

UNIVERSITY TRANSPORTATION CENTERS (UTC) PROGRAM

FY 2018 NOTICE OF FUNDING OPPORTUNITY

for

***NATIONAL CENTER FOR
CONGESTION RESEARCH***

and

***NATIONAL CENTER FOR
INFRASTRUCTURE RESEARCH***

Opening Date: September 21, 2018

Required Letter of Intent Due: October 12, 2018

Application Due: December 3, 2018

Office of the Assistant Secretary for Research and Technology
U.S. Department of Transportation
Washington, D.C. 20590-0001

<http://utc.dot.gov/>

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SECTION A. PROGRAM DESCRIPTION

A.1 Introduction

The Fixing America's Surface Transportation Act (FAST Act, P. L. 114-94, December 4, 2015) authorizes the Secretary of Transportation to make grants to eligible non-profit institutions of higher education¹ to establish and operate University Transportation Centers (UTCs or Centers). Non-profit institutions of higher education may include qualifying two-year institutions (20 U.S.C. § 1001(a))². The Office of the Assistant Secretary for Research and Technology (OST-R) of the U.S. Department of Transportation (DOT) will manage the UTC Program (**Catalog of Federal Domestic Assistance number--20.701**).

Through this Notice of Funding Opportunity, the Department seeks competitive grant applications for **two** National UTCs (a detailed description for National Centers is provided in Section B: Award Information). UTCs will be selected by the Secretary, in consultation with the Assistant Secretary for Research and Technology, and the Administrator of the Federal Highway Administration and other modal administrators as appropriate (49 U.S.C. § 5505(b)(4)(B) as amended by P. L. 114-94, Sec. 6016). Funding for these two National Centers is provided through the Consolidated Appropriations Act, 2018; Division L, Title I, Research and Technology (P.L. 115-141, March 23, 2018).

These National Centers will support two of the FAST Act research priorities (49 U.S.C. § 6503(c)(1) as enacted by P.L. 114-94, Sec. 6019). One Center will focus on "Congestion Relief" (Reducing Congestion) and one will focus on "Improving the Durability and Extending the Life of Transportation Infrastructure."

A UTC must be located in the United States or its territories. It must be a consortium of two or more universities. Each Center is required to obtain matching funds from non-Federal sources. National UTCs must obtain matching funds in an amount at least equal to the DOT grant amount. The DOT grant funds may be expended up to September 30, 2022, and Centers will have until that date to meet the full match requirement.

Specific instructions on how to apply for UTC grant funding under this Notice of Funding Opportunity are provided in Section D: Application and Submission Information.

A.2 UTC Mission and Objectives

The purpose of a UTC is to:

¹ The *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Grants*, Title 2 of the Code of Federal Regulations, Part 200 defines "institution of higher education" as that term is established in 20 U.S.C. § 1001(a).

² Qualifying two-year institutions may include junior or community colleges if they meet the requirements of 20 U.S.C. § 1001(a).

- Advance transportation expertise and technology in the many disciplines that comprise transportation through research, education and workforce development, and technology transfer;
- Provide a critical transportation knowledge base outside the Department; and
- Address vital workforce needs and educate the next generation of transportation leaders.

In addition, the UTC Program and each individual Center share the following objectives:

- **Research:** To conduct basic, advanced, and applied research, the products of which are judged by peers or other experts in the field of transportation to advance the body of knowledge in transportation.
- **Education and Workforce Development:** To provide an education program relating to transportation that includes multidisciplinary course work, participation in research, and workforce development activities and programs to expand the workforce of transportation professionals.
- **Technology Transfer:** To deliver an ongoing program of technology transfer that makes transportation research results available to potential users in a form that can be implemented, utilized, commercialized, or otherwise applied.

Although every Center has the same broad objectives, DOT values diversity in program participation and in the approaches that individual Centers take to achieve the program objectives. The Department encourages unique approaches to research, education, workforce development and technology transfer, building on or reflecting institutional expertise, facilities, and partnerships. Finally, in order to achieve its vision of a truly multimodal integrated system, DOT encourages UTCs to engage in research, education and workforce development, and technology transfer activities that cut across disciplines and span multiple modes of transportation, enabling improvements to the Nation's surface transportation system, inclusive of rail, maritime, highway, pipelines, transit, and any links to aviation.

A.3 UTC Program History

The FAST Act's authorization of the UTC Program both sustains existing and establishes new and vital initiatives in research, education and workforce development, and technology transfer that have benefited the U.S. traveling public and its transportation system over the years. The Consolidated Appropriations Act, 2018, affirms the need for national-level support of research, education, and workforce development at universities in the areas of congestion relief and improving the durability and extending the life of transportation infrastructure.

The history of the UTC Program begins in 1988, when DOT initiated the UTC Program as authorized in the Surface Transportation and Uniform Relocation Assistance Act of 1987. After a nationwide competition, DOT awarded grants to create a UTC in each of the ten standard Federal regions. The primary purpose of the program at that time was conducting research.

The Intermodal Surface Transportation Equity Act (ISTEA) of 1991 reauthorized the UTC Program through Fiscal Year 1997, and expanded its mission to include education and

technology transfer, as well as research. In addition to the ten Regional Centers, ISTEA created three “national” Centers and six University Research Institutes at universities that were named in the Act. The program expansion led DOT to adopt a strategic planning approach to program management based on a common mission and goal set for all 13 Centers and six Institutes. In 1994, the Department extended the grants to the Regional Centers for three years, but announced its intention to reopen the program to competition.

In 1998, the Transportation Equity Act for the 21st Century (TEA-21) reauthorized the UTC Program for an additional six years and increased the total number of Centers to 33. In addition to the ten Regional Centers, which were selected competitively in 1999, TEA-21 created 23 other Centers at institutions named in the Act. TEA-21 established education as one of the primary objectives of a UTC and institutionalized the use of strategic planning in university grant management.

The Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA-LU), enacted in 2005, provided the most significant expansion of the UTC program to date. SAFETEA-LU increased the number of UTCs from the 33 established in TEA-21 to 60, including the ten Regional UTCs plus a new group of ten competitive centers called Tier 1 Centers; the other 40 UTCs were located at institutions named in the Act. Annual authorized funding for the UTC program also increased from \$32.5 million in TEA-21 to \$85.9 million in SAFETEA-LU.

The Surface Transportation Extension Act of 2010, sec. 411(e)(3), gave DOT the discretion to redistribute funds allocated to specified research projects and programs designated in SAFETEA-LU. The Fiscal Year 2011 funds were made available through full and open competition following the framework of the competitive UTC programs under SAFETEA-LU sections 5506(e) and (f). Grants of approximately \$3.5 million each were awarded to ten Tier 1 UTCs, two Tier 1 Transit-Focused UTCs, and ten Regional UTCs. Fiscal Year 2012 funds were added to these grants following additional extension legislation.

In 2012, the Moving Ahead for Progress in the 21st Century Act (MAP-21) continued the UTC program, authorizing the competitive selection of 35 UTCs to receive a total of \$72.5 million in funding for each of Fiscal Years 2013 to 2014, with continued funding from extension acts through Fiscal Year 2015. Following a competition in 2013, grants of approximately \$3 million each were awarded to five National UTCs, \$2.75 million each to ten Regional UTCs, and \$1.5 million each to twenty Tier 1 UTCs.

The FAST Act was enacted in December 2015, establishing the UTC Program as five National UTCs at five annual awards of approximately \$3.1M each, ten Regional UTCs at five annual awards of approximately \$2.85M each, and up to 20 Tier 1 UTCs at five annual awards of approximately \$1.56M each.

Additional funding for the two additional National Centers in the stated areas of congestion research and infrastructure research is provided through the Consolidated Appropriations Act, 2018.

Additional information on the UTC Program is available on the [UTC Program website \(http://utc.dot.gov/\)](http://utc.dot.gov/).

A.4 Relationship to Other US DOT Efforts

The DOT continues to build on existing efforts to apply research awards and resources in an effective manner, in order to ensure a fast, safe, efficient, accessible, and convenient transportation system that meets vital national interests and enhances the quality of life of the American people, both today and into the future.

SECTION B: AWARD INFORMATION

The DOT will operate the UTC Program based on the principles of full and open competition. Awards will be in the form of grants to successful applicants. The funding and authorization available to OST-R for this Notice of Funding Opportunity are solely from Federal Fiscal Year 2018 funds.

The Consolidated Appropriations Act, 2018, provides \$15 million for two National UTCs. The FY 2018 funds are not subject to an obligation limitation, and are subject to the terms of the Budget Control Act (BCA). Funds made available under this Notice of Funding Opportunity may be expended from an anticipated start date of March 1, 2019 through September 30, 2022.

Current UTC Program grant recipients are eligible to apply for grant funding, with the exception of the lead grantee institutions that received National Center funding in 2016 (please see Section C.3: Multiple Applications for more details). If current UTC Program grant recipients are selected to be new UTCs under this Notice of Funding Opportunity, the new grant will be managed as a separate entity from any previously awarded grant(s).

B.1 Number of Awards

Two National UTCs will receive awards under this Notice of Funding Opportunity.

The appropriated fiscal year 2018 funds, minus any BCA action, will be awarded over three fiscal years: 2019, 2020 and 2021. Funding amounts for each fiscal year are up to the following amounts:

National Center for Congestion Research

FY19	\$2,500,000
FY20	\$2,500,000
FY21	<u>\$2,500,000</u>
TOTAL	\$7,500,000

National Center for Infrastructure Research

FY19	\$2,500,000
FY20	\$2,500,000

FY21	<u>\$2,500,000</u>
TOTAL	\$7,500,000

The DOT has decided to award grants in fixed amounts to each National recipient. These amounts are within the authorized funding ranges in 49 U.S.C. § 5505(c).

B.2 National Centers

The two National Centers must focus their efforts on national transportation issues as identified by the Consolidated Appropriations Act, 2018 focus areas: Congestion Relief and Improving the Durability and Extending the Life of Transportation Infrastructure. Section D: Application and Submission Information provides additional information on non-exclusive candidate topic areas categorized under these focus areas.

National Centers may be based in any region and may include consortium members that are not in the same Federal region as the lead institution.

SECTION C. ELIGIBILITY INFORMATION

C.1 Eligible Applicants

Only U.S. non-profit institutions of higher education as defined under 20 U.S.C. § 1001(a) are eligible to apply. Non-profit institutions of higher education may include qualifying two-year institutions that meet the requirements of 20 U.S.C. § 1001(a). Applications submitted by or including an entity other than a U.S. non-profit institution of higher education will not be considered for selection.

As noted in Section B: Award Information, current UTC Program grant recipients are eligible to apply for grant funding, with the exception of the lead grantee institutions that received National Center funding in 2016 (please see Section C.3: Multiple Applications for more details). If current UTC Program grant recipients are selected to be new UTCs under this Notice of Funding Opportunity, the new grant will be managed as a separate entity from any previously awarded grant(s).

Under the FAST Act, a UTC must be a consortium of two or more non-profit institutions of higher education led by one lead grantee institution, all located in the United States or its territories. Typically, a consortium is a meaningful arrangement with all members involved in planning the overall direction of the Center's activities and participating in most aspects of the Center; the consortium is a long-term relationship intended to last the full life of the grant. Any application submitted by a sole non-profit institution of higher education that is not part of a consortium will not be considered for selection.

