Fiscal Year 2015
National Summer Transportation Institute
Statement on Work Application

Transmittal Sheet

Host Site (College/University): The University of West Alabama
Address (including zip): UWA Station #21, Livingston, AL 35470

Contact Representatives

Host Site
Project Director: Veronica Triplett
Title: Director
Phone: 205-652-3656
E-Mail: vbeasley@uwa.edu

State Transportation Agency Liaison:
Name: Tameka Rose
Title: Transportation Equal Employment Unit Supervisor
Phone: (334) 242-6943
E-Mail: roset@dot.state.al.us

Federal Highway Administration Division office
Name: Charles Calloway
Title: Civil Rights Specialist
Phone: (334) 274-6344
E-M ail: Charles.Calloway@dot.gov

Please Complete and Return This Sheet and Your Statement of Work to the State Transportation Agency Liaison.

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Section A: Program Information

Host Site (Name):	The University of West Alabama
State Abbreviation:	AL [redacted] Zip: 35470
Congressional District Number(s):	7th
FHWA Funding Requested:	$29,760.91
Is this a new STI? Y/N	N
Number of years in existence:	4 Hosted
Type of In-Kind Contributions:	Services/Fac. [redacted] Monetary $0
	Other (Provide brief description): Guest speaker services; Admission Fee to Southern Museum of Flight; Supplies-Office & Classroom Space; Telephone Usage, Internet Usage; Computer Aided Design (CAD) equipment, supplies and consumables, Services to instruct ACT prep course

Program Length:	2 Weeks	Program Dates: May 31- June 12, 2015
NSTI (weeks):	2 Weeks	
FAA ACE Academy (days):		
ACE Academy Location:		
Anticipated Number of Students:	16	

Select Type of Program:	Residential	X	[redacted]	Non-Residential	
Select Grade Levels:	Middle School (grades 6-8)		High School (grades 9-12)		X
Priority (if applicable, rank 1-5)					

Each Summer Transportation Institute (STI) Host Site is responsible for the following:

1. **Financial Reimbursement:** Submit all invoices in a timely manner. Note: Expenses on invoices should reflect only the expenses listed in the approved budget.
2. **Section 508 Standards of the Rehabilitation Act:** Ensure that their procurement of electronic and information technology takes into account the needs of all end users – including members of the public with disabilities who are seeking information or services, have access to and use of information and data that is comparable to that provided to others.
3. **Annual Post Program Questionnaire:** Complete the online NSTI Questionnaire via a web link provided by HCR at the end of the program. **PLEASE DO NOT SEND COPIES TO HCR**.
4. **Program Evaluations**: Conduct weekly and post program participant evaluations.

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Section B: Program Overview

The University of West Alabama Summer Transportation Institute will be a 2-week, residential program focused on sparking interest in careers in transportation among rural, west Alabama students with a STEM-focus. The target service area is in great need of programs such as STI to motivate and prepare students for future employment. Currently, the college-going rate of target school graduates is only 40%, and only 43% of target school seniors are enrolled in a rigorous program of study. The target area perpetuates the cycle of ill-prepared high school graduates; the area is socio-economically deprived, a low percentage of adults have earned college degrees, and a high percentage, consequently, earn low wages. As a designated Minority Serving Institution, the University of West Alabama has significant experience with and is well-equipped to offer programmatic educational and outreach activities serving minority, first-generation, and low-income student populations.

Following recruitment and selection of participants, the STI program curriculum and activities will occur throughout two split-week sessions, each reflective of the three primary modes of transportation, which make up the national and international transportation system – air, water, and land transportation as well as transportation safety. Additional academic enhancement activities include time management workshops, ACT prep workshops, computer skills workshops, and financial literacy workshops interspersed throughout the 2-week program. In addition to the prescribed curriculum, students will participate in lab activities throughout the program designed specifically to enhance critical thinking and problem-solving skills. During each week, students will also participate in mini competitions by demonstrating the speed, agility or constructions or the appropriate models.

The project will be staffed with a Director, responsible for administrative management, a Coordinator, responsible for program operations, three Residential Counselors, an Enhancement Program Instructor, a Recreation Instructor for mentoring activities and participant supervision, and instructors for the transportation modules. In addition, appropriate guest speakers will be invited for each transportation unit.

