



Program Progress Performance Report for University Transportation Centers Mineta Consortium for Transportation Mobility (MCTM) Led by San José State University

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- **Center Director:**
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San Jose State University Research Foundation
210 N. Fourth Street, 4th Floor, San Jose, CA 95112
- **Recipient Identifying Number or Account Number:** Not Applicable
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- **Reporting Period End Date:** March 31, 2018
- **Report Term or Frequency:** Semi-annual
- **Signature of Submitting Official:** *Karen Philbrick*

1. Accomplishments

Major Goals and Objectives of the Program

The Mineta Consortium for Transportation Mobility (MCTM), 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 and make our nation's transportation system safe, efficient, accessible, and convenient for all.

MCTM 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; San José State University; and the University of North Carolina Charlotte.

This Consortium was designed to foster synergies between leaders in transportation planning, policy, and engineering, each with a long and distinguished track record of visualizing and deploying cutting-edge, multimodal solutions that meet our nation's mobility challenges.

MCTM plans to lead the nation in researching safe, reliable solutions that increase mobility of people and goods and strengthen the nation's economy. To achieve this goal, MCTM will:

- 1) Leverage new technologies and innovative processes to achieve a seamless, multimodal surface transportation system that integrates with other "smart city" investments;
- 2) Create a safer, more reliable, and more resilient surface transportation system that improves equity through increased access to jobs, housing, services, and other opportunities;
- 3) Reduce the impact of transportation on climate change by identifying feasible alternative modes and fuels and innovative ways to reduce vehicle miles traveled;
- 4) Increase access to surface transportation so that people of all abilities and socioeconomic levels enjoy the same opportunities for learning, living, labor, and leisure; and
- 5) Optimize passenger and freight movements to improve mobility of people and goods through development of more accurate data models and advanced application of analytical tools.

It is not an overstatement to say that transportation of people and goods is the linchpin of our economy. Where human beings are concerned, the difference between having and lacking mobility is no less than the difference between having and lacking opportunity. To that end, MCTM research and activities will use a multidisciplinary approach that addresses the complex nature of today's mobility challenges to advance the body of usable transportation knowledge.

Research Program

Emerging Leaders Seed Grant Program

The Emerging Leader Seed Grant Program seeks to engage and develop leadership capacity among junior faculty at San José State University. This program supports faculty in the first five years of an academic position who are interested in exploring transportation research problems aligned with MTI's research goals and objectives and encourages multidisciplinary participation.

To date, MTI has awarded five grants through this program. Following is a summary.

- 1. Integrating Smart Cars in Smart Cities: A Particle Swarm Problem**
Faculty Member: Francesca Favaro, PhD, Assistant Professor, Department of Aviation and Technology
- 2. Improving Demand Modeling in California's Rail Transit System**
Faculty Member: Rui Liu, PhD, Assistant Professor, Department of Economics
- 3. A Comprehensive Picture of Smart Support Chain Management**
Faculty Members: Seung Jun Lee, PhD, and Tianqin (Kelly) Shi, PhD, Assistant Professors, Department of Global Innovation and Leadership
- 4. Older Adults' Perceptions Regarding Transportation Services in San Jose, CA: Access, Barriers, and Innovations**
Faculty Member: Deborah Bolding, PhD, Assistant Professor, Department of Occupational Therapy
- 5. Wireless Power Charging of Electric Vehicles Using Resonant Converters**
Faculty Member: Mohamed Badawy, Ph.D., Assistant Professor, Department of Electrical Engineering

Request for Proposals Issued

MTI completed a competitive Request for Proposals (RFP) during this reporting period. This competitive, open, broad-based process for soliciting and selecting transportation research projects ensures that our research meets our stated Consortium goal to “lead the nation in research that identifies safe, reliable transportation solutions that increase mobility of people and goods and strengthen the nation’s economy.” Proposals were due July 31, 2017 and six research projects were selected for funding:

