Program Progress Performance Report for University Transportation Centers at
University of Texas at Arlington

Submitted to	U.S. Department of Transportation Office of the Assistant Secretary for Research and Technology (OST-R)
Grant Number:	69A3551747134
Project Title:	Center for Transportation, Equity, Decisions and Dollars (CTEDD) Consortia members: University of Texas at Arlington, California Polytechnic State University, Georgia Institute of Technology, University of Wisconsin-Madison, University of South Florida.
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Recipient Organization:	University of Texas at Arlington, 701 S Nedderman Dr, Arlington, TX 76019
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Report Term:	Semi-annual
Signature:	

1. **ACCOMPLISHMENTS:** What was done? What was learned?

The information provided in this section allows the OST-R grants official to assess whether satisfactory progress has been made during the reporting period

What are the major goals and objectives of the program?

MISSION:

The Center for Transportation Equity, Decisions and Dollars (CTEDD) is a University of Texas at Arlington (UTA)-led partnership with the California Polytechnic State University (Cal Poly), Georgia Institute of Technology (GIT), University of Wisconsin-Madison (UWM) and University of South Florida (USF). CTEDD is leading transportation policy research that improves economic development through more efficient, cost-effective use of the existing transportation system, and offers better access to jobs and opportunities. CTEDD will address these needs through innovative use of cutting edge technology, and policies that harness private resources for public infrastructure. CTEDD and its consortium members aim to serve their fast-growing regions and the nation as a whole through various programs that expand economic prosperity, provide outreach to policy makers, address infrastructure needs through innovative methods, and educate future leaders of the transportation field.

VISION:

CTEDD will be a leader in transitioning our antiquated transportation system towards the future through innovative policy making and the latest technology.

The major goals for CTEDD as described in our application fall into four categories:

CATEGORY #1: Research

GOAL 1: CTEDD PROPOSES MULTIDISCIPLINARY RESEARCH IN SIX BROAD AREAS:

Focus Area 1: Creative Use of Existing Infrastructure for Future Transportation Needs: Optimizing and upgrading the existing infrastructure to accommodate different mobility options, infrastructure preservation, innovative land use planning and enhance ridership.

Focus Area 2: Innovative Funding Strategies for Future Transportation Infrastructure, and Better Maintenance of Existing Infrastructure Understanding the nature of policy making, its challenges and obstacles for future transportation infrastructure, and providing the knowledge to overcome them.

Focus Area 3: Transportation Systems, Economic Competitiveness, and Equal Access Understanding different transportation demands due to multi-scalar nature of economic developments, designing the transportation systems serving users equally to access the opportunities.

Focus Area 4: Employing Big Data and Innovative Techniques to Improve System Efficiency Updating infrastructure maintenance management and public participation practices through utilizing the innovative and data driven strategies.

Focus Area 5: Ensuring Transportation System Vitality through Performance Management and Monitoring Systems: Upgrading the monitoring systems for infrastructure maintenance and the performance management of transportation systems.

Focus Area 6: Transportation Policy and Decision Making: Understating the obstacles to decision making due to jurisdictional fragmentation, and seeking solutions to the multi-scalar nature of the transportation system.

GOAL 2: COMPETITIVE, PEER REVIEW PROJECT SELECTION PROCESS

- CTEDD projects are selected through an open Request for Proposals (RFP) process.
- RFPs are open to faculty at member insinuations. All faculty members, postdocs and research associates are eligible to submit research, education and technology transfer project proposals responding to CTEDD's themes.
- Proposal evaluation and selection process are based on external peer review and rely on the expertise of practitioners and researchers nationally.

GOAL 3: DIVERSE RESEARCH GRANT CATEGORIES

- *General RFP:* CTEDD will be distributing grants among affiliated faculty members through the CTEDD General RFP.
- *SEED Grants:* The SEED Grant aims to encourage postdocs and junior faculty to participate in research projects. Compared to the CTEDD General RFP, SEED Grants have a larger financial cap and wider scope.
- *Emerging Scholar Research Fellowship RFP:* CTEDD supports research activities of young, emerging scholars through thesis and fellowships.

