

Semi-Annual Progress Report for University Transportation Centers

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Small Urban, Rural and Tribal Center on Mobility (SURTCOM)

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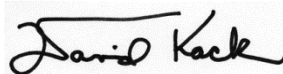
Recipient Organization: Montana State University
Bozeman, MT 59717

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Signature:



1. Accomplishments

What are the major goals and objectives of the program?

The mission of the Small Urban, Rural and Tribal Center on Mobility (SURTCOM) is to conduct research and provide leadership, education, workforce development, and technology transfer in all transportation-related aspects of mobility for people and goods, focusing specifically on small urban, rural and tribal areas. The Western Transportation Institute (WTI) at Montana State University (MSU) is the lead institution, with consortium members including Eastern Washington University (EWU) and the Small Urban and Rural Center on Mobility (SURCOM) at North Dakota State University (NDSU).

What was accomplished under these goals?

From October 2023 through March 2024:

- WTI/MSU continues providing technical assistance to rural and tribal communities who want to increase biking and walking in their towns. The *Building Active Communities Technical Support* project identifies changes in infrastructure that can increase the number of people using active modes of transportation. WTI/MSU staff have conducted pop-up traffic calming projects in Big Sky and Hamilton, Montana. Staff also continue to help with Safe Routes to School efforts in Montana, and during the October–December timeframe, multiple walking school buses (walk to school events) were held with the Hyalite and Meadowlark Elementary Schools in Bozeman (MT) and a Bike Rodeo was held on October 10 with the Emily Dickinson Elementary School.
- Work continues with Transportation Demand Management (TDM) efforts in the greater Bozeman (Montana) area. WTI/MSU had assisted Gallatin County and the City of Bozeman with TDM efforts under the previous SURLC UTC and is continuing the work through SURTCOM. This past winter, the community of Big Sky (Montana) and major employers in that area significantly increased their promotion of Go Gallatin’s TDM resources with their “One Less Car Big Sky” promotion. WTI staff are working with MSU students and City staff to plan a new traffic calming project that will be implemented in April 2024.
- WTI/MSU completed the research project *Implication of School Format on Women in STEM* documenting the importance of K–12 school format (e.g., online, hybrid, in-person, “pandemic pod”) for women in science, technology, engineering, and mathematics (STEM) who have children in kindergarten through 12th grade. Three separate surveys were administered to women in STEM-related jobs at three discrete periods of time to capture the impact that changes in K–12 school format had on their work and family lives. The final report is available [here](#) and a presentation on this work was recently accepted for the 2024 Women and Gender in Transportation Conference to be held September 9–11 in Irvine, California.
- WTI/MSU completed work on the *Montana MPO Travel Survey Analysis* project. The purpose of this study was to provide additional information and greater understanding of transportation planning and travel behavior in the areas served by the Billings-

Yellowstone County Metropolitan Planning Organization and the Missoula Area Metropolitan Planning Organization, two of the three metropolitan areas in Montana. The report for this project is available [here](#).

- WTI/MSU staff completed their work with the University of Florida on NCHRP 08-135, *Reliability and Quality of Service Evaluation Methods for Rural Highways*. The objectives of this research were to: 1) develop reliability and quality of service predictive methodologies for rural road facilities to account for the new context and functional classifications of the Green Book, and 2) develop a guidebook on application of the methodologies for a broad range of users. The information was incorporated into the Green Book, and the Guidebook, which will be an online document from the National Academies Press, should be published soon.
- WTI's Community-Engaged and Transformational Scholarship (CATS) program facilitates course-based student projects determined by community-driven needs. For academic year 2023–2024, CATS partnered with both the City of Bozeman and the HRDC, a local non-profit present in multiple Montana communities, which provides a wide range of services that address community needs such as housing, food and nutrition, childcare, and transportation. Over the reporting period, undergraduate and graduate students worked with community partners to address historic preservation, bicyclist and pedestrian safety, and to design and install traffic calming projects.
- WTI continued working with the National Association of Development Organizations (NADO) on technical assistance projects funded through the U.S. Department of Agriculture (USDA). On-going projects are currently located in communities in Southcentral Florida, Northern New Hampshire, Northwestern California (both the Humboldt County Association of Governments and the Wiyot Tribe), White Earth Indian Reservation in Minnesota, and the Yankton Sioux Tribe in South Dakota.
- WTI finalized the report for the project *In Search of Simultaneous Benefits of Infrastructure Provisions on Freight & Bicycle Movements*. The purpose of this project was to research rural roadway measures (e.g., wider shoulders, separated facilities) that could increase freight efficiency and safety (e.g., reduce run-off-the-road incidents) while offering bicyclists simultaneous benefits (e.g., reduced traffic-related injuries and fatalities, reduced particulate matter inhalation). The report for the project is available [here](#).
- WTI/MSU completed the project *Technical Support to Increase Safety for People Walking and Biking in Big Sky*, which helped the Big Sky Community Organization determine what changes may be needed to improve the safety of those walking and biking in the Town Center area of Big Sky. The report for the project may be found [here](#) and a Pop Up Traffic Calming Toolkit created for the Big Sky community is available [here](#).
- WTI/MSU continued work on the project *Network Screening on Low-Volume Roads: Empirical Validation of a New Proposed Methodology*. The objective is to validate the newly proposed low-volume roads network screening methodology using extensive field

