Academic Centers and Institutes

FIVE YEAR EXTENSION REQUEST – NOVEMBER 21, 2025

CITT
CENTER FOR INTERNATIONAL TRADE AND TRANSPORTATION
CSULB

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INTRODUCTION

Organizational Overview

Established in 1999, the Center for International Trade and Transportation (CITT) delivers education programs, innovative research, and community outreach in the areas of transportation, supply chains, and logistics. CITT establishes and maintains partnerships across the entirety of the trade and transportation landscape, including the ports of Los Angeles and Long Beach, the Southern California Association of Governments (SCAG), and the California Department of Transportation (Caltrans), and with academic and research institutions around the globe. Since 2014, CITT has secured more than $15 million dollars in grant funds to support education and outreach programs. The workforce analyses produced by CITT have led to the development of new training programs and career pathway models that support local economic sectors in partnership with CSULB's College of Professional and Continuing Education (CPaCE), The Port of Long Beach, the California Hydrogen Business Council, California Energy Commission, California Air Resources Board, California Governor's Office of Business and Economic Development, U.S. Department of Transportation (USDOT) and others. CITT designs and implements programs that are reflective of the needs of our partners in both the private and public sectors, and CITT is responsive to changes in economic reality, government policy, and workforce needs.

CITT administers California's Local Technical Assistance Program (LTAP) Center under the direction of Caltrans' Division of Local Assistance. CITT Executive Director Tyler Reeb, Ph.D., serves as the LTAP Tribal Liaison, drawing upon his extensive work with the Transportation Research Board's Standing Committee on Native American Transportation Issues. CITT also partners with the Western Tribal Technical Assistance Program and is a member of the program's Steering Committee. As Tribal Liaison to California's tribes under the California LTAP, Reeb provides the WTTAP team with additional understanding of tribal needs and assistance in transportation-related issues.

CITT also has directly relevant experience in undertaking Workforce Development Initiatives for FHWA and in research on highway construction workforce partnerships. CITT led FHWA's National Transportation Career Pathway Initiative (NTCPI), which developed pathway models for five disciplines within transportation including planning and engineering.

In addition to the LTAP Center, CITT is the Long Beach home for two USDOT-designated university transportation centers, the U.C. Davis-led National Center for Sustainable Transportation and the University of Southern California-led Pacific Southwest Region University Transportation Center (covering California, Arizona, Nevada, and Hawaii).

CITT's research portfolio features policy analysis in the areas of trade and transportation, as well as workforce development. Our outreach programs include educational forums, including the nationally recognized State of the Trade and Transportation Town Hall series, research conferences such as the International Urban Freight Conference, and media-based efforts including podcasts and newspaper columns that engage the broader community in the discussion surrounding international trade and transportation. CITT's education programs include the award-winning Global Logistics Professional program. CITT also developed a customized leadership training program for mid-level managers designed to support their advancement at the Port of Long Beach.

CITT is also a member of the METRANS Transportation Center, a joint partnership with the University of Southern California (USC). METRANS' mission is to solve the transportation problems of large metropolitan regions through interdisciplinary research, education, and outreach.

Our research portfolio features policy analysis in the areas of trade and transportation, as well as workforce development. CITT organizes, designs, and implements solutions-based forums and workshops for the transportation sector, including the nationally recognized State of the Trade and Transportation Town Hall series, research conferences such as the International Urban Freight Conference, and media-based efforts including podcasts and newspaper columns that engage the broader community in the discussion surrounding international trade and transportation. CITT's education programs include credit and non-credit programs in integrated logistics, featuring the award-winning Global Logistics Professional (GLP) program. In 2023, CITT lead the design, development, implementation, and documentation of the half-day Japanese-California Green Shipping Corridors Symposium.

During the reporting period, CITT had two Executive Directors. Dr. Tom O'Brien served as Executive Director from 2015 until 2023. In October 2023, Dr. Tyler Reeb was named CITT's Interim Executive Director and became the Center's official Executive Director in March 2024.

Mission Statement

Over the last twenty-six years, CITT has made an ongoing effort to actively:

1. conduct innovative research within the field of trade and transportation;
2. develop educational and training programs in partnership with industry and community stakeholders; and
3. connect stakeholders in industry, academia, and government.

Since its founding in 1997 by Marianne Venieris at California State University, Long Beach, the Center has operated as a resource for the goods movement industry, researchers and education providers. CITT contributes specialized research in the areas of policy analysis, workforce development, and labor market analysis. The research informs the development of its

training and education programs for audiences that range from middle school students through late career professionals. Since the creation of the Global Logistics Professional (GLP) program in 1997, CITT has continued to build its reputation as a respected and forward-looking education developer and service provider.

As a key nexus of industry, academia, and government, CITT is also uniquely positioned to provide an ongoing and neutral forum where all stakeholders can come together to present alternative solutions to complex problems, seek opportunities around those solutions, and share expertise and resources. Our outreach programs include educational forums, publications that translate dense research for non-expert audiences, and multimedia efforts that keep the community connected and engaged. The Center has continued to lead outreach efforts within the regional trade and transportation community through its annual Town Hall meetings, which are designed to provide a forum for stakeholders to present their perspectives on current issues and developments impacting the industry.

CITT is dedicated to connecting and empowering the trade and transportation workforce by providing:

1. Education and training for today's realities and tomorrow's opportunities
2. Research and policy insights across the global supply chain
3. Leadership in the classroom, community, and the workplace

Education and Training for Today's Realities and Tomorrow's Opportunities

The Center contributes to the development of a well-informed cross-sectoral and multidisciplinary community of industry professionals, governmental, and community leaders through:

- Education and Training Programs - a suite of training solutions designed to provide incumbent and emerging professionals with essential industry-recognized knowledge, skills, and abilities
- Customized contract training - educational programs designed to address organizational development and capacity needs for public and private organizations
- Scalable community education seminar programs--targeted outreach programs to promote knowledge transfer about critical supply chain logistics issues for industry, community, and governmental stakeholders
- K-12 programs to create pathways to opportunity

Research and Policy Insights across the Global Supply Chain

The Center conducts unbiased applied research that contributes to the knowledge base of goods movement, leading to an informed analysis of:

- Workforce Development--Career Pathway Development for critical occupations in the trade and transportation sector

- Labor Market Analysis--identifying skills gaps and mapping new competencies required to empower the new mobility workforce
- Policy Analysis--studying the impact of legislation and regulations across the supply chain
- Applied Research--Developing real-world test beds and pilot programs to test new initiatives

Leadership in the Classroom, Community, and the Workplace

The Center disseminates globally significant research findings and information by serving as an evidence-based community and industry resource and providing:

- Organizational leadership as subject matter experts in various venues
- Civic Markets - Bringing Together Leaders in Industry, Education, and Government to develop common calls to action
- Signature Events: Annual Town Hall, Conferences, Seminars
- Multimedia offerings: Video, Webinars, Podcasts
- Scholarships and Awards to students

Grants & Funding Streams

Pacific Southwest Region (PSR) University Transportation Center (UTC)

The Pacific Southwest Region University Transportation Center (UTC) is the Region 9 UTC funded under the US Department of Transportation's University Transportation Centers Program. Established in 2016, the Pacific Southwest Region UTC (PSR) is led by the University of Southern California and includes nine partners:

- California State University, Long Beach
- Northern Arizona University
- Pima Community College
- University of California, Berkeley
- University of California, Davis
- University of California, Irvine
- University of California, Los Angeles
- University of Hawaii
- University of Nevada, Las Vegas

The Pacific Southwest Region (PSR) University Transportation Center (UTC) serves Region 9 with a comprehensive, integrated program of research, education and technology transfer built upon the priority needs of the region: 1) closing access gaps to support an efficient transportation

system, 2) increasing sustainability and resilience of the goods movement system, and 3) expanding workforce opportunities.

This is a moment of great change. Technology is enabling new mobility opportunities, but many people are being left behind. Our vulnerability to external shocks (natural and human-made) is increasing. We must build a transportation system that promotes access, while sustainably supporting the economy, with a workforce that is trained for and connected to new jobs.

Region 9 is the right place for transformative research that will change practice. Region 9 includes Arizona, California, Hawaii, Nevada, and the Pacific Territories. The region has enormous variation geographically, economically, and socially. It has the second largest metropolitan area in the US (Los Angeles), as well as vast tracts of rural lands. Income disparities are extreme, with concentrations of poverty in central cities as well as remote tribal communities. It includes the center for US maritime trade (the Ports of Los Angeles and Long Beach) and the inaccessible Pacific islands and territories. We identified five characteristics of Region 9 that frame our research program and inform our research themes.

1. *Uneven transportation resources* across our enormously diverse region, particularly among transportation-disadvantaged travelers and communities
2. Our region's *central role in global supply chains*, and the growing risk of disruption to the supply chains
3. *Our region's particular vulnerabilities* to risks such as wildfires, sea level rise, drought, and extreme weather
4. Our region's role as the *global center of the information and communications technology (ICT) revolution*, which is transforming transportation
5. The *changing nature of transportation work*, potentially placing hundreds of thousands of jobs at risk but creating new jobs as well

The PSR UTC is structured to have a truly regional focus and is intended to build a strong university-government-industry partnership. Our consortium of universities and community colleges, together with partnerships with state Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs), forms a region-wide network to guide the development and implementation of the center's research, education, and technology transfer programs.

The most recent semi-annual report on PSR's activities can be found here.

The PSR program was suspended in May 2025.[1] As of October 1, 2025, the PSR program has been reinstated.[2]

National Center for Sustainable Transportation

The National Center for Sustainable Transportation (NCST) provides national leadership in advancing environmentally sustainable transportation through cutting-edge research, direct policy engagement, and education of our future leaders. The Institute of Transportation Studies at the University of California, Davis (ITS-Davis) leads the NCST in partnership with METRANS (University of Southern California; California State University, Long Beach); the University of California, Riverside; Georgia Institute of Technology; and the University of Vermont.

The NCST was established in 2013 after being selected in a national competition to serve as one of five national transportation centers as part of the University Transportation Centers (UTC) program administered by the U.S. Department of Transportation. In 2016, the NCST successfully re-competed for the opportunity to continue serving as one of the U.S. DOT's five National UTCs and is addressing the Fixing America's Surface Transportation (FAST) Act research priority area of Preserving the Environment. To preserve the environment, we must minimize the impact of the transportation system on our natural resources, including energy, climate, air, water and land. Although considerable progress has been made in the last five decades, the environmental impacts of transportation remain substantial and fall disproportionately on the most vulnerable members of our communities. The challenge for the nation is to reduce these impacts while meeting the mobility needs of society, fostering healthy communities, and supporting economic growth. In response to this challenge, the NCST's research, education, and engagement programs are organized around the following high-priority themes:

- Environmentally responsible infrastructure and operations
- Multimodal travel and sustainable land use
- Zero-emission vehicle and fuel technologies
- Institutional change

The NCST receives funding from the U.S. DOT, the California Department of Transportation, the California Air Resources Board, the California Energy Commission, the South Coast Air Quality Management District, the Volvo Research and Educational Foundation, and sources in the states of Georgia and Vermont.

The most recent semi-annual report on NCST's activities can be found here.

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[1] "U.S. Transportation Secretary Sean P. Duffy Defunds Woke University Grants," United States Department of Transportation, May 2, 2025, https://www.transportation.gov/briefing-room/us-transportation-secretary-sean-p-duffy-defunds-woke-university-grants.

[2] Jaweed Kaleem, "Judge Orders U.S. to Restore UCLA Grants," Main News; A; Metro Desk, *Los Angeles Times* (Los Angeles, Calif., United States), September 23, 2025, https://www.proquest.com/docview/3253205017/citation/11F1DD3C0C434D6EPQ/3?sourcetype=Newspapers.

The NCST program was suspended May 2025.[3] As of October 1, 2025, the NCST program has been reinstated.[4] Deliverables until 12/31/2025 include a workforce needs assessments to inform the development of curriculum for a "Foundations in Energy Systems for Transportation" certificate as well as the restart of a Middle School GIS Day and research efforts through the University Research Opportunity Program (UROP).

California State University Transportation Consortium

The California State University Transportation Consortium (CSUTC), led by the Mineta Transportation Institute at San José State University, conducts research and workforce development activities to identify safe, reliable solutions that increase mobility of people and goods and strengthen California's economy. CITT conducts research under this grant funded by California SB1. Other members of the CSUTC include the California Pavement Preservation Center based at California State University, Chico and the Fresno State Transportation Institute based at California State University, Fresno.

METRANS Tier 1 Transportation Center

The METRANS Transportation Consortium was established in 1998 through the Transportation Equity Act for the 21st Century (TEA-21) as the first University Transportation Center in Southern California. METRANS is a joint partnership of the University of Southern California (USC) and California State University, Long Beach (CSULB).

METRANS is located in Southern California, which is home to nearly two-thirds of the state's population and the most congested metropolitan area in the US. The region is a center for international trade: the Los Angeles/ Long Beach port complex is the largest container port in the US (trade in 2011 was $382 billion); and LAX is the 7th largest air freight center in the US. As a center of both international trade and immigration, the Los Angeles region is home to both extreme wealth and extreme poverty, and has one of the largest transit-dependent populations in the country. METRANS is committed to addressing the transportation challenges of regions such as Los Angeles.

METRANS' mission is to solve transportation problems of large metropolitan regions through interdisciplinary research, education and outreach.

METRANS has three primary objectives:

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[3] "U.S. Transportation Secretary Sean P. Duffy Defunds Woke University Grants," United States Department of Transportation, May 2, 2025, https://www.transportation.gov/briefing-room/us-transportation-secretary-sean-p-duffy-defunds-woke-university-grants.

[4] Jaweed Kaleem, "Judge Orders U.S. to Restore UCLA Grants," Main News; A; Metro Desk, *Los Angeles Times* (Los Angeles, Calif., United States), September 23, 2025, https://www.proquest.com/docview/3253205017/citation/11F1DD3C0C434D6EPQ/3?sourcetype=Newspapers.

- Foster independent, high quality research to solve the nation's transportation problems
- Train the next generation transportation workforce
- Disseminate information, best practices, and technology to the professional community

We accomplish these objectives through a comprehensive and collaborative program of research, education, information dissemination and technology transfer organized around three topical focus areas:

- Integrated management of freight and passenger systems
- Sustainable and efficient urban freight transportation
- Mobility of urban populations

The partnership of USC and CSULB brings together two large urban universities – a combined student body of about 65,000 – with complementary strengths. USC is among the nation's leading research universities, and CSULB is one of the largest teaching universities in California. METRANS research includes many disciplines: faculty come from several fields of engineering, as well as planning, public policy, public administration, economics, and geography.

The two universities together offer a full spectrum of education and training, from PhD to undergraduate and including professional training and certificate programs. Dissemination and technology transfer are accomplished via conferences, workshops, publications, and website.

California Local Technical Assistance Program (LTAP)

In October of 2021, CITT became the new administrative home for California's Local Technical Assistance Program (LTAP *or* CALTAP) Center after being awarded a three-year contract from California's Department of Transportation (Caltrans). Funded through partnerships between the Federal Highway Administration (FHWA) and state departments of transportation (DOTs), this national program assists local, rural, and tribal transportation agencies by offering low-to-no-cost access to high-demand workforce training, technical assistance, and other knowledge transfer services. CITT also works with the CSULB College of Engineering in curriculum design for the LTAP.

