Metrics

- 1. Develop trade-off analysis guidance to support computation of return-on-investment for all modes, facilitate prioritization of transportation investments within and across modes, quantify the broader economic benefits of transportation investments, and help assure that transportation expenditures support overall economic and social wellbeing. (Trade-off analysis: a multi-modal guide for rural transportation investment analysis RNS4).
- 2. Identify strategies for actions to take if a return on investment evaluation yields an answer that indicates a negative ROI.
- 3. Identify performance measures and performance management tools tailored to evaluation of rural transportation.
- 4. Develop a practitioner-oriented meta-analysis of the documented economic benefits and disbenefits of infrastructure improvements across multiple modes: what types of transportation investments have the greatest impact on economic growth, and what can adversely impact rural economies by making it cheaper to bring in products made elsewhere?
- 5. Develop case examples and guidance to assist agencies in evaluating the resilience and sustainability of transportation investments intended to address economic development objectives.
- 6. Evaluate the cumulative effects of rural transportation investment (RNS6).
- 7. Assess the relationship between access to global markets in rural areas and socioeconomic outcomes.
- 8. Identify rational approaches for determining when the supply of rural transportation is adequate and when the provision of additional infrastructure and services can foster economic development.
- 9. Develop a meta-analysis of the economic literature to help transportation practitioners understand the role of transportation in industrial location decisions and the transportation assets that are of interest to specific industries
- 10. Identify accessibility barriers for businesses to start, expand, and succeed in rural areas and best practices to overcome those barriers.

- 11. Identify transportation impacts of changing economic and social conditions in rural communities and innovative methods for responding to these changes.
- 12. Analyze impact of rural economic development on rural transportation funding.
- 13. Identify methods for making rural transportation systems more of an economic engine.
- 14. Identify sustainable rural economic development models that reduce dependency on long-distance travel for employment, goods and services while supporting quality-of-life in rural communities.
- 15. Identify the impact of MAP-21 performance measurement rulemaking and recent growth in return-on-investment-driven decision making on funding distribution and investment outcomes between urban and rural areas.
- 16. Review existing methods used to select transportation capital improvement projects. Identify methods for making selection process more objective to minimize urban/rural and highway/non-highway biases.
- 17. Quantify current economic and social risks to rural communities in the event of a prolonged rise in petroleum prices, in relation to levels of dependence on personal motor vehicles and truck freight.
- 18. Apply the return on investment methodology (previously utilized for active transportation analysis) to infrastructure, partnerships, and Medicaid population access.
- 19. Update the 2005 cost benefit analysis for non-emergency medical transportation (NEMT) and include case studies.
- 20. Analyze cost for accessing medical care.
- 21. Analyze the economic impact of having rural transit versus not having transit.
- 22. Identify strategies to address socioeconomic factors that contribute to crashes, such as increased travel by high-risk drivers during periods of economic prosperity.
- 23. Evaluate the economic benefits of maintaining existing transportation infrastructure and relationships between the quality of maintenance and community wellbeing.

Freight

- 1. Identify guidance for officials on public investment strategies for freight.
- 2. Evaluate the feasibility of public/private, state/federal collective funding and financing of lock and dam infrastructure on inland waterways

Frontier and Remote Areas

- 1. Document the unique transportation needs and challenges of Alaska Native villages.
- 2. Document the unique transportation needs and challenges of the U.S. Pacific Ocean territories (American Samoa, Guam, and the Northern Mariana Islands).
- 3. Develop a forum for collaboration on ground transportation issues relevant to the arctic region.

General Funding

1. Identify rural transportation funding strategies including non-tax methods for funding infrastructure and programs; analyze the sustainability and equity of these approaches.