Universities may collaborate with state DOTs, the private sector, and non-profit organizations; however, organizations that are not defined as U.S. non-profit institutions of higher education will not be considered members of the consortium. Organizations that are

not members of a consortium may collaborate with a Center on a particular project or provide a service that assists in accomplishing that Center's activities.

The lead grantee institution will be the direct and primary recipient of DOT funds, and must perform a substantive role in carrying out Center activities, and not serve solely or primarily as a conduit for awards to another party. Under this Notice of Funding Opportunity there is no minimum requirement for concentration of funding at the grantee institution.

C.2 Cost Sharing or Matching Funds

Total funding for a Center's operation must include DOT funding plus non-Federal matching funds. The matching funds may include Federal funds provided to a recipient under 23 U.S.C. § 504(b) or 505 (local technical assistance and state planning and research programs managed by the Federal Highway Administration). No other sources of Federal funds may be counted towards the match requirement.

The non-Federal matching funds (1) may be cash or in-kind, (2) must be used to accomplish program objectives and the purpose of the grant, and (3) must be fully documented in the Center's records. Grantees will have the length of the grant period to provide the full amount of required matching funds.

National UTCs must obtain matching funds in an amount at least equal to the DOT grant amount.

Letters of commitment are neither required nor permitted in the application. You may note in the application that you have received such commitments.

C.3 Multiple Applications

Institutions in general may apply for multiple UTC program grants. However, the FAST Act (49 U.S.C. § 5505(b)(2) as amended by P.L. 114-94, Sec. 6016) restricts the type of grants that an institution might receive as a lead institution of a consortium to **one in each type of UTC category (National, Regional or Tier 1)**. Thus, the five institutions that were awarded National UTC grants in 2016 (these are listed at <https://www.transportation.gov/utc/2016-utc-grantees>) may not receive one of these two additional National UTC grants as the lead grantee institution of that center.

In this competition, there are no restrictions on the numbers or types of UTCs of which an institution may be a member (not the lead). The lead institutions on the five 2016 National UTCs may be non-lead consortium members of one or both of these two National UTCs led by a different institution.

SECTION D. APPLICATION AND SUBMISSION INFORMATION

D.1 Address to Request Application Package

Applicants may view this Notice of Funding Opportunity and other supporting materials on [Grants.gov](#) (the Federal electronic grant identification and application system) and the [UTC Program website, http://utc.dot.gov](#). Applicants that are unable to access the Internet or need special accommodation may contact the UTC Program office at (202) 366-4957 to request that a hard copy of the Notice of Funding Opportunity be sent by mail. Please note that grantees selected through this Notice of Funding Opportunity will be required to host an Internet website for public sharing of information about their respective UTCs.

For [Grants.gov](#), applicants should log onto <http://www.grants.gov> and cite Catalog of Federal Domestic Assistance number 20.701 or **Opportunity No. UTCNATIONALCOMP2018** to search for this funding opportunity.

This Notice of Funding Opportunity and proposed grant terms and conditions (including reporting requirements) may also be found on the [UTC Program website, http://utc.dot.gov](#).

D.2 Content and Form of Application Submission

D.2.1 Letters of Intent

This Notice of Funding Opportunity requires that each applicant submit a Letter of Intent which must be received by **5:00PM EDT, FRIDAY, OCTOBER 12, 2018**; any application not preceded by a Letter of Intent will be rejected. The Letter of Intent must be submitted to OST-R as a PDF attachment in an e-mail, sent to UTCgrants@dot.gov.

The Letter of Intent must identify the following:

The research focus area, Congestion Relief or Improving the Durability and Extending the Life of Transportation Infrastructure (see Section A.1: Introduction above), that will be the primary focus of the proposed Center.

Letters of Intent are required so that DOT review panels, comprised of relevant subject matter experts, may be organized in advance of receipt of final proposals.

If you intend to submit more than one application, you must submit a separate Letter of Intent (and a separate application) for each grant. An institution applying for more than one grant is not allowed to submit preferences as to which grant it would prefer to receive; DOT will make the selections.

D.2.2 Applications

If you are eligible to receive an award under this Notice of Funding Opportunity, your (non-profit institution of higher education's) authorized representative must submit the application through [Grants.gov](#). You will want to ensure well in advance that your institution is registered

with [Grants.gov](https://www.grants.gov), as registration is not instantaneous.

In addition, eligible entities must have or secure a DUNS number for the purposes of formal application. The DUNS number is a unique nine-character number that identifies your organization. Each applicant's DUNS number will be maintained as part of the applicant's profile. This number can be obtained free-of-charge through the Dun and Bradstreet website (<http://www.dnb.com/get-a-duns-number.html>). Please ensure that you allocate enough time to register with [Grants.gov](https://www.grants.gov) and secure the DUNS number, as these activities require significant processing time.

Your UTC application must be submitted to [Grants.gov](https://www.grants.gov) no later than **11:59 PM EST, MONDAY, DECEMBER 3, 2018**. [Grants.gov](https://www.grants.gov) will provide you with an acknowledgement of your submission.

Hard copies of the application (see Section D.6: Other Submission Requirements) must be received by OST-R no later than **5:00 PM EST, THURSDAY, DECEMBER 6, 2018** (*note that this is later than the Grants.gov deadline*).

You are responsible for the accuracy and validity of all the administrative, fiscal, and technical information in your application. The application must consist of:

A proposal that includes:

1. A cover sheet;
2. A one-page research abstract;
3. A written response to the evaluation criteria, and descriptions of the proposed Center Director and key staff (this portion of the proposal must not exceed 40 pages);
4. Required appendices;
5. Standard Forms SF-424 "Application for Federal Assistance" and SF-424B "Assurances – Non-Construction Programs;" and
6. A copy of each of your consortium institutions' most recent negotiated overhead and fringe benefit rates.

