



NDOT TravelWell SS4A Scope of Work

Project Title: *Navajo Nation DOT TravelWell SS4A Demonstration Grant*

Background

The Infrastructure Investment and Jobs Act (IIJA) established the Safe Streets and Roads for All (SS4A) competitive grant program with \$5 billion in appropriated funds over 5 years, 2022-2026. The SS4A program funds regional, local, and Tribal initiatives through grants to prevent roadway fatalities and serious injuries. Approximately \$1 billion is still available for the next funding round.

The SS4A program supports the U.S. Department of Transportation's National Roadway Safety Strategy and our goal of zero roadway deaths using a Safe System Approach.

In FY 2023 the Navajo Division of Transportation (NDOT) received federal funding to develop a Safety Action Plan for six communities within the Navajo Nation. This grant is focused on safety planning. This is the first round of funding received by NDOT and the project is referred to as SS4A Federal Grant (round 1)

In FY2024 NDOT received federal funding for a second SS4A grant. This grant is focused on demonstration of potential safety improvements. It is specifically focused on the educational aspect of safety improvements. This project is referred to as SS4A Federal Grant (round 2)

TravelWell is a multimedia education, engagement, and research project designed to directly involve the community in mobility and planning issues with the aim of increased safety and travel awareness. The latest innovative learning and community engagement technologies will be employed, including primarily the interactive data gathering mapping app, MappsLab. Additional research will test the effectiveness of school-based programming to impact community-wide travel patterns.

The TravelWell program seeks to become a replicable local and national model for advancing safer, more sustainable travel behaviors across diverse communities. By leveraging innovative technologies like the MappsLab app and focusing on community engagement and the latest learning research, the program will promote the Safe System Approach and foster healthier, more connected communities.

The four “Es” of the TravelWell Program are:

- **Education**—learn Safe Streets for All Mobility principles and best practices
- **Engagement**—community voices use new knowledge to contribute to place-

- based planning and behavior change
- **Evaluation**—assess the built environment
- **Empathy**—“I see you”—Safe Streets FOR ALL

Project Objectives:

1. Conduct research and develop a scalable, data-driven TravelWell program to inform the community about the Navajo Department of Transportation (NDOT) Safety Action Plan.
2. Promote safer, more sustainable, and empathetic travel behaviors through community engagement, education, and behavioral change initiatives.
3. Employ advanced data collection and analysis techniques, primarily through the MappsLab app, to assess community engagement and safety behaviors.
4. Assess community building effects of TravelWell beyond traffic data, i.e., economic development; personal mobility; sustainability; academic performance.

Research Success Metrics:

1. Increase in community and school participation in TravelWell activities.
2. Demonstrable changes in travel behaviors and safety awareness.
3. Integration of the TravelWell program into ongoing Community planning activities.
4. Adoption of the TravelWell program into K-12 Schools including CORE curriculum integration with measurable academic and behavioral outcomes.
5. Scalable model recommendations for broader implementation.

Potential Emphasis Areas Addressed

The TravelWell program will align with the safety emphasis areas that are defined in the round 1 SS4A Grant.

1. Community Educational Campaign Development

Potential Emphasis Areas Addressed:

- Distracted driving
- Substance abuse
- Speed
- Driving off the road
- Livestock on roads
- Adverse weather conditions
- Large distances to travel

Relevant Subtasks:

- 1.1 Community
- 1.2 Production
- 1.3 Post Production
- 1.4 Engineer the MappsLab app – distinct research modes
- 1.6 Quality Assurance (QA) Testing

2. TravelWell Schools – K–12 Educational Materials

Potential Emphasis Areas Addressed:

- Distracted driving (youth prevention)
- Substance abuse

- Speed
- Large rural distances
- Adverse weather conditions

Relevant Subtasks:

- 2.1 Identify SS4A principles critical to behavior change
- 2.2 Teacher Professional Development
- 2.3 TravelWell Academic Success
- 2.6 Engineer the MappsLab app – research methods
- 2.8 Quality Assurance (QA) Testing