With 51 centers across the U.S. and Puerto Rico forming a state-based regional network, LTAP has established a comprehensive national framework of local public agency (LPA) support. In California, the audience for LTAP services consists of the State's 600+ LPAs, which includes 58 counties (482 municipalities) comprised of cities, regional transportation planning agencies (RTPAs), metropolitan planning organizations (MPOs), towns, special districts, and tribal communities. Caltrans organizes all of these LPAs geographically into 12 "Districts" that cover the State's three regions: north, south, and central.

In its administration of California's Local Technical Assistance Program (LTAP) Center, CITT has remained focused on executing work plan objectives to expand program outreach and local

public agency (LPA) engagement via new and existing communication channels, including the dissemination of curated industry news and updates via social media and email-based direct subscriber campaigns, content and feature-set upgrades to our newly developed caltap.org website, and targeted presentations and webinars that are designed to broaden audience awareness.

Tribal Technical Assistance Program (TTAP)

Applied Pavement Technology, Inc. (APTech) has assembled a team of tribal engagement and transportation outreach experts to meet the Federal Highway Administration (FHWA) mission for the Western Tribal Technical Assistance Program (TTAP) Center. APTech's team is led by its proposed Director, Ms. Carrie Brown of APTech, and further strengthened by partnerships with the University of California, Berkeley (UCB); California State University, Long Beach (CSULB); Monte Yazzie, a consultant based in the Salt River Pima-Maricopa Indian Community; and Walita Querta, an indigenous graphic artist with tribal affiliations with Pyramid Lake Paiute Tribe and the Hualapai Tribe of Arizona. As Tribal Liaison to California's tribes under the California LTAP, Tyler Reeb of CSULB provides the APTech team with additional understanding of tribal needs and assistance in transportation-related issues.

CITT assists tribal communities in California with workforce development and partnerships in highway construction. CITT's work has resulted in training courses and resources that include the Highway Construction Apprenticeship Development Guide for the FHWA Roads to Your Future Playbook. For the Western TTAP Center, CITT will lead the Workforce Development Initiative (WDI).

The Western TTAP Center will foster a safe, efficient, and environmentally sound transportation system for tribes in the Western region by improving skills and increasing knowledge of the transportation workforce and tribal decision makers. In doing so, APTech and its partners will strive to balance the following key activities:

- Assisting tribes with their transportation technical needs through instructional system design (ISD) and delivery.
- Respecting sovereignty and self-determination of tribes through culturally competent technical assistance and training.
- Encouraging tribes to update their infrastructure and exercise tribal sovereignty when making decisions involved in performing those updates.

EDUCATION and TRAINING

Completed

2019-2020

Geospatial Tech Education: This project involved coordinating a five-year Train-the-Trainer GIS Initiative with CITT in partnership with Pima Community College to promote skills required for careers using geospatial technology and modelling. Enrolled trainers received hands-on instruction to help them integrate GIS into the courses they teach.

Virtual Logistics Peer Exchange: Using its extensive experience in the development of both classroom-based and online logistics programs for audiences that include regional and statewide planning organizations, METRANS/ CITT hosted two virtual peer exchanges each year to allow municipal and MPO-level planners to share best practices on incorporating freight and logistics into local and regional plans. The peer exchanges included content specific to the regional audience (e.g. cross-border trade logistics in Arizona and California) and incorporated existing distance-based teaching tools developed by CITT and offered access to leading industry practitioners who served as virtual mentors.

Southern California Regional Transit Training Consortium (SCRTTC) Needs Assessment and Gap Analysis Project: As SCRTTC's first university partner, CITT developed the relevant structures for transit agencies to determine workforce needs and, in turn, effectively and safely deploy new training to California's transit workforce with a focus on environmental and clean technology. The transit sector grows and evolves quickly with the needs of growing, busy cities. With this growth comes a need for more transit workers and more training to ensure workers can best serve their diverse communities. CITT provided a transit training needs assessment and gap analysis to identify the most pressing challenges of the evolving transit workforce served by the SCRTTC.

Online training for EV Transit Bus Safety Awareness and Familiarization (CSUTC): This course provides a general understanding of safety protocols when working around all-electric high voltage (HV) transit vehicles. Two syllabi were developed for this course: an instructor-led version and an eLearning online version for Train-the-Trainer sessions (T-t-T). This training is being deployed at institutions that are part of the Southern California Regional Transit Training Consortium (SCRTTC). Instructors for the T-t-T course with Proterra were hosted at Foothill Transit's Arcadia facility on November 2, 2018. Ten (10) participants representing 5 transit agencies, 2 colleges and 1 private industry partner attended.

Southern California Regional Workforce Development Needs Assessment for the Transportation and Supply Chain Industry Sectors (CSUTC): COVID-19 brought the public's attention to the critical value of transportation and supply chain workers as lifelines to access food and other supplies. This report examines essential job skills required of the middle-skill workforce (workers with more than a high school degree, but less than a four-year college degree). Many of these middle-skill transportation and supply chain jobs are what the Federal Reserve Bank defines

as “opportunity occupations” -- jobs that pay above median wages and can be accessible to those without a four-year college degree. This report lays out the complex landscape of selected technological disruptions of the supply chain to understand the new workforce needs of these middle-skill workers, followed by competencies identified by industry. With workplace social distancing policies, logistics organizations now rely heavily on data management and analysis for their operations. All rungs of employees, including warehouse workers and truck drivers, require digital skills to use mobile devices, sensors, and dashboards, among other applications. Workforce training requires a focus on data, problem solving, connectivity, and collaboration. Industry partners identified key workforce competencies required in digital literacy, data management, front/back office jobs, and in operations and maintenance. Education and training providers identified strategies to effectively develop workforce development programs. This report concludes with an exploration of the role of Institutes of Higher Education in delivering effective workforce education and training programs that reimagine how to frame programs to be customizable, easily accessible, and relevant.

2020-2021

Southern California Logistics: Surviving COVID, Preparing for the Future: This course was designed to examine the impacts of the COVID-19 pandemic on global supply chains and logistics infrastructures. The added pressures on cargo lulls, surges, and bottlenecks at port terminals affected drayage operations, freight corridors, and warehousing and distribution facilities. The instructor provides a brief overview of international trade, the availability of logistics and trade-related jobs, and public policies related to port operations directly affect our communities and businesses, as well as our regional and national economies.

Soft Skills Webinar (PSR): CSULB’s efforts incorporating “soft” or foundational skills into its training programs, including webinars, has evolved into a strategic partnership with the renowned Toastmasters International. It has also required research on the organization to understand how they are structured, how they engage in regular activities, and how the curriculum is taught to the club members so that it can be best integrated into workforce and professional development programs within PSR and ultimately the CSU statewide system.

Commercial Driving License Training: Workforce development for middle skills occupations is a critical priority across the PSR network. Through its collaborations with Pima Community College, CSULB has supported the development of a range of successful online training programs focusing first on the supply chain and logistic and more recently on CDL and autonomous trucking. CSULB and Pima held a webinar on October 27, 2020, in which Pima presenters, Missy Blair and Jon Schore, discussed how their innovative Truck Driver Training Program is reaching out to a rural/tribal audience to provide the skills, training, and certifications necessary to start a career in transportation.

MPO Logistics Peer Exchange: Significant research was performed to understand which Metropolitan Planning Organizations (MPOs) in the PSR have freight included in their transportation and urban planning programs, and if not then how freight and transportation was

addressed in other regional plans. Outreach was performed to PSR Board members for recommendations on contacts at several MPOs throughout the PSR region in order to identify participants for a peer exchange on best practices on regional freight planning and coordination at the regional level. Participants included representatives from:

- San Diego Association of Governments (SanDAG), CA
- Southern California Association of Governments (SCAG), CA
- Gateway Cities Council of Governments (Gateway COG), CA
- Kern County Council of Governments (Kern County COG), CA
- Metro Plan (Flagstaff, AZ)

Additional outreach has been performed in Hawaii and the Pacific Islands, and it is anticipated that there will be one or more participants from Hawaii and Nevada.

The original date for the Peer Exchange was scheduled for the Summer of 2021, however due to the unexpected cancellation by several of the participants, the event was postponed and is now being included as a component of a larger peer exchange for Caltrans.

GIS Story Map Workshop and White Paper: CITT prepared a white paper on the use of GIS in the high school classroom as a STEM activity under the direction of CITT's GIS and Data Manager Ben Olson, and the report has been published. Subsequently CITT began to coordinate introductory GIS workshops for high schoolers in order to work directly with high school educators in building career-readiness into a workshop where they learned about GIS fundamentals, future opportunities, and practiced creating their own GIS story map.

Five workshops were held with positive feedback from teachers, students, and coordinators. A summit is currently being coordinated to convene teachers and student participants to further encourage the use of GIS in high school curricula. Olson led all of the sessions:

- Laguna Creek High School, Elk Grove CA, October 2021, via University of California, Davis: The workshop was held over three class days in a technology academy senior capstone class. The teacher and students helped refine the materials during this first run-through. In assessments, many students expressed enthusiasm.
- North High School, Riverside CA, October 2021, via University of California, Riverside: The workshop was held over five class days in a junior/senior environmental science class. Students came up with good products and again expressed enthusiasm and demonstrated comprehension of GIS skills. Feedback from the teacher included acknowledgement of the materials' quality and her ability to teach them herself as a non-GIS practitioner.
- University of Vermont (UVM) Extension, Burlington VT, November 2021, via UVM: The workshop was held over two one-hour evening sessions for which students voluntarily signed up and tuned-in after school. Most students ended up being middle schoolers. They responded well to the materials and topics. There was high retainment from the first to second session and students were eager to present their products.

- Academy of Global Logistics at Cabrillo High School, Long Beach CA, April 2022, via CITT: Two classes, one of freshmen and one of junior year students in the Academy of Global Logistics, joined the workshop virtually over three class days.
- University of Southern California Hybrid High School, Los Angeles CA, May 2022, via USC: Advanced Placement (AP) Environmental Science students that opted out of the AP exam participated in the workshop.

K-12 E-Commerce Special Investigation Project: CSULB has developed this K-12 Special Investigation Project as an introduction to ArcGIS StoryMaps, an engaging, free and sophisticated web-based GIS application. The result was a blueprint for middle school teachers including lesson plans on how to introduce geospatial topics in the classroom. The lessons center on e-commerce and its accompanying environmental and economic impact, but the activities can be easily adapted to projects in any subject area, such as humanities, science, math, or language arts. This teacher blueprint includes a teacher training guide with ten detailed lesson plans and activities. With the guidance of a National Board-Certified Teacher in Early Adolescence Math as lead instructor, the curriculum is designed to align with Next Generation Science Standards (NGSS). Exploration of STEM and GIS-related careers are also incorporated into the lesson plans.

Sustainable Freight Foundations Certificate: Under a grant from the California Energy Commission, CITT developed a 30-hour course in Sustainable Freight that prepares freight operators for state mandates in the use of alternative fuel vehicles. The course was piloted in 2020 and was subsequently revised to be suitable as a CPaCE self-support program The program increased the understanding of workforce development and needs for Southern California. Tom O'Brien and Deanna Matsumoto have moderated and presented on various topics regarding sustainable freight, including lessons learned from the development of the Sustainable Freight Foundations Certificate. The focus has been on outreach to the 15 states that have agreed to adopt California's clean air targets.

- Increased understanding and awareness of transportation issues
- Passage of new policies, regulation, rulemaking, or legislation
- Increases in the body of knowledge
- Improved processes, technologies, techniques and skills in addressing transportation issues
- Enlargement of the pool of trained transportation professionals
- Adoption of new technologies, techniques or practices

2021-2022

IANA: Teaching Intermodalism Post COVID-19: The Intermodal Association of North America (IANA) provides support to colleges and universities across the country for student scholarships. At CSULB, the scholarships allow students to take classes in the Global Logistics or Marine Terminal Operators Professional Program and to conduct applied research on topics related to the intermodal industry. The objective of this project was to compare how intermodal

education programs were impacted by COVID relative to other higher education programs. Research Assistant Jenny Benitez and Executive Director Tom O'Brien reached out to program leaders in transportation, logistics, and supply-chain education in order to learn about their experiences in transitioning to virtual education over the lockdown period of the pandemic. They interviewed faculty at Cal State Maritime, College of Charleston, Georgia Southern University, the State University of New York (SUNY), and the University of Wisconsin to inquire about the impacts of the pandemic and remote learning on their education programs. There was also a written survey for industry partners inquiring about the major challenges they faced. The surveys in combination with a literature review informed a white paper titled: *The Impact of COVID-19 on Supply Chain, Transportation, and Logistics Education: Challenges and Opportunities in Teaching Intermodalism*.

Equity in Learning Opportunities for Middle School Students: Connecting Communities and Transportation Through GIS: In this CA SB-1 project, CITT led the coordination of a workshop introducing GIS and robotics to middle school students that was held in May 2022. The project was a partnership with Rio Hondo College (RHC) and was held through Mountain View School District in Whittier, CA. The bootcamp included pre- and post-assessment surveys that assessed student learning and understanding of transportation career opportunities before and after the bootcamp. In the next reporting period, CITT will host a webinar convening middle school teachers interested in incorporating GIS and transportation in their classrooms. The webinar will feature observations from the research team on the student survey results as well as what was observed in both the teacher and student workshops. There will be opportunity for the teachers to learn about available resources as well as provide feedback on how best to facilitate future workshops, including whether they anticipate barriers to implementation.

2022-2023

Intro to GIS for Local Public Agencies (CALTAP): CALTAP developed and delivered a live online GIS training class that introduced basic concepts, tools, and applications needed to begin creating useful, informative, and data-rich online maps. Held August 3, 2023, this initial pilot provided an opportunity to upskill non-GIS transportation professionals by demonstrating how incorporating GIS concepts and applications into their work products could help them convey complex, map-based dataset relationships in a way that engages with a broader more non-technical audience, like agency leadership and the public.

Fugitive Dust Mitigation (CALTAP): CALTAP hosted the first in a series of online training courses for its Sustainable Engineering Training Academy (SETA), called Fugitive Dust Mitigation. Developed under a partnership between CALTAP/CITT and CSULB's Center for Energy & Environmental Engineering & Services (CEERS), SETA courses are specifically designed to help transportation and construction engineers, planners, and project managers identify and reduce the environmental impacts of construction projects and roadway development. Presented on September 14, 2023, Fugitive Dust Mitigation combined theory, application, and case study lectures from CEERS instructors and industry partners as a way of contextualizing particle disbursement and suspension modeling for workforce practitioners, as well as quantifying

the health impacts, contributing factors, and approaches to mitigating dust generation during construction project activities (an EPA requirement).

California Energy Commission Tribal Transit Zero Emission Vehicles Training Program (California Energy Commission): CITT worked with the National Indian Justice Center (NIJC); Fasterhorse, LLC; and Bubar & Hall Consulting, LLC to develop a training program addressing transit needs and the transition to zero-emission vehicles in tribal nations in San Diego and Humboldt County, CA. The program began with a needs assessment targeting tribal participants to gather their input on the transit needs and impact of ZEV transit in their regions. The goal was to develop a suite of training pilots that could be developed and deployed with tribal participants based on the identified needs. However, due to the passing of Kelly Myers, Executive Director of the National Indian Justice Center (NIJC), members of the board of directors and the Myers family have elected to dissolve the center. The decision to dissolve NIJC means that the California Energy Commission (CEC) grant project, "Tribal Zero Emission Vehicles Training Program" was also discontinued. CITT was a lead sub-partner on the project. February 28, 2023 was the official end-date for the project. CSULB submitted a collection of work completed for the project that featured an innovative community readiness model for tribal engagement. That model was presented at a National Academies tribal workforce summit later in 2023. The community readiness model was dedicated to the legacy of Kelly Myers.