D.2.2.1 Cover Sheet

The cover sheet of the proposal must include the following information:

1. The name of the proposed UTC, and names and locations (city, state, and zip code) of the lead grantee institution and the other members of the Center's consortium. In order for OST-R to comply with Federal agency reporting requirements, state whether any of the participating non-profit institutions of higher education is a Minority Institution. For purposes of this competition, the FAST Act defines a Minority Institution per Section 365 of the Higher Education Act of 1965 (20 U.S.C. §1067k): an institution of higher

education whose enrollment of a single minority or a combination of minorities exceeds 50 percent of the total enrollment.

2. The Consolidated Appropriations Act, 2018 focus area: Congestion Relief or Improving the Durability and Extending the Life of Transportation Infrastructure.

Prepare the cover sheet as an 8.5x11” standard-size page using Arial 12 font with one-inch margins. Color may be used if desired. The cover sheet does not count toward the 40-page limit that applies to the Written Response section that follows.

D.2.2.2 Research Abstract

The research abstract must not be more than one page in length. It should contain high-level descriptions of the following:

- The research topics on which the proposed UTC intends to focus;
- The motives for pursuing the research;
- How the topics align with the chosen Consolidated Appropriations Act, 2018 focus area and the non-exclusive candidate topic areas that fall within the selected priority area; and
- The impacts that the proposed research is expected to have on the transportation system and its users.

Prepare the research abstract as an 8.5x11” standard-size page using Arial 12 font with one-inch margins. The research abstract does not count toward the Written Response’s 40-page limit.

D.2.2.3 Written Response

Page Limits:

This section of your proposal must not exceed a total length of FORTY (40) 8.5x11” standard-size pages, single-spaced, Arial 12 font*, with one-inch margins. **Any application that exceeds the page limit or that uses other than the specified spacing, font, or margins will be rejected.** Color may be used if desired.

A table of contents is not required; if you choose to include one, it will count toward the 40-page limit.

The cover sheet, abstract, and appendices do not count toward the 40-page limit.

There are specific page limits for the required appendices, which are stated in Section D.2.2.4: Required Appendices below.

Format:

*Arial 12 should be used throughout the document, except for

headers/footers and tables/figures within which the font size may be no smaller than 9. Arial Black is acceptable, but Arial Narrow is not. Any size/type of font may be used in the appendices.

NOTE: Any hyperlinks to external websites that provide supplemental content to the information contained in the proposal will **not** be viewed by the review panels.

This section must address the following:

1. Response to Evaluation Criteria
2. Center Director and Key Personnel.

D.2.2.3.1 Response to Evaluation Criteria

The proposal submitted in response to this Notice of Funding Opportunity will serve as the Strategic Plan for any Center that is selected to receive funding. All the items listed below must be addressed clearly and completely. Resources that are expected to be provided through the grant's required matching funds should be included in the response.

All applicants must respond to the following evaluation criteria, in the order specified below.

D.2.2.3.1.A Research Activities and Capability

In this section, describe the key research activities that you will undertake and that demonstrate your capability and experience to carry out these activities and achieve the objectives of the UTC Program. You must provide sufficient detail in this proposal to enable the reviewers to understand what you intend to accomplish with your Center, to see how you plan to select and carry out the projects financed with your grant, and to evaluate the feasibility of your proposed approach as well as your capability to achieve the proposed outcomes within the designated grant time frame.

i. Proposed Research Activities

The Consolidated Appropriations Act, 2018 specifies two research focus areas that UTCs selected through this competition must address – Congestion Relief and Improving the Durability and Extending the Life of Transportation Infrastructure. In addition, the Act charges the Secretary of Transportation with establishing non-exclusive topic areas within these priorities. These topic areas are listed below:

1. Congestion Relief:

- Optimize the efficiency and reliability of travel for all transportation system users;

- Improve operations, controls and devices;
- Urban logistics – last mile for both passengers and freight
 - Land use and transportation planning
 - Novel (non-traditional or alternative) forms of freight movement;
- Data Modeling and analytical tools to evaluate the effects of shifting transit incentive structure; and
- Ridesharing and alternative forms of transportation.

2. Improving the durability and extending the life of transportation infrastructure:

- Application of new materials and technologies;
 - Cyber and communications security;
 - Condition monitoring, remote sensing, and the use of GPS;
 - Asset management and performance management
 - Data accessibility and security
 - Analytical tools;
 - Construction methodologies and management; and
 - Corrosion and aging infrastructure.
- Describe your Center’s proposed research topic(s) and corresponding relationship to one of the two research focus areas--either Congestion Relief or Improving the Durability and Extending the Life of Transportation Infrastructure--which you previously identified as your primary focus area. You are encouraged to select from the list of non-exclusive research topic area(s) to provide more depth to your research focus. The DOT welcomes a focused Center that will make dramatic impacts on one or a few closely related topics and is not necessarily looking for Centers trying to demonstrate the ability to span a large number of research topics.
 - Discuss the degree to which your proposed research activities are multimodal (either across modes or involving modes other than highway) and multidisciplinary in scope, and how such an emphasis impacts the quality of the research.
 - Describe your commitment to, and implementation of, peer review principles and other research “best practices” in the selection and management of your research projects.
 - Provide two to three relevant performance metrics that you will use to assess your performance in meeting research goals.
 - In addition, state how you will obtain and maintain the information included in those metrics.

ii. Capability and Experience

- Provide details on whether your proposed research activities are a continuation of existing research projects and programs within your university and among members of the consortium, or are intended to provide opportunities to create and establish new research projects and programs.
- Describe your ability to address the specific topic areas you described above as proposed research activities. Please include:

- Examples of significant impacts of past research on the transportation enterprise, including a description of products or patents, or a change in practice, or instances of informing policy decisions.
- Examples of research included in peer-reviewed journals, publications, and conferences.
- Qualifications of faculty expected to be involved in your proposed research activities.
- Describe the research resources already available to conduct research, including those at consortium universities. Among others, these resources may include the following, if relevant to the transportation research to be conducted:
 - Dedicated laboratory space;
 - Specialized computer or other technical equipment; and
 - University support personnel with particular knowledge of transportation-research needs such as a librarian, IT/data specialist, or machinist.
- Describe any research resources you anticipate obtaining in order to perform your proposed research activities.