- 1. Drivers Reactions to Autopilot's Disengagements, and Regulatory Implications for Semi-Autonomous Vehicles**
PI: Francesca Favaro, Ph.D.
- 2. Evaluating Alternative Measures of Bicycling Level of Traffic Stress Using Crowdsourced Route Satisfaction Data**
PI: Kevin Fang, Ph.D.
- 3. Microscopic Simulation, Complete Streets, and Tactical Urbanism Strategies to Enhance Multimodal Transportation in Downtown Jose**
PI: Anurag Pande, Ph.D.
- 4. Is That Hoverboard Whizzing by Me Supposed to Be on the Sidewalk? Regulating All Types of Personal Transportation Devices to Balance Transportation and Safety**

Concerns

Co-PIs: Kevin Fang, Ph.D. & Asha W. Agrawal, Ph.D.

5. Potential for Value Capture to Fund Public Transportation: Evidence from Fremont, CA Warm Springs BART Extension Project's Impact on the Value of Neighboring Properties

PI: Shishir Mathur, Ph.D.

6. Evaluating the Effectiveness of a School-based Intervention on Driving-related Carbon Emissions Using Real-time Transportation Data

PI: Eugene Cordero, Ph.D.

Since inception, MCTM has selected 14 projects for funding. Details on all projects can be found in the [UTC project information sheets](#).

Data Management Plan

MCTM's final Data Management Plan (DMP) has been approved. After receiving comments on the draft DMP, the MCTM team worked closely with experts at San José State University including Dr. Gilles Muller, Associate Dean, Office of Research, Alena Filip, Human Protections Analyst, and Emily Chan, Scholarly Communications Librarian. The MCTM team collaborated extensively with Leighton Christensen from the National Transportation Library to ensure that the planned data repository complies with federal requirements.

Technology Transfer

MCTM 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. MCTM partners include university transportation centers, federal and state agencies, private industry, and nonprofits.

Consortium Website

In compliance with the *Grant Deliverables and Reporting Requirements for 2016 University Transportation Centers*, MCTM created a new website that features all consortium activities: <http://transweb.sjsu.edu/mctm/index.html>. This website is updated weekly with event information, media coverage, and research activities.

Media Coverage

Since inception, there have been 296 stories featured in print, radio, and television media outlets. Links to these articles are featured on the [Consortium website](#) and below is a snapshot of activity

- *The Hill* (June 5, 2017): [London Bridge attack: The latest example of 'pure terror.'](#)
- *Planitizen* (June 19, 2017): [Nation's second bikeshare fatality under investigation in Manhattan.](#)
- *Mynewsdesk US* (July 28, 2017): [International Podcar City Conference comes to Las Vegas, USA.](#)

- *East Bay Times* (September 5, 2017): [Good Neighbors: Senior transportation ‘more than just ride.’](#)
- *Washington Post* (October 15, 2017): [Bike-share debacle isn’t unique to Baltimore. Thefts, other woes had also hit the early programs in N.Y., Paris.](#)
- *San Francisco Chronicle* (October 17, 2017): [Believe it or not, commuting will get better— a few decades from now.](#)
- *USA Today* (November 1, 2017): [NYC terror attack: Manhattan bike path where 8 were killed lacked safety barriers.](#)
- *The Mercury News* (February 9, 2018): [No one likes Bay Area traffic, but getting us out of our cars is a challenge.](#)
- *SiliconValley.com* (February 16, 2018): [How these Bay Area cities are paving the way for our autonomous car future.](#)

Regional Forums, National Summits, and K-12 Workforce Development Initiatives

During this period of performance, MCTM sponsored sixteen technology transfer activities that reached 1,204 attendees; these are:

Summer Transportation Institute

June 12-30, 2017 • San Jose CA

MTI hosted our annual Summer Transportation Institute (STI) for forty high school students in San Jose, California. The competitively selected students learned about transportation careers through a free, three-week on-campus program at San Jose State University. STI introduced students to principles of transportation systems development, construction, management, technology, intermodal systems, and environmental impact.

Over the course of this non-residential program, students received 30-hours of direct instruction and participated in 16 fieldtrips. Following the successful conclusion of the academic portion of the program, students earned three units of California State University college credit in Environmental Science. Many of the STI participants will be first generation college students and this experience is, often, their first-time on a college campus. Students came away understanding career opportunities in the transportation industry, and they are encouraged to pursue college degrees that prepare them for transportation careers.