3. MappsLab App Integration & Data Management

Potential Emphasis Areas Addressed:

- Speed-prone corridors
- Run-off-road incidents
- Livestock crossings
- Weather-related crash zones
- Rural distance exposure metrics

Relevant Subtasks:

- 3.1 Ensure Data Privacy Compliance
- 3.2 Collaborate with Software Engineers

4. Community Engagement & Empowerment Research

Potential Emphasis Areas Addressed:

- Livestock on roads
- Large distances to services
- Adverse weather conditions
- Driving off the road

Relevant Subtasks:

- 4.1 Collaborate with Chapter Houses
- 4.2 Establish Neighborhood Research Partners
- 4.3 Implement Community Research
- 4.4 Community Research Data

5. K–12 School Outreach & Curriculum Research

Potential Emphasis Areas Addressed:

- Distracted driving
- Substance abuse
- Speed
- Adverse weather conditions

Relevant Subtasks:

- 5.2 Implement Navajo TravelWell School Research
- 5.3 Professional Development for Educators
- 5.4 Empower Student Leadership
- 5.5 Schools Research Data

6. Behavioral Change & Civic Engagement Evaluation

Potential Emphasis Areas Addressed:

- Speed reduction outcomes
- Distracted driving behavior shifts
- Substance abuse awareness impact
- Run-off-road crash trends
- Weather-related crash reduction

Relevant Subtasks:

- 6.1 Gather quantitative and qualitative data
- 6.2 Evaluate MappsLab data effectiveness
- 6.3 Explore health and wellness metrics
- 6.4 Re-engineer MappsLab app to capture research data

7. Ongoing Assessment & Program Scalability

Potential Emphasis Areas Addressed:

- Rural infrastructure risk (distance)
- Livestock conflict mitigation
- Speed management models
- Weather adaptation strategies

Relevant Subtasks:

- 7.1 Iterative research methodology
- 7.2 Scalability recommendations
- 7.3 Future funding partnerships

Tasks and Deliverables



Task 1. Community Educational Campaign Development

Design and test multimedia educational materials focusing on travel literacy, sustainability, and the Safe System Approach. These will drive the educational campaign testing and citizen engagement.

The MappsLab app utilizes interactive personal mapping to educate, engage, and empower across demographics.

Task 1.1 Community Multimedia Educational Materials

- Develop materials tailored to diverse community audiences including Chapter Houses, Senior Citizen Centers, businesses, nonprofits, and government agencies.
- Work with Navajo DOT to identify SS4A principles critical to TravelWell education leading to quantifiable behavior change across the community.

Task 1.2 Production

- Create multimedia educational materials using the latest media tools and storytelling techniques, i.e., hi-res cameras, drones, and digital image and video production.
- Develop storyboards and other multimedia production planning tools to address the needs of Navajo community education.

- Media expertise will be informed by cultural specifics in script and planning design through Navajo input.
- Demographic appropriate narration

Task 1.3 Post Production

- Finalize Multimedia Educational Materials
- Use cutting edge editing to produce final multimedia educational materials.
- Examine materials for cultural sensitivity and unique learning opportunities.
- Address any translation needs.

Task 1.4 Engineer the MappsLab app to deliver these materials in three distinct research modes:

- 1. Through a TravelWell Leader/Mentor community real-time experience
- 2. Community MappsLab app turnkey asynchronous TravelWell session
- 3. Personal MappsLab app turnkey asynchronous TravelWell session

Task 1.5 Investigate possible web-based delivery barriers

- Design non-web delivery strategies
- Off-line materials options

Task 1.6 Quality Assurance (QA) Testing

- Continuously assess and refine materials for effectiveness and scalability
- Small-scale pre-research testing
- Education materials updates and adjustments

Deliverables: The multimedia materials to implement the community research component of TravelWell Education, Engagement, Empowerment, and Empathy.