D.2.2.3.1.B Leadership

In this section, you must describe your plans for providing and creating leadership to solve immediate and long range national transportation problems and advancing transportation expertise and technology. You should provide examples of:

- Your high standing within the national and international arenas of transportation research as evidenced by activities such as publications, committee work, participation in professional transportation organizations and conferences (e.g., presentations, steering committees, session chairs, etc.), awards, and other indicators of leadership excellence.
- Your experience in contributing to the solution of regional and/or national transportation problems.
- Your plans for the development of future leaders (young faculty and graduate students).
- Demonstrated leadership in the development and delivery of programs. This includes innovative transportation education, workforce development, technology transfer, and research activities.
- Two to three relevant performance metrics that you will use to measure your Center's leadership, and how you will obtain the information to track these outcomes.

D.2.2.3.1.C Education and Workforce Development

Education and workforce development efforts should result in the development of a transportation workforce that is prepared to design, deploy, operate, and maintain the complex transportation systems of the future. In describing your Center's planned education and workforce development activities, you must provide the following information:

- Describe any accredited degree-granting programs with transportation components and/or specializations that will be part of this grant, and provide the number of degrees

conferred annually during the past five years (undergraduate, masters, and Ph.D.) as well as the number of full-time faculty in each program. Describe how the grant will be used to support, increase and improve these academic programs. Discuss what you propose to do to facilitate the connections between your students and transportation industry employers.

- Describe any transportation non-degree programs that will be supported by the grant. Include in your description a narrative on how the grant will support, increase or improve non-degree transportation education programs.
- Describe the number and types of seminars, workshops and/or training courses you will offer with support from the grant and the target audience(s) for those seminars, workshops and/or training courses. Include in your description a narrative on how the grant will support, increase or improve these offerings.
- Describe the outreach and educational activities you propose to undertake with support from the grant to attract new entrants into the transportation field. Discuss any specific plans to reach out to primary and secondary school students and connect your activities with the career technical education system in your state or geographic proximity. Discuss any activities to foster and sustain the interest of primary and/or secondary students in transportation careers beyond the initial exposure. Include in your narrative the target groups by age, grade, ethnicity/race, and/or gender characteristics. Provide details on the annual numbers of students to be involved in the proposed programs, what will be done to promote outreach and educational efforts, and how successes will be documented and shared.
- Describe additional education and workforce development programs and activities that are not listed above. Be sure to include in the narrative a description of program purpose, target audience(s), and numbers of events and participants.
- Provide two to three relevant performance metrics that you will use to measure the effectiveness of degree granting programs, other educational efforts, outreach, workforce development, and other educational and workforce activities, and describe how you will obtain the information to populate these metrics.

D.2.2.3.1.D Technology Transfer

UTC programs must include an ongoing program of technology transfer to make research results available to potential users in a form that can be implemented, utilized, commercialized or otherwise applied. In this section, you must describe the technology transfer activities you will undertake to ensure the successful transfer of information and technology to those who can use it, especially current transportation practitioners. You must also provide examples of your prior experience in outreach, dissemination, and technology transfer activities related to transportation research and education.

- Describe your planned activities and prior experience in technology transfer activities, such as:
 - Partnerships across sectors, with private enterprise, non-profit entities, or state and local governments, to move research into practice;

- o Technical assistance to stakeholders in implementing and deploying research results;
 - o Use of technology transfer mechanisms, such as licensing, patents, commercialization (provide examples), cooperative research and/or user agreements, or the creation of new business entities;
 - o The collection and use of licensing revenues to provide further support for research and technology transfer;
 - o The dissemination of your research outputs;
 - o Information exchanges, including new or social media campaigns and activities;
 - o Academic and continuing education programs targeted towards transportation professionals, such as statewide or region-wide continuing education courses and/or distance learning, seminars, webinars, and workshops related to transportation;
 - o How research outputs, outcomes and impacts will be tracked and reported; and
 - o How corporate research support will be increased.
- Provide technology transfer goals and relevant performance metrics that you will use to measure the effectiveness of your technology transfer efforts. Performance measures should be included in the areas of research outputs, outcomes, and impacts (at least two in each of the three areas). Include information on how you will obtain the information to track these measures.

This section of the proposal will be considered the Center's Technology Transfer Plan, as currently required by the Department. The UTC grant managers within DOT have the responsibility to track each UTC's technology transfer progress. Where there are instances of insufficient performance, UTC grant managers will adhere to 2 CFR Section 200.338, Remedies for Noncompliance, which may include withholding receipt of funding or suspension/termination of the Federal Award.

D.2.2.3.1.E Collaboration

Centers are expected to form collaborative relationships with other academic and/or research institutions in order to achieve their objectives. Centers must also demonstrate a commitment and capability to form substantial and effective partnerships with public, private, and non-profit entities, in order to advance transportation expertise and technology and address critical workforce needs.