data to assess the effectiveness of the proposed method and its suitability for implementation in Montana and the northwest region.

- WTI/MSU continues work on two projects related to animal-vehicle collisions, a major safety concern in Montana and other states. One is *Identification and Prioritization of Road Sections with a Relatively High Concentration of Large Wild Mammal-Vehicle Collisions in Gallatin County Montana* and the other has to do with supporting the ROaDS (Roadkill Observation and Data System) Partnership, which is used to collect data to identify where animal-vehicle collisions are occurring. A small project (under \$25,000) *Electrified Barriers Installed on Top of Wildlife Guards to Help Keep Large Wild Mammals Out of a Fenced Road Corridor* was also completed, and that report is [here](#).
- Working with Battelle, staff from WTI/MSU completed work on the *Traffic Incident Management (TIM) Strategies for Rural Environments* project. The objectives of this FHWA research project were to identify the unique challenges, good practices, and opportunities necessary to help rural responders and motorists improve safety and incident mitigation of rural roadways. The final report is still being reviewed by FHWA, but a Fact Sheet about TIM for the rural environment is available [here](#).
- WTI/MSU, EWU and SURCOM/NDSU are all working as a team (with the KFH Group as the lead) on the NCHRP 08-147/TCRP B-49 project, *Improving Public Transportation in Rural Areas and Tribal Communities*. The output of this project will be a guidebook designed to assist those operating and managing public transportation (transit) systems in rural areas and in tribal communities.
- Work continued on the EWU project, *The Status and Issues for American Indian Transit in the West*. Beginning with a 2012 report, the EWU team has sought to conduct a “state of tribal transit” update, including the identification of critical issues and an assessment of western tribes in relation to transit.
- *The Impact of the Automobile on American Indian Reservations*, an EWU project, saw further progress. This report will assess the culture, use, and impact of the automobile on land use and reservation design, which will inform efforts to address unmet transportation needs.
- *Mobility on American Indian Reservations: A Tribal Context for Transportation*, an EWU project, continued its progress. This project will provide a perspective on mobility, including historic change from successful tribal-specific cultures pre-contact to contemporary mobility related to American Indian reservations to other emerging transportation and key issues. An important component of this work is to understand the dynamics of mobility, particularly within tribal and community cultures, access, needs, and issues.
- EWU staff continued work on *Best Cases for Tribal Transportation Safety: Media, Planning and Action*. These small research projects are underway to support tribes as they determine how to safely provide mobility and raise awareness of the importance of mobility.