The first week of the program will focus on various aspects of land and water transportation and the careers related to them. Guest speakers from the various transportation modes will serve as classroom presenters sharing their perspective to rewarding careers and experience in the transportation industry. Students will also learn about the entry process for securing a satisfying career in transportation. In the days prior to a presentation from a guest speaker, students will undertake research assignments relative to each of the presenter's area of expertise within transportation. These assignments will give students insight into the subject matter and allow for greater comprehension of information shared by the presenter.

The capstone field trips for this section of the program will be a field trip to the Alabama Department of Transportation (ALDOT) Headquarters in Montgomery, AL, Mercedes Benz International in Vance, AL and the Port of Mobile in Mobile, AL. The enrichment trip to ALDOT will provide students with a comprehensive look at how transportation systems are planned and help them learn of various professional services behind the scenes of transportation development and maintenance. Students will also visit and receive a guided tour of the Mercedes

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Benz International Car Plant. This year the UWA STI students will be able to further exam the many facets of land transportation by being able to also tour and speak with students in the newest UWA Automotive Technician Training Facility which houses Mercedes vehicles, engines and other specialty equipment and supplies.

This year UWA STI will continue to provide students the opportunity to learn the fundamental of road construction planning and management. This component will provide fundamental skills to manage construction costs, schedules, and contracts. The classroom component will be designed to teach students the technical skills and duties of working professionals (e.g., Project Controls Specialist, Estimators, Schedulers, Contract Administrators, Construction/Field Engineers, Field Superintendents, and Construction/Project Managers) required within the highway construction area. Professional speakers from the highway construction field will lead classroom lectures. An enhancement to this year's STI will be the addition of a CAD Course (Computer Aided Design) which will allow students a more in depth look at transportation designs by learning drafting skills such as scales, multiview drawings and isometric drawings.

On the expedition to the Port of Mobile, students will witness various jobs and the coordination of these transportation skill-sets needed to operate a major import/export transportation hub. Students will also visit the Gulf Quest National Maritime Museum of the Gulf of Mexico, which specializes in hands-on experiences that inspire students to understand and appreciate the maritime heritage of the Gulf of Mexico.

The program will also seek to partner with an ALDOT contractor or other partners to lead students through an on-site learning experience. This on-site learning experience will provide students with a close up look at how classroom concepts and techniques are applied in the development of highway construction projects. Students will be provided a tour through a construction site and the opportunity to hear first-hand testimonies of a construction professional.

The second week of the program will focus on air transportation. This part of the program will also follow the same lesson plan format of guest speakers and research assignments. The capstone field trip for this section of the Institute will be a trip to the Birmingham International Airport. For this enrichment trip, students will receive a tour and learn about the inner workings of a major air transportation center. Students will also visit the Southern Museum of Flight to further study aviation transportation.

The University of West Alabama is committed to hosting this program as an integral part of its mission to provide educational outreach programs to the institutional community. The public education systems in each county we serve are uniformly beset with the same hindrances to quality education – high levels of poverty, inadequate funding and facilities, and disproportionately high drop-out rates. It can be argued that high school dropouts (currently 22%) perpetuate the vicious cycle of poverty that leads to general depression of local economies and inadequate public funding of schools. That is where the true value of this program comes in
– the ability to show students up close what the fruits of their labors in high school and post-secondary education can get them (i.e. stable, well-paying careers in transportation in this case). The UWA Summer Transportation Institute seeks to provide high school students from our 8 county region with the tools and skills they need to realize their potential.

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Section C: Program Administration

1. Recruitment and Student Selection Procedures

Project staff will enlist the intentionally informed target school personnel to identify prospective participants for the project. The guidance counselors will distribute applications for the UWA STI to students they identify as appropriate for the program. We are using this method of recruitment because the targeted have enrollment numbers that are conducive to this method. The counselors, we work with do indeed know which of their students would be best served by participation in the UWA STI. A minimum of 10 applications will be distributed at each public and private school. The county high schools to be served are Sumter, Choctaw, Marengo, Perry, Wilcox, Hale, and Greene counties, and the independent cities of Demopolis and Linden.

The UWA STI Selection Committee will then review applications and the Project Director will conduct applicant interviews. Representatives from the STA and Division will be invited to participate in the selection and screening process. In order for students to be considered, they must meet the following minimum criteria:

Minimum Selection Criteria
1. Must be a ninth, tenth, eleventh or twelfth grader.
2. Must have completed algebra or will be qualified for enrollment in algebra for the coming school term.
3. Must have a minimum of a 2.0 grade point average on a 4.0 scale.
4. Must have an expressed interest in STEM education and/or career
5. Must submit at least one letter of recommendation from a teacher or a guidance counselor.
6. Must submit a written statement regarding his/her reasons for wanting to participate in the program and how the STI can assist in meeting his/her career goals.
7. Must attend the program orientation meeting with a parent/guardian upon selection.