Innovation & Impact Symposium

June 14, 2017 • Mountain View CA

The Innovation & Impact Symposium featured the latest developments in Energy, Mobility and the Built Environment. The region's leaders from the startup, corporate, public and research communities discussed what it will take to implement these ideas for maximum impact. With a Keynote Presentation by Steve Westly, and featured speakers from Tesla, Microsoft, Integral Group, Navigant Research, and SoCal Edison, the event connected participants to like-minded visionaries! MTI proudly co-sponsored this symposium.

Eighth Annual Mineta National Transportation Finance Summit: “Are we there yet? Bridging the gap in California’s transportation funding.”

June 16, 2017 • San Francisco CA

The need to invest in California’s transportation system is dire. Estimates suggest a nearly \$140B backlog in deferred maintenance on highways, bridges, and local streets and roads. While the funding crisis is widely recognized, solutions are difficult to come by. Senate Bill 1, passed by the California legislature in early April, dedicates over \$50B to transportation projects through increased fuel taxes and vehicle registration fees, yet that only partially fills the gap. This free, half-day summit hosted by MTI at the Commonwealth Club in San Francisco looked at various strategies the state and local and regional governments and transportation agencies are taking to address California’s transportation needs. The results from year eight of a national public opinion poll of more than 1,500 Americans on various tax options for raising federal transportation revenues were presented. The keynote portion of this event was broadcast on NPR and 230 radio stations nationwide. Additionally, it was audio and videotaped for later streaming.

Young Professionals in Transportation: South Bay Transportation Mixer

August 3, 2017 • San Jose CA

Young Professionals in Transportation (YPT) is an international group of young transportation professionals started in Washington, DC with a growing network of chapters around the United States, including the San Francisco Bay Area. YPT’s mission is to provide career guidance, fellowship, and networking opportunities for young professionals in the transportation field.

2017 Silicon Valley Bike Summit

August 8, 2017 • Mountain View, CA

The 7th Annual Silicon Valley Bike Summit was the Bay Area’s largest gathering of active transportation leaders and organizers from government, law enforcement, non-profit, and the public. This year’s keynote speaker was Tamika Butler, Executive Director of the Los Angeles Neighborhood Land Trust and former Executive Director of Los Angeles County Bicycle Coalition (LACBC). Tamika discussed LACBC’s work on Vision Zero, law enforcement, and creating safe bicycling for the diverse population of LA. The Bike Summit also had sessions on Safe Routes to Schools, protected bike lanes, Bikes + Transit, planning low-stress bike networks, and bicycling encouragement programs. MTI was a proud co-sponsor of this event.

Viva CalleSJ

September 17, 2017 • San Jose CA

VivaCalleSJ was a free recreational program co-sponsored by MTI that closed miles of scenic San José streets to motor vehicles. Participants walked, biked, skated, played, and explored the city as never before. The route spanned six miles of streets, through some of San Jose's most iconic neighborhoods including Japantown and Alum Rock Village, the Mexican Heritage Plaza, and parks including Lake Cunningham Park and Roosevelt Park.

Careers in Motion

September 20, 2017 • San Jose CA

MTI was invited to discuss career path development with participants in the Independence High School Auto and Transportation Careers Program. During the opening welcome, the MTI Executive Director cited the joint United States Departments of Education, Labor, and Transportation report, "[Strengthening Skills Training and Career Pathways across the Transportation Industry](#)", published in 2015, that quantified the impending human capital shortage in the transportation industry. A spirited discussion of the number and types of jobs available followed and the multidisciplinary nature of transportation workforce was stressed.

Podcar City 11

November 8-10, 2017 • Las Vegas NV

MTI sponsored the eleventh annual Podcar City conference focused on sustainable and innovative automated public transportation. More than 200 city planners, transit planners, academics, engineers, developers, elected officials, and others discussed this 21st-century opportunity. The Urban International Design Contest (or UIDC) was a main feature of the 2017 Podcar City Conference. The UIDC connected students with city professionals and together they worked toward the goal of educating, inspiring and motivating important stakeholders in how new modes of sustainable public transportation can be utilized in an urban environment.