In this section, you should describe:

- Your plans for:
 - o Collaborating with other universities or research institutions. For your consortium, describe how the participating universities will draw upon diverse types and/or sizes of institutions, including Minority Institutions; how the members will work together within the proposed consortium, including roles and responsibilities of the lead and consortium institutions; what each university brings to the proposed consortium; and how the presence of multiple parties will enhance your ability to reach your goals.
 - o Establishing collaborative relationships and linking your research, education,

- workforce development, and technology transfer activities among collaborative partners.
- o Developing collaborations with other entities, including private sector concerns, Minority Institutions, state DOTs, Metropolitan Planning Organizations, other public sector organizations at all levels of government, non-profit institutions, and technical and practitioner organizations such as (but not limited to) the American Association of State Highway and Transportation Officials (AASHTO), the American Public Transportation Association (APTA), the Institute of Transportation Engineers (ITE), and the Transportation Research Board (TRB).
- The composition of any existing or planned advisory committees.
- Your prior experience forming collaborative relationships, including the outcomes of these relationships.
- Two to three relevant performance metrics that you will use to measure the effectiveness of collaborative efforts, and how you will obtain the information to track these outcomes.

D.2.2.3.1.F Program Efficacy

In this section, you must describe your management approach and procedures, and how you will implement planned activities and produce results in an effective and cost-efficient manner. Include the following:

- A description of the availability of institutional resources to carry out planned activities, including the institutional resources available from all members of your consortium. Institutional resources encompass such things as research and training facilities, human resources, physical facilities, and institutional support capabilities. Discuss the collective resources of your consortium that will be available to your Center.

NOTE: If there is any pre-existing center of transportation studies or research at the institution(s) comprising your Center, describe how the UTC's activities and accomplishments will relate to, and be distinguishable from, those of the existing center(s).

- Plans for overall management and oversight of fiscal and technical activities, including methods for ensuring cost efficiency, and a demonstration of the ability to implement the program in a cost efficient manner.
- Procedures for tracking and coordinating research efforts.

D.2.2.3.1.G Diversity

Applications must demonstrate a Center's commitment to broadening participation and attracting new entrants to the transportation field in order to enhance diversity. Diversity is the inclusion of people of different genders, races, cultures and geographic backgrounds. Applications should describe planned outreach or workforce development activities designed to increase interest in STEM (science, technology, engineering, and mathematics) disciplines and/or raise awareness of transportation careers among underrepresented groups including women, minorities and those

with disabilities.

Provide two to three relevant performance metrics that you will use to measure the effectiveness of diversity efforts, and how you will obtain the information to track these outcomes.

D.2.2.3.2 Center Director and Key Personnel

In this section, name the individual who will lead the UTC as Center Director, and the key staff members who will support the Center Director in accomplishing the goals of the grant. For purposes of management and oversight, OST-R requires that a single Center Director be identified and affiliated with the grantee institution, and not with any of the sub-grant consortium-member institutions.

The Center Director is the person responsible for ensuring compliance with all UTC Program requirements. This role is particularly important in multi-party consortia involving distant partners. The Center Director is expected to represent the Center and/or the UTC Program at external meetings, and is required to participate in up to two annual meetings convened by DOT with the directors of all UTCs. No minimum percentage of the Center Director's time is required on the grant, but meaningful personal involvement by the Center Director in the UTC is expected.

- Describe how your Center Director plans to effectively direct and oversee the Center's funds, personnel, and programs.
- State the titles and describe the duties and responsibilities of any other key personnel that are considered to be critical for Center activities.
- Briefly discuss the qualifications of the Center Director and key personnel. (**NOTE:** The curriculum vita (CV) for the Center Director is required. CVs for key personnel may be included in the application materials. See further instructions in Section D.2.2.4: Required Appendices below.)

D.2.2.4 Required Appendices

The following appendices are required:

1. Curriculum Vitae for Center Director and Key Personnel
2. Center Budget Plan

The required appendices do not count toward the 40-page limit.

D.2.2.4.1 Curriculum Vitae for Center Director and Key Personnel

Curriculum vitae are limited to two pages per individual. Provide curriculum vitae for only the key individuals noted previously in Section D.2.2.3.2: of your proposal. Do not include Personally Identifiable Information (PII) such as Social Security numbers, birth dates, or home addresses.

D.2.2.4.2 Center Budget Plan

Provide a completed overall Center Budget Plan for the first year of the grant, including required matching funds (see Appendix A) for your UTC. As OST-R does not yet know whether there will be any reductions to the authorized amounts in the Federal Fiscal Year 2018 budget that will fund the first funding period of these awards, your budget should reflect the \$2.5M amount discussed above and should cover the initial period of the grant (3/1/19 to 9/30/19). Centers will be asked to prepare budgets for subsequent years' funding at the time OST-R is prepared to award those additional funds.

In addition to the overall Center Budget Plan, provide individual budget plans for each consortium member and the lead institution. Amounts shown for each budget category in these individual budget plans must roll up to the amount shown for that budget category in the overall Center Budget Plan.

You may provide the budget plan in any format you choose, but it must use only the budget categories specified in Appendix A.

UTCs selected to receive grants under this Notice of Funding Opportunity may, subject to availability of funds and the grantee's compliance with grant terms and conditions, receive two additional increments of funding toward the grant in approximately September of 2019 and 2020. As with the first increment, grantees will have through 9/30/2022 to expend the additional funds. Prior to awarding such additional funds, OST-R will ask grantees to submit a revised budget reflecting the additional increment of funding.

D.2.2.5 Standard Forms SF-424 and SF-424B

Prepare and submit Standard Forms SF-424 and SF-424B.

D.2.2.6 Confirmation of Negotiated Overhead and Fringe Benefit Rates

Provide legible copies of the most recent negotiated overhead rates and fringe benefits rates for the lead and all consortium institutions, including the name and telephone number of the Federal audit agency representative.