Based on the results of the applications and the interviews, the selection committee will invite the 16 most qualified students to participate in the ~~2014~~ 2015 UWA STI. 6 alternates will also be selected in case any members of the top 16 are unable to attend.

2. **Staffing Requirements -** *Completed Table A*

3. **Program Cost (Detailed Budget Summary) -** *Completed Table B*

4. **Inter-Modal Advisory Committee -** *Completed Table C*

5. **Specific-Named Partners -** *Complete Table D*

6. **Implementation Schedule -** *Complete Table E*

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7. **Program Curriculum** (STEM-Focused)
   - Academic

The academic program will be conducted each weekday of the Institute. The program curriculum will be based on the following: an introduction to the transportation industry and to expose students to in-depth facts related to the transportation industry and career opportunities. The program curriculum will expose students to all of the modes of transportation (land, air, water, and the incorporation of safety topics). As a part of the learning experience, the program includes activity-based presentations by professionals who work in areas related to the mode being studied and field trips to transportation-related establishment.

The program's curriculums focus for week one will be the study of land and water transportation. Guest speakers will include a representative from the McElroy Trucking Company, a major transporter of products located in Sumter County, as well as a representative from ALDOT. A guest speaker from the U.S. Army Corp of Engineers will also be invited to speak. Classroom lab activities will lead students in building a solar powered car, model bridge building and solar powered boat. This process will show students how cutting edge technology can be used to power transportation in more environmentally-friendly ways.

Students will also learn the technical skills and duties of working professionals (e.g., Project Controls Specialist, Estimators, Schedulers, Contract Administrators, Construction/Field Engineers, Field Superintendents, and Construction/Project Managers) required within the highway construction area.

This year's STI program will be enhanced by incorporating a CAD (Computer Aided Design) course. The topics to be covered include basic drafting skills such as scales, multiview drawing and isometric drawings; basic computer-aided drafting commands and terminology along with basic hands-on CAD drawings and techniques utilizing the MicroStation CAD software. It is also during the first week of the program that the instructor will cover vehicle transportation safety as well as pedestrian safety. Classroom activities for the water component will include lessons on deep sea freight transportation, local water transportation, and marine cargo handling.

During week one, students will travel to the Alabama Department of Transportation in Montgomery, AL for a tour of the sign shop and materials lab. ALDOT representatives will discuss with students the various careers within the transportation industry and how the responsibilities of those jobs affect the way we travel and how roads are built. Students will also take a tour of the Mercedes Benz International car plant located in Vance, AL and the program will also seek to partner with an ALDOT contractor to lead students through an on-site learning experience. This on-site learning experience will provide students will a close up look at how classroom concepts and techniques are applied in the development of highway construction projects.

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Students will take a field trip to the Port of Mobile and the Coast Guard Base for a tour that will be designed to demonstrate how the jobs of many individuals are coordinated to operate a major import/export hub. Students will also visit the Gulf Quest National Maritime Museum of the Gulf of Mexico. Students will tour the museum, which specializes in providing hands-on experiences that inspire them to understand and appreciate the maritime heritage of the Gulf of Mexico. Students will also participate in the take the helm program which includes simulators that will allow participants to navigate a variety of vessels in the Gulf of Mexico.

The focus of week two of the program will be the air transportation sector. Guest speakers will include an Air Traffic Controller from a local airport and a flight from a Naval Air Station. Topics covered in the classroom will include an overview of flight instruments, aircraft performance, and air navigation. Additionally, students will learn about aviation bio-fuels and how they can reduce the environmental impact of the air transportation sector. Lab activities during this week will focus on physical properties such as gravity and lift, as well as engineering/design problems that illustrate how flight is achieved. Students will also complete model airplanes. At the conclusion of this week students will compete in a mini competition of airplane models. The field trip at the end of this week will take the students to The Birmingham-Shuttlesworth International Airport and The Southern Museum of Flight. At the Southern Museum of Flight, students will participate in a hands-on Learn to Fly Program where they will act as pilot and co-pilot of their own aircrafts. The tour of the Birmingham-Shuttlesworth Airport will grant students the opportunity to explore the major part of the airport and airfield. Students will hear from several guest speakers about careers related to air travel. Air travel safety will resonate throughout lessons taught in the classroom and during each tour.