2023-2024

Intelligent Transportation Systems (ITS) Professional Capacity Building (PCB): In Spring of 2021, the CITT's Southwest Transportation Workforce Center (SWTWC) was awarded a $95,000 contract by Volpe National Transportation Systems Center to revise and expand its library of academic resources for college students and faculty, as part of its ITS Professional Capacity Building (ITS PCB) program. Overall, the goal of this program is to build a greater national awareness of and engage student interest in the field of ITS as a viable career option, as well as offer relevant professional development for current ITS professionals. The SWTWC team and its national partners completed development of classroom-ready "case studies" that will allow students to experience practical workplace problem-solving within the context of real-world ITS project deployments. To help enrich these lessons with a sense of career opportunity, each case study connects students to a series of profiles of actual ITS professionals reflecting on their own experience working on similar projects and the educational pathways that led them there. The workforce centers and Volpe conducted beta-testing of the case studies and discussing deployment in 2023-24. All course materials were transferred to Volpe in February 2024.

2024-2025

NCST Geographic Information Systems (GIS) High School Summit

CSULB held a summit in April 2024 with Cabrillo High School in Long Beach, CA that featured the best practices and refined exercise approaches that were learned during the high school training pilot program. Students in the Academy of Global Logistics (AGL) high school pathway program

learned about using GIS in the context of their classwork and teachers learned about integrating GIS into their curriculum.

Active

POLB High School Pathways: Next-Gen Opportunities in Vehicles and Alternative Energy (NOVA)

CITT designed and implemented a three-day externship hosted at Port of Long Beach Administration Building that engaged Long Beach Polytechnic High School's Next-Gen Opportunities in Vehicles and Alternative Energy (NOVA) teachers in activities which empowered them to create pathway relevant curriculum. Each day of the externship featured guest industry speakers who introduced concepts critical to alternative energy and vehicles, discussions regarding the design and deployment of concepts relevant to the pathway's curriculum, and a fieldtrip showcasing alternative energy technology near the Port of Long Beach (PoLB).

On the first day, teachers were introduced to the Port of Long Beach's Zero Emissions, Energy Resilient Operations (ZEERO) goals, discussed the future of the pathway, and toured the harbor.

On the second day, teachers learned how electricity is generated and the unique challenges associated with a zero-emission future, teachers were also exposed to the Port's upcoming pier wind project which aims to construct off-shore wind turbines in Long Beach and transport them to Northern California for use, discussed best practices to help students engage with the pathway, and toured the Long Beach Container Terminal showcasing the world's first zero-emission automated container terminal.

On the final day of the externship, teachers participated in a data walk using Esri's Survey123 tool, exploring how they can integrate it into their classrooms to enhance learning. They also learned how Long Beach Transit is transitioning their fleet to zero emission buses to meet their sustainability goals, received an overview of the Port's microgrid system which keeps the port operating in the event the main power grid becomes unavailable, and heard from FuelCell about how the Tri-gen facility at the port generates renewable electricity, hydrogen, and electricity for Toyota logistics center at the Port. The three-day externship concluded with a reflection led by Dr. Tom O'Brien regarding how teachers can maximize the learning value of fieldtrips.

Caltrans Active Transportation Research Center (ATRC)

CITT was funded as a sub-awardee to the University of California, Davis to support the ATRC. The ATRC exists to serve active transportation implementers throughout California and aims to leverage a variety of existing active transportation resources and efforts. ATRC draws from experts

in the field to offer a repository of tools, training, resources and technical assistance to local agencies, Tribes, active transportation implementers and ATP applicants. The ATRC is funded by the Active Transportation Program (ATP) and managed by the California Department of Transportation (Caltrans). The ATRC utilizes a combination of subject matter experts from state agencies, universities, and consultants to provide active transportation resources that support the ATP. These services focus on both infrastructure and non-infrastructure ATP project types. The audience of the ATRC is primarily those that are eligible for ATP projects, but also those who are implementing or applying for active transportation projects in California. This includes Local, Regional or State Agencies, Caltrans, Transit Agencies, Natural Resources or Public Land Agencies (State or local park or forest agencies, State or local fish and game or wildlife agencies, Department of the Interior Land Management Agencies, U.S. Forest Service, Public Schools or School Districts), Tribal Governments, Private Nonprofit Organizations (Recreational Trails Program only), and any other entity with responsibility for oversight of transportation or recreational trails. CITT's principal role will be to extend the reach of ATRC programs through the CALTAP network and to coordinate outreach with tribal organizations.

Western Tribal Technical Assistance Program (TTAP)

The APTech team is undertaking a Tribal Strategic Workforce Development Initiative that will support tribal workforce development by using FHWA Highway Construction Workforce Partnership resources for on-the-job training and by expanding HCWP in ways that are meaningful for tribal workforces in the Western TTAP region. The Workforce Development Initiative is led by CITT and includes assembling and training a Tribal Workforce Gaps Working Group that supports FHWA's efforts to identify, train, and place individuals into highway construction-related occupations as well as matching highway construction program opportunities with needs for prior research in this area.

Ongoing Programs

CITT leads or assists multiple programs which operate on a continual, annual, biannual, or otherwise regular basis. These programs are listed and described below.

Academy of Global Logistics

The Port of Long Beach Academy of Global Logistics offers a four-year academic curriculum at Long Beach Unified School District's Juan Rodriguez Cabrillo High School that is integrated with real-world experiences through courses, site visits and workshops presented by industry professionals. This program - a partnership between the Port of Long Beach (POLB), the Long Beach Unified School District, and CITT - features workshops and activities that incorporate concepts across disciplines such as mathematics, social sciences, and humanities, while developing

cultural competencies for a global economy. Due to CITT's expertise and position as a hub for transportation research, its role in the program is facilitating industry coordination and in providing technical assistance to AGL faculty.

CITT contributed to the development and support of the following AGL milestones and events from 2020 to 2025:

- **Support for the AGL Advisory Board:** The AGL Advisory Board supports the mission of the Academy by providing feedback and input to help teachers collaborate across subject areas and develop relevant curriculum and work-based learning activities. Board Members also participate in career workshops and mentorship programs.
- **Curriculum Support**: As part of the support of the AGL program, CITT works with teachers to develop grade-appropriate curriculum for students. Through guided curriculum support, CITT helps the instructors develop integrated, grade-level projects that correspond to the course material they are learning. CITT also brokers connections with industry contacts to facilitate mentoring relationships with students and provides additional consulting on special topics. During the 2021-22 academic year, CITT led the development of a 12*th* grade capstone course for AGL that was launched in the spring of 2023 and repeated the following academic year. The capstone allows graduating seniors to work in teams over the course of an entire semester to solve the supply chain problems of a fictitious solar company. CITT worked with course instructors to develop the course objectives and the capstone case study. CITT also assembled an Industry Advisory Board to guide the development of the course and to work with instructors and students over the length of the semester. Students receive transfer credit for schools in both the UC and CSU systems.
- **Industry Coordination**: The Intermodal Association of North America (IANA) has provided support to allow up to 50 students in the Port of Long Beach Academy of Global Logistics to attend each Intermodal Expo over the past five years. CITT, as part of its work with the Port on the project, has coordinated the student experience during the conference including having high school students shadow undergraduate students taking part in a case study competition.

Caltrans Freight Academy

From 2005 until 2021, CITT has held yearly Caltrans Freight Academies. This format was adapted to the Sustainable Freight Academy, which has operated on a recurring basis since 2021.

2020: CSULB conducted the Caltrans Freight Academy on December 1-3, 8, and 10, 2020. The Academy consisted of presentations from goods movement professionals and subject matter experts, daily activities to supplement the instruction, and a final group presentation on regional freight issues using a web-based geospatial presentation platform. There were 88 participants that were divided into two groups with different study areas of focus: San Diego and Bakersfield.

Each had a separate geographic focus and freight-related challenge: (San Diego Neo-bulk freight movement; Bakersfield agricultural freight).

Caltrans Sustainable Freight Academy

2022: The Caltrans Sustainable Freight Academy was conducted on March 29; April 5, 12, and 26; and May 3, 2022. The focus of this effort was on the State DOT's role in supporting sustainable freight operations. Using input from survey responses, the research team designed the curriculum delivered virtually over a five-week period. Transportation corridors were researched to identify case studies to be incorporated into course materials: Trade Corridor Enhancement Program (TCEP), alternative fuel corridors, and truck parking. The research team coordinated with AASHTO and other State DOTs to identify Best Practices in sustainable freight planning and to identify participants for peer exchange components of the training. Conclusions, workshop materials, and participant survey results are available in a report published on the NCST website. https://ncst.ucdavis.edu/research-product/caltrans-sustainable-freight-academy.

2024: The Sustainable Freight Academy took place November 18-21, 2024 in Bakersfield California. The four-day Academy included approximately 50 participants from Caltrans and partner agencies including Metropolitan Planning Organizations. The Caltrans audience included engineers and planners from across the State. The focus of the training was agricultural supply chains. Exercises also allowed the participants to develop skills in writing effective project descriptions for grant applications. The Academy was hosted by the Wonderful Company which also facilitated site visits to facilities in its logistics park and at a neighboring Amazon facility. On February 19, 2025, NCST published a report by CITT researchers that summarizes the Caltrans 2024 Sustainable Freight Academy.

Global Logistics Professional (GLP) Designation Program

GLP is an industry-designed program serving every sector of the goods movement industry in Southern California and globally. It is offered in a flexible format to meet the unique training needs of individuals at various stages of their careers. Courses can be taken individually or in the entire sequence in order to earn the GLP professional designation. Partnerships with local workforce development agencies ensure that this program reaches veterans and displaced workers and connects them to career opportunities in an exciting and vibrant industry that needs a diverse set of workforce skills. The GLP program is administered by the CPaCE Office of Professional and Workforce Development with support from CITT which administers student scholarships, assists with marketing and outreach and provides instruction. FY 2024-25 marks the 28th anniversary of the GLP program.

Intermodal Association of North America (IANA)

IANA funding allows students to take the Global Logistics Professional designation program and to conduct applied research on topics related to the intermodal industry. Since 2020, IANA has

funded 15 GLP scholarships and funded eight student research projects across the topics of port drayage, chassis, blockchain, port development regulations, and more.

RESEARCH

Completed

All publications resulting from research are in the Publications subsection under Achievements.

PSR-Supported Research

AI Policy project: The purpose of this project was to collect traffic data and use artificial intelligence for improvement of traffic flows at city intersections. An ideal intersection was identified for the pilot study, and the project team designed a methodology for the data privacy aspects of the study ("data walks") and obtained IRB approval. A digital data collection tool developed by geolocation software company ESRI was customized for the walks. These data walks were designed to stimulate conversation with local residents about data collection and the trade-offs that accompany the implementation of smart city technologies. Thirty-two participants documented and discussed the smart city technologies (e.g. public Wi-Fi networks and license plate readers) observed throughout the designated route. CITT Director of Research and Workforce Development Tyler Reeb, CSULB faculty member Gwen Shaffer, and instructor Hossein Jula submitted the proposal for "Implementing a Community-Based Mobility Lab: Improving Traffic, Protecting Data Privacy," which followed up on the first round of their PSR-funded work, which was completed in January 2022.

Geospatial Approaches to Enhancing MPO Community Engagement: Metropolitan planning organizations are responsible for overseeing urban planning in every major urban region in the country. In recent years the importance of building engagement with constituents to create more equitable and inclusive urban planning models has become a heightened priority. This white paper explored the benefits and best practices that would be needed to incorporate Geographic Information System (GIS) data visualizations into MPO outreach plans to further this goal. Key considerations included legal outreach requirements, current outreach goals, and implementation of GIS-based outreach. The researchers found that GIS data visualizations contain many elements that support and promote outreach that meets legal standards of the California Brown Act as well as federal ADA and Civil Rights requirements. Furthermore, GIS data visualizations offer unique opportunities for MPOs and constituents to engage in collaborative dialogues where MPOs can both disseminate information and collect constituent opinions and data in both synchronous and asynchronous manners. Recommendations for the incorporation of GIS data visualizations in MPO outreach plans include building cross-departmental collaboration between GIS teams, project leads, and outreach teams; leveraging existing relationships with stakeholders and community

organizations especially among hard-to-reach communities; and increasing and developing social media engagement with constituents.

Implementing a Community-Based Mobility Lab: Improving Traffic, Protecting Data Privacy: This study pilots a scalable methodology to conduct community-based mobility research to address critical safety, environmental, and traffic congestion issues while also addressing the data privacy issues such as transparency and accountability associated with the extensive data collections necessary for predictive traffic modeling. The study provides a blueprint for a three-phase scalable methodological approach to community-based mobility studies including the collection of video footage, the data processing for the predictive traffic modeling technology and the approach to addressing related data privacy concerns. A key focus of this study regards the establishment of an efficient and practical way of balancing between (1) gathering the extensive data required to model the intersection of study as it relates to addressing critical safety, environmental, and traffic congestion issues with (2) a corresponding need to respect residents' concerns about smart technologies and data privacy. Using data from the video recordings, the research team used an artificial neural network to develop a predictive traffic model. To address data privacy concerns for residents living near the intersection of study during the footage collection, researchers conducted data walks – a 1.5-mile guided walk through the study area during which researchers prompted study participants to reflect on various smart technologies, including traffic cameras and the recording sessions in place. The study focuses on a singular node in the West Long Beach transportation network, but its findings can be used as a resource for community-based mobility research addressing critical safety, environmental, and traffic congestion issues at other intersections, corridors, and networks of intersections and corridors not only across California but across the country. The final report was published in July of 2024.

Implementing Sustainable Freight Technology Transfer Systems. The purpose of this white paper is to provide a gap analysis and assessment of best practices in sustainable freight technology transfer to assist stakeholders across the California supply chain to better address freight and logistics challenges in an era of increasing zero-emission regulations. This white paper and the corresponding research represent an implication-based assessment of the current state of sustainable freight technology transfer and outlines initial implications of a still nascent area of research. State Departments of Transportation seek to implement efficient, resilient, and sustainable freight infrastructure planning projects which require public sector agencies to gain knowledge of best practices from key stakeholders in industry, education, and government in the California supply chain. Without an efficient, seamlessly coordinated, and widely supported way to share information across the public, private, and governmental stakeholders in the California supply chain, stakeholders within the freight industry are exposed to increased vulnerability and missed opportunities for improvement. The results indicate that there is a need for increased institutional prioritization for intentional and direct sustainable freight technology transfer. Key aspects thereof are (1) the establishment of synchronized baseline knowledge and (2) a prioritization to learn key synthesizing technology tools. Additionally, a conscious effort to focus on sustainable technology transfer activities across all freight sectors, including rail and air cargo, could greatly improve efficiency and collaboration across the California supply chain. Introducing

common definitions at least within specific freight sectors and at least baseline knowledge thereof could greatly reduce uncertainties and ease regulatory oversight. The white paper was published in December 2024.

