



Semi-Annual Progress Report Mineta Consortium for Equitable, Efficient, and Sustainable Transportation

June 1, 2023 – September 30, 2023





**Semi-Annual Progress Report for
University Transportation Centers
Mineta Consortium for Equitable, Efficient, and Sustainable
Transportation (MCEEST)
Led by San José State University**

- **Federal Agency and Organization Element to Which Report is Submitted:**
U.S. Department of Transportation Office of the Assistant Secretary for Research and Technology
- **Federal Grant or Other Identifying Number Assigned by Agency:** 69A3552348328
- **Project Title:** Tier 1 University Transportation Center
- **Center Director:**
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MCEEST Executive Director
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- **Submission Date:** October 30, 2023
- **DUNS and EIN Numbers:** 0568207150000 and 94-6017638
- **Recipient Organization:**
San Jose State University Research Foundation
210 N. Fourth Street, 4th Floor, San Jose, CA 95112
- **Recipient Identifying Number or Account Number:** Not Applicable
- **Project/Grant Period:** June 1, 2023 – May 31, 2029
- **Reporting Period End Date:** September 30, 2023
- **Report Term or Frequency:** Semi-annual
- **Signature of Submitting Official:** *Karen Philbrick*

Introduction

The Mineta Consortium for Equitable, Efficient, and Sustainable Transportation (MCEEST), led by the Mineta Transportation Institute (MTI) at San José State University, conducts research, education, workforce development, and technology transfer activities to improve mobility of people and goods. MCEEST unifies and focuses the efforts of four outstanding institutions that represent and support the geographical, cultural, racial, and socioeconomic diversity that makes our nation strong: Howard University; Navajo Technical University (NTU); San José State University (SJSU); and the University of South Florida (USF).

1. Accomplishments

Major Goals and Objectives of the Program

Evidence-based, people-focused research paves the way for transformative solutions to our nation’s most pressing mobility challenges, including expanding the inclusivity of the transportation workforce. MCEEST conducts research to achieve the following goal and objectives aligned with improving mobility of people and goods:

Goal: Lead the nation in data-driven, human-centered research that delivers equitable, efficient, and sustainable transportation solutions that increase the mobility of people and goods and strengthen the nation’s economy and global competitiveness.

Objective 1: Create a safer, more reliable, and more resilient transportation system that improves equity through increased access to jobs, housing, services, and other opportunities for historically underserved communities.

Objective 2: Reduce transportation’s impact on climate change by identifying feasible alternative modes and effective ways to reduce vehicle miles traveled.

Research Program

Year 1 Research Projects

The following table lists Year 1 projects underway and in the final proposal review stage. MTI will be posting and submitting research project descriptions per the UTC Grant Deliverables and Reporting Requirements as soon as they are finalized. MCEEST’s research program is designed to make a measurable impact on achieving USDOT’s strategic goals focused on **equity, climate and sustainability**, and **economic strength and global competitiveness**.

| Project Title | Campus Lead | Status |
|---|-------------------|-----------------|
| Gender Gaps in the Transportation Workforce (Project partner: WTS) | SJSU/MTI | Proposal review |
| Improved Safety for Pedestrians in Crosswalks at Signalized Intersections | Howard University | In progress |

| | | |
|---|----------|-----------------|
| Making Micromobility Work: Exploring Public Opinion to Inform Policy, Infrastructure, & Technology | SJSU/MTI | Proposal review |
| Moving Transportation Equity Beyond Title VI: Multimodal Equity | SJSU/MTI | Proposal review |
| Routes to Sustainable Goods Movement: How Local and Regional Governmental Agencies Can Plan for the Sustainable Freight System of the Future | SJSU/MTI | Proposal review |
| Understanding the Current Transit Investment in Cybersecurity (Project partner: FTA Transit Advisory Committee for Safety) | SJSU/MTI | In progress |
| Understanding the Prevalence of Mental Health and Behavioral Distress in Transit Assaults and Presenting Targeted Response and Mitigation Methods to Reduce Victimization Trends (Project partner: University of South Florida's Louis de la Parte Florida Mental Health Institute) | USF | In progress |
| Urban Air Mobility (UAM) Vertiport Infrastructure Planning in the Context of Multimodal Urban Mobility | SJSU/MTI | Proposal review |
| Using Crowdsourcing and Collaborative Planning to Address Safety Concerns of Women and Gender Non-Conforming People Using Public Transportation | SJSU/MTI | Proposal review |

Emerging Leader Seed Grant Program

MCEEST's Emerging Leader Seed Grant Program seeks to engage and develop leadership capacity among tenure-track faculty. This program supports faculty in the first five years of an academic tenure-track position across the Consortium who are interested in exploring transportation research problems aligned with MCEEST's research goals and objectives. No awards have been made to date.