- *Tribal-State Relations in Transportation: A Western States Analysis, Part 1: Evidence from Nine States* and *Part 2: Jurisdiction Overlaps* are two parts of a new project started by the EWU staff that will analyze how well states (and their departments of transportation) recognize the sovereignty of Tribal Governments, and how well these agencies work with the tribes to address their transportation needs. A survey related to the first part of the project is underway with tribes in the western United States to provide a quantitative approach/framework. The COVID-19 pandemic has delayed the survey analysis longer than expected, but it is currently being finalized.
- EWU staff continued work on the project *Data Driven Planning and Tribal Implementation for Tribal Safety on Reservations*. This project will analyze how Washington State traffic safety programs may empower tribal programs and implement a culture of safety.
- EWU staff continued work on the project *The Relationship between Reservation Geography & Jurisdiction Overlaps* to highlight why jurisdiction matters to Indian Country. This project attempts to correlate the effects of jurisdictional overlap with federally recognized continental American Indian Reservations and Tribal Lands through examination of how they are divided across states, counties, school districts, and congressional districts. This is accomplished primarily through GIS. Staff are investigating instances of these jurisdictional overlaps with the 397 census-identified continental reservations and tribal areas.
- The EWU team is working on several additional research reports, including *Dangers Related to Mobility for Tribal Women (MMIW)*; *Human Trafficking as Related to Transportation*; *Effects of Climate Change on Tribal Mobility for Land & Water Based Tribes: Sustainability, Resiliency, & Mobilizing for Climate Change*; and an *Environmental Review on Colville Confederated Tribes Roads Damage Due to Climate Change: A Preventative Measures and Cost Analysis Report*.
- SURCOM/NDSU completed the project *Utilizing Public Transportation to End Food Insecurity in the Rural and Small Urban Areas by Providing Better Access: A Case Study of Rural Counties in North Dakota*. This study included maps of all the grocery, convenience stores, and food pantries within each county as well as the transit service available to access the stores. The final report is available [here](#).
- SURCOM/NDSU has completed the study, *Impacts of Transit on Health in Rural and Small Urban Areas* and the final report for the project is located [here](#).
- SURCOM/NDSU completed the project *Interest in Shared-Use Mobility Services in Tribal Communities* and the project's final report is available [here](#).
- SURCOM/NDSU published two papers related to the research project *Designing an Electric Transit Bus Network*, which are noted in the **Publications** section of this report.

What opportunities for training and professional development has the program provided?

The program has provided opportunities for training and professional development through funding for staff to attend conferences and meetings such as the TRB Annual meeting, the

American Public Health Association Meeting, and other conferences and training opportunities (including webinars and online trainings).

How have the results been disseminated? If so, in what ways?

Research results have been disseminated through the presentations and publications noted herein, the SURTCOM website, and the websites of the SURTCOM partners (EWU & NDSU). In addition, videos were created for all the SURTCOM/NDSU reports published in 2020 and later, and are available on the SURTCOM website and on the Upper Great Plains Transportation Institute's [YouTube channel](#). WTI/MSU also highlights many project results in its e-newsletter, and on its Facebook and LinkedIn pages.

What do you plan to do during the next reporting period to accomplish the goals and objectives?

- On-going projects will be concluded, as April begins the final six months of operations for SURTCOM.
- Dissemination of research results will continue to occur through national conferences and webinars.

2. Participants & Collaborating Organizations

What organizations have been involved as partners?

- Eastern Washington University and North Dakota State University are partners/collaborators in SURTCOM.
- MSU/WTI, SURTCOM lead, is working with the National Association of Development Organizations (NADO) on mobility/transit projects that incorporate seven communities/areas, which are fully funded by NADO (through a grant from USDA).
- WTI/MSU completed a project with Idaho Transportation Department (ITD) to implement or modify public transportation in two Idaho communities.
- WTI/MSU is collaborating with multiple communities in Montana on pop-up traffic calming projects. In addition, WTI/MSU is working with multiple departments within the City of Bozeman (MT) on pop-up projects, as well as the City's Transportation Demand Management (TDM) efforts.
- The Washington State DOT (WSDOT) has worked with EWU for several years and continues that collaboration.
- Additional EWU partners include the Affiliated Tribes of Northwest Indians (ATNI), numerous individual tribes, the Bureau of Indian Affairs (BIA), and the Federal Highway Administration (FHWA).
- The Montana Department of Transportation (MDT) is working on four projects with the SURTCOM lead, WTI/MSU.
- SURTCOM/NDSU works with the National Transit Institute (NTI) and National Rural Transit Assistance Program (National RTAP) on various projects.

- SURCOM/NDSU worked with the North Dakota Department of Transportation (NDDOT) to look at North Dakota mobility services and transit systems and how well they serve the needs of North Dakota residents. The report for that project is noted herein.
- SURCOM/NDSU worked with the Minnesota Department of Transportation (MnDOT) to conduct a study on roundabouts. The report for that project was noted in a previous semi-annual progress report.
- WTI/MSU works with FHWA, as WTI continues to lead the operations of the National Center for Rural Road Safety (also known as the “Rural Safety Center”).
- SURCOM/NDSU (Jill Hough) serves as the University Liaison for the American Public Transportation Association’s Research and Technology Committee. Monthly leadership meetings are held.

Have other collaborators or contacts been involved?