D.3 System for Award Management (SAM)

Each lead agency applicant is required to:

- Be registered in the System for Award Management (SAM, <http://www.sam.gov>) before submitting your application; and

- Continue to maintain an active [SAM](#) registration with current information at all times during which you have an active Federal award or application or plan under consideration by a Federal awarding agency.

Applicants which have Federal contracts, grants, and cooperative agreement awards with a cumulative total value greater than \$10,000,000 must provide information to [SAM](#) about certain civil, criminal, and administrative proceedings that reached final disposition within the most recent five-year period, that were connected with the award or performance of a Federal award. The Department may not make a grant award to an applicant until that applicant has complied with all applicable Data Universal Numbering System (DUNS) and [SAM](#) requirements. Late applications that are the result of a failure to register or comply with these requirements in a timely manner will not be considered.

D.4 Submission Dates and Times

D.4.1 Letters of Intent

Letters of Intent must be received by **5:00 PM EDT, FRIDAY, OCTOBER 12, 2018**. A Letter of Intent must be submitted to OST-R as a PDF attachment in an e-mail, sent to UTCgrants@dot.gov.

D.4.2 Applications

Your UTC application must be submitted to [Grants.gov](#) no later than **11:59 PM EST, MONDAY, DECEMBER 3, 2018**. [Grants.gov](#) will provide you with an acknowledgement of your submission.

Hard copies of the application must be received by OST-R no later than **5:00 PM EST, THURSDAY, DECEMBER 6, 2018** (*note that this is later than the [Grants.gov](#) deadline*). Please refer to Section D.6: Other Submission Requirements for details on hard copy submittals.

Your application will be considered complete as initially received by us; if you need to make changes after submission but before the due date, you will need to withdraw and resubmit your application in whole. Any materials submitted after the due date will not be incorporated into the review process unless OST-R specifically requests such material to complete the review of your application.

D.5 Funding Restrictions

The grant funds intended for award under this Notice of Funding Opportunity do not apply to, and may not be used for, construction activities or projects.

Please visit the *Tools for Grantees* button on the [UTC Program website](#) (available at <http://utc.dot.gov>) to view *General Provisions of Grants for University Transportation Centers*

and *Deliverables and Reporting Requirements for University Transportation Centers*, which provide information on proposed grant terms and conditions regarding certain cost items, and the post-award requirements and deliverables pertaining to the grant.

D.6 Other Submission Requirements

In addition to submitting your application electronically through [Grants.gov](https://grants.gov), you must also submit to the UTC Program office hard copies of the following documents:

- Two copies of the proposal with all of its appendices;
- One copy each of Standard Forms SF-424 and SF-424B; and
- One copy of the negotiated overhead and fringe benefits rates for all members of the consortium.

These hard copies must contain identical information to what you submitted through [Grants.gov](https://grants.gov). Any type of binding is acceptable. The hard copies must be received by OST-R no later than **5:00 PM EST on THURSDAY, DECEMBER 6, 2018** (*note that this is later than the Grants.gov deadline*). OST-R recommends that you use an overnight delivery or courier service that allows you to track and document delivery and receipt. An application will not be rejected if the hard copies are not received by the deadline, but failure to meet the deadline will be noted by reviewers as part of their assessment of your application.

Please address your hard copy submittal as follows, using all of the information shown:

Amy Stearns
US DOT/OST-R/mail code RDT-30
Work Station E33-472
1200 New Jersey Avenue, SE
Washington, DC 20590-0001

Contact telephone number regarding hard copy submittal only: (202) 366-4957.

Personally Identifiable Information such as Social Security numbers, birth dates, or home addresses *must not* be included in the application. Information submitted as part of the application may be subject to the Freedom of Information Act (FOIA).

SECTION E. APPLICATION REVIEW INFORMATION

E.1 Criteria

The Secretary will select two applicants to receive National UTC grants, one in the area of Congestion Relief and the other in Improving the Durability and Extending the Life of Transportation Infrastructure, using the selection criteria stated in section D.2.2.3.1 and its subsections above. The selections made by the Secretary are final.

The DOT seeks to select two National Centers that support the Consolidated Appropriations Act, 2018 focus areas mentioned above, include different types and/or sizes of universities, provide geographic diversity, and are multimodal in focus.

E.2 Review and Selection Process

E.2.1 Compliance Review

After the closing date, OST-R staff will conduct an initial review of applications to identify any that are incomplete, non-responsive to this Notice of Funding Opportunity, or ineligible to receive a UTC grant. Any such applications will be rejected and the proposers notified.

E.2.2 Merit Review

Submitted proposals will be sorted per the Consolidated Appropriations Act, 2018 focus areas. The proposals will be provided to a review panel(s) consisting of the appropriate subject matter experts.

Reviewers will base their evaluations on the criteria identified in Section D.2.2.3.1: Response to Evaluation Criteria of this Notice of Funding Opportunity. The review panels will rate each proposal as highly recommended, recommended, or not recommended for funding.

The reviewers' recommendations will be forwarded to a committee comprised of the Assistant Secretary for Research and Technology, the Administrator of the Federal Highway Administration, or delegates, and other DOT modal administrators as appropriate. This committee will recommend recipients for the two available UTC grants, taking into consideration the statutory restrictions on receiving grants. The final decisions as to grant recipients will be made by the Secretary of Transportation.

OST-R reserves the right to request from any or all applicants such additional information as it may deem necessary to complete its review of applications. In conformance with the transparency requirements of the FAST Act, applicants may (upon request) receive copies of any materials used in the evaluation of their proposals after the conclusion of this competition.