Data Management Plan

MCEEST received approval for the data management plan (DMP) on August 25, 2023. The DMP has been posted to the [MCEEST website](#) and is referenced in materials sent to each research team. As part of submitting their research proposal, research teams must acknowledge compliance with MCEEST's DMP.

Dissemination of Results

MCEEST utilizes a diverse array of dissemination methods and media to ensure research results, conference proceedings, and expert interviews reach those responsible for managing change. These methods include publication, seminars, workshops, websites, social media, webinars, and other technology transfer mechanisms.

Consortium Website

In compliance with the Grant Deliverables and Reporting Requirements for 2023 University Transportation Centers, MCEEST has a website that features all consortium activities:

<https://transweb.sjsu.edu/mceest>. This website is updated regularly with event information, media coverage, and research activities.

Continuing Education: Opportunities for Growth and Engagement

MCEEST provides thought leadership and contributes to solutions for some of our nation’s most pressing transportation problems. Through regional forums, national summits, mid-career leadership training, and K-12 workforce development initiatives we help create a connected world. To that end, and during this period of performance, MCEEST sponsored/co-sponsored 4 technology transfer and workforce development activities that reached 196 attendees:

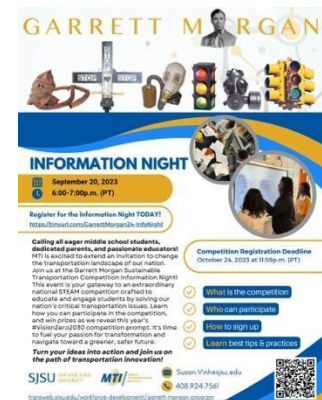
Mineta Summer Transportation Institute (MSTI) 2023

July 10-28, 2023 • San José, CA: This year, MTI hosted 32 high school students for our annual three-week MSTI. While engaging in stimulating hands-on STEM [activities](#) and venturing on exciting local field trips, students learned about transportation innovation and earned 3 transferable college credits in Environmental Studies from San José State University. This year, the [program](#) included a drone flying practice and flight simulation experience, and a variety of local field trips, including visits to California High-Speed Rail in Fresno, Henry Cowell Redwoods State Park in the Santa Cruz Mountains, Central Subway in San Francisco, and the Santa Clara Valley Transportation Authority (VTA) in San José. In addition to a college course and field trips, more than 48 guest speakers supported the program through career panels and guest lectures. This free program was delivered in partnership with Caltrans and open to high school students. It is a crucial step toward building the transportation workforce pipeline.



Garrett Morgan Sustainable Transportation Competition: Information

Night September 20, 2023 • [Online](#): MTI was joined by eager middle school students, dedicated parents, and passionate educators at the [Garrett Morgan Sustainable Transportation Competition](#) Information Night. This event served as a gateway to an extraordinary national STEAM competition crafted to educate and engage students by solving our nation’s critical transportation issues. Participants learned how they can participate in the competition and win prizes as we revealed this year’s #VisionZero2030 competition prompt.



Best Practices in Disaster Public Communications September 21, 2023 • [Online](#):

When disaster strikes and an emergency notification is issued, people are often unsure how to act. They may spend time “milling,” checking in with friends and neighbors, scrolling through sources and social media—trying to decide whether the alert applies to them. Research has shown this can be life threatening. Looking at how community members responded to alerts during the SCU and CZU complex wildland fires in 2020, experts Dr. Frances L. Edwards and Dan Goodrich



examine disaster public communications best practices. How can public agencies collaborate with social media organizations to get the right messaging out? How do we ensure messaging engenders immediate, life-saving action? The researchers have also proposed an app that could assist in eliminating time spent milling by speeding up social media investigation by sorting messages via GIS coordinates, time, and more to ensure community members are reading the messages most relevant to them. This webinar, presented during National Preparedness Month, helped viewers gain valuable insights and explore innovative solutions in disaster communication.