Task 2 TravelWell Schools—Create K-12 Classroom Educational Materials

Design and test multimedia educational materials focusing on travel literacy, sustainability, and the Safe System Approach relevant and responsive to K-12 classrooms. There will be two additional components: teacher professional development

and TravelWell implications for academics across the curriculum.

Task 2.1 Identify SS4A principles critical to TravelWell education leading to quantifiable behavior change for students and spilling over across the school community.

- Develop grade appropriate K-12 classroom TravelWell materials that are accessible and assessable.

Task 2.2 Add a teacher professional development experience.

- Teachers learn SS4A principles and how to use the MappsLab app to deliver compelling lessons on mobility and planning.
- Engineer the MappsLab app to deliver this Professional Development in three distinct research methods:
 1. Through a TravelWell Leader/Mentor real-time experience
 2. A MappsLab app turnkey asynchronous TravelWell PD experience
 3. Personal MappsLab app turnkey asynchronous TravelWell PD session
- Investigate qualifying the TravelWell Schools PD experience for teacher in-service contract credits.

Task 2.3 TravelWell Academic Success

- Design a TravelWell Schools experience that aligns and meets CORE curriculum requirements.
- Identify applicable grade specific CORE requirements that connect to TravelWell.
- Create opportunities to use MappsLab across the curriculum in non-TravelWell specific uses—introduce the first interactive mapping tool designed specifically for classroom use. Educator friendly—set up an entire class with user names and passwords in less than a minute.

Task 2.4 Production

- Create multimedia educational materials using the latest media tools and storytelling techniques, i.e. hi-res cameras, drones, and digital image and video production.
- Produce multimedia Grade and Age Specific TravelWell experiences.
- Develop storyboards and other multimedia production planning tools to address Navajo schools.
- Media expertise will be informed by cultural specifics in script and

planning design through Navajo input.

Task 2.5 Post Production

- Finalize Multimedia Educational Materials
- Use cutting edge editing to produce final multimedia educational materials.
- Examine materials for cultural sensitivity and unique learning opportunities.
- Address any translation needs.

Task 2.6 Engineer the MappsLab app to deliver these materials in three distinct research methods:

- 1. Through a teacher-led real-time classroom experience
- 2. Teacher assigned MappsLab app turnkey asynchronous TravelWell session
- 3. Individual student and family MappsLab app turnkey asynchronous TravelWell session

Task 2.7 Investigate possible web-based delivery opportunities and barriers

- Design non-web delivery strategies
- Download materials options

Task 2.8 Quality Assurance (QA) Testing

- Continuously assess and refine materials for effectiveness and scalability
- Small-scale pre-research testing
- Education materials adjustments

Deliverables: The multimedia materials necessary to implement the K-12 Schools research component of TravelWell Education, Engagement, and Empowerment, with a particular emphasis on academic achievement across the curriculum.



Task 3. MappsLab App Integration and Data Management

Design and utilize the MappsLab app for interactive mapping to address TravelWell Project needs of data collection and community engagement effectiveness.

Task 3.1 Ensure data privacy compliance through alignment with the Utah Data Privacy Agreement and other relevant standards.

Task 3.2 Collaborate with software engineers to enhance app features for actionable insights and program delivery.

Deliverables: The MappsLab app is engineered to generate and capture the necessary data for successful TravelWell research.



Task 4. Community Engagement and Empowerment Research

Engage with the community to test the efficacy of the Navajo DOT TravelWell educational materials developed in Task 1.

Use the new knowledge base from this educational experience to empower citizens to change behaviors.

The MappsLab app will document and generate data to assess this new involvement by providing a communication tool for the community to express ideas and identify barriers and solutions to mobility across the community.

Task 4.1 Collaborate with Chapter Houses, local businesses, and nonprofit organizations to ensure a diverse community involvement.

- Develop specific research target communities informed by but not limited to the six NDOT SS4A Action Plan geographic areas.