Freight Tech Transfer: CITT staff began work on the Freight Tech Transfer project in June 2024. In order to implement efficient, resilient, and sustainable freight infrastructure planning projects, public sector agencies require access to best practices and lessons learned from experts in industry, education, and government who play critical roles in the California supply chain. Without a mode to facilitate knowledge sharing, agencies are vulnerable to missed opportunities for improvement. Through the development of the white paper proposed for this project, the research team identified and establish the most efficient methods for technology transfer so that agencies can enhance their planning processes and foster collaborative thinking informed by freight infrastructure planning best practices. By sharing information on project timelines, resource allocation, and technical specifications, agencies can align their efforts, avoid duplication, and make informed decisions that optimize the use of public resources. The research team submitted the final white paper in December 2024. The white paper was accepted in February of 2025 and published in March 2025.

NCST-Supported Research

Environmental Policy Case Studies: CITT published a quick-strike analysis white paper that documented environmental case studies and accompanying videos that can be used in developing course curricula and lesson plans. The case studies consider the role that policy plays in sustainable port and freight operations and the outcomes of some specific policy measures. CITT interviewed an environmental justice community advocate who has worked extensively with both the Port of Long Beach (POLB) and the Port of Los Angeles, California Air Resources Board (CARB), and various community-based organizations. This advocate provided a perspective of historical context to the development of the Clean Air Action Plan (CAAP) and provided research resources focusing on democratizing planning and analyzing components of decision-making processes in environmental policy development. The research also includes a case study of a private-sector, yet-to-be-built infrastructure project designed to support the faster movement of freight out of the San Pedro Bay Ports called the Southern California International Gateway (SCIG). The case studies are provided to elucidate how self-regulating agreements and operator-led programs contribute to regional environmental goals for freight operations. A brief video accompanying the white paper serves as an introduction to the case studies and provides guided study questions for both instructors and students. The white papers were published in March 2024. *Grant amount: $150,000. Period of Performance: 12/1/16 to 9/30/21.*

Workforce Development White Paper: CITT completed the report "Workforce Implications of Transitioning to Zero Emission Buses in Public Transit" in January of 2022. This white paper examines how the effects of transformational change within an industry—factors like competitor innovation, regulatory pressures, technological advancement, and generational turnover—can impact the performance and viability of its underlying workforce. With a lens focused specifically

on public transportation, CSULB researchers explore the considerations, barriers, and unforeseen complications that can accompany the transitioning of transit bus fleets to all-electric engine platforms; a transformative evolution that is gradually impacting agencies across the United States. In highlighting these factors, this paper identifies common challenges faced by industry employers in terms of worker retention, upskilling, and knowledge transfer—challenges that can be crippling in the face of transformational change, and outlines a set of reformative strategies that can help employers be more effective at engaging and training a new generation of tech-savvy workers. *Grant amount: $75,000. Period of Performance: 12/1/16 to 9/30/21.*

Other Grant Supported Completed Research

Eno Center for Transportation

Inland Waterways Research: The Inland Waterways project is focused on inland freight transportation along waterways. The project investigates the relative competitiveness of the U.S. inland waterway system compared to other countries with significant waterway networks and is funded by the Eno Transportation Center. First, CITT wrote a report taking a broad look at the domestic US waterway system and the policy that governs it. The report was presented to a research project advisory panel in October 2021. In response to the advisory board's feedback, CITT conducted a high-level analysis of three international case studies, including the Yangtze and Mekong in Asia, Rhine-Danube in Europe, and Amazon and Paraná-Paraguay in Latin America. The cases reveal important findings about waterway governance, the role of foreign direct and private sector investment, and the relationship between waterways and national economic development and security strategies.

The final project report was published in May 2022. The report was the subject of an Eno Transportation Center Webinar and presentations to the AASHTO Council on Water Transportation and at the annual meeting of Inland Rivers, Ports, and Terminals, Inc. CITT's Executive Director Tom O'Brien led all three presentations. The report is available via the Eno website at enotrans.org. *Grant Amount: $60,917. Period of Performance: 7/26/2021 to 3/31/2022*

Fehr and Peers

Southern California Association of Governments (SCAG) Freight Impact Assessment: CITT assisted a team led by Fehr and Peers that assessed the unique freight impacts within six communities in the SCAG region. CITT guided the assessment of the workforce development needs at the sub-regional level. *Grant Amount: $25,000. Period of Performance: 11/2/2021 to 9/30/2022*

SB-1

Trade and Transportation Talent Pipeline Blueprints: Building University-Industry Talent Pipelines in Colleges of Continuing and Professional Education: The rapid adoption of transformational technologies along with other economic and cultural shifts, have created a gap between workers and the skills and knowledge necessary for in-demand occupations. Trade and Transportation Talent Pipeline Blueprints: Building University-Industry Talent Pipelines in Colleges of Continuing and Professional Education identifies the steps required to build talent pipelines that target in-demand trade and transportation occupations requiring specific degrees, certificates, and non-credit professional development. This report provides a literature review and labor market data analysis. It also includes documentation of methodology in planning a pilot program for Colleges of Professional and Continuing Education housed within each of the 23 California State University campuses. The recommendations guide the colleges to develop talent pipelines to empower trade and transportation employers to play a more central role in addressing skills gaps and other critical workforce development needs in working partnerships with postsecondary education and training providers.

CSULB held a webinar on November 16, 2022 to convene industry, education, and government partners in the launch of a Talent Pipeline pilot program, as a "proof-of-concept" for this project. This pilot program will prepare engineering students at CSULB for in-demand knowledge, skills, and abilities related to future Intelligent Transportation Systems (ITS) occupations. The Talent Pipeline project was funded through the California State University Transportation Consortium (CSUTC) using SB1 funding. The final report for the project was published in February 2023:

CITT researchers then conducted several meetings with partners at Gannet Fleming, a global engineering firm, and faculty and staff at the College of Engineering and College of Professional and Continuing Education at CSULB to facilitate the Talent Pipeline program during the Spring 2023 semester.

L&D On-Ramps and Of-Ramps for the Mobility Workforce: CITT researchers designed, implemented, and continuously evaluated a proof-of-concept pilot. Throughout this process, CITT researchers have conducted meetings with partners at Gannet Fleming, a global engineering firm, and faculty and staff at the College of Engineering and College of Professional and Continuing Education at CSULB to facilitate the Talent Pipeline program during the Spring 2023 semester and into the Fall 2023 Semester. Three students received paid summer internships at Gannet Fleming. CITT also facilitated a paid workshop with NASA's Jet Propulsion Laboratory. Participants took part in a pre- and post-workshop survey. Two students were selected for internships with JPL. Additionally, a survey was disseminated among CSULB faculty as well as industry and community stakeholders during this reporting period in order to gauge support and interest in the project and its direction in the future. A final assessment of the proof-of-concept pilot and the indications it provides for future research will take place in November and December 2023.

The research culminated in a report that presents a blueprint with implementation tools and strategies for CSULB and other CSU campuses to adopt a knowledge ecosystem model in higher education. By conducting talent pipeline pilots for internship preparation activities and related

survey and focus group research, the research team found near universal support for pursuing university-industry partnerships. Faculty identified extracurricular activities, experiential learning opportunities, and guidance on further education as their top three priorities when mentoring students in professional development. There was, however, a paradoxical perception among faculty about what universities provide in terms of knowledge, skills, and abilities (KSAs) and what industry values in new employees. This paradox begs the solution of having university faculty and administrators collaborate with industry professionals in the planning and delivery of professional development activities for students. The California State University system has ready homes for such "third space" activities in their colleges of professional and continuing education (PaCE units) and in their centers and institutes. The research team submitted the final report during the last reporting period in September 2024. The final report was accepted and published in November 2024.

Developing an ROI Assessment Model for Employee Development Programs Implemented by California Transit Agencies: The objective of this research was to determine the extent to which transit agencies in California are implementing Return on Investment (ROI) assessments or otherwise evaluating the value and effectiveness of the employee development programs they administer, what cost and performance data they collect and track, and what resources or support are needed to support ROI assessment efforts. Transit agencies will necessarily incur expenses in efforts to improve the recruitment, retention, and morale of employees, but will struggle to solicit adequate funding unless they are able to demonstrate the value of such efforts to a broader audience. Thus, developing and implementing ROI assessments is critical. The literature review, survey, and follow-up interviews conducted by the research team found that program outcome measures and programmatic expense data required for ROI is similar across employee development programs but is not currently being uniformly collected across agencies. The research findings demonstrate the need for technical assistance if transit agencies are to successfully design and implement return on investment models for employee development programs they administer. Interview participants emphasized that transit labor shortages also extend into administrative and human resource divisions. A commonly voiced concern regarding ROI implementation focused on the additional staff capacity and know-how that would be required to systematically collect and analyze the wide range of operational performance metrics, human resource metrics, and expenditure data required to calculate ROI. This challenge is exacerbated by the outdated data systems found at many public transportation agencies. Agency representatives also expressed concern that to obtain meaningful ROI, a widely agreed upon and objective process to translate qualitative metrics like "employee satisfaction" into monetized benefit values is required. A final report was accepted in November 2024 and published in December 2024.

American Road and Transportation Builders Association (ARTBA) Needs Assessment (Match Project): CITT was funded as a sub-awardee to the San Jose State University Research foundation to support the California State University Transportation Consortium (SB1) The objective of this project was to identify innovative approaches for the hiring and retention of workers in the transportation construction industry. CITT documented the experience of the healthcare, technology, and agricultural industry in addressing workforce shortages and/or gaps

through both short-term and long-term solutions. These solutions may include policy measures that allow access to employment for guest workers. The research team submitted the final report during the last reporting period on Friday, September 20th. The report was accepted and published in September 2024.

A Hydrogen Hub Blueprint for the California Supply Chain: The objective of this project was to create a blueprint to help guide the future workforce needed to operate a future hydrogen supply chain. As global climate targets tighten and state regulations accelerate, hydrogen technology presents a significant opportunity to help California supply chain and transportation stakeholders comply with state emissions mandates and global goals aimed to reduce the impacts of climate change. However, while fuel cell costs and infrastructure needs have received attention, workforce development remains overlooked. CITT partnered with industry advisors and five other universities (referred to as the CSU5+) to define the initial scope and objectives of the blueprint. Industry and university partners recommended CITT perform a literature review, labor market analysis, and hydrogen technology site visits. The literature review documented existing programs targeting the development of the knowledge, skills, and abilities necessary for the future workforce to successfully operate a hydrogen economy. By expanding the scope of the literature review to international programs, CITT researchers identified 21 key occupations critical to the hydrogen economy today by assigning SOC codes to the 83 unique jobs found within Canada and Australia's hydrogen roadmaps. Using the previously identified 21 occupations as a foundation, CITT researchers conducted a labor market analysis targeting Southern California to determine which occupations are currently relevant to the emerging hydrogen economy. To better understand the needs of the workforce currently responsible for the existing hydrogen supply chain researchers visited existing hydrogen production facilities located at the San Pedro Port Complex and discussed the challenges associated with the production and use of the fuel. The project concluded with a survey and peer exchange with the CSU5+ to document the available programs in California. The report is currently being finalized by the Mineta Transportation Institute.

California Department of Transportation (Caltrans)

Developing Succession Planning Capacity Within Caltrans: The Center for International Trade & Transportation (CITT) research team conducted research on previous and current succession planning strategies undertaken by state Departments of Transportation (DOTs) and other organizations to be used by the California Department of Transportation (Caltrans) in developing and updating its own strategies. The CITT research team worked with Caltrans to identify a narrow focus on succession planning for planning and modal programs (including those dedicated to rail, mass transportation, and related research), and this approach proved effective in identifying potential pilot deployments at Caltrans headquarters and targeted divisions. CITT researchers conducted focused interviews with select Caltrans employees and held a peer exchange with representatives from state DOTs in Michigan, Montana, Arizona, Colorado, and California. However, research also revealed more universal insights beyond the scope of the initial focus. Those insights provide a rationale for scaling succession planning efforts beyond the narrowly defined focus for this study on planning and modal programs. Research revealed that succession planning is implicated in recruitment, retention, and the entirety of the employee life cycle and

involves employees who may never take up a formal leadership position. The research team concluded the report with recommendations for a proposed series of pilot programs intended to help integrate this new perspective into succession planning activities at Caltrans. The final report was published in September 2024.

Caltrans Transit Operator Shortage: Transit agencies across the State of California struggle with the recruitment and retention of a sufficient transit operator workforce. This shortage is intensified by current and anticipated retirements among the transit operator workforce, as well as state laws and policy initiatives that require a well-trained and compliant transit operator workforce. The shortage has made it difficult for agencies to implement improvements in the quality and frequency of service, and in some cases has even led to the impromptu cancellation of existing service. The shortage of transit operators is most severe for bus transit operations and affects agencies in rural and urban areas across California. Researchers composed a literature review, distributed a survey, and conducted a focus group to understand the workforce and socioeconomic issues driving the shortage. The research team submitted a final report in January 2025 which was accepted in February 2025. The final report has not yet been published publicly online.

National Science Foundation

Trust, Transparency and Technology: Building Digital Equity Through a Civic Digital Commons: The project, entitled "Trust, Transparency and Technology: Building Digital Equity Through a Civic Digital Commons," is funded by a planning grant from the National Science Foundation's Smart and Connected Communities program. CSULB Journalism Professor Gwen Shaffer, Ph.D., serves as Principal Investigator (PI) along with CITT Interim Executive Director Tyler Reeb, Ph.D., and City of Long Beach Technology Partnerships Officer Ryan Kurtzman who both serve as Co-PIs for the project. During the reporting period, Shaffer, with support from CITT and the City of Long Beach's Technology & Innovation Department, led "data walks" with nearly 80 Long Beach residents to test the efficacy of the Digital Rights Platform. During the data walks, researchers asked residents about their comfort levels and attitudes toward the City's data collection practices, and about their experiences interacting with the platform. By bringing in the community at the start, Data Walks and QR code equipped signage will allow the City to implement smart technologies in an inclusive, democratic, and ethical manner. The research team has plans to expand the Long Beach Digital Rights Platform, with the goals of:

- Examining data privacy rights and expectations across competing needs of local government, third-party vendors and residents, and the City's Data Privacy Guidelines.
- Examine how traditional power structures (i.e., city government, technology platform vendors) mobilize smart city technologies and the corresponding impact on human decision-making.
- Examine how trust is constructed; study how strongly residents value/weigh factors such as transparency, accountability, agency, integrity, accuracy, and fairness when interacting with smart technologies.

In March 2024, the project was included in the City of Long Beach's Civic User Research cohort for 2024.

Active

Active Transportation Research Center (January 2024 – June 2026)
Grantor: Caltrans, PI: UC Davis, Sub: CITT (Tyler Reeb)

The Active Transportation Resource Center, administered by the California Department of Transportation, aims to teach municipal, regional, and Tribal organizations as well as the general public about active transportation and related funding opportunities such as the Active Transportation Program. As a part of this effort led by the University of California Davis, CITT developed and is implementing free Bike and Walk Audit Training courses across California. CITT will hold six training courses, each consisting of a technical introductory session (virtual) and an in-person walk audit. After successful completion of both training sessions, participants will receive a certificate of completion and have gained the tools to conduct Bike and Walk Audits in their own communities as well as resources on how to apply for Active Transportation Program funding.