Autonomous Vehicle Symposium (continuing education credit offered)

November 8, 2017 • San Francisco CA



With the rise of autonomous vehicles, there are both opportunities and challenges in how these technological advances can be harnessed to reshape future cities and improve the socioeconomic health of cities. Opportunities exist to reduce collisions and improve access to healthcare for those who need it most — particularly high-cost, high-need individuals at the younger and older ends of the age spectrum. Opportunities also exist to connect individuals to jobs and change the way cities organize space and

optimize trips. That said policy has lagged in this area. And despite some high-level policy suggestions from organizations such, technological change is outpacing urban planning and policy. The purpose of this symposium was to frame and develop policy around the topic of AVs particularly focused on land use, the social implications of technology, and economics. A video of the day's proceedings can be viewed at: <http://transweb.sjsu.edu/events>.

Navajo Technical University Open House & Skills Fest

October 25, 2017 • Crownpoint NM



Skills Fest celebrated community cohesiveness on the Navajo Nation by introducing high school students to the possibilities of higher education. Students learned about the various educational programs and services available at Navajo Technical University. Several representatives from MCTM's partners at NTU were present to discuss career opportunities in transportation.

Building upon this momentum, NTU has been invited by two of the regional school districts to significantly expand dual-credit relationships. To that end, the Gallup-McKinley County School District will create an academy on the NTU main campus in Crownpoint while the Central Consolidated School District has acquired an abandoned high school that will be reimaged as a Technology Center.

Are Autonomous Vehicles Safe? Understanding What's Already Here and What Needs to Happen

February 6, 2018 • Online

This webinar, organized through the U.S. Department of Transportation, Intelligent Transportation Systems Joint Program Office covered recently concluded and ongoing projects related to safety and regulatory concerns for the expanding market of Autonomous Vehicles (AVs). The work presented was conducted within the past year at the RiSA2S Research Center of San José State University, a multi-disciplinary innovation center for the Risk and Safety Assessment of Autonomous Systems with funding support from the Mineta Transportation Institute. The activities of the lab are aimed at improving safety and better informing regulatory agencies in their recommendations for the certification process of autonomous systems. In particular, the seminar delved into three topics of current interest:

1. An analysis of current AV accident statistics based on the data provided by the California Department of Motor Vehicles;
2. An examination of triggers and contributory factors of disengagements of the autonomous technology that controls the car; and

3. An overview of current issues related to driver's reactions to disengagements when collaboration is expected (e.g., Level 2 and 3 AVs) and presentation of ongoing human-in-the-loop study.

Implementing the State Rail Plan

February 20, 2018 • San Jose CA

In the fall of 2017, California released its State Rail Plan, a strategic vision that provides an innovative framework for our rail network over the next two decades with the intended goal of creating a state-of-the-art rail system by 2040. During this event, participants explored the plan to learn more about its vision, how it supports the intermodal connections at Diridon Station and how it might change the future of travel throughout California for the better. Mineta Transportation Institute was a proud co-presenter of this event.

Secretary Norman Y. Mineta: Retrospective on the Career of an Icon

February 21, 2018 • San Jose CA

Secretary Norman Y. Mineta is a San Jose icon hardened in the crucible of the Japanese American internment camps of WWII; who succeeded against all odds. , After serving as an Army intelligence officer during Korea, he became the first Japanese American mayor of a major US city (San Jose) and served over twenty years in Congress in progressively more powerful positions, retiring as chair of the House Transportation and Infrastructure Committee. He further distinguished himself by serving as the Secretary of Commerce in the Clinton administration and as Secretary of Transportation for the Bush administration, where he served for seven years, the longest in history. Secretary Mineta remains active in SJSU's Mineta Transportation Institute, the San Jose Norman Y. Mineta International Airport, and by serving on numerous nonprofit and commercial Silicon Valley boards.