GOAL 4: ENHANCE COLLABORATIVE RESEARCH AND PARTNERSHIP OPPORTUNITIES

- *External Advisory Board:* The Advisory Board will help CTEDD identify significant research topics, the Center's annual plan and connect with appropriate partners.
- *Industry-University grant:* This initiative assists local transportation-related organizations, entities, industries and communities seeking partnership with our expert research team. CTEDD aims to links these opportunities to its affiliated research faculty
- *Diverse Internal Collaboration:* CTEDD encourages Multi-modal, multi- disciplinary collaborations across disciplines and our areas of research covers expertise from engineering, planning, public policy, business, social science and big data.

CATEGORY #2: Education and Workforce Development

CTEDD's education and workforce development goals will be accomplished through the creation of pre-college, undergraduate and graduate programs and professional development learning opportunities. These initiatives target traditional educational venues and alternatives provided in short-term formats or via virtual technologies.

GOAL 1: ATTRACT AND EDUCATE PRE-COLLEGE STUDENTS

- *Leveraging and Supporting the Existing Initiatives:* C-TEDD's members will use existing programs to expose K–12 students to transportation as a career choice
- *Joint educational initiatives with K-12 schools:* C-TEDD's will facilitate partnerships with K–12 and secondary schools, along with community colleges, and technical schools, to align education and industry and to support career pathways for current and future transportation workers.

GOAL 2: ATTRACT AND EDUCATE UNDERGRADUATE AND GRADUATE STUDENTS

- Offering degrees, courses, curricula, certificates and E-Modules
- *Providing Experiential Training Opportunities through Students' Involvement in Research Projects:* CTEDD requires research projects to involve undergraduate and graduate students. We also will aim to broaden these students' exposure to the range of transportation professions available, particularly through the lens of equity and upward social mobility. Our intent is to expand the workforce pool and diversity of new professionals.
- *C-TEDD Student Chapter Led Activities: CTEDD leadership structure includes the elected student leadership council. The council members are the elected leaders of CTEDD student chapter represent students through decision making processes.*
- *Student Competitions, Fellowship and Scholarship Programs:* To demonstrate our commitment to the ongoing education of graduate students, CTEDD will offer competitive scholarships, fellowships, assistantships and awards to attract graduate students, especially those from underrepresented populations.
- *Hosting Seminars, Workshops and Online Training Initiatives:* C-TEDD will create and maintain a calendar of seminars, workshops, professional courses and other training opportunities targeted at four audiences

GOAL 3: PROFESSIONAL DEVELOPMENT OPPORTUNITIES

- *Hosting Transportation Oriented Annual Career Fairs*
- *Developing Joint Industry-University Educational Programs*, housed by private companies and agencies.
- *Citizens and Transportation Policymakers and Leaders:* In order to improve the information available to the public on issues related to C-TEDD research priorities, our researchers will be required to submit a 1–2 page policy brief along with their research findings. The policy briefs will be written in plain, layperson style and disseminated through appropriate media channels.

CATEGORY #3: Engagement and Technology Transfer

CTEDD aims to ensure the research moves routinely into practice and consistently equip decision makers, researchers and communities with data and information for transportation decision-making,

funding sources, and mechanisms to achieve efficiency, equity and upward social mobility. To achieve this, CTEDD goals and programs are as follow.

GOAL 1: REGULAR DISSEMINATION OF INFORMATION FOR CTEDD PROGRAMS, EVENTS AND NEWS

- *CTEDD Social Media:* The center seek to develop an extensive social media and electronic presence so that information are shared in the way that is accessible to all, efficient and consistent.
- CTEDD Website will also be a principal communication channel to both disseminate the research news and an online host for the news outlets to share CTEDD news with the broader audience. CTEDD website will house a blog platform through which researchers and subject matter experts can exchange their knowledge, ideas and expertise.
- *CTEDD Subscription and Email Pipeline:* CTEDD research, news, events and updates are publicly accessible through subscription. CTEDD will send a quarterly e-newsletter to a list of recipients to drive interest and awareness in center's programs
- *YouTube and Periscope Channels:* CTEDD YouTube and Periscope channels also make CTEDD's recorded events, webinars, and other educational programs publicly accessible.

GOAL 2: INNOVATIVE USE OF TECHNOLOGY FOR DISSEMINATION:

- *Multimedia Collaboration with Established Outlets:* CTEDD seeks to collaborate with TEDx Talk and radio podcast programs for the joint events such as CTEDDx Talks.
- *Livestream of Events:* CTEDD social media and website pages will host the live broadcast of events.
- *CTEDD Testimonies:* CTEDD establishes a new tradition of outreach; regular and free-of-charge presentations to inform decision makers.