Perfecting Your Scholarship Application September 26, 2023 • [Online](#): MTI’s Student Association hosted a free virtual event to learn tips for perfecting students' scholarship applications for a better chance at funding their education. Speakers joined from transportation associations such as the Conference of Minority Transportation Officials ([COMTO](#)), California Transportation Foundation ([CTE](#)), and Women's Transportation Seminar ([WTS](#)). Attendees learned about each association's scholarship programs.

Plans During the Next Reporting Period to Accomplish the Goals?

No change to the agency-approved application.

2. Participants & Collaborating Organizations

What Organizations Have Been Involved as Partners?

During this period of performance, MCEEST partnered with the 20 organizations listed below.

1. Organization Name and Location: **Alabama A&M University** (Huntsville, AL)
 - Partner’s Contribution to the Project: In-kind support of SAE Formula Car Project
 - Project: [Navajo Technical University Workforce Development Components](#)
2. Organization Name and Location: **Aurora Innovation** (San Francisco Bay Area, CA)
 - Partner’s Contribution to the Project: In-kind support of guest presentation and demonstration
 - Project: [Mineta Summer Transportation Institute 2023](#)
3. Organization Name and Location: **Bay Area Connectors (a joint venture partnership between AECOM and EPC)** (San Francisco, CA)
 - Partner’s Contribution to the Project: \$6,000 sponsorship of field trip to the Central Subway project in San Francisco
 - Project: [Mineta Summer Transportation Institute 2023](#)

4. Organization Name and Location: **California Department of Transportation** (Caltrans-Sacramento, CA)
 - Partner's Contribution to the Project: Provided partial funding for the Summer Transportation Institute program, which covered the students' tuition and field trip transportations.
 - Project: [Mineta Summer Transportation Institute 2023](#)
5. Organization Name and Location: **California High Speed Rail Authority** (Sacramento & Fresno, CA)
 - Partner's Contribution to the Project: In-kind support of facilities tour and panel of speakers on infrastructure planning and development, as well as career development
 - Project: [Mineta Summer Transportation Institute 2023](#)
6. Organization Name and Location: **City of San José, Department of Transportation** (San José, CA)
 - Partner's Contribution to the Project: In-kind support of facilities tour and panel of speakers on career development
 - Project: [Mineta Summer Transportation Institute 2023](#)
7. Organization Name and Location: **DB Engineering & Consulting USA (part of Deutsche Bahn AG)** (Sacramento, CA)
 - Partner's Contribution to the Project: \$5,000 sponsorship of field trip to the California High Speed Rail construction sites in Fresno, CA
 - Project: [Mineta Summer Transportation Institute 2023](#)
8. Organization Name and Location: **District Department of Transportation** (Washington, DC)
 - Partner's Contribution to the Project: In-kind support
 - Project: [Howard University Research Projects](#)
9. Organization Name and Location: **HNTB** (Oakland, CA)
 - Partner's Contribution to the Project: Guest presentation and class activities, and \$1,000 sponsorship for student lunch
 - Project: [Mineta Summer Transportation Institute 2023](#)
10. Organization Name and Location: **Louis De La Parte Mental Health Institute** (Tampa, CA)
 - Partner's Contribution to the Project: Collaborative research – participate in site visit, develop protocol for interviews with mental health professionals
 - Project: [University of South Florida Research Projects](#)
11. Organization Name and Location: **MTI Student Association** (San José, CA)
 - Partner's Contribution to the Project: In-kind support in webinar planning and hosting