West Coast Rail Conference

March 6-8, 2018 • Los Angeles CA

The world's leading rail experts joined with business and political leaders to discuss bringing fast rail to America. Construction is underway on the first phase of the 800-mile, state-of-the-art transportation system set to revolutionize mobility in America, starting with California. Once the system is built out, it will carry more than 100 million people each year, saving time, money, energy, and lives. MTI was a proud co-sponsor of this event.

CALCOG Regional Leadership Forum

March 14-16, 2018 • Monterey CA

Every year, leaders from regions across California gather in Monterey for the Regional Leadership Forum. This event focused on the role of regional governance in California and the critical issues facing the transportation industry. The Forum also explored the ways that Senate Bill 1 is making California a better place to live, work, and thrive. MTI Research Associates made two well-received and innovative presentations: *Cybersecurity and Public Infrastructure*

and *Coordinating & Executing Evacuations in Emergency Planning*. MTI was a proud co-sponsor of this event.

Innovative Technologies in Urban Planning (continuing education credit offered)

March 17, 2018 • San Jose CA

This symposium, keynoted by Dr. Waddell, focused on “Innovative Technologies in Urban Planning” Dr. Waddell led the development of the UrbanSim model now used by Metropolitan Planning Organizations and other local and regional agencies. Panel discussions addressed:

- Using Urban Simulation and Data Science to Evaluate Land Uses
- Providing Services Using Emerging Technologies
- Transportation and Technology in the Urban Environment

Car-light Housing: More Affordability, Less Traffic

March 26, 2018 • San Mateo CA

Californians need to address the housing affordability crisis without increasing congestion or harming the climate. To that end, MTI sponsored this event focused on:

- Learning the connections between housing affordability, traffic reduction, and climate change;
- Documenting successful regional campaigns to reduce driving; and
- Identifying ways that citizens can help make their community more walkable, affordable, and transit-friendly.

Student Internships and Assistantships

Currently, 23 students are receiving financial support from the Consortium. This support includes tuition, stipends, and paid hourly rates.

- Howard University: Six students
- SJSU: Fifteen students
- UNCC: Two students

The U.S. Department of Transportation has increasingly demonstrated interest in developing programs that will enhance the workforce capacity of future transportation systems. To that end, the Department sponsored the 2015 Innovative Public Transportation Workforce Development program, directed by the Federal Transit Administration. This program sought to enhance the availability of skilled workers from targeted groups, including the underserved, underemployed, and/or minority groups into possible transit-oriented career paths. One of the 19 programs selected for funding was the “DO IT!” project proposed and developed by the Valley Transit Authority (VTA). VTA proposed to create an innovative education and training program that focused on attracting and ultimately hiring underserved, underemployed, and/or minority groups in its service area of Santa Clara County. The program was created with two major goals in mind: (1) to enable VTA to work with local youth who may not otherwise have the opportunity to be exposed to a career in public transportation – specifically in the area of transportation planning; and (2) to provide a ladder of opportunity into the middle class which will help strengthen our workforce and our intercity communities by building the critical skillset needed to maintain a competitive and efficient public transportation service. MTI provided an evaluation of

the “Do It! Program” and presented recommendations for program replication. Overall, this program as a success and on March 22, MTI received a message from VTA’s Supervisor of Organizational Development and Training indicating that one of the student interns in the program, who had never previously been exposed to careers in transportation, was hired as a VTA Transportation Planning Aide and she enrolled in the MTI Master of Science in Transportation Management program.

Student Scholarships

Each year, MTI hosts an annual awards banquet and convocation celebration to recognize students graduating with their Master of Science in Transportation Management (MSTM) degree. This celebration also serves as a fundraising opportunity whereby MTI secures sponsorships that support scholarships for MSTM students. During this period of performance, and using these sponsorship funds, MTI awarded \$42,000 to deserving students.

By way of background, in 1999 MTI, using federal USDOT UTC dollars and state match provided by the California Department of Transportation (Caltrans), founded the MSTM program. The curriculum is led by nationally recognized instructors who are academic or industry experts. The Masters program is fully accredited by the Association to Advance Collegiate Schools of Business (AACSB) and the program is accelerated, which enables students to complete the MSTM in two and a half years. Classes are held in the evening, allowing students to work full time while earning their degrees. Students generally take one course at a time, one night per week for each 10-class session, for a total of four classes per year. The program is available statewide at designated Caltrans district offices and other participating transportation agencies. Classes are delivered by two-way video conferencing supplemented by video streaming and web courseware.