GOAL 3: EFFECTIVE DISSEMINATION AND IMPLEMENTATION OF EACH RESEARCH PROJECT

- *Two Page Policy Briefs:* Each project is required to produce a plain-language research brief written for decision- and policy makers.
- *Journal Publications and Conference Presentations:* The CTEDD project budget includes expenses for conference travel to present results and also PIs are encouraged to publish their research results in top peer-reviewed journals.
- *Three local implementation contacts:* CTEDD PIs must identify three practitioners at local nonprofits or governmental agencies who may directly implement the research outcomes.
- *Implementation plan:* CTEDD research proposals will identify a strategy for implementing their outcomes and/or research findings.
- *Webinar Series:* CTEDD projects are required to present a webinar session upon completion of the projects.

What was accomplished under these goals?

Administrative Tasks

CTEDD has completed the following administrative tasks and related research and engagement activities during the reporting period of November 30, 2017 to May 31, 2017:

- Finalized the mission and vision statements, finalized the focus areas and started developing the strategic plan. The Executive Committee members met and provided feedback, first individually, and then together.
- Established an exclusive email address (C-tedd@uta.edu) for CTEDD-related communications.
- Formed an Executive Committee
- Held teleconferences with campus Associate Directors (members of the executive committee) to provide updates and receive feedback.
- Finalized dates for monthly meetings on every third Thursday of each month for the first year.
- Drafted the subcontract master agreement and completed subcontract negotiations with consortium members.
- Finalized the job description, got internal required approvals and began search for the CTEDD program manager position.
- Hired a post-doctoral scholar working in the area of transportation equity, governance and financial policy analysis.
- Drafted and completed the strategic plan for the first year programs with input from the executive committee.
- Drafted and completed an action plan for research, education and engagement program including the designs, details and timelines for action.
- Prepared and submitted the Data Management Plan, which is approved by OST-R
- On April 14th 2017, UT Arlington held the first CTEDD kick off meeting and hosted DOT representatives for a one day event, including the presentation of CTEDD programs and timeline, tour of UTA facilities, and presentations by CTEDD researchers, who outlined their recent work within CTEDD's research focus areas.
- Formed a subject-based Peer Review Database with input from Executive Committee as well as scholarly and professional community

Research

COMPETITIVE, PEER REVIEW PROJECT SELECTION PROCESS

RFP Preparation and Solicitation:

- Prepared the RFP for the CTEDD's first general research program within the Center's themes. The RFP included the guidelines and template for each research project's Data Management Plan (DMP), and requested the descriptions, outlines, timelines and budgets.
- The Executive Committee reviewed and finalized the RFP before solicitation.
- On May 5th, released General RFP for consortium member researchers to submit proposals.

- The Director and Interim Program Manager worked with the PIs and their consortium member staff during the proposal submission process to provide assistance with the requirements, matching sources, documentation and budgeting for their projects.
- Through an internal review, the Interim Program Manager reviewed proposals in terms of the required items and documents, before sending for peer review.
- Began initial preparations for the RFP, to be released in fall 2017, for a second research program, the CTEDD SEED grant.
- By May 25, 2017, CTEDD had received 14 proposals under its General RFP.
- Submitted proposals totaled $786,994.55.
- Each proposal was reviewed by at least two external reviewers including one academic researcher and one practitioner. The external review criteria were developed based on the NSF process, including intellectual merit and broad impacts, modified to the CTEDD theme. Each proposal was also reviewed and scored by the Interim Program Manager for the following programmatic criteria:
  - Fit with the CTEDD theme and transportation equity focus
  - student support/mentoring
  - Support for tenure-track faculty
  - Leveraging of matching funds
  - Substantive and meaningful external collaboration; multi-disciplinary and/or multi-campus collaboration.
  - Synthesized results from external and programmatic review, and ranked proposals accordingly.
  - The Executive Committee is set to meet on the second week of July, 2017 to make decisions about project selection. The projects are listed below, with the principal investigator and university noted:

Table 1: List of proposed research projects seeking grants through CTEDD General RFP Grant Category