Page 2 | 7

- Document flexible funding programs for rural investment and identify innovative value capture opportunities, that allow communities to do things that bring in money where "cash" doesn't exist.
- 3. Develop techniques for balancing investments to maximize overall community benefits.
- 4. Evaluate why individuals do or do not support transportation investments and strategies for messages to help change their mind either way.
- 5. Develop case examples documenting strategies for addressing resistance to expanded use of local revenue sources (such as local option taxes) to support rural transportation.
- 6. Analyze changes in traditional travel patterns and their effect on funding and infrastructure.
- 7. Compare growth/decline in rural transportation funding levels with corresponding changes in rural transportation needs.
- 8. Identify the long-term effects of rural highway jurisdictional transfers from state to local agencies (also called "turnbacks") on the local agencies' ability to maintain and operate the rest of their transportation system.
- 9. Evaluate the impact of transportation infrastructure on community income, performance, and social inclusion.
- 10. Identify public policy benefits and disbenefits of shifting more revenue into investments in active transportation.
- 11. Identify approaches for funding the development and maintenance of transportation safety databases
- 12. Document noteworthy state practices in administering federally funded local road projects.
- 13. Analyze transportation for persistent poverty communities and evaluate the effect of household poverty level on transportation access.
- 14. Apply a rural community typology and document the unique transportation needs and challenges for each grouping.
- 15. Develop transition guidance for communities that are being reclassified from "rural" to "urban" as a result of census boundary changes (RNS14).
- 16. Assess the impact of Census Bureau sampling techniques on data used for rural transportation funding allocations and decision-making.
- 17. Develop educational materials that inform rural residents and local elected officials about how transportation projects and services are funded, including the interactions between federal, state, county, and local government.
- 18. Summarize and compare methods that are being used to incentivize safety analysis and countermeasure development for rural roads under local jurisdiction.
- 19. Identify consequences of discontinuing funding eligibility for non-infrastructure Safe Routes to Schools projects.
- 20. Identify how to correctly interpret sponsored trip regulations for operational funding.
- 21. Document the basic data needed for rural areas to apply for funding.

General Policy

- 1. Analyze the interaction of federal, state, and local transportation policies and develop recommendations for aligning funding and other resources to assure the health, safety, and overall wellbeing of the rural population.
- 2. Develop case examples of transportation investments that resulted in more meaningful social interactions between urban and rural communities, or helped overcome barriers to social integration.
- 3. Identify rural land use patterns that minimize the need for motorized transportation and identify policies that would support the re-emergence of communities where nearly all everyday needs can be met locally.
- 4. Identify the appropriate roles of transportation agencies in broader community development efforts, such as road-building as an element of overall community-building. Develop case examples of projects that link transportation investments with investments in other sectors to support the economic and social wellbeing of rural communities. Identify supporting strategies, such as expanded use of context-sensitive design and community visioning to replace deficit-based methods of selecting transportation projects.
- 5. Compare the institutional structures for rural transportation in various states and regions. Identify opportunities to deliver rural transportation infrastructure and services more efficiently/effectively by reducing unnecessary redundancies.
- 6. Evaluate the concept of merging small communities in areas that are losing population to reduce the cost of maintaining transportation infrastructure and other local services.
- 7. Identify a new economic development approach to transportation for the future based on changing trends.
- 8. Review programs aimed at repopulating and attracting highly-skilled people to rural areas, such as Canada's Rural & Northern Immigration Programme and Australia's Regional Sponsored Migration Scheme. Identify whether these strategies are transferrable to U.S. rural communities and their potential effects on demand for transportation infrastructure and services.
- 9. Review the effect of national immigration policies on rural transit ridership.
- 10. Identify strategies to empower the decision-makers for rural transportation.
- 11. Conduct a comprehensive policy review for Federal funding of rural public transportation (transit and paratransit).
- 12. Conduct a comprehensive review of state and federal policies for funding medical transportation.
- 13. Assess the effects of focusing transportation infrastructure investments mainly on the National Highway System.
- 14. Evaluate the impact of changing funding allocations on rural transportation.
- 15. Review state rail bank programs and identify the extent to which they are successful in preserving abandoned corridors to support non-motorized transportation and current or future community redevelopment.
- 16. Document the effects of public transportation service levels (or lack of service) on income inequality and poverty perpetuation in the rural United States. Assess the link between rural