In October of 2017, MTI partnered with the American Public Transportation Foundation (APTF) to award a \$10,000 scholarship to a San Jose State University student. To achieve this level of funding, MTI and APTF both supported this scholarship with a \$5,000 investment. MTI plans on continuing this partnership in the Fall of 2018.

What Do You Plan to Do During the Next Reporting Period to Accomplish the Goals?

No change to the agency-approved application

2. Products

Publications, Conference Papers, and Presentations

During this period of performance 32 academic and professional presentations, featuring the results of MTI-funded research, were provided. A snapshot of this activity is presented (Full citations for all presentations available upon request).

- *Do Americans’ Opinions About Federal Transportation Tax Options Depend on Survey Mode? A Comparison of Results from RDD Phone and On-line Surveys* presented at Association of Collegiate Schools of Planning on October 12, 2017 in Denver CO.

- ***Microscopic Simulation, Complete Streets, and Tactical Urbanism Strategies to Enhance Multimodal Transportation in Downtown San José, CA*** presented at Chinese Ministry of Industry and Information Technology (delegation) on October 18, 2017 in San Jose CA.
- ***Infrastructure Finance for Existing and Emerging Mobility Systems*** presented at TE3 Conference on October 20, 2017 in Ann Arbor MI.
- ***What Determines Travel Demand by Bus in the United States? A National Study at Metropolitan Statistical Area Level*** presented at Transportation Research Board 97th Annual Meeting on January 7, 2018 in Washington DC.
- ***Designing Road Diet Evaluations: Lessons Learned from San José’s Lincoln Avenue Road Diet*** presented at Transportation Research Board 97th Annual Meeting on January 7, 2018 at Washington DC.
- ***Improving Pathways to Fixed-Route Transit: Transit Agency Practices to Expand for All Users*** presented at Transportation Research Board 97th Annual Meeting on January 7, 2018 in Washington DC.
- ***Transit Stop Consolidation*** a poster presented at Transportation Research Board 97th Annual Meeting on January 7, 2018 in Washington DC.
- ***Finding Support for “Green” Transportation Taxes: Should We Look for Supportive Places or Supportive People?*** a poster presented at Transportation Research Board 97th Annual Meeting on January 7, 2018 in Washington DC.
- ***Placemaking for Age-Friendly Cities*** presented at AARP California on January 17, 2018 in La Cañada Flintridge CA.
- ***Analysis of Disengagements in Autonomous Vehicle Technology*** presented at 64th Annual Reliability and Maintainability Symposium on January 25, 2018 in Reno NV.
- ***Securing our Surface Transportation Systems: Examining the DHS Role in Surface Transportation Technologies*** a testimony presented at House Committee on Homeland Security – Transportation and Protective Security and Emergency Preparedness, Response, and Communications Subcommittees on January 30, 2018 in Washington DC.

Journal publications

During this period of performance, four journal articles were published.

- Lee, J.,Boarnet, M., Houston, D., Nixon, H. and Spears, S. (2017). Changes in Service and Associated Ridership Impacts near a New Light Rail Transit Line. *Sustainability*, 9(10), p. 1827-1854.

- Nixon, H. & Agrawal, A.W. Would Americans Pay More in Taxes for Better Transportation? Answers from Seven Years of National Survey Data. *Transportation* (2018). <https://doi.org/10.1007/s11116-018-9855-x>
- Nixon, H, Agrawal, A.W. & Simons, C. Slimming the Streets: Best Practices for Designing Road Diet Evaluations. *ITE Journal* 88, no. 3 (March 2018): 40-45.
- Ndon, Udeme (2017). Trends in the Application of Permeable Pavement as Sustainable Highway Storm Water Management Options for Safe-use of Roadways. *Journal of Civil & Environmental Engineering*, 7(6), DOI: 10.4172/2165-784X.1000288.