	Focus Area	Project Name	Consortium Member	Status
1	FOCUS AREA 4	Evaluation of Adaptive Ramp Metering on I-80 in the San Francisco Bay Area	Cal Poly	Under Review
2	FOCUS AREA 1 FOCUS AREA 3	Integrating Transportation Management Companies (TMCs) and Public Transportation	GIT	Under Review
3	FOCUS AREA 5	A Multi-asset Transportation Infrastructure Asset Management Framework and Modeling for Local Governments	GIT	Under Review
4	FOCUS AREA 1 FOCUS AREA 6	When and Where are Dedicated Lanes needed under Mixed Traffic of Automated and	GIT	Under Review

		Non-Automated Vehicles for Optimal System Level Benefits?		
5	FOCUS AREA 2 FOCUS AREA 3	Assisting Transit Riders with Disabilities via an App Designed for All	USF	Under Review
6	FOCUS AREA 6	Moving Communities Forward: Social Marketing and Social Change for Transportation	USF	Under Review
7	FOCUS AREA 4 FOCUS AREA 5	Improving Transportation Performance Measurement via Open "Big Data" Systems – Phase 1	USF	Under Review
8	FOCUS AREA 3 FOCUS AREA 6	Overcoming Local Barriers to Regional Transportation: Understanding Transit System Fragmentation from an Institutionalist Framework	UTA	Under Review
9	FOCUS AREA 1 FOCUS AREA 3 FOCUS AREA 4 FOCUS AREA 5	Methodological Guide for Developing Neighborhood Congestion Index (NCI)	UTA	Under Review
10	FOCUS AREA 5	Evaluation of Pavement Performance Using Remote Sensing Techniques	UTA	Under Review
11	FOCUS AREA 4	Fast Reference-free Crack Measurement (RACM) System in Transportation Infrastructures using Noncontact Ultrasound	UTA	Under Review
12	FOCUS AREA 5	Managing Highway Maintenance Expenditures using Level of Service Targets	UWM	Under Review
13	FOCUS AREA 6	Transportation and Health Indicators for the Local Level	UWM	Under Review
14	FOCUS AREA 6	Scan of Diversity and Inclusion Practices in State DOTs	UWM	Under Review

Peer Review Committee: The CTEDD Peer Review Committee has established and is consist of practitioners from several US regions involved in shaping policy and making decisions on key transportation issues around the country, as well as academics who are moving the field forward through cutting edge research. Committee members were chosen for the relevance of their work to the CTEDD theme and focal areas.

- The committee currently has 25 members who actively participate in reviewing the project proposals.
- The members are either researching, teaching or working in the areas of transportation asset management, planning, community planning, big data, public health, workforce and human capital, governance and policy making, and paratransit systems.

Texas Department of Transportation (TXDOT): UTA established a partnership with Texas DOT to incorporate the cutting-edge technology- unmanned aerial vehicles- to inspect Texas roadways and bridges more efficiently.

Education and Workforce

ATTRACT AND EDUCATE PRE-COLLEGE STUDENTS

- *Joined CityLab Founding Advisory Board (high school, 9-12):* CTEDD Director initiated collaboration with CityLab, a brand new planning and architecture-oriented high school in the city of Dallas. CityLab is among a very small group of schools nationally that concentrates on educating tomorrow's planners and policymakers. The established CTEDD + CityLab collaboration will include several join initiatives over the course of 5 years.
- On May 31st Cal Poly visited Atascadero Junior high school and introduced students to transportation engineering. The team led a radar gun lab session to demonstrate the Doppler Effect, and help students understand how and why spot speed surveys are conducted.

ATTRACT AND EDUCATE UNDERGRADUATE AND GRADUATE STUDENTS

- *Research Assistantships:* Through the first cycle of CTEDD general RFP, a total of 32 undergraduate and graduate students are proposed to participate in the research programs and through research assistantship, can obtain experiential training opportunities. Notably, eight of these students are from underrepresented population.
- *CTEDD Student Leadership Council:* on March 10th, CTEDD held its first campus-wide meeting for UTA students. Volunteer students were recruited to participate in the leadership council and, beginning fall 2017, will participate in the establishment of CTEDD's student organization.
- *Student Organizations:* Upon UTC receipt, CTEDD's Director initiated collaboration with UTA's student chapters of Women's Transportation Seminar (WTS) and Institute of Transportation Engineers (ITE). CTEDD will support the two organizations for their fall 2017 activities, in accordance with CTEDD theme and focal areas. Other consortium members are in the process of implementing this initiative.