Developing a Home-Grown Multidisciplinary Rail Workforce through Engagement with the Corridor Systems Planning Process
Grantor: Federal Railroad Administration, PI: Western Transportation Institute at Montana State University, Sub: CITT (Tyler Reeb)

CITT was awarded $1.25 million in funding to support workforce development efforts in the national railway sector. CITT's award is part of a larger $6.4 million infrastructure initiative funded by the federal Department of Transportation's Federal Railroad Administration. The Western Transportation Institute at Montana State University will lead the five-year grant in partnership with Big Sky Passenger Rail Authority, University of Memphis, and CSULB. The grant team will conduct research that empowers the rail workforce and improves coordination between industry, labor, economic development, and education sectors. The project will support research and workforce development activities to lead multidisciplinary rail workforce capacity-building activities focused on increasing faculty, student, and youth engagement with rail-related topics and skillsets. Project outcomes include enhanced coordination between industry, labor, economic development, and education sectors; increased professional capacity of faculty and teachers in rail topics; expanded early career exposure and student engagement with rail-focused content and problem-solving; and strengthened local talent pipelines.

The grant is administered through the Consolidated Rail Infrastructure and Safety Improvements (CRISI) Program. According to the U.S. Department of Transportation, this infrastructure initiative marks "the most significant investment in American rail in more than 50 years" and includes rail safety and service improvements such as expanding rail connections at ports, upgrading track, replacing or rehabilitating aging bridges, and incorporating modern locomotives

into existing fleets. The grants also support workforce development, expanded training opportunities, establishing partnerships with universities, and advanced research. Preliminary activities have already begun, but the project will officially begin in January 2026 and conclude in January 2030.

COMMUNITY, PARTNER, AND STAKEHOLDER ENGAGEMENT

Leadership

Tom O'Brien Affiliations

- First Vice President, Board of Directors, Harbor Association of Industry and Commerce
- Member, Board of Advisors, Eno Center for Transportation
- Member, Advisory Board, National Transit Institute
- Vice Chair, Transportation Research Board Intermodal Freight Transport Committee
- Member, Transportation Research Board Urban Freight Committee
- Board of Directors, Los Angeles Transportation Club
- Chair, Governmental Affairs and Grants Committee, California Transit Training Consortium
- Past President, Council of University Transportation Centers 28
- Chair, National Center for Supply Chain Technology Education National Visiting Committee (National Science Foundation)
- Member, Advanced Partnership Action Team, California State University, Long Beach
- Member, Build a Growth Strategy Action Planning Team, California State University, Long Beach
- Member, National Academy of Sciences Study Committee on the Best Practices for the Efficient Supply of Chassis for Transporting Intermodal Containers
- Vice President, Harbor Association of Industry and Commerce (HAIC)

Note: the above includes only affiliations during tenure as Executive Director (2015-2023).

Tyler Reeb Affiliations

- Board Member, California Transit Training Consortium (CTTC) (2023-present)
- Member, Rural Transportation Issues Coordinating Council, Transportation Research Board (2021-2025)
- Member, Standing Committee on Native American Transportation Issues, Transportation Research Board (2020-2025)

- Member, Standing Committee on Workforce Development and Organizational Excellence, Transportation Research Board, (2020-2025)
- Co-Chair, National Summit on the Future of the Transportation Workforce, Transportation Research Board (2025)
- Workforce Leadership Network, Coro Southern California (2021)

Events

Signature Events

Town Hall (**PSR**)

CITT's State of the Trade and Transportation Industry Town Hall is one of the highest profile events in the goods movement industry in the Los Angeles region. All event programs are archived on the METRANS website.

During AY 25-2026, CITT's Town Hall Meeting, "Port Town Resilience: Thriving in Uncertain Times," was held at the Juan Rodriguez Cabrillo High School Auditorium in West Long Beach on September 15, 2025. Cabrillo High School is also the home of the Academy of Global Logistics (AGL), a career pathway sponsored by the Port of Long Beach in partnership with CITT, Long Beach Unified School District, Long Beach City College, and California State University, Long Beach (CSULB). The coalition of industry and educational partners that have supported AGL students over the last decade reflect Port Town Resilience and the sage words of founding CITT member Domenick Miretti to bring "the university to the docks, and the docks to the university."

2025 Panelists included:

- **Dr. Tom O'Brien** (moderator), Associate Dean of the College of Professional Continuing Education, California State University Long Beach and former Executive Director of CITT
- **Dr. Noel Hacegaba**, Chief Operating Officer, Port of Long Beach
- **Robert Loya**, Chief Executive Officer, Harbor Trucking Association
- **Sal DiCostanzo**, Port Liaison / Labor Relations Representative, International Longshore and Warehouse Union, Local 13
- **Bonnie Lowenthal**, Member, Long Beach Board of Harbor Commissioners

Note: The 2025 Town Hall was not supported by PSR, as the program was suspended during that time.

CITT did not hold a Town Hall in 2024.

During AY 22-23, CITT's Town Hall Meeting, "Decarbonization: Truth, Consequences, and Hard Choices," was held at The Pointe Conference Center on the campus of CSULB on November 17, 2023. California Supply Chain leaders must balance unprecedented decarbonization mandates and American consumer demand for rapid and affordable fulfillment of goods. Striking this delicate balance poses challenges to industry, labor, and government stakeholders. The Town Hall Meeting consisted of a brass tacks talk about the truth, consequences, and hard choices all stakeholders must make to ensure a sustainable and economically secure future.

2023 Panelists included:

- Genevieve Giuliano, Professor and Margaret & John Ferraro Chair in Effective Local Government, USC Sol Price School of Public Policy Director, METRANS Transportation Consortium
- Trelynd Bradley, Deputy Director for Sustainable Freight and Supply Chain at the California Governor's Office of Business and Economic Development (GO-Biz)
- Jack Hedge, Vice President of Hydrogen Hub Development BayoTech
- Sarah Dawn Saltzer, Managing Director of SCCS, Energy Science & Engineering
- Dr. Thomas O'Brien. Associate Dean, College of Professional and Continuing Education, California State University, Long Beach

During AY 21-22, CITT's Town Hall Meeting, "Chasing Supply Chain Sustainability: Balancing Economic Growth, Consumer Demand, and the Environment" was held at the Hyatt Regency in Long Beach on May 24, 2022, in conjunction with INUF. Disruptions and delays have been the big story in the news; but the supply chain has been surprisingly resilient in the face of unprecedented consumer demand over the past two years. As the freight system navigates these challenges, it also continues to work toward the sustainability goals set out by the State and called for by local communities. Can we meet the pace of demand and move toward a zero-emission freight system at the same time? When it comes to sustainability, do we all speak the same language? The Town Hall was focused around these questions.

2022 panelists included:

- Paul Bingham, Director of Transportation Consulting, S&P Global Market Intelligence
- Dr. Wilma Franco, Executive Director, Southeast Los Angeles (SELA) Collaborative
- Genevieve Giuliano, Professor and Margaret & John Ferraro Chair in Effective Local Government, USC Sol Price School of Public Policy; Director, METRANS Transportation Consortium
- Ramon Ponce de Leon, Jr., President, ILWU Local 13
- Matt Schrap, CEO, Harbor Trucking Association
- Heather Tomley, Managing Director of Planning and Environmental Affairs, Port of Long Beach

During AY 20-21, CITT's Town Hall Meeting, "A COVID-19 Supply Chain Report Card: Balancing Perception and Reality" was held virtually at on October 6, 2020. This event addressed the performance of the supply chain's response to the supply and demand shocks caused by the pandemic. Industry leaders stressed the importance of safety for workers, predicted a surge in openings for full-time work, and noticed opportunities for increased connectivity across sectors in the supply chain. In addition to the innovations made necessary by the pandemic, there was a deepened gratitude towards the workers who make supply chain operations possible.

2020 panelists included:

- Leslie Blakey, President of Coalition for America's Gateways and Trade Corridors and Advisory Committee Member to the Department of Commerce on Supply Chain Effectiveness;
- Carla Fernandez, Supervisory Consumer Safety Officer of the U.S. Food and Drug Administration;
- Donna Lemm, Executive Vice President of National Sales of IMC Companies;
- LCDR Kazu Okumura, Imports Specialist of the FDA; and
- Bobby Olvera Jr., International Vice President (Mainland) of the International Longshore and Warehouse Union (ILWU).

<u>International Urban Freight (I-NUF)</u> (**PSR**)

The International Urban Freight Conference (I-NUF) is the premier biennial conference that addresses all aspects of city logistics and goods movement in the world's metropolitan areas. The conference brings together researchers and practitioners in urban freight, supply chains, and logistics from around the world. It is a showcase for cutting-edge research and dynamic information-sharing and provides a forum for researchers, policy makers, and practitioners to reimagine and guide the future of the industry.

- ***9th International Urban Freight (I-NUF) Conference 2021 (postponed):*** The International Urban Freight Conference was postponed to May 2022 due to travel restrictions for the large proportion of international attendees.
- ***9th International Urban Freight (I-NUF) Conference 2022:*** The 2022 International Urban Freight Conference was held from May 25 to 27 at the Hyatt Regency in Long Beach. The theme was "Reimagining Freight." Over three informative days, a comprehensive assortment of presentations and special sessions surveyed topics including last mile pickup and delivery, urban modeling and planning, technology, automation, changing consumption and production, spatial organization, and best practices.
- ***10th International Urban Freight (I-NUF) Conference 2025:*** The 2025 International Urban Freight Conference took place from April 9 to 11 at the USC Hotel. A special pre-event was held on April 8. The conference program contains over 150 abstract- and six panel presentations from researchers from 15 countries and five continents. Conference presenters will have the chance to submit full-length papers based on their abstracts for

publication in a Transportation Research Interdisciplinary Perspectives special issue for publication.

Other Events

IANA Trade and Transportation Industry Association Forum

CSULB hosted the Intermodal Association North America (IANA) Research Forum on April 23, 2021. CSULB is one of IANA's scholarship partners. Funds are used to allow students on the CSULB campus to take CITT's Global Logistics Professional Program and to conduct applied research on intermodal topics. The past IANA scholarship recipients (Diana Sanchez, Jeremy Stumpp, Nicholas Roy, and Jenny Benitez) attended to share their experiences conducting research on various intermodal topics (e.g. blockchain, port congestion, chassis management, virtual intermodal education) and participating in the Global Logistics Professional (GLP) program at CSULB. The event raised awareness for the program to encourage additional scholarship participants.

Port Solutions Summit (SUCCESS Initiative)

CSULB partnered with the California Governor's Office of Business and Economic Development (GO-Biz), the California State Transportation Agency (CalSTA), and the Port of Long Beach to develop the California Supply Chain SUCCESS Initiative, a collaboration aiming to take a solutions-based approach to supply chain issues. CSULB deployed several strategies to guide stakeholders' approach to discussing solutions, including a social media campaign, virtual workshop open to the supply chain community, and in-person Summit with key supply chain leadership. This collaboration brought together stakeholders from every sector of the supply chain, both public and private, to identify critical issues and build consensus on the next steps with the goal of formulating practical, near-term solutions that lead to long-term, sustained progress. The virtual workshop, held on September 1st, 2021, convened over 140 registrants to address four key issues: supply chain visibility, the role of government, efficiency of intermodal operations, and changes in consumer demand. Read about the event here and here.

2023 Western NLTAPA Regional Meeting & Tribal Peer Exchange (CALTAP)

CSULB hosted the 2023 Western NLTAPA Regional Meeting & Tribal Peer Exchange from April 25-27. The National Local & Tribal Technical Assistance Program Association (NLTAPA) is a not-for-profit organization representing and serving the 52 LTAP and TTAP Member-Centers in the United States and Puerto Rico. The western NLTAPA regional meeting in Long Beach allowed the CALTAP team, housed at CITT, to showcase some of the partners and projects that make the city and region unique. The Port of Long Beach hosted the three-day session at its downtown headquarters and offered meeting attendees a tour of the Long Beach Container Terminal. The meeting also included participants from California's Tribes as well as tribal liaisons from CALTAP, SANDAG, and other organizations as part of a tribal peer exchange. Read about the event here, here, and here.

2023 International Association of Maritime Economists (IAME) Conference

Together with partners at the METRANS Transportation Consortium, CITT hosted the International Association of Maritime Economists (IAME) conference in Long Beach, California on September 5-8, 2023. The event garnered a large international audience with over 160 maritime professionals joining the conference. More than 130 papers covering a variety of topics including the cruise industry, container terminal optimization, and digitization were presented. The theme for this year's conference was "New Realities in the Global Maritime Economy." Researchers and industry leaders convened to explore what is next for the maritime economy in an environment of lingering pandemic anxieties, geopolitical conflicts, rapid technological change, and increasing urgency to manage global climate change. The conference inspired participants from around the world to engage in innovative collaborations between academia, government, and industries in response to a rapidly changing world. Read about the event here.

California State Transportation Agency (CalSTA) Port Decarbonization Symposium

Japanese and U.S. companies and ports gathered in San Pedro on October 20, 2023 to share experiences, information, technical know-how, and best practices in forming Green Shipping Corridors and decarbonizing the port sector. Representatives from four Japanese ports and the California ports of Long Beach, Los Angeles, Oakland, and Hueneme were in attendance. The California State Transportation Agency (CalSTA) and the Japan Ministry of Land, Infrastructure, Transport and Tourism (MLIT) served as the Symposium's hosts. The Center for International Trade & Transportation (CITT) played an essential role by leading the design, development, implementation, and documentation of the half-day symposium. More information can be found in the METRANS News write-up on the event (here).

Benchmarking Equity and Mobility Needs for Tribal Governments: A Tribal Transportation Peer Exchange Summit for a New Tribal Self-Determination Paradigm

Dr. Tyler Reeb co-chaired with Ron Hall a tribal transportation workforce peer exchange sponsored by the Transportation Research Board (TRB) and hosted at Esri corporate headquarters in Redlands, California from October 23-25, 2024. Funding and programmatic support was provided by the Upper Great Plains Transportation Institute (UGPTI) (https://www.ugpti.org/), the National Center for Sustainable Transportation (ncst.ucdavis.edu), Pacific Southwest University Transportation Center (metrans.org/psr_utc_about), Small Urban, Rural and Tribal Center on Mobility (https://www.ewu.edu/cahss/surtcom/), and Esri (esri.com). This effort is also supported by TRB's Committee on Native American Transportation Issues (AME30), Rural Transportation Issues Coordinating Council (A0040C) and Standing Committee on Workforce Development and Organizational Excellence (AJE15). Most significant is the support of several national and regional tribal organizations including the Intertribal Transportation Association, National Congress of American Indians, Alaska Tribal Transportation Working Group, and Tribal Transportation Program Coordinating Committee.

Participants in the national TRB tribal peer exchange included members of multiple Tribes and Tribal organization, including the Red Lake Tribe, Pueblo of Jemez, Ak-Chin Indian Community, Pawnee Nation, Mescalero Apache Tribe, Navajo Nation, Chickasaw Nation, Crow Tribe DOT,

Standing Rock Sioux Tribe, Pyramid Lake Paiute Tribe, Sitka Tribe of Alaska, Mille Lacs Band of Ojibwe, Fort Peck Assiniboine & Sioux Tribes, Ponca Tribe of Nebraska, and the Hoopa Valley Tribe.