Task 4.2 Establish Neighborhood TravelWell research partners to foster local engagement and responsibility during testing.

- Coordinate outreach efforts targeting underserved groups, older adults, and multigenerational participation.

Task 4.3 Implement Community Research

- Coordinate implementation including authentic participation through the stages of Education, Engagement, Empowerment, and Evaluation.
- Assure a positive research experience, adjusting as necessary.

Task 4.4 Community Research Data

- Assure the capture and cataloguing of identified research data.

Deliverables: Implementation of TravelWell research in community settings that captures the necessary data for quantitative and qualitative analysis.



Task 5. K-12 School Outreach and Curriculum Research

Implement testing of pilot curriculum-aligned educational programs within schools to promote TravelWell principles of travel safety and behavioral change.

Task 5.1 Identify Research Schools, Administrators, Teachers, and Classrooms

- Likely research partners should have support from administrators, teachers, students, and student families, as well as the greater school community.
- Research schools should be open to data generation and prior data sharing.

Task 5.2 Implement Navajo TravelWell Schools Research

- Utilize the MappsLab app and educational materials for place-based learning and encourage active student and teacher and family participation.

Task 5.3 Professional development for Educators

- Facilitate professional development for educators to integrate TravelWell into the CORE curriculum.
- Use TravelWell PD to develop substantive school partnerships affecting better research.

Task 5.4 Empower student leadership and environmental initiatives focused on mobility, equity, and safe travel practices.

- Provide opportunities for student-led actionable education and behavior change opportunities.
- Test possible school leadership groups and student-led community outreach.

Task 5.5 Schools Research Data

- Assure the capture of identified research data.

Deliverables: Implementation of TravelWell research in K-12 School settings that captures the necessary data for quantitative and qualitative analysis.



Task 6. Evaluate Behavioral Change and Civic Engagement Research

Evaluate the impact of the TravelWell program on travel behaviors across the two primary targets—the community and schools.

Task 6.1 Gather quantitative and qualitative data

- Use observational research to gather qualitative and quantitative data.
- Create data centers to share and collaborate on research analysis

Task 6.2 Evaluate MappsLab data gathering effectiveness

- Create necessary metrics responsive to data capture and behavior change.
- Analyze research data collection.
- Examine data alignment with TravelWell goals.
- Adjust data collection for efficacy and alignment with TravelWell research.
- Add and adjust metrics where necessary for research integrity.

Task 6.3 Explore metrics related to health, wellness, economic, and cultural benefits derived from the program.

- Relate TravelWell data to community well-being beyond directly travel related experiences.
- Create qualitative metrics for Community Well-Being.
- Create quantitative metrics for Community Well-Being.

Task 6.4 Re-engineer MappsLab app to capture research data informed by Phase 1 Research analysis.

- Identify MappsLab structural changes.
- Design MappsLab TravelWell Phase 2 project management plan.
- Implement TravelWell Phase 2 app build.

Deliverables: Research summary of TravelWell Demonstration Phase 1 on actual behavior with quantitative and qualitative data.
Implement program changes and possible improvements in research methods for Phase 2 informed by Phase 1.



Task 7. Ongoing Assessment and Program Scalability

Integrate feedback from participants, educators, and community partners to improve the TravelWell model and align with NDOT Action Plan needs.

Produce specific TravelWell scalable implementation strategy.

Address necessary resources needs, materials, capacity, programming.

Task 7.1 Design an iterative research methodology to test, assess, and refine TravelWell strategies and goals during NDOT Action Plan implementation.

Task 7.2 Develop recommendations for scalability and broader implementation based on demonstration results.

Task 7.3 Possible future funding and partnership support.

- Identify community Federal and nonprofit sources
- Community wellness, safety, health, economics, increased civic engagement
- Opportunities to support educational success.

Deliverables: Comprehensive reporting of recommendations for NDOT Action Plan informed by TravelWell research.
Future TravelWell implementation strategies with outcomes and how to achieve them.