E.2.3 Risk Assessment

Federal awarding agencies must report information to the [Federal Awardee Performance and Integrity Information System \(FAPIIS, <http://www.fapiis.gov>\)](http://www.fapiis.gov) about agreements with a non-Federal entity that involved material failure to comply with the award terms and conditions, suspension or debarment proceedings, or similar integrity or prior-performance issues. A non-Federal entity may submit comments in the record in [FAPIIS](http://www.fapiis.gov) about any information that Federal awarding agencies had reported to the system about that non-Federal entity, for consideration by the Federal awarding agency in making future Federal awards to the non-Federal entity.

Prior to making an award to a non-Federal entity, Federal agencies must determine whether that non-Federal entity is qualified to receive that particular award. In making a determination about any potential risk posed by an applicant being considered for a UTC grant, the UTC Program will review and take into consideration any information about the applicant that is in [SAM](#) (see Section D.3) and [FAPIS](#).

SECTION F. FEDERAL AWARD ADMINISTRATION INFORMATION

F.1 Federal Award Notices

The funding and authorization available to OST-R for this Notice of Funding Opportunity at this time are solely from Federal Fiscal Year 2018 funds. OST-R expects to award two additional increments of funding in approximately September of 2019 and 2020, subject to availability of funds and the grantee's compliance with terms of the grant. OST-R will allow all funds awarded to be spent over an approximate four-year period, from the initial award dates until September 30, 2022.

Under no circumstances may a public announcement of grant funding or awards (such as a press release) serve as an authorization to begin performance. The receipt of written documentation of a grant award bearing the signature of the Assistant Secretary of Research and Technology, or delegate, shall provide sole authorization to begin performance. Such documentation is expected to be sent via Federal Express sent to the address provided on the SF424 "Application for Federal Assistance" filed with the application.

F.2 Administrative and National Policy Requirements

Data Management Plans (DMPs)

All grants to UTCs will be administered in accordance with 2 CFR Part 200, 49 U.S.C. § 5505, and other applicable Federal laws. General provisions that will apply to UTC grants to be awarded in 2018 can be found at <http://utc.dot.gov>.

In accordance with the Office of Management and Budget's (OMB) Open Data Policy (OMB Memorandum M-13-13; available at <https://www.whitehouse.gov/sites/default/files/omb/memoranda/2013/m-13-13.pdf>) and the DOT Departmental Data Release Policy ((DOT Order 1351.34, adopted March 28, 2011; available at <https://www.transportation.gov/digitalstrategy/policyarchive/Departmental-Data-Release-Policy>), each UTC awardee is required to create a **Data Management Plan (DMP)**. In the DMP, a UTC awardee must propose program-level strategies to deposit Digital Data Sets resulting from DOT-funded scientific research in a repository that enables and allows for public access and sharing. The DMP will be reviewed and must be approved by the Office of the Assistant Secretary for Research and Technology.

Upon the receipt of written confirmation of a grant award, each awardee will be given a date by which it must develop a DMP and submit it to OST-R. Failure by the awardee to

submit a DMP to OST-R will result in the withholding of UTC grant funds.

Additional information on DMP requirements may be found in *General Provisions of Grants for University Transportation Centers* available at <http://utc.dot.gov>. Specific instructions on the development of DMPs may be found in *Deliverables and Reporting Requirements for University Transportation Centers* available at <http://utc.dot.gov>.

For additional grant terms and conditions, please refer to *General Provisions of Grants for University Transportation Centers* available at <http://utc.dot.gov>. This document and *Deliverables and Reporting Requirements for University Transportation Centers* will become part of the grant agreement when awarded.

F.3 Reporting

For grant deliverables and reporting requirements, please refer to *Deliverables and Reporting Requirements for University Transportation Centers* available at <http://utc.dot.gov>. This document will become part of the grant agreement when awarded. Applicants should integrate these deliverables and reports into their management plans and schedules.

SECTION G. FEDERAL AWARDING AGENCY CONTACT

Until **4:00 PM EST on WEDNESDAY, NOVEMBER 28, 2018**, questions about this Notice of Funding Opportunity or the UTC Program in general may be directed to the following email address: UTCgrants@dot.gov. Questions posed by applicants will be posted along with OST-R's responses on the [UTC Program website](http://utc.dot.gov) (available at <http://utc.dot.gov>), in order that all potential applicants may benefit equally from any additional information provided in the responses.

NOTE: Until a formal notice of award is issued, no communication by the government, either written or oral, shall be interpreted as a promise that an award will be made.

APPENDIX A

Center Budget Plan 3/1/19-9/30/19

CATEGORY	Budgeted Amount from Federal Share	Budgeted Amount from Matching Funds	Explanatory Notes
Center Director Salary			
Faculty Salaries			
Administrative Staff Salaries			
Other Staff Salaries			
Student Salaries			
Staff Benefits			
Total Salaries and Benefits			
Student Tuition			
Permanent Equipment ¹			
Expendable Property, Supplies, and Services ²			
Domestic Travel			
Foreign Travel ³			
Other Direct Costs (specify) ⁴			
Total Direct Costs			
F&A (Indirect) Costs			
TOTAL COSTS			

1 Permanent Equipment includes any item of equipment having a unit acquisition cost of \$5,000 or more. Per the grant's *General Provisions* document, written permission must be obtained from OST-R prior to the purchase of such equipment.

2 Expendable Property, Supplies, and Services include such tangible items as office and laboratory supplies and such intangible services as telecommunications.

3 Foreign Travel includes travel to or from any destination outside of the United States and its territories. Per the grant's *General Provisions* document, written permission must be obtained from OST-R prior to the initiation of such travel, or such travel may not be funded under the grant.

4 Itemize other anticipated direct costs not mentioned above.