SURTCOM’s Advisory Board consists of one representative (each) from the Montana, North Dakota, and Washington (state) DOTs, three tribal representatives, and one person from NADO. The Board receives SAPR reports and is encouraged to submit topics/issues for potential research projects. Further, staff from SURTCOM organizations attend meetings of relevant TRB Committees and other organizations (such as ATNI) where issues/topics are discussed, and potential projects identified.

3. Outputs

Publications, conference papers, and presentations

Publications

Hill, M., Tate, L., Carvalho, N., Lyles, W. and White, S. (2023) Confronting Anxiety and Uncertainty in Planning: New Insights for Advancing Justice, *Planning Theory & Practice*, DOI: [10.1080/14649357.2023.2256178](https://doi.org/10.1080/14649357.2023.2256178)

Momenitabar, M., Dehdari Ebrahimi, Z., Mattson, J. (2023). Queueing-based formulation model in a public transit network considering energy storage technology and demand charges. *Journal of Energy Storage*, 64(107212). <https://doi.org/10.1016/j.est.2023.107212>.

Momenitabar, M., Dehdari Ebrahimi, Z., Mattson, J., Hough, J. (2023). Designing an Electric Transit Route Network Utilizing Energy Storage Technology to Mitigate Annual Demand Charge. *Transportation Research Record*, 2677(8), 158-174. <https://doi.org/10.1177/03611981231155904>.

Hill, M., Tovey, J.D. “Complexities of Tribal Planning Jurisdiction,” *Zoning Practice*, American Planning Association (November 2023 issue). <https://www.planning.org/zoningpractice/>

Villwock-Witte, N., Clouser, K., Fay, L., May, D., Hetherington, N., Johnson, L., and J. Sullivan. (December 2023). “Improving Traffic Safety Culture Using a Novel Dissemination Method,” *ITE Journal*.

Clouser, K., Allphin, B., Kissel, C., and N. Villwock-Witte. (February 2024). "Rural Vanpools: Lessons Learned and Their Importance to Rural Employment and Mobility," *ITE Journal*.

Villwock-Witte, N. (March 14, 2024). "Characteristics and Reported Bicycle & Pedestrian Infrastructure for Communities of Less Than 10,000 People in Maine, Minnesota, & New Hampshire," *Case Studies on Transport Policy*.

Huda, K. T., and Al-Kaisy, A. (2024) "Network Screening on Low-Volume Roads using Risk Factors," *Journal of Future Transportation*, Basel, Switzerland, 4(1), 257-269.
<https://doi.org/10.3390/futuretransp4010013> .

Al-Kaisy, A. and Doruk, D. (2024) "Approach Saturation Headways at All-Way Stop Control Intersections: Empirical Investigation," *Journal of Advanced Transportation Studies*, in press.

Dhaka, B. and Al-Kaisy, A. (2024) "A New Approach for Identifying Safety Improvement Sites on Rural Highways: Validation Study," *Applied Sciences*, MDPI Publishing, 14(4), 1413.
<https://doi.org/10.3390/app14041413>.

Conference Papers

- None at this time.

Policy Papers

- None at this time.

Presentations

October 3, 2023. Margo Hill (EWU) attended a meeting (as a member) of the U.S. DOT Advisory Committee on Human Trafficking & Awareness, Washington, D.C.

October 4-6. Margo Hill (EWU) presented the Keynote Address *Understanding Tribal Sovereignty and Collaboration with Tribal Governments* at the 2023 Michigan Association of Planning's Annual Conference, Acme, MI.

October 16-18. Natalie Villwock-Witte (WTI/MSU) presented *Effectiveness of Highway Public Safety Education in Montana* at the AASHTO Safety Summit, Kansas City, MO.

November 1. Margo Hill (EWU) gave an online presentation *Federal Indian History & Law* to the National Defense University during Native American Heritage Month.

November 2. Margo Hill (EWU) presented *Missing and Murdered indigenous Women: Human Trafficking & Transportation* at the 2023 Annual Summit of the Washington State Missing and Murdered Indigenous Women and People Task Force, Airway Heights, WA.

November 8 & 9. Matt Madsen (WTI/MSU) provided a two-hour training each day focused on *Building Livable Communities*. There were 30 community members at each training held in Bozeman, MT.

November 12 & 13. Jennifer MacFarlane (WTI/MSU) presented *An Audit of Health-Related Performance Metrics in Montana Counties' Transportation Plans* and Matt Madsen (WTI/MSU) presented *Health in All Policies – the Gallatin Valley Building Livable Communities Project* at the American Public Health Association Meeting in Atlanta, GA.