PROFESSIONAL DEVELOPMENT OPPORTUNITIES

- UTA held the first CTEDD signature event on April 5th entitled "Smart Cities: A National Panel Discussion of Experts." The event hosted dozens of transportation professionals from DFW and students from various colleges in UTA.
- The April 5th event followed a CTEDD hosted networking event on April 4th, at UT Arlington CAPPA. This event provided networking opportunities for students to learn about job opportunities at national metropolitan planning organization (AMPO), and for MPO representatives to learn about UT Arlington transportation students' activities and capabilities.
- CTEDD has provided the Fort Worth Transportation Authority (known locally as The T) officials with two policy memos, and is working with them to develop a citizen participation initiative, which will involve local citizens in planning and supporting transit improvements. As a part of started

outreach activities of CTEDD Director, CTEDD has been invited to take a seat on the Advisory Board for the Fort Worth T's Citizen Advisory Group, providing a permanent, ongoing avenue for technology transfer to one of the region's key transportation agencies.

Engagement and Technology Transfer

REGULAR DISSEMINATION OF INFORMATION FOR CTEDD PROGRAMS, EVENTS AND NEWS:

- Established CTEDD Facebook, Twitter, Periscope and YouTube pages. They have been maintained frequently and stored the videos of CTEDD first signature event.
- Designed and established the CTEDD website and supporting infrastructures. The website provides extensive sources of information for CTEDD vision, mission, plans and programs, personnel directory, executive committee, location and contact information. The news and event fields have been updated frequently.

INNOVATIVE USE OF TECHNOLOGY FOR DISSEMINATION TO REACH OUT TO A BROADER AUDIENCE:

- The first CTEDD signature event was broadcasted live through CTEDD Facebook, Periscope and Twitter channels, attracting 150 online viewers.
- The first CTEDD testimony was requested by Dallas City Council. CTEDD Director Dr. Shima Hamidi, presented her testimony to the Dallas City Council's Quality of Life Committee on March 27th, advocating better accessibility and transportation amenities for Dallas' large low income population. Her testimony has drawn significant local attention to the issue, and the Dallas Area Rapid Transit (DART) plans to consider her testimony in their decision making and implementation process.

DISSEMINATION AND IMPLEMENTATION OF EACH RESEARCH PROJECT:

- CTEDD 1st general RFP required PIs two-page policy brief in addition to their research, describing the plans to disseminate their results. CTEDD is now developing formal guidelines and a template for the policy brief.
- CTEDD Executive and Associate Directors participated in more than 25 presentations during the 2017 TRB Annual Meeting.

How have the results been disseminated? If so, in what way/s?

Nothing to report for this period

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

Research

- CTEDD Advisory Board will be established.
- Completion of peer review and evaluation of research proposals for the General RFP solicitation
- Final selection of proposed projects for the first round.
- Award notification and kick off of funded research projects
- Submission and reporting of the first quarterly progress reports from the PIs

- Finalize the RFP for the second category of grants, "CTEDD SEED Grant," in collaboration with the executive committee
- Disseminate RFP for the CTEDD SEED Grant
- Conduct peer review, proposal evaluation and selection
- Award notification and kick off of funded SEED Grant research projects
- Dissertation and thesis fellowship call for proposal:
- Release call for application for CTEDD dissertation and thesis fellowship.
- Fellow(s) will be selected and awarded in fall 2017.

Education and Workforce

- Continuing signature event: Two more panel discussion events and/or workshops on UTA campus.
- CTEDD student leadership council: the CTEDD student organization will be established and the council will start developing plans for future activities.
- Student of the Year: Selecting the student of the year which will attend the Annual Outstanding Student of the Year Awards Ceremony at next TRB annual meeting.
- Career Fair Initiative: CTEDD staff will initiate the collaboration with UTA Career Development Center to prepare for the transportation related fields career fair event.
- Travel Awards: CTEDD will provide financial supports for specific student for attending conferences to present their research. The student will be evaluated for the awards based on their research activities, relevancy to CTEDD theme, affiliation with CTEDD, belonging to the underrepresented communities, and participation in CTEDD student activities.
- The CTEDD team will be collaborating with CityLab (a new high school in Dallas, TX) in designing and teaching a studio course, "The Connected City". The course will concentrate on transportation, active streets and the creation of public spaces. Through this course, CTEDD will be collaborating with other local agencies and industries. The course is scheduled to be offered beginning spring 2018, as a 9th grade studio program.
- CTEDD Consortium members will continue offering courses and degrees in transportation related fields.