- Enhancement

Week 1: Enhancement program activities in week one will include activities designed to teach the students how to write a compelling résumé, learn valuable time management skills and formulate good study habits. Students will be given an ACT preparation course in the area of mathematics. The overall enhancement focus for this week will be on promoting Self Awareness and Development and Improving Study Habits and Academic Achievement.

Week 2: Enhancement program activities during week two will focus on career exploration. Students will be required to research specific transportation careers and educational training requirements to enter into those careers. Additionally, the students will participate in financial literacy workshops that will help them to become more financially savvy. ACT preparation in Math will also be given. The program's overall enhancement focus for week two will be on Academic Achievement and Life Skills. Students will also focus on dining etiquette and social engagement at the end of this week.

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- Sports/Recreation *(residential programs)*

  Sports and recreation activities will occur daily. Weather conditions will determine the venue for said activities; however, events will consist of individual and team activities along with fitness and wellness sessions. Our recreation program will expose students to the full complement of options available on the UWA campus. Our program will encourage good sportsmanship and expose students to rules and regulations of a variety of sports. Our Recreation Program Instructor will have all of UWA's recreation venues and supplies at his/her disposal. Some of the recreation programs that students will be exposed to include: basketball, kickball, tennis, pickle ball, archery, and swimming among other activities. Students will also have board games, access to watch movies and activities that the resident assistants have planned as part of their recreation activities.

  This year, UWA will be able to enhance the Sports/Recreation residential program through in-kind contributions. Students will be able to participate in additional entertainment activities such as bowling and movies among others. These in-kind contributions will be used to fund transportation, admissions and any other related cost.

8. Follow-up Survey of Students

UWA will conduct a follow up for all participants, including a survey of all senior (rising 12th grade) participants enrolled in the program to determine post-secondary course of study. The survey will be developed by the Program Director and distributed via mail. Students will initially be contacted by phone and/or e-mail to let them know the survey has been mailed and instructions for returning it to UWA. The focus of the survey will be on the career and academic decisions made by STI graduates. We will capture information that will help us determine if the STI graduate will be enrolled in a transportation related major in higher education or if they are employed in the transportation field within one year of the completion of the STI. UWA will locate students through the National Student Clearinghouse to verify college or training program enrollment.

AVIATION CAREER EXPERIENCE:
For more information, please see the point of contact list provided:

Please review application in its entirety to confirm information is accurate.

Name of STA Representative who reviewed this proposal: ***Tameka Rose***

Date: ***January 30, 2015***

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Activity Calendar

Sessions:
Morning Sessions- 8:15 A.M.-11:30 A.M.
Lunch- 12:00 P.M.-1:00 P.M.
Afternoon Session-1:30-5:00 P.M.
Evening Sessions/Activities- 6:30 P.M.-8:00 PM

Daily Courses:
STEM Course
Transportation Course
CAD Course
Recreation

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
June 1 Welcome and Admin. Activities UWA Tour Introduction to Transportation Planning & Logistics Highways/Bridges ACT Prep- Math	**June 2** Introduction to Public Transit Vehicle Transportation Safety- Pedestrian Safety Lab: Bridge Construction Resume Writing for High School & College Students	**June 3** Guest Speaker (2) Exploration in Water Transportation Water Safety Developing Good Study Habits Lab: Salt Water Cars	**June 4** Field Trip: ALDOT Presentations: Career Opportunities in Transportation Industry Lab: Fuel Cell Cars	**June 5** Field Trip to Mercedes Benz International Time Management Workshop Lab: Sail Boats Mini Competitions	**June 6** Field Trip to Port of Mobile & Gulf Quest Maritime Museum Career Exploration Options & Requirements
June 8 Exploration in Air Transportation On-Site Learning Experience (Date Tentative) ACT Prep Science	**June 9** Career Exploration Options & Requirements Dining Etiquette and Social Engagement	**June 10** Guest Speaker Flight Theories Lab: Model Airplane	**June 11** Field Trip: Birmingham International Airport/ Southern Museum of Flight Financial Literacy Workshop	**June 12** Guest Speaker Closing Program Mini Competition on Airplanes	

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