- accessibility barriers and socioeconomic outcomes, such as the implications of limited access to education, jobs, and medical services for non-drivers.
- 17. Comprehensively study vehicle availability trends in rural areas.
- 18. Evaluate culturally how to approach transportation funding in the future based on changing trends.
- 19. Review the effectiveness of local government and tribal government participation in state and federal rulemaking affecting local transportation systems.
- 20. Develop guidance on methods for converting high-level safety performance goals into programmatic criteria (e.g., safety funding levels) and project-level actions.
- 21. Develop guidance on the application of mobility metrics for rural areas and identify data and methods practitioners can use to measure accessibility in their state/community.
- 22. Develop methods for analyzing and optimizing the extent and quality of modal interconnectivity for rural passenger and freight systems.
- 23. Develop a meta-analysis summarizing the results of studies that have evaluated the effect of restricting cell phone use while driving, such as hands-free only laws.
- 24. Identify best practices for determining population characteristics in rural areas for the purposes of community impact assessments and improving public involvement processes.
- 25. Develop an enhanced urban/rural classification system that can be used in conjunction with U.S. Census geography.
- 26. Conduct an overall assessment of the state of rural transportation planning in the U.S. (including transit planning): shortfalls, best practices, opportunities, benefits observed in areas with greater planning capacity and organization.
- 27. Identify factors of success for rural planning organizations, such as their working relationships with one another and with metropolitan planning organizations and state transportation agencies.
- 28. Identify minimum threshold of planning efforts needed to adequately assess and address unmet transportation needs in rural areas.

Infrastructure

- 1. Compare per-capita and per-lane-mile revenue and expenditures for transportation infrastructure in urban and rural areas.
- 2. Identify innovative infrastructure financing strategies that can succeed in rural areas.
- 3. Document techniques for communicating benefits of resilient infrastructure investments to local officials.
- 4. Analyze the impacts of infrastructure investment programs.
- 5. Document objective methods for sharing costs of infrastructure projects that overlap jurisdictions, including roads serving state parks and other public lands.

Maintenance

- 1. Identify strategies for funding a backlog of maintenance projects.
- 2. Document advantages and disadvantages of consolidated, multi-jurisdictional maintenance departments and other shared service-delivery models.

3. Identify emerging automation technologies that can support road maintenance and postdisaster recovery

Matching Funds

- 1. Document strategies that states and localities have used to address matching funds requirements for roadway projects.
- 2. Analyze Federal Transit Administration matching funds requirements for rural transit systems, document utilization of in-kind services and other "soft match" and analyze social and economic effects of current cost-share policies.
- 3. Develop case examples of the impacts to citizens and businesses when a local government fails to secure matching funds.
- 4. Assess the feasibility and impacts of a reduction or suspension of local matching funds requirements for Federal Transit Administration projects in economically distressed rural communities.

Transit/Intercity Bus

- 1. Evaluate innovative revenue sources for rural transit systems (RNS12).
- 2. Identify techniques for a higher level of financial accountability and reporting compliance for rural public transportation systems.
- 3. Review the effects of service area characteristics on transit system productivity, financial performance, and subsidy requirements
- 4. Evaluate overlaps between rural transit and paratransit services and identify opportunities to improve efficiency and customer service.
- 5. Identify unmet mobility needs or offer methodology for practitioners to measure unmet needs in their state/community where are there high rates of vehicle unavailability without corresponding alternate mode choices?
- 6. Create tool for converting transit system costs into costs per passenger-mile for rural mobility services.
- 7. Adjust the transit investment value and cost benefit analysis framework for rural outcomes.
- 8. Identify the impact of decline in overall non-urbanized population on transit funding.
- 9. Analyze the funding impacts resulting from rural areas shifting into urbanized areas after the 2010 Census and the potential effects of the 2020 Census.
- 10. Identify strategies to ameliorate rural transit funding inequities.
- 11. Identify the implications of converting existing FTA operating and capital funding programs to a block grant approach for rural systems.
- 12. Analyze effects of transit and intercity bus services on rural economic development.
- 13. Explore the cost-efficiency and cost-effectiveness for rural transit service provision.
- 14. Identify best practices and strategies for transit contracts with rural healthcare facilities.
- 15. Evaluate the efficiency/effectiveness of the Federal Transit Administration 5310/5311 program and the impacts of the 5310 program mandated changes.
- 16. Update the state-by-state Medicaid/Medicare reimbursement study.

- 17. Update TCRP 79 and NCHRP RRD 356 to document what states are doing with FTA section 5311 funding.
- 18. Review the relationship of FTA Urbanized/Non-Urbanized designations to various rural community types.

Tribal

- 1. Identify the effects of urbanization on rural tribal funding when not self-sufficient.
- 2. Analyze multi-jurisdictional issues in tribal funding.
- 3. Analyze and document tribal funding formulas.
- 4. Identify best practices for the coordination of state, local, and tribal transportation agencies when Road Safety Audits are conducted on or near jurisdictional boundaries.