The Pacific Southwest Regional (PSR) University Transportation Center (UTC) served as the lead UTC sponsor for the peer exchange in collaboration with the Upper Great Plains Transportation Institute (UGPTI), the Small Urban, Rural and Tribal Center on Mobility (SURTCOM), and the National Center for Sustainable Transportation (NCST).

Read about the event here.

TRB National Summit on the Future of the Transportation Workforce

The TRB National Summit on the Future of the Transportation Workforce was held June 2-4, 2025 in Westminster, Colorado (near Denver). National leaders in transportation gathered for the Transportation Research Board (TRB) National Summit on the Future of the Transportation Workforce, held June 2-4, 2025 in Westminster, Colorado. CITT Executive Director Tyler Reeb and Glenn McRae of the National Network for the Transportation Workforce served as co-chairs of the Summit.

The Summit's program centered around three key questions:

- How do we attract and engage a diverse workforce?
- What kind of workforce do we need for the 21st century?
- What business models and tools sustainably support the workforce?

Each of those questions are pivotal to the future of the transportation workforce and the professionals who will face the challenges posed by climate change, aging infrastructure, artificial intelligence, and a rapidly evolving economy. Briefings on each presentation and session at the Summit can be found on the National Network for the Transportation Workforce (NNTW) website.

CSUTC Conference 2025

The first-ever CSUTC Conference was held on the campus of CSULB on August 15 and 16, 2025. Under the motto "Shaping the Future of Transportation", it marked nearly eight years of groundbreaking research, innovative training programs, and transformative collaborations. The conference featured engaging panel discussions, networking opportunities, and technical presentations.

Through a lens of sustainability and innovation, CSUTC 2025 focused on the current and future workforce training needs, practical and industrial applications of research and technology. Conference Chair Dr. Karen Philbrick and Co-Chair Dr. Hamid Rahai led engaging panel discussions with industry experts on various topics, including Transportation Readiness for the upcoming Olympic Games in Los Angeles, Operations at the Port of Long Beach, AI & Innovation, and updates on the Transportation Workforce.

The conference attracted over 60 transportation professionals and students from across California. The keynote address was delivered by the Hon. Jim Beall, former CA State Senator and Chair of the Committee on Transportation and Housing.

Digital Communications

METRANS News summarizes METRANS research, student awards and activities, new program initiatives, and summary of events. It is distributed to University Transportation Centers, to faculty throughout the U.S., federal, state, and local public agencies, and to industry.

CITT Center Updates are monthly electronic blasts. Each e-blast contains brief articles covering relevant awards, presentations, events, and project descriptions as they appear. The focus is on the freight sector and on education and workforce development. They are distributed as e-mails to industry and education partners as well as partners in government.

The **CITT website** (https://www.cpace.csulb.edu/center-for-international-trade-and-transportation) is a central portal for information on CITT programs. A website redesign was launched in August 2020. The redesign takes all users of the CITT website into consideration to improve the functionality and searchability of the site, the presentation of information, and the accessibility of tools for stakeholders to utilize. The redevelopment has added the capability to present research publications and timely articles relating to organizational projects and activities.

The **METRANS website** (https://www.metrans.org/) is managed by CITT. The METRANS website is a central portal for information on METRANS and CITT's programs including the National Center for Sustainable Transportation, the MetroFreight Volvo Center, and the Southwest Transportation Workforce Center. All research reports generated by CSULB faculty using METRANS funding are available at metrans.org.

The **NNTW website** (https://www.nntw.org/) is primarily managed by CITT. The NNTW website is a central portal for information on NNTW programming.

CITT is currently developing **TribalTransportation.org**, a central hub for Tribal transportation issues discussing research efforts following *Benchmarking Equity and Mobility Needs for Tribal Governments: A Tribal Transportation Peer Exchange Summit for a New Tribal Self-Determination Paradigm*.

Trade Talks

Dr. Tom O'Brien, Executive Director of the Center for International Trade and Transportation from 2017 to 2024, hosted Trade Talks, a quarterly video series program that examines pertinent issues in the trade sector with both global and local perspectives from industry experts. The series was produced by CPACE's Advanced Media Production team and distributed through the CSU network.

All "Trade Talks" episodes are archived on the Beach TV YouTube channel and can be easily accessed on our website.

Guests that have joined the series include the following:

- Terry Bills, Global Transportation Industry Manager at ESRI (August 2018);
- Mario Cordero, Executive Director of the Port of Long Beach (December 2018);
- Stephen Cheung, President of the World Trade Center Los Angeles and Executive Vice President of the Los Angeles County Economic Development Corporation (March 2019);
- Fran Inman, Senior Vice President of Majestic Realty (September 2019);
- Peter V. Hall, Director of the Graduate Urban Studies Program at Simon Fraser University (October 2019);
- Tyler Reeb, Director of Research for the Center for International Trade and Transportation (CITT) at California State University, Long Beach (CSULB), and the Associate Director of the Federal Highway Administration's Southwest Transportation Workforce Center (February 2020);
- Mario Cordero, CEO of the Port of Long Beach (October 2021);
- Kirk DeJesus, Director of the Port of Stockton (March 2020);
- Kristin Decas, Director and CEO of the Port of Hueneme (May 2022).

Eno Webinar Series

The Eno Center for Transportation is an independent, non-partisan think-tank that shapes public debate on critical multimodal transportation issues and builds an innovative network of transportation professionals. CITT Director of Research Tyler Reeb moderated a three-part series on the mobility workforce in 2020.

- *Empowering a Resilient Transit Workforce* was presented on June 30th, 2020. The webinar was co-moderated by Robert Puentes, President and CEO, Eno Center for Transportation. Panelists included Xinge Wang, Deputy Director of the Transportation Learning Center; Joanne Peterson, Chief of Human Capital & Development at Los Angeles Metro; Jess Guerra, Executive Director of the Transportation Workforce Institute at Los Angeles Trade-Technical College.
- *The State of the New Mobility Workforce* was presented on July 28th, 2020. The webinar was co-moderated by Paul Lewis, Vice President of Policy and Finance, Eno Center for Transportation. Panelists included Brian Cronin, Vice President of Human Capital for ICF International; Genevieve Giuliano, Professor Margaret and John Ferraro Chair in Effective Local Government, Director, METRANS Transportation Center; Stephanie Ivey, Associate Dean for Research, Professor, Herff College of Engineering, The University of Memphis, and Director of the Southeast Transportation Workforce Center; and Lischa Brooks, Executive Principal of the East High School T-STEM Academy.
- *Promoting Resiliency Across the Global Supply Chains* was presented on August 25th, 2020. The webinar was co-moderated by Romic Aevaz, Policy Analyst, Eno Center for Transportation. Panelists included Rick Blasgen, President, The Council of Supply Chain Management Professionals; Kristin Decas, CEO and Director, Port Hueneme; and Ian R.

Roark, Vice President of Workforce Development and Strategic Partnerships, Pima Community College.

Mindful Mobility Series:

Deanna Matsumoto developed and presented a three-part webinar series as part of the Mindful Mobility Tech Talk series in 2021. The webinars provided CSULB with an opportunity to share the findings from its development of a Sustainable Freight Foundations Certificate to a national audience. Topics included:

- **Part I:** Freight Systems & Management, Legal Issues for Sustainable Freight Operations on 4th of February 2021, moderated by Diana Sanchez and Deanna Matsumoto.
- **Part 2**: Energy, Infrastructure, and Sustainability; Data and Metrics for Freight on 11th February 2021. Moderated by Tom O'Brien and Deanna Matsumoto
- **Part 3:** Introduction to Regulatory Compliance on 25th February 2021. Moderated by Tom O'Brien and Deanna Matsumoto

Mobility Matters

The Mobility Matters podcast addresses mission-critical issues facing the professionals who design, develop, operate, and maintain the mobility systems that get people where they need to go and transport essential goods for communities and families throughout the country. Tyler Reeb has periodically hosted episodes of the podcast since February 2022. Episodes are archived on the CITT website.

- Equity and Mobility in Indian Country (February 2022)
- Choosing ITS: Smarter Communities and Careers (September 2022)
- From Invisible to Essential: Covering Freight in the Media (September 2022)
- Mike Davis and American Mobility (April 2023)
- Tariffs and Trade With Dan Gardner (March 2025)

Country Of Origin Social Media Challenge

The Center for International Trade and Transportation launched a new Country of Origin social media challenge in March 2025. This was kicked off on Tyler Reeb's Mobility Matters podcast: https://www.linkedin.com/feed/update/urn:li:activity:7305683840990121984. The challenge concept was immediately embraced by instructors from the Academy of Global Logistics (AGL) based at Cabrillo High School (CITT serves as a learning and development advisor for AGL.). CITT released a short social media video featuring AGL students participating in the Country of Origin Challenge available here: https://www.youtube.com/watch?v=qPz3Yrify5A . CITT will also engage industry leaders to participate in the Country of Origin Challenge.

Sponsorships

CITT also engages with many of our partners as a host of industry-focused events or as a co-sponsor of events hosted by our partners. Our partnerships also include association memberships that provide students in our programs with either free or reduced-fee access to events. Events from the past five years (that are not mentioned elsewhere in this document) include:

Supported Events

LA Area Chamber of Commerce 94th Annual World Trade Week: The annual World Trade Week was held virtually due to COVID-19 in September of 2020. The event, sponsored in part by CITT, included opening remarks by LA Mayor Eric Garcetti, and featured a talk by Port of Long Beach Executive Director Mario Cordero.

Council of University Transportation Centers Awards Banquet: The Council of University Transportation Centers (CUTC) hosts an annual awards banquet to honor distinguished students and faculty who have made contributions to transportation research. The reception and banquet took place virtually on January 6, 2021 and was sponsored in part by CITT.

The METRANS Associates Program (MAP) provides the core support for the METRANS Transportation Consortium California at both USC and CSULB. Associates provide annual support at varying levels up to $50,000. More on the MAP members can be found at METRANS | METRANS Associates Partners.

HTA Golf Tournament 2025: The Harbor Trucking Association (HTA) raised $5,000 for CITT's HTA Endowment at its 4th Annual Golf Classic at Sklylinks Golf Course on November 7, 2025. HTA Chief Executive Officer Robert Loya presented CITT Executive Director Tyler Reeb a $5,000 check during the dinner reception after the golf tournament. HTA represents a coalition of Long Beach, Los Angeles, Oakland, Seattle, and Tacoma intermodal carriers. Through education and advocacy, HTA promotes strategies in collaboration with other goods movement stakeholders and policy makers to sustain emission reductions, provide a dialog for intermodal truck efficiency, and to return cargo and jobs to America's West Coast ports. The HTA scholarship supports students interested in trucking, intermodal logistics, transportation technology, and transportation policy. Applicants are reviewed for commitment to learning and development, career background and direction, financial need, and community involvement.

Social Media

CITT maintains several social media accounts used to help disseminate research results and information on PSR-related projects: LinkedIn, Youtube, Instagram, Facebook, and Twitter.

CITT has been focusing its social media engagement on LinkedIn with regard to current research, curriculum development, and outreach activities. The most notable growth in digital presence can be seen on LinkedIn. From 2020-2025, CITT's following increased from 240 to 746, an increase of over 200%. CITT has found that LinkedIn is superior for engagement and discussion, and allows followers of the page to repost CITT's content accompanied by their own extensive commentary.

In 2025, CITT reworked its Instagram presence and created a new account. CITT has not found that Facebook and Twitter/x to be particularly useful outlets, but continues to maintain those pages and update them periodically.

REQUESTED ACI CHANGES

None.

REASONS FOR ACI CONTINUATION

CITT believes that for the reasons outlined below in Achievements and Impact that our status as a university-approved Center warrants renewal. We have more than a 20-year track record of success in education, research and community engagement. In 2017, the Long Beach Chamber of Commerce International Business Association recognized CITT with its International Achievement Award in recognition of its 20-year anniversary.

CITT has developed regional, national and international profile in the areas of trade and transportation and transportation workforce development. Our portfolio of projects has diversified over recent years so that our core funding through USDOT is supplement by other sources of funding which contributes to long term sustainability. In addition to the programs and projects outlined above, CITT has pending proposals submitted to Caltrans that will address the workforce implications of Complete Streets laws and the workforce needs of the state's freight rail supply chain.

TERM EXTENSION

CITT is requesting a five-year extension as an ACI-approved Center.

CENTER ACHIEVEMENT and IMPACT

Achievements

Publications

Gregor, Theresa Lynn. "Tribal Transportation Oral History of Mobility in San Diego." StoryMap. With Tyler Reeb, Rhithu Mandiram, and Devin Martinez Flores. Https://storymaps.arcgis.com/stories/c71d9cb3cef14852b0f027c367c0ad8e, March 21, 2025. https://storymaps.arcgis.com/stories/c71d9cb3cef14852b0f027c367c0ad8e.

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O'Brien, Thomas, Elizabeth Warren, and Kieu-Anh Vu. *Caltrans Sustainable Freight Academy*. NCST-CSULB-RR-22-30. National Center for Sustainable Transportation, 2022. https://escholarship.org/uc/item/6zk8689k.

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Presentations/Seminars/Workshops

2020-2021

GO-Biz California Supply Chain SUCCESS Initiative: CITT partnered with the California Governor's Office of Business and Economic Development (GO-Biz), the California State Transportation Agency (CalSTA), and the Port of Long Beach to develop the California Supply Chain SUCCESS Initiative, a collaboration aiming to take a solutions-based approach to supply chain issues. CITT deployed several strategies to guide stakeholders' approach to discussing solutions, including a social media campaign, virtual workshop open to the supply chain community, and in-person Summit with key supply chain leadership. This collaboration brought together stakeholders from every sector of the supply chain, both public and private, to identify critical issues and build consensus on the next steps with the goal of formulating practical, near-term solutions that lead to long-term, sustained progress. *Grant Amount: $50,000. Period of Performance: 6/30/2021 to 11/30/2021.*

Eno Webinar Series: The Eno Center for Transportation is an independent, non-partisan think-tank that shapes public debate on critical multimodal transportation issues and builds an innovative network of transportation professionals. CITT Director of Research Tyler Reeb moderated a three-part series on the mobility workforce.

- *Webinar: Empowering a Resilient Transit Workforce* was presented on June 30th, 2020. The webinar was co-moderated by Robert Puentes, President and CEO, Eno Center for Transportation. Panelists included Xinge Wang, Deputy Director of the Transportation Learning Center; Joanne Peterson, Chief of Human Capital & Development at Los Angeles Metro; Jess Guerra, Executive Director of the Transportation Workforce Institute at Los Angeles Trade-Technical College.
- *Webinar: The State of the New Mobility Workforce* was presented on July 28th, 2020. The webinar was co-moderated by Paul Lewis, Vice President of Policy and Finance, Eno Center for Transportation. Panelists included Brian Cronin, Vice President of Human Capital for ICF International*;* Genevieve Giuliano**,** Professor Margaret and John Ferraro Chair in Effective Local Government, Director, METRANS Transportation Consortium*;* Stephanie Ivey**,** Associate Dean for Research, Professor, Herff College of Engineering, The University of Memphis, and Director of the Southeast Transportation Workforce Center; and Lischa Brooks**,** Executive Principal of the East High School T-STEM Academy.
- *Webinar: Promoting Resiliency Across the Global Supply Chains* was presented on August 25th, 2020. The webinar was co-moderated by Romic Aevaz, Policy Analyst, Eno Center for Transportation. Panelists included Rick Blasgen, President, The Council of Supply Chain Management Professionals; Kristin Decas**,** CEO and Director, Port Hueneme; and Ian R. Roark, Vice President of Workforce Development and Strategic Partnerships, Pima Community College.