- Project: Perfecting Your Scholarship Application
12. Organization Name and Location: **Nuro** (Mountain View, CA)
- Partner's Contribution to the Project: In-kind support of guest presentation, class activities, and career panel
 - Project: Mineta Summer Transportation Institute 2023
13. Organization Name and Location: **Santa Clara Valley Transportation Authority (VTA)** (San José, CA)
- Partner's Contribution to the Project: In-kind support of facilities tour and panel of speakers on career development
 - Project: Mineta Summer Transportation Institute 2023
14. Organization Name and Location: **SJSU Aviation and Technology** (San José, CA)
- Partner's Contribution to the Project: In-kind support of guest presentation, class activities, and flight simulation practice.
 - Project: Mineta Summer Transportation Institute 2023
15. Organization Name and Location: **SJSU Peer Connection** (San José, CA)
- Partner's Contribution to the Project: In-kind support of guest presentation and college-readiness workshops
 - Project: Mineta Summer Transportation Institute 2023
16. Organization Name and Location: **SJSU Writing Center** (San José, CA)
- Partner's Contribution to the Project: In-kind support of guest presentation and writing workshops
 - Project: Mineta Summer Transportation Institute 2023
17. Organization Name and Location: **Tohatchi Middle School** (Tohatchi, NM)
- Partner's Contribution to the Project: In-kind support of Garrett Morgan Sustainable Transportation Competition
 - Project: Navajo Technical University Workforce Development Components
18. Organization Name and Location: **Spartan Racing** (San José, CA)
- Partner's Contribution to the Project: In-kind support of presentation and shop tour
 - Project: Mineta Summer Transportation Institute 2023
19. Organization Name and Location: **United Airlines** (San José, CA)
- Partner's Contribution to the Project: In-kind support of aviation career presentation
 - Project: Mineta Summer Transportation Institute 2023

20. Organization Name and Location: **Washington Metropolitan Area Transit Authority**
(Washington, DC)

- Partner's Contribution to the Project: In-kind support
- Project: Howard University Research Projects

Have Other Collaborators or Contacts Been Involved?

Nothing to report.

 **3. Outputs**

Published Research Reports

Nothing to report.

Publications, Conference Papers, and Presentations (including briefings to elected officials, agency leaders, and other transportation professionals)

- Lisa Staes, MCEEST partner at the University of South Florida, briefed the Transit Advisor Committee for Safety's Transit Worker and Rider Safety Subcommittee on new MCEEST research. Ms. Staes has also been invited to present on this work at the APTA Mid-Year Safety and Security Workshop in Austin, Texas in December 2023.
- MTI's Dr. Hilary Nixon led a roundtable discussion during the CUTC Summer Meeting held in June 2023 focused on assisting new UTC's. As a direct result of this event, Dr. Nixon was asked to consult with the Director of the Center for Equitable Transit-Oriented Communities on best practices for running a UTC.

Journal Publications

Nothing to report.

Books or other non-periodical, one-time publications

Nothing to report.

Website(s) or other Internet site(s)

- An MCEEST website is maintained at <http://transweb.sjsu.edu/mctm/index.html>
- An MCEEST presence has been established, and continues to grow, in conjunction with the existing MTI Facebook page - <https://www.facebook.com/MinetaTransportation/> and Twitter feed - [@MinetaTrans](http://www.twitter.com)

Technologies or Techniques

Nothing to report.

Inventions, Patent Applications, and/or Licenses

Nothing to report.

 **4. Outcomes**

Nothing to report.

■ 5. Impacts

What is the Impact on the Effectiveness of the Transportation System? Nothing to report.

What is the Impact on the Adoption of New Practices, or Instances Where Research Outcomes Have Led to the Initiation of a Start-up Company? Nothing to report.

What is the Impact on the Body of Scientific Knowledge? Nothing to report.

What is the Impact on Transportation Workforce Development?

- MCEEST Partner, NTU, has just approved starting a new Civil Engineering Program, which will be supported, in part, by the USDOT UTC grant.

Other Highlights:

- MTI Research Associate, Dr. Kezban Yagci Sokat was appointed to the USDOT's Advisory Committee on Human Trafficking's Research and Data Subcommittee. Dr. Yagci Sokat received an [Emerging Leader Seed Grant](#) under MTI's prior USDOT UTC to develop her research agenda and expertise in the field of human trafficking focused on the role of transportation.

■ Changes/Problems

- Changes in Approach and Reasons for Change: Nothing to report
- Actual/Anticipated Problems or Delays Encountered: Nothing to report
- 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
- Change of Primary Performance Site Location from that Originally Proposed: Nothing to report