Engagement and Technology Transfer

CTEDD Presence at local, regional and national conferences:

- CTEDD seeks to hold three sessions at the Texas APA 2017 conference in collaboration with the other agencies including DART, NCTCOG, Dallas Innovative Alliance, UT Dallas and City of Dallas. Sessions will focus on Transportation Equity, Transportation Planning for Innovative Transportation Systems and Local/Regional Economic Growth and Transportation Amenities.
- *CTEDD has organized a session on "Equity in Transportation Policy" for the 2017 Association of Collegiate Schools of Planning (ACSP) conference in Denver, inviting top researchers from around the country to present their latest research on the subject, and engage in a panel discussion.*

- *CTEDD will support its researchers and faculty to lead and participate in committees and presentations during the 2018 TRB annual meeting.*
- *E-Newsletter:* The first CTEDD E-Newsletter will be published and disseminated widely.
- *Website:* Continue updating CTEDD website functionalities and performance. The CTEDD website blog will begin issuing blogs with the topics related to CTEDD theme and focal areas.
- CTEDD Executive and Associate Director(s) attendance of the 2017 CUTC Summer Meeting. During their meeting, they will evaluate future activities and collaborations with other UTCs.

2. PRODUCTS: What has the program produced?

Publications are the characteristic product of research projects funded by the UTC Program. OST-R may evaluate what the publications demonstrate about the excellence and significance of the research and the efficacy with which the results are being communicated to colleagues, potential users, and the public, not the number of publications. Many research projects (though not all) develop significant products other than publications. OST-R may assess and report both publications and other products to Congress, communities of interest, and the public.

All research is ongoing; there are not yet any specific products from Center-funded projects.

Publications, conference papers, and presentations
- CTEDD Executive and Associate Directors participated in more than 25 presentations during the 2017 TRB Annual Meeting.

Website(s) or other Internet site(s)
CTEDD Website Address: https://ctedd.uta.edu
CTEDD Tweeter Page: https://twitter.com/C_TEDD
CTEDD Facebook Page: https://www.facebook.com/C-Tedd-1945985105622480/
CTEDD YouTube Channel: https://www.youtube.com/channel/UCqf2G50JsqMMC66kcUMKYJA/videos

Technologies or techniques
Nothing to report for this period

Inventions, patent applications, and/or licenses
Nothing to report for this period

Other products, such as data or databases, physical collections, audio or video products, software or NetWare, models, educational aids or curricula, instruments, or equipment
Nothing to report for this period

3. PARTICIPANTS & COLLABORATING ORGANIZATIONS: Who has been involved?

OST-R needs to know who has worked on the project to gauge and report performance in promoting partnerships and collaborations.

What organizations have been involved as partners?

The members of the consortium include the University of Texas at Arlington, California Polytechnic State University, San Luis Obispo, Georgia Institute of Technology, University of Wisconsin–Madison and University of South Florida. CTEDD has created a governance structure that reflects our basis in collaboration. Our Executive Committee is consist of one representative from each member university and provides overall direction for the center, make project funding decisions and select center award recipients. Table 2 presents a list of current and future CTEDD external partners

Table 2 Current and Future CTEDD External Partners

Partner	Program	Collaboration Type	Member insinuations	Status
CityLab high school	The Connected City course, summer transportation camp, etc.	Education	UT Arlington	2
Dallas Area Rapid Transit	DART Leadership Academy	Education	UT Arlington	2
WTS International	Transportation Career Fair	Education	UT Arlington	1
Corgan Architects	Partnership on Research Projects	Research	UT Arlington	
Fort Worth Transit Authority	"Tarrant Transit Alliance " Citizens Advocacy Group	Education and Tech Transfer	UT Arlington	1
North Texas Council of Government (NCTCOG)	Partnership on Research Projects	Research	UT Arlington	2
Association of Metropolitan Planning Organization (AMPO)	CTEDD signature event on Smart Cities	Education and Tech Transfer	UT Arlington	4
City of Dallas	Partnership on Research Projects	Research	UT Arlington	1
Texas Department of Transportation	Partnership on Research Projects	Research	UT Arlington	3
Wisconsin Department of Transportation	Partnership on Research Projects	Research	Wisconsin Madison	2
Georgia Department of Transportation	Partnership on Research Projects	Research	Georgia Tech	1
Metropolitan Transportation Commission	Partnership on Research Projects	Research	Cal Poly SLO	2
Status *** 1 Initial arrangement 2 Agreement made, will be implemented 3 Implementation phase 4 Completion				

Have other collaborators or contacts been involved? Please see Table 2

4. **IMPACT:** What is the impact of the program? How has it contributed to transportation education, research and technology transfer?