Mindful Mobility Series: Deanna Matsumoto developed and presented a three-part webinar series as part of the Mindful Mobility Tech Talk series. The webinars provided CSULB with an opportunity to share the findings from its development of a Sustainable Freight Foundations Certificate to a national audience. Topics included:

- **Part I:** Freight Systems & Management, Legal Issues for Sustainable Freight Operations on 4th of February 2021, moderated by Diana Sanchez and Deanna Matsumoto.
- **Part 2**: Energy, Infrastructure, and Sustainability; Data and Metrics for Freight on 11th February 2021. Moderated by Tom O'Brien and Deanna Matsumoto
- **Part 3:** Introduction to Regulatory Compliance on 25th February 2021. Moderated by Tom O'Brien and Deanna Matsumoto

IANA Research Forum: CITT hosted the Intermodal Association North America (IANA) Research Forum on April 23, 2021. CITT is one of IANA's scholarship partners. Funds are used to allow students on the CSULB campus to take CITT's Global Logistics Professional Program

and to conduct applied research on intermodal topics. The past IANA scholarship recipients: Diana Sanchez, Jeremy Stumpp, Nicholas Roy, and Jenny Benitez attended to share their experiences conducting research on various intermodal topics (e.g. blockchain, port congestion, chassis management, virtual intermodal education) and participating in the Global Logstics Professional (GLP) program at CITT. The event raised awareness for the program to encourage additional scholarship participants.

Pacific Southwest Region UTC Congress*:* The fourth annual Pacific Southwest Region (PSR) Congress took place virtually on April 12th and 13th, 2021. This year focused around 4 themes:

1) Technology to address transportation problems and improve mobility;

2) improving mobility for vulnerable populations;

3) improving resilience and protecting the environment; and

4) managing mobility in high growth areas.

The event included a presentation series designed to quickly highlight research conducted at the eight PSR member universities. Both faculty and student researchers from CITT participated, as well as industry and public agency representatives. METRANS Director Genevieve Giuliano gave the opening remarks for the research events.

Other Presentations

Tom O'Brien presented on careers in intermodalism and how students can position themselves for success at the IANA 2020 Student Case Competition on October 1, 2020.

O'Brien presented on freight technology advancements and WFD at the Transportation Research Board 2021 Annual Meeting on January 8, 2021. In the presentation, he identified the latest transformational technologies (i.e. Internet of Things, connected vehicles, and drones) and anticipated impacts on transportation.

Deanna Matsumoto submitted a poster on *COVID- 19 Impacts on Transportation and Supply Chain Workforce Development in Southern California* to the Transportation Research Board 2021 Annual Meeting in January 2021.

O'Brien presented a virtual session of the *Southern California Logistics: Surviving Covid, Preparing for the Future* on January 21, 2021, via the NEOMA Business School, a French business and management graduate school.

O'Brien taught a virtual session, *Southern California Logistics: Surviving Covid, Preparing for the Future*, via CPIE in January and March 2021. This course aimed to answer the questions of lessons learned during the COVID-19 pandemic and how Southern California logistics service providers are preparing for the post-pandemic future.

O’Brien was a panelist for the “Bridging the Gap Between Next Generation Preparedness and Industry Requirements” during the Containerization & Intermodal Institute’s (CII’s) *Building the Supply Chain Workforce of the Future* event on April 28, 2021.

Ben Olson presented on the curriculum development approach used in CITT’s Urban Goods Movement Training for Transportation Consultants and Urban Freight Solutions for a Smart City Workshop during the Federal Highway Administration’s International Urban Freight Roundtable in April 2021.

Deanna Matsumoto and Angelina Carballo each presented posters at the 2021 WTS Annual Conference in May 2021. The submitted posters were “Make Way for the Next Generation: Attracting and Training the Transportation Workforce of the Future,” and “Assessing the Workforce Development Needs of Port-to-Warehouse Transportation and Supply Chain Middle Skill Workers in Southern California.”

O'Brien and Matsumoto moderated and presented the “Southern California Regional Workforce Development Needs Assessment for the Transportation and Supply Chain Industry Sectors” during the 2021 Annual Conference: Special Interest Group 2 (Siga2) Maritime and Ports: Key Developments and Challenges, hosted by the World Conference on Transport Research Society (WCTRS) in May 2021.

CSULB representatives participated as panelists in two workshops as part of a Port of Long Beach-led Zero and Near Zero Emissions Freight Facilities (ZANZEFF) series. The first workshop titled Introduction to the Academy of Global Logistics took place on May 24, 2021. The second workshop, Zero-Emission Port Equipment and Training, took place on June 7, 2021.

2021-2022

Pacific Southwest Region UTC Congress*:* The fifth annual Pacific Southwest Region (PSR) Congress took place at University of Hawaii, Manoa in Honolulu, HI on March 21 and 23, 2022. The event included a presentation series designed to quickly highlight research conducted at the eight PSR member universities. Both Executive Director O’Brien and GIS and Data Manger Ben Olson presented. More information can be found at the event’s website.

Other Presentations

Tom O’Brien presented the Intro to World Trade and Containerization as part of the CITT 200 “Foundations in Global Trade” of the College of Professional and International Education on July 14, 2021.

Tom O’Brien presented on Pharmaceuticals and Vaccines at the Beach as well as on the State of the US Supply Chain and its Impacts on Pharma and Logistics at the virtual Pharma Logistics Masterclass on September 8, 2021.

Tom O’Brien and Tyler Reeb hosted a webinar on the “Roadblock up on the Cloverleaf: Workforce Development for the Industry” for the Mineta Transportation Institute Research Snaps series on September 16, 2021.

Tom O’Brien presented on Supply Chain Disrupted – Preparing STEM Technicians for the ‘Next Normal’ at the virtual Advanced Technical Education Conference hosted by the American Association of Community Colleges on October 22, 2021.

Tom O’Brien was the keynote speaker at the New Mexico MEP (Manufacturing Extension Partnership) Summit on October 28, 2021.

Tom O’Brien moderated the AT045 Intermodal Freight Transport Committee Workshop on Zero Emission Workforce Development at the TRB Annual Meeting in Washington, D.C. on January 9, 2022.

Tom O’Brien presented the Intro to World Trade and Containerization as part of the CITT 200 “Foundations in Global Trade” of the College of Professional and International Education on January 19, 2022.

Tom O’Brien presented on the “Supply Chain Crisis” at the virtual South Bay Cities Council of Governments (SBCCOG) Board Meeting on January 27, 2022.

Tom O’Brien was a speaker at the National Propane Gas Association’s (NPGA) winter meetings in Palm Springs, CA on January 31, 2022.

Tom O’Brien presented on the Summit Initiative at the California Freight Advisory Committee virtual statewide meeting on February 9, 2022.

Tom O’Brien and CITT Research Assistant Jared Paz presented at the Futures in Transportation High School Workshop at USC in Los Angeles, CA on February 18, 2022.

Tom O’Brien and Ben Olson of CSULB participated in the Annual Pacific Southwest Region University Transportation Center (PSR-UTC) Congress in Honolulu, HI on March 21, 2022.

Tom O’Brien participated in the CA-HI Transportation Symposium in Honolulu, HI on March 23, 2022.

Tom O’Brien presented on “Local Impacts on Underserved Communities” at US ITC RoundTable on April 1, 2022.

Tom O'Brien, Biju Kewalram, and Anh Vu presented on “Gamification of Urban Freight” at International Urban Freight Conference 2022 in Long Beach, CA on May 25, 2022.

Tyler Reeb and Gwen Shaffer presented on “Using artificial intelligence to improve traffic flows with consideration of data privacy principles” at International Urban Freight Conference 2022 in Long Beach, CA on May 26, 2022.

Tom O’Brien presented on “Sustainability, Energy, and the California Supply Chain” at the Southern California Waste Management Forum (SCWMF) Annual Conference in Ontario, CA on June 8, 2022.

Tom O'Brien and Elizabeth Warren presented on the Supply Chain SUCCESS Initiative at the virtual event “Supply Chain Disruption - Part Three: Managing Cargo Movement” at the Manufacturers' Council of the Inland Empire on June 22, 2022.

2022-2023

Pacific Southwest Region UTC Congress

The sixth annual Pacific Southwest Region (PSR) Congress took place at the University of Southern California in Los Angeles, CA on March 17 and 18. The title of this year's Congress was Moving Forward: Improving Transportation in USDOT Region 9, and featured concurrent sessions across five themes: Improving Mobility, Mobility & Technology, Improving Resiliency, The Intersection of Research and Practice, and Carbon & Air Quality. The event included a presentation series designed to quickly highlight research conducted at the eight PSR member universities. GIS and Data Manger Ben Olson presented *Geographic Visualization of Select Global and Domestic Inland Waterways*. Two CSULB students were recognized as 2022 Pacific Southwest Region UTC Students of the Year: James Reuter (M.A., Philosophy) and Calvin Bragg (Global Logistics Specialist from CSULB College of Professional and Continuing Education). More information can be found in the event's program (here) and the METRANS News write-up on the event (here).

Other Presentations

CITT Team Member	Event	Panel/Session (if applicable)	Hosting Organization	Date	Location
Tom O'Brien	World Conference of Transport Research (WCTR) 2022 Virtual Meeting	Young transport academics' career development	WCTR	25-Jul-22	Zoom
Tom O'Brien	2022 Pharma Logistics Masterclass	Setting your Future Supply Chain Strategy by Economic Modelling	Khalifa University	6-Sep-22	Abu Dhabi, UAE
Tom O'Brien	International Association of Maritime Engineers (IAME) Conference 2022		IAME Conference	14-Sep-22	Busan, Korea
Tom O'Brien	Hosting org's Spring Meeting	US Inland Waterwasy' Role in a Global Marketplace	American Association of State Highway and Transportation Officials (AASHTO) Council on Water Transportation	21-Sep-22	Online
Tom O'Brien	Inland Rivers, Ports & Terminals (IRPT) 2022 Annual Conference	Waterborne Competitiveness: Comparing U.S. and Foreign Inland Waterways	IRPT	4-Oct-22	Tulsa, OK
Tom O'Brien	Focus on the Future 2022	Freight Forward: Using Technology to Solve Supply Chain Snafus	Self Help Counties Coalition	14-Nov-22	Newport Beach, CA

Tom O'Brien	Fall Conference	Transportation Policy Committee	County Engineers Association of California	16-Nov-22	Anaheim, CA
Tom O'Brien	KYL	Long Beach Qingdao Association (LBQA) Session	Long Beach Qingdao Association (LBQA)	18-Nov-22	Long Beach, CA
Tyler Reeb	Transportation Research Board (TRB) Annual Meeting 2023	How to Find Employees and Keep Them	TRB	10-Jan-23	Washington, DC
Tom O'Brien	Global Logistics Professional (GLP) Course	CITT 200: Intro to World Trade and Containerization	CSULB	18-Jan-23	Long Beach, CA
Tom O'Brien	Futures in Transportation High School Workshop	Sustainable Supply Chains	METRANS Transportation Consortium/University of Southern CA	10-Feb-23	Los Angeles, CA
Tom O'Brien	Fourth Annual National Mobility Summit	PSR UTC Overview	Carnegie Mellon University	16-Mar-23	Washington, D.C.
Tom O'Brien	eTRUC: Workforce Development Advisory Committee (WDAC) Quarterly Meeting	Developing a Sustainable Freight Certificate Program	GRID Alternatives Greater Los Angeles	12-Apr-23	Virtual
Tom O'Brien	CA Delivery Association Event	Top 10 (ish) Trends Shaping the Courier Industry (The Supply Chain View)	California Delivery Association	19-Apr-23	Virtual
Tom O'Brien	Community of Inclusion & Equity Symposium: Equity in Infrastructure	Equity Approaches in Education	Burns McDonnell	9-May-23	Brea, CA
Tom O'Brien	Green Shipping Conference		Simon Fraser University	23-May-23	Vancouver, Canada
Tom O'Brien	Governing Green Shipping Transformation Pathways to Marine Sustainability	Closing Panel: The Paths Ahead: Governance Options for Transforming Ports and Shipping	Simon Fraser University	24-May-23	Vancouver, BC
Tom O'Brien	ITS Canada	Next Generation ITS Workforce	ITS Canada @ St Clair College Centre for the Arts	16-Jun-23	Windsor, ON

2023-2024

Pacific Southwest Region UTC Congress

The 2024 Pacific Southwest Region (PSR) Annual Congress was hosted by the University of Nevada, Las Vegas (UNLV) on March 11th and 12thOver 100 students, faculty members, researchers, and industry associates joined the two-day event which featured 50 presentations on transportation research themes ranging from mobility in tribal nations to autonomous vehicles, and from dashboards for transportation equity to machine learning for traffic signal control systems. Students and faculty members from twelve universities and from all over California, Nevada, Arizona, Hawaii, and guest from well beyond Region 9 (Virginia) were able to connect, network, and engage with the topical research being produced across the PSR institutions.

Research themes for the Congress included: Attitudes; Optimization, Control, and Simulation; Tools and Visualization; Engine, Emissions, and Electric Vehicles; Transit Modes; Technologies; Universal Travel Benefits; Emergency Resilience; Rail; Gender; and Tribal Mobility.

The PSR Student of the Year winners were all in attendance and were honored during the PSR Student of the Year Ceremony on Tuesday morning. These student winners were selected by the PSR Executive Committee and were chosen based on academic merit, research accomplishments, and leadership skills. Yazmin Martinez, UNLV Ph.D. candidate in Computer Science and PSR Ph.D. Student of the Year, presented her paper titled, *Information Visualization for Exploring Road Traffic Congestion.* Alejandra Rios-Gutierrez, UCLA Master's student in Urban and Regional Planning and PSR Master's Student of the Year, presented her paper titled *Transportation Challenges Facing Low-Income Households with Children: A Case Study in South Los Angeles.* Uriah Campos, UC-Irvine Undergraduate Student in Urban Studies and PSR Undergraduate Student of the Year, presented his paper titled *Equity Analysis of Shared E-Scooter System.*

More information can be found in the event's program (here) and the METRANS News write-up on the event (here).

Institute of Electrical and Electronics Engineers (IEEE) Green Systems Presentation

Dr. Tyler Reeb coordinated with CSULB Associate Vice President of Research Barbara Taylor and the organizers of the 15th IEEE International Conference on Green Energy & Smart Systems (IEEE GESS 2024) to develop a panel that will include discussion of both hydrogen fuel-cell and battery-electric technologies titled "Building a Zero-Emission Vehicle Ecosystem." The panel featured presentations from Bill Beverley, Cofounder/CEO of Evolectric, Jacquelyn Birdsall, Senior Engineering Manager of the Fuel Cell Integration Group at Toyota Motor North America Research and Development, John Keisler, CEO of Sunstone Management, Marc Deutsch, Head of the New Business Execution Department within Auto Sales at American Honda Motor Co., Inc., (AHM), and Cory Shumaker, MBA, Director of Market Development for the California Hydrogen Business Council (CHBC). After the panel, attendees were able to check out a hydrogen fuel-cell heavy duty truck and a medium duty battery electric truck. Video clips of the recorded presentation received considerable exposure via LinkedIn postings.