Books or other non-periodical, one-time publications

MCTM documents two publications in this category between June 1, 2017 and March 31, 2018. They are:

- Edwards, F., Goodrich, D., Hellweg, M., and Strauss, J. (2018). Earthquake Early Warning Systems: International Experience. In Kar, B. and Cochran, D. (Eds.), *Understanding the Roles of Risk Communication in Community Resilience Building*. New York: NY: Taylor & Francis Group.
- Haas, P. & Springer, F. (2018, March). [Evaluation of the Valley Transportation Authority’s DO IT! Program A “Ladders of Opportunity Initiative” Program Funded by the Federal Transit Administration](#). *MTI Report WP12-18*.
- Loukaitou-Sideris, A. & Peters, D. (2017). High-speed Rail Stations as Transportation Nodes and Places: Lessons for California. In B.L.P. Henriquea & E. Deakin (Eds.) *High-Speed Rail and Sustainability: Decision-making and the Political Economy of Investment (Routledge Explorations in Environmental Studies)*. New York, NY: Routledge.
- Jenkins, B. & Butterworth, B. (2017, September). [Terrorist Vehicle Attacks on Public Surface Transportation Targets](#). *MTI Security Perspective*.

Website(s) or other Internet site(s)

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

Technologies or Techniques

T3e Webinar: Are Autonomous Vehicles Safe? Understanding What’s Already Here and What Needs to Happen a webinar on February 6, 2018.

Inventions, Patent Applications, and/or Licenses:

Nothing to report

Other Products
Nothing to report

■ 3. Participants & Collaborating Organizations

What Organizations Have Been Involved as Partners?

During this period of performance, MCTM universities partnered with the following organizations:

1. **Organization Name and Location:** American Public Transportation Association (APTA-Washington, DC)
 - Partner's Contribution to the Project:
 - Facilities: Conference room, audiovisual
 - Financial support: Provided breakfast and lunch
 - Project: MCTM Board of Trustees Winter Meeting
2. **Organization Name and Location:** Booker T. Washington Community Service Center (San Francisco, CA)
 - Partner's Contribution to the Project: Financial support (transportation for middle-school girls to tour Spartan Superway facility and San Jose State University campus)
 - Project: STEM as a Path to the Future
3. **Organization Name and Location:** California Department of Transportation (Caltrans-Sacramento, CA and several district offices)
 - Partner's Contribution to the Project: In-kind support (live-streaming broadcast network)
 - Project: MTI Masters of Science in Transportation Management
4. **Organization Name and Location:** Chinle, AZ High School (Chinle, AZ)
 - Partner's Contribution to the Project: In-kind support
 - Project: Developing a Certificate in Transportation Careers (MCTM Project 1703)
5. **Organization Name and Location:** City of Charlotte (Charlotte, NC)
 - Partner's Contribution to the Project: In-kind support (data pertaining to all major new developments and road construction projects in Charlotte)
 - Project: Modeling the Effect of Developments and Road Construction Projects on Transportation System Performance (MCTM Project 1702)
6. **Organization Name and Location:** District Department of Transportation (DDOT: Washington, DC)
 - Partner's Contribution to the Project: Financial support
 - Project: Exploring strategies to improve mobility and safety on roadway segments in Urban Area (MCTM Project 1701)
7. **Organization Name and Location:** Dutch Cycling Embassy (Delft, The Netherlands)

- Partner's Contribution to the Project: In-kind support
 - Project: How Can the Silicon Valley Become One of American's Great Biking Capitals? Lessons Learned from the Dutch Cycling Embassy
8. **Organization Name and Location:** History San Jose (San Jose, CA)
- Partner's Contribution to the Project: Financial support (free admission for Summer Transportation Institute high school students)
 - Project: Summer Transportation Institute
9. **Organization Name and Location:** Navajo Division of Transportation (Navajo DOT: Mentmore, NM)
- Partner's Contribution to the Project: In-kind support
 - Project: Developing a Certificate in Transportation Careers (MCTM Project 1703)
10. **Organization Name and Location:** North Carolina Department of Transportation (NCDOT: Raleigh, NC)
- Partner's Contribution to the Project: In-kind support (data pertaining to all road construction projects in and around Charlotte)
 - Project: Modeling the Effect of Developments and Road Construction Projects on Transportation System Performance (MCTM Project 1702)
11. **Organization Name and Location:** Prospect SV (San Jose, CA)
- Partner's Contribution to the Project: Collaborative Research and Event
 - Project: Innovation & Impact 2017
12. **Organization Name and Location:** The Tech Museum (San Jose, CA)
- Partner's Contribution to the Project: Financial support (discounted admission for Summer Transportation Institute high school students)
 - Project: Summer Transportation Institute

Have Other Collaborators or Contacts Been Involved?