November 15. Margo Hill (EWU) made an online presentation titled *Missing and Murdered Indigenous Women: Human Trafficking & Transportation* to the American Automobile Association (AAA) Washington.

January 7 – 11, 2024. TRB Annual Meeting. Washington, D.C. Ahmed Al-Kaisy (MSU/WTI) presented *Approach Saturation Headways at All-Way Stop Control Intersections: An Empirical Investigation* and *Motivations and Constraints for Rural Cycling Based on User Perception: Recommendations for Bicycle Analysis Procedures*. Dilip Mistry (SURCOM/NDSU) presented *A Data-Driven Approach to State of Good Repair: Utilizing Machine Learning to Predict Rolling Stock Service Life for Backlog Reduction and Long-Range Replacement Cost Estimation in Small Urban and Rural Transit Systems* as part of the Emerging Issues in Rural, Intercity Bus, and Specialized Transportation session. Jeremy Mattson (SURCOM/NDSU) participated as a panelist on the topic of “Research Needs and Opportunities to Overcome Decarbonization Challenges” in the workshop “Overcoming Challenges to Decarbonizing Transportation in Small and Rural Communities.” Jill Hough (SURCOM/NDSU) chaired the AP055 Rural, Intercity Bus, and Specialized Transportation Committee meeting and provided brief presentations at the Paratransit Subcommittee and the Intercity Bus Transit Subcommittee meetings. Natalie Villwock-Witte (WTI/MSU) chaired the AEP20 Transportation Needs of Parks and Public Lands Committee meeting, while Laura Fay (WTI/MSU) chaired the Low Volume Roads Committee meeting. Further, Jaime Sullivan (WTI/MSU) chaired the A0040C Rural Issues Coordinating Council meeting. Finally, Margo Hill (EWU) was part of a panel during the workshop *Health for All: Addressing Gender Disparities in Accessing Healthcare and Other Critical Destinations*.

February 6. Natalie Villwock-Witte (WTI/MSU) gave two presentations to Minnetonka Middle School students as a Career Fair Speaker, which highlighted the projects *Case Studies of Communities of Less Than 10,000 People with Bicycle & Pedestrian Infrastructure* and *Effectiveness of Highway Safety Public Education at Montana Motor Vehicle Registration Stations by Streaming a Variety of Safety Content*.

February 9. Natalie Villwock-Witte (WTI/MSU) presented *Walking & Biking in Rural America* to Iowa State University’s CE395x, Global Perspectives in Transportation class (an online presentation).

February 15. Matt Madsen (WTI/MSU) provided training on *Building Livable Communities* to the Bozeman/Gallatin County Board of Health in Bozeman, MT.

February 20. Matt Madsen (WTI/MSU) gave a guest lecture on *Transportation and Health* to the Energy and Sustainability class (ECHM205) at Montana State University.

March 5. Margo Hill (EWU) presented *Murdered Missing Indigenous Women/People and Human Trafficking* to a class at the St. Aloysius school Spokane, WA.

March 19. Matt Madsen (WTI/MSU) gave a guest lecture on *Transportation and Health* to the Gateway to Sustainability Studies class (LS103) at Montana State University.

March 21. Jennifer MacFarlane (WTI/MSU) gave a guest lecture entitled *The Intersection of Transportation and Health* for the Geographical Planning (GPHY 365) class at MSU.

Website(s) or other Internet site(s)

- SURTCOM website (www.surtcom.org)
- EWU's SURTCOM related website (<https://www.ewu.edu/css/surtcom/>) has updated contact information, new lectures, outreach with lectures and PowerPoint presentations, and listings of on-going research.
- NDSU's Small Urban and Rural Center on Mobility website (<https://www.ugpti.org/surcom/>) includes project reports and video overviews.

New methodologies, technologies, or techniques

Several projects noted herein provide for new or improved methodologies and/or techniques to improve rural transportation, including NCHRP 08-135, *Reliability and Quality of Service Evaluation Methods for Rural Highways* and the *Traffic Incident Management (TIM) Strategies for Rural Environments* project.

Inventions, patent applications, and/or licenses

Nothing to report.

Other products, such as data or databases, physical collections, audio or video products, application software or NetWare, analytical models, educational aids, courses or curricula, instruments, equipment, or research material

Nothing that was not noted in other sections.