Other Presentations

CITT Team Member	Event	Panel/Session (if available)	Hosting Organization	Date	Location
Tom O'Brien	International Warehouse Logistics Association Event		International Warehouse Logistics Association	5/9/2023	Virtual
Tom O'Brien	Green Shipping Conference		Simon Fraser University	5/23-24/2023	Vancouver, Canada
Tom O'Brien	Ports Master Class		University of Antwerp		
Tom O'Brien	Digital Ports	Network of Next Generation Digital Ports	University of the Andes	7/1/2023	Valparaiso, Chile

CITT Team Member	Event	Panel/Session (if available)	Hosting Organization	Date	Location
Tom O'Brien	Governing Green Shipping Transformation Pathways to Marine Sustainability	Closing Panel: The Paths Ahead: Governance Options for Transforming Ports and Shipping	Simon Fraser University	5/24/2023	Vancouver, BC
Tom O'Brien	ITS Canada	Next Generation ITS Workforce	ITS Canada @ St Clair College Centre for the Arts	6/16/2023	Windsor, ON
Tom O'Brien	Fourth Annual National Mobility Summit		Carnegie Mellon University		
Tom O'Brien	Community of Inclusion & Equity Symposium: Equity in Infrastructure	Equity Approaches in Education	Burns McDonnell	5/9/2023	Brea, CA
Tom O'Brien	History of Global Trade & Global Trade Policy			9/6/2023	
Tom O'Brien	NLTAPA	A Day in the Life of an LTAP Center	NLTAPA	7/18/2023	Columbus, OH
Tyler Reeb	Tribal Readiness Model: Introduction and Discussion	Tribal Readiness Model: Introduction and Discussion	CITT / CEC (online)	8/11/2023	online
Tyler Reeb	CSULB Research Foundation Board		Research Foundation Board	Sept, 2023	Long Beach, CA
Hamid Rahai (CALTAP)	GHG Emissions & Mitigations in Construction Projects	GHG Emissions & Mitigations in Construction Projects (Sustainable Engineering	CALTAP	12/7/2023	Long Beach, CA/ Online

CITT Team Member	Event	Panel/Session (if available)	Hosting Organization	Date	Location
		Training Academy)			
Tyler Reeb	Cybersecurity and TSMO Virtual Peer Exchange	Cybersecurity and TSMO Virtual Peer Exchange	National Operations Center of Excellence	12/14/2023	Virtual
Tyler Reeb	TRB Annual Meeting 2024	Intermodal Freight and the Media: Why Getting the Story Right Matters	TRB	01/07/2024-01/11/2024	Washington, DC
Tyler Reeb	TRB Annual Meeting 2024	The Future of the Transportation Workforce Development Life Cycle Workshop	TRB	01/07/2024-01/11/2024	Washington, DC
Tyler Reeb	2024 National Transportation in Indian Country Conference		The Center for Tribal Transportation	08/24/2024 - 08/29/2024	Durante, OK

2025

CITT Team Member	Event	Panel/Session (if applicable)	Hosting Organization	Date	Location	Moderation, Panelist, etc.
Tyler Reeb	Tribal Transportation Peer Exchange and Research Framework	Tribal Transportation Peer Exchange and Research Framework	Transporation Research Board (TRB)	1/7/2025	Washington, D.C.	panel discussion
Tyler Reeb	"Identifying Opportunities, Challenges, and Existential Threats Across the Supply Chain"	International Urban Freight Conference Pre-Event	International Urban Freight	4/8/2025	Long Beach, CA	panel presentation

Collaborations

Over the last twenty-two years, CITT has made an ongoing effort to develop its educational and training programs in partnership with industry and community stakeholders. From the creation of the Global Logistics Specialist (GLS) program in 1997, to the Working and Living in a Port City seminar series, CITT continues to build its reputation as a highly relevant and respected education provider. CITT's research portfolio features policy analysis in the areas of trade and transportation, as well as workforce development. Our outreach programs include educational forums, research conferences, and media-based efforts. In addition, CITT has continued to lead outreach efforts within the regional trade and transportation community to provide a forum for stakeholders to present their perspectives on current issues and developments impacting the industry.

Academic Research Center Partnerships (University Partnerships)

- **Pacific Southwest Region (PSR) University Transportation Center (UTC)**: The goal of the PSR UTC is to address regional needs and to generate and share knowledge throughout the region. The center's primary focus is to improve the mobility of people and goods. The center will focus on the following research themes: (1) technology to address transportation problems and improve mobility; (2) improving mobility for vulnerable populations; (3) Improving resilience and protecting the environment; and (4) managing mobility in high growth areas.

  The U.S. Department of Transportation (USDOT) awarded METRANS a five-year $12.5 million grant to operate the DOT Region 9 UTC. Under the most recent federal highway bill, the FAST Act, one regional center is selected for each of the nation's ten Standard Federal Regions. Region 9 includes the states of California, Arizona, Nevada, Hawaii, and the Pacific Island territories. Southwest Region UTC partners include:

  - University of Southern California
  - University of California, Davis
  - University of California, Irvine
  - University of California, Los Angeles
  - University of Hawaii at Manoa
  - Northern Arizona University
  - Pima Community College in Tucson, AZ

  CITT Executive Director Thomas O'Brien serves as Director of Workforce Development for the PSR UTC.

- **National Center for Sustainable Transportation (NCST)**: NCST is a United States Department of Transportation (USDOT)-funded national University Transportation Center (UTC) with these participating research institutions:
    - University of Southern California
    - California State University, Long Beach
    - University of California, Riverside
    - University of Vermont
    - Georgia Tech

  The USC/CSULB partnership coordinates research and training for NCST in the area of sustainable freight systems and workforce development.

CITT's Executive Director, Thomas O'Brien, serves as the MetroFreight Director of Education.

- **National Network for the Transportation Workforce (NNTW)**: CITT is part of the National Network for the Transportation Workforce (NNTW) which includes other universities with a focus on transportation workforce development: Montana State University, University of Memphis, and University of Vermont.

Research, Education, and Outreach Partnerships

Big Sky Passenger Rail Authority

California Air Resources Board (CARB)

California Department of Transportation (Caltrans)

California Energy Commission (CEC)

California Governor's Office of Business and Economic Development (GO-Biz),

California Hydrogen Business Council - https://californiahydrogen.org/

California State Transportation Agency (CalSTA)

California Transit Training Consortium (CTTC)

Council of University Transportation Centers (CUTC)

CSULB College of Engineering

CSULB Undergraduate Research Opportunity Program

Esri (Environmental Systems Research Institute, Inc.)

Evolectric - https://evolectricnow.com/

Federal Highway Administration (FHWA)

Fehr & Peers

Fuel Cell Integration Group at Toyota Motor North America Research and Development - https://www.toyota.com/usa/operations/map/ttc_ann_arbor_and_saline

Gannett Fleming

Governor's Office for Business (GO-Biz)

Harbor Association of Industry and Commerce (HAIC),

Harbor Transportation Club

Hyzon Motors - https://www.hyzonfuelcell.com/

Intermodal Association of North America (IANA)

International Association of Maritime Engineers (IAME)

International Longshoremen and Warehousemen's Union (ILWU) Local 13

International Transportation Learning Center (ITLC)

Japanese Ministry of Land, Infrastructure, Transport and Tourism (MLITT)

Jet Propulsion Laboratory (JPL) - a partnership between the National Aeronautics and Space Administration (NASA) and the California Institute of Technology.

Los Angeles Area Chamber of Commerce

Los Angeles County Metropolitan Transportation Authority (LACMTA / LA Metro)

Los Angeles Customs Brokers and Freight Forwarders Association (LACBFFA),

Los Angeles Transportation Club

MAES: Latinos in Engineering and Science (CSULB Student Group)

METROLINK

Pharma.Aero

Southern California Association of Governments (SCAG)

Sunstone Management Inc. - https://www.sunstoneinvestment.com/

The Port of Los Angeles

University of Antwerp

University of Memphis

Volvo Research & Educational Foundations (VREF)

Western Transportation Institute (Montana State University)

WorldBank

Yusen Terminals LLC

The organizations below are partners through the California Local Technical Assistance Program (LTAP), hosted at CITT:

- American Public Works Association (APWA)
- California Rural Counties Task Force (RCTF)
- National Association of County Engineers (NACE)
- Pacific Gateway Workforce Innovation Network (PGWIN)
- South Bay Cities Council of Governments (SBCCOG)
- American Association of State Highway & Transportation Officials (AASHTO)
- Federal Highway Administration (FHWA)
- National Association of County Engineers (NACE)
- National Highway Institute (NHI)
- National Local & Tribal Technical Assistance Program Association (NLTAPA)
- National Transportation Training Directors (NTTD)
- Caltrans Division of Local Assistance (DLA)
- Caltrans Division of Research, Innovation, & System Information (DRISI)
- California Active Transportation Resource Center (ATRC)
- California Workforce Association (CWA)
- CSU Sacramento Cooperative Training Assistance Program (CTAP)
- County Engineers Association of California (CEAC)
- California Rural Counties Task Force (RCTF)
- UC Berkeley TechTransfer Center
- Western Tribal Technical Assistance Program (WTTAP)

Grants, Endowments, Contracts and Donations

CITT received grants, contracts, and donations for its education, research, and outreach activities totaling $6,173,832 since 2020.

CITT continues to manage four endowments established in the College of Professional and International Education for Students in CITT-related credit and non-credit programs. Those endowments are:

- Los Angeles Transportation Club
- Marianne Venieris / Harbor Transportation Club Endowment Scholarship Fund
- Richard Hollingsworth Fund
- Harbor Association for Industry and Commerce Endowment

Fund	Endowment Market Value at 10/31/25	Fund Balance 11/21/25
LA Transportation Club Endowed Scholarship	**103,353.20**	15,414.93
Marianne Venieris Endowment	**50,032.75**	6,905.58
Harbor Association of Industry and Commerce Endowment	**32,391.25**	3,295.68
Harbor Trucking Association Endowment	**29,400.68**	3,322.29

IANA Scholarship: CITT has been designated as one of only ten programs in the country to be part of the Intermodal Association of North America (IANA) scholarship program and the only one focused on professional development offerings. The IANA scholarship money is made available on a competitive basis to students on the CSULB campus pursuing degree programs who would also benefit from the logistics industry exposure offered by CITT's Global Logistics Professional and Marine Terminal Operations Professional programs. A portion of the money also allows both undergraduate and graduate students on campus to gain research experience on applied research projects being undertaken by CITT, including those that are part of the PSR research program. The following students completed research projects as part of their participation in the IANA program:

- 2020 – Diana Sanchez, *Examining Collaborative Chassis Management Practices at the Ports of Los Angeles and Long Beach*
- 2020 – Nicholas Roy, *Port Container Drayage: Disruptions and Interventions in Urban Context*
- 2021 – Jeremy Stumpp, *Blockchain Applications in Supply Chains and Intermodal Transportation*

- 2021 – Jenny Benitez, *The Impact of COVID-19 on Supply Chain, Transportation, and Logistics Education*
- 2022 – Maria Casares, *The Port and Trucking Sector's Response to Environmental Mandates on the U.S. West Coast*
- 2022 – Patrick Schiwek, *How Can the Concept of Gamification be Used to Address the Shortage of Truck Drivers in the United States?*
- 2025 – Sarah Gomes (currently composing research)
- 2025 – Tobey Howe (currently composing research)

Awards

Organizational

California Transportation Foundation Annual Awards Gala

The CTF recognized CSUTC as one of California's most vital and important organized research programs in the field at the 2025 California Transportation Foundation Annual Awards Gala**.** Since its inception, the CSUTC has been a frequent collaborator with CITT. CSUTC is composed of four CSU campuses and their affiliated departments or research centers: CSU Chico (California Pavement Preservation Center), CSU Fresno (Fresno State Transportation Institute), CSU Long Beach (Center for International Trade and Transportation & College of Engineering) and San José State University (Mineta Transportation Institute).

FHWA Build A Better Mousetrap (BABM)

- 2023 - City of Walnut Creek (sponsored by CITT/CALTAP)

Instructors

No updates.

Students

*An * denotes a CITT student research assistant.*

SCAG Student Showcase

- 2021 – Adam Doyle*, graduate student in Geographic Information Systems, California State University, Long Beach

Pacific Southwest Region Student of the Year

- 2020 – Nicholas Roy*, undergraduate student in Applied Mathematics and Economics (double major), minor in Philosophy, California State University, Long Beach
- 2021 – Faraz Bhatti, Global Logistics Specialist student, California State University, Long Beach College of Professional and International Education (CPIE)
- 2021 – Jenny Benitez*, undergraduate student in Economics, California State University, Long Beach
- 2022 – James Reuter*, graduate student in Philosophy, California State University, Long Beach
- 2022 – Calvin Bragg, Global Logistics Specialist student, California State University, Long Beach

Graduations

Name	Major	Undergrad / Grad	Graduation
Jeremy Stumpp	Economics	G	Spring 2020
Nick Roy	Econ, Math	UG	Spring 2020
Eleni Hala	Business Management	UG	Spring 2020
Alejandro Flores Torres	MBA	G	Spring 2021
Alondra Garcia	GIS	G	Summer 2020
Caitlin Mace	Philosophy	G	Spring 2021
Diana Sanchez	Economics	UG	Fall 2020
Jesse Brouillette	Economics	UG	Spring 2020
Lehxy Pich	MBA	G	Spring 2022
Jaymin Ashwin Sindhav	MBA	G	Spring 2021
Angelina Carballo	GIS	G	Summer 2020
Anu Palakshaiah	IS	G	Spring 2021
Meghan Orr	Social Work	G	Spring 2021
Ayush Vij	IS	G	Spring 2021
Lena Kotanchyan	Public Admin, Economics	G	Spring 2022
Adam Doyle	GIS	G	Summer 2021
Armando Real	Psychology, HR	UG	Spring 2024
Caroline Beshay	Political Science	UG	Fall 2021
Brice Wildemuth	Economics, Public Policy	UG	Fall 2021
Jenny Benitez	Economics	UG	Fall 2021
Brittany Cooper	English Literature	G	Fall 2021

Name	Major	Undergrad / Grad	Graduation
Jared Paz	Finance	UG	Spring 2023
Naomi Suzuki	Criminology	G	Spring 2022
Sai Sandesh Narukullpati	GIS	G	Summer 2022
Anh Vu	Business Administration	UG	Fall 2022
Georgie Suico	Political Science	UG	Fall 2021
Ramiro Gomez	GIS	G	Summer 2022
James Reuter	Philosophy	G	Spring 2022
Thi Vuong	Interior Design	UG	Spring 2023
Maria Casares	MBA	G	Spring 2025
Patrick Schiwek	International Affairs	G	Spring 2023
Lan Ca	Engineering	UG	Fall 2023
Miles Wittig	Business Economics	UG	Spring 2023
Miti Desai	Computer Science	UG	Fall 2023
Devin Martinez Flores	Business Economics	UG	Spring 2024
Rhithu Mandiram	GIS	G	Summer 2024