- Several organizations have participated as experts in MCTM summits, conferences and other events. These include but are not limited to the International Union of Railways; Metropolitan Transportation Commission, Santa Clara Valley Transportation Authority, and the Silicon Valley Leadership Group.

 **4. Impact**

What is the Impact on the Development of the Principal Disciplines of the Project?

- MCTM partner, Navajo Technical University, has developed dual credit course agreements with two regional high schools, each with greater than 90% Native American enrollment, for the MCTM Transportation Workforce Skills summer program. Courses include welding, construction, and computer aided drafting and modeling. The participating high schools are:
 - Wingate High School in Wingate , NM

- Many Farms High School in Many Farms, AZ

What is the Impact on Other Disciplines?

All MCTM/MTI publications are added to SJSU ScholarWorks, an open access digital service representing the research, scholarship, creative works, and campus documents of SJSU researchers.

What is the Impact on the Development of Transportation Workforce Development?

- MCTM partner, Navajo Technical University, is developing a program to directly connect careers in the transportation industry with students in this underserved population. Through the *Career Ready and College Ready* program, students develop an increased awareness of career opportunities in transportation.
- MTI is once again hosting the 2018 SJSU **Summer Transportation Institute** - a three-week, non-residential program that provides high-school students with a summer experience that is both academically challenging and fun. With an emphasis on science and related transportation issues, the curriculum introduces key components of scientific inquiry and major transportation-related topics of the day. Field trips to major Bay Area transportation sites and agencies provide a first-hand look at potential career paths. Recruitment is underway and the program will commence in June.

What is the Impact on Physical, Institutional, and Information Resources at the University or Other Partner Institutions?

The MCTM web site provides an online resource for professionals and the public to access a repository of transportation-related research.

What is the Impact on Technology Transfer?

- MCTM transfers the results of research and outreach activities through news releases, all of which include active links, and through media interviews, which are actively pitched. News releases are issued through Meltwater's national media distribution and are sent directly to MTI/MCTM's proprietary list of email addresses that include policy makers, transportation professionals, research associates, students and alumni, and others. This list is continually updated as new contacts are made. MTI also leverages diverse methods and media to disseminate research findings to those responsible for managing change. Such methods include research publication, seminars, workshops, websites, social media, and webinars, among others.

What is the Impact on Society Beyond Science and Technology?

The long-range purpose of MCTM research and outreach activities is to help legislators, policy leaders, transportation professionals, and others to understand the issues facing the nation's mobility infrastructure and to make optimum decisions based on factual data.



5. Changes/Problems

Changes in Approach and Reasons for Change: Nothing to report

Actual or Anticipated Problems or Delays Encountered: Nothing to report

Changes that Have a Significant Impact on Expenditures: Nothing to report

Change of Primary Performance Site Location from that Originally Proposed: Nothing to report

ADDITIONAL INFORMATION REGARDING PRODUCTS AND IMPACTS

Outputs

- Website: MCTM created a website to document consortium-related activity (<http://transweb.sjsu.edu/mctm/events.html>)
- Technologies or Technology Assessments; Databases, Software or Models:
 - The data collected for the MCTM project [Exploring strategies to improve mobility and safety on roadway segments in urban areas](#) has been stored in the Howard University Transportation Research Center's Turning movement count database and is available to the public through their website (www.hutrc.org).
- Outreach activities: MNTRC sponsored sixteen outreach activities, five of which focused on K-12 during this period of performance.

Outcomes

Nothing to report

Impacts

Nothing to report