4. Outcomes

SURTCOM staff present the findings from research projects related to the SURTCOM theme to the maximum extent possible. The Center has one performance measure to disseminate research deliverables for each research project. This target was met: the research reports for all the completed projects are posted to the SURTCOM website and provided to the sponsor. Another performance measure was to plan or participate in technology transfer activities that offer implementation or deployment guidance at a broader scale. This was met through presentations at the TRB Annual Meeting, and as noted elsewhere in this report. The target of hosting or participating in at least one forum per year that offers implementation assistance on a key mobility topic was met through presenting at the American Public Health Association meeting in Atlanta, GA, November 12 & 13.

Increased understanding and awareness of transportation issues

The project reports and presentations noted herein all help to increase the understanding and awareness of transportation issues, especially issues in rural and tribal areas.

Passage of new policies, regulation, rulemaking, or legislation

Nothing to report.

Increases in the body of knowledge

All completed projects, with their final reports posted or presentation made, increase the body of knowledge related to transportation issues.

Improved processes, technologies, techniques, and skills in addressing transportation issues

While many of the projects noted herein help improve the nation's transportation system, a few specific projects that help processes and techniques include: *NCHRP 08-135: Reliability and Quality of Service Evaluation Methods for Rural Highways*; and the *Utilizing Public Transportation to End Food Insecurity in the Rural and Small Urban Areas by Providing Better Access: A Case Study of Rural Counties in North Dakota* project.

Enlargement of the pool of trained transportation professionals

EWU, WTI/MSU and SURCOM/NDSU staff taught numerous classes related to planning and/or transportation, and, of note, Rebecca Gleason and Matt Madsen (WTI/MSU) are again teaching ECIV 491 Sustainable Transportation and Community Health this spring semester (January – May 2024), which will now be a class offered on a yearly basis. Further, Ranjit Godavarthy (SURCOM/NDSU) is teaching two classes this spring semester, SCM 425: Procurement and Sourcing and TL 787: Transportation and Distribution, and Jeremy Mattson (SURCOM/NDSU) is teaching SCM 330 Supply Chain Analysis and Analytics and TL 731: Supply Chain Decision Analysis this spring semester as well. In addition, outreach efforts were made to grade school, middle school, and high school students to promote STEM activities and to highlight the need for more professionals in the transportation field.

WTI's Community-Engaged and Transformational Scholarship (CATS) program facilitates course-based student projects determined by community needs submitted by community partners. Over 250 students in fourteen courses, representing ten different academic disciplines, participated in CATS projects over the reporting period. Projects focused on community planning, livability, sustainability, and safety.

Adoption of new technologies, techniques or practices

As the final reports on several projects are finalized, such as *NCHRP 08-135: Reliability and Quality of Service Evaluation Methods for Rural Highways* and the *Traffic Incident Management (TIM) Strategies for Rural Environments* project, these efforts will lead to the adoption of new techniques and/or practices that should improve transportation in rural environments.

5. Impacts

The effectiveness of the transportation system

The main goal of SURTCOM is to enhance mobility of both people and goods in small urban, rural and tribal areas. Through our research and other activities, we seek to:

- increase access to opportunities that promote equity and economic development through mobility;
- implement innovative multi-modal solutions in these areas;
- implement smart cities innovations in small urban, rural, and tribal communities;

- increase active transportation modes, especially walking and cycling; and,
- address mobility issues on Federal lands.

Technology transfer (including transfer results to entities in government or industry, adoption of new practices, or instances where research outcomes had led to the initiation of a start-up company)

As noted earlier, the NCHRP 08-135 report will be used by State DOTs to review the operation of their rural highways, and the documents from the *Traffic Incident Management (TIM) Strategies for Rural Environments* project will help State DOTs address how they respond to traffic incidents on their rural highways and other rural roads.

The increase in the body of scientific knowledge

All projects noted herein help increase the body of scientific knowledge related to rural transportation issues.

6. Changes/Problems

Changes in approach and reasons for change

Nothing to report.

Actual or anticipated problems or delays and actions or plans to resolve them

Because the COVID-19 pandemic delayed some field work (data gathering) and disrupted travel projects took longer to complete than originally planned. Thus, the need for the one-year no-cost extension. Further, SURTCOM partner EWU has struggled to hire support staff, and has had some turnover of fiscal staff. This has led to many of their projects taking longer to complete than was first estimated. However, there are no anticipated problems with closing out projects in the final six months of SURTCOM.

Changes that have a significant impact on expenditures

Nothing to report.

Significant changes in use or care of human subjects, vertebrate animals, and/or biohazards

Nothing to report.

7. Special Reporting Requirements

Not applicable.