Over the years, this base of knowledge, techniques, people, and infrastructure is drawn upon again and again for application to commercial technology and the economy, to health and safety, to cost-efficient environmental protection, to the solution of social problems, to numerous other aspects of the public welfare, and to other fields of endeavor.

The taxpaying public and its representatives deserve a periodic assessment to show them how the investments they make benefit the nation. Through this reporting format, and especially this section, UTCs provide that assessment and make the case for Federal funding of research and education.

DOT uses this information to assess how the research and education programs:

1. increase the body of knowledge and techniques;
2. enlarge the pool of people trained to develop that knowledge and techniques or put it to use; and
3. improve the physical, institutional, and information resources that enable those people to get their training and perform their functions.

CTEDD and the center's Director have been referenced on several occasions in the media, directing the attention of a wide public audience towards serious concerns about transportation equity and social upward mobility, leading to a regional public discussion about how transportation policy can be reformed to better serve the mobility needs of the regions. Some examples of media coverage are as follows:

• There's no such thing as upwardly mobile when you're waiting for a DART bus
  Dallas News – Mar 28, 2017

• Dallas' Poverty Problem Explained in a Single Map
  D Magazine – Mar 27, 2017

• Surrounding real estate shows increase in value if near transit station
  Science Daily – Feb 15, 2017

• Texas Transit Agencies Eye Bus Changes After Ridership Jump in Houston
  The Texas Tribune – Dec 8, 2016

What is the impact on the development of the principal discipline(s) of the project?
  Nothing to report for this period

What is the impact on the other disciplines?
  Nothing to report for this period

What is the impact on development of human resources?
  Nothing to report for this period

What is the impact on physical, institutional, and information resources at the university and/or other partner institution?

Nothing to report for this period

What is the impact on technology transfer (include transfer of results to entities in government or industry, adoption of new practices, or instances where research has led to the initiation of a start-up company)?

Nothing to report for this period

What is the impact on society beyond science and technology?

- Though CTEDD has not yet begun its primary research activities, the Center has been working with the Fort Worth T to set up a Citizen Advisory Committee, which will help plan new transit lines, and ensure that the system provides service that is useful to the local community. CTEDD prepared a policy document providing case examples, and policy recommendations to help the T with this effort.

- CTEDD initiated a collaboration between the Center, the City of Dallas and DART to identify ways that a public service inspired by Transportation Network Companies (TNCs) like Uber or Lyft could be used to provide service to transit dependents living in some of Dallas' low density areas, which are currently underserved by fixed route service. The collaboration partners jointly applied for a $1 million grant from Toyota to fund the service.

- CTEDD has been collaborating with the City of Dallas' Office of Resiliency to study transportation equity in DFW. This project is supported by the Rockefeller Foundation as part of its 100 Resilient Cities Initiative. DART, one of the collaborators in this study, agreed to use the recommendations provided by this research as a major component of their future decision making for funding allocations for new bus services.

5. CHANGES/PROBLEMS

The grantee is required to obtain prior written approval from the OST-R grants official whenever there are significant changes in the project or its direction. See agency specific instructions for submission of these requests. If not previously reported in writing, provide the following additional information, if applicable:

4. Changes in approach and reasons for change.
5. Actual or anticipated problems or delays and actions or plans to resolve them.
6. Changes that have a significant impact on expenditures.
   Significant changes in use or care of animals, human subjects, and/or biohazards

Changes in approach and reasons for change
Nothing to report for this period

Actual or anticipated problems or delays and actions or plans to resolve them
Nothing to report for this period

Changes that have a significant impact on expenditures
Nothing to report for this period

Significant changes in use or care of human subjects, vertebrate animals, and/or Biohazards
Nothing to report for this period

Change of primary performance site location from that originally proposed
Nothing to report for this period