

**RITA**  
**SEMI-ANNUAL REPORT**

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For the

**UNIVERSITY TRANSPORTATION CENTER FOR ALABAMA**

A University Transportation Center  
Reporting to

The Research & Innovative Technology Administration  
US Department of Transportation

July 31, 2006

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## A. SUCCESS STORIES

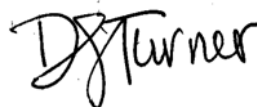
### Introduction by Executive Director

The UTCA 2006 Semi-Annual Report includes a series of “success stories” about the education, research and technology transfer activities underway on the three campuses of The University of Alabama System: The University of Alabama (UA) located in Tuscaloosa, The University of Alabama at Birmingham (UAB), and The University of Alabama in Huntsville (UAH). They reflect seven full years of operation of operation by the Center. By now, UTCA in an engrained portion of the research programs on all three campuses, with exceptional multi-disciplinary participation.

The stories include personal experiences of four UA System students whose academic experience included work with UTCA. Nancy Fouad received both B.S. and M.S. degrees in civil engineering from UAB. Her involvement with UTCA projects has pointed her toward a career in construction law. Luke Stafford’s experiences on a UTCA project led to an employment opportunity with Alabama Power. Two undergraduate Research Assistants who visited remote regions of Peru as part of a humanitarian service project. The perspectives and lives of both young ladies were changed. Another story features a glimpse of 40 eighth graders who were exposed to transportation engineering careers, along with 12 alumni of the same program who returned for a one-on-one research/design session with transportation professors. Watching young people get their first taste of potential careers in transportation is exciting and fulfilling.

Stories like these make it easy to come to work, and to look forward to the continuing efforts of so many individuals who contribute to UTCA, and to see their many efforts benefit transportation stakeholders in Alabama and the region.

Sincerely,



Daniel S. Turner  
Director of UTCA

## **1. Student Success Story - Nancy Fouad**

Ms. Nancy Fouad obtained a BSCE from UAB in the spring of 2004. While UAB, she served as President of the Chi Epsilon student chapter, Vice-President of the ASCE student chapter, President of Omicron Delta Kappa, and as a member of Tau Beta Pi.

During her MSCE studies, she was a graduate research assistant on UTCA project 04215, “Alternative Highway Project Delivery Systems.” The project investigated Design-Build, Construction Management at Risk, and Job Order Contracting as possible ways to deliver Alabama Department of Transportation (ALDOT) projects. She was fortunate to be directed and supported by an advisory panel of senior managers, including the ALDOT Chief Engineer, Design Engineer, Office Engineer, Finance Director, Construction Engineer, and Materials & Tests Engineer. Ultimately, the different methods were analyzed and compared, and a process to deliver ALDOT projects using alternative delivery systems was outlined. In addition, the project identified the types of ALDOT projects where alternative delivery systems can reduce construction time and cost while delivering projects of better or similar quality when compared to those delivered using the traditional design-bid-build method were identified.

Through her MS research with UTCA, academic courses, and interaction with leaders at ALDOT and in the construction industry, she gained substantial insight into the workings of the construction industry, the involved relationships, and the diverse legal and business issues common to the industry. She received her MSCE with a Certificate in Construction Engineering Management in 2005, and with this foundation has decided to pursue a career in construction law. She has already been accepted to the University of Alabama School of Law.



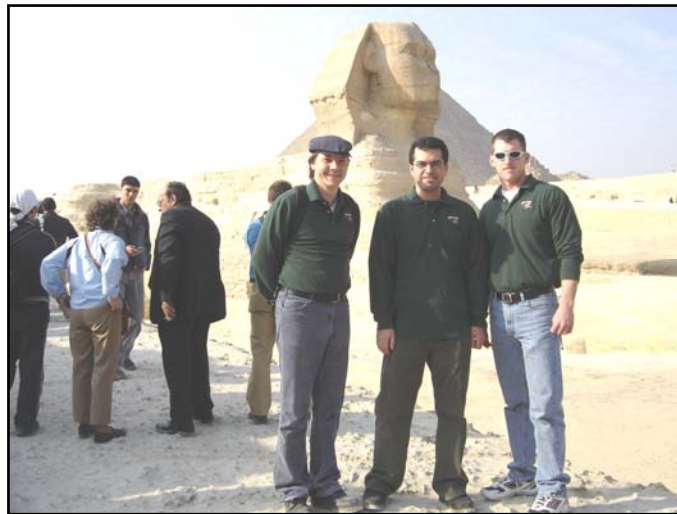
**Ms. Nancy Fouad**

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## 2. Student Success Story - Edward Luke Stafford

As a young boy, Luke Stafford was highly interested in construction related fields such as masonry, excavation, and hauling. Taking his father's advice, to pursue a Civil Engineering career, he enrolled in pre-engineering at a community college in Tuscaloosa, Alabama. Upon graduation he received a transfer scholarship to UAB, where he, served as President of the ASCE student chapter, Vice President of Chi Epsilon chapter, and a member of Tau Beta Pi. His leadership led to an offer to pursue a master's degree, while working on UTCA project 05215, involving research and development of a prototype design of a prefabricated, pre-cast concrete bridge system.

The project exposed him to pre-cast concrete bridge design and construction while offering the opportunity to work with industry experts. He also delivered a presentation of the project in Cairo, Egypt. As a result of the experiences, he accepted a job with Alabama Power Company and now works in their Transmission Line Design and Maintenance Department. In Luke's words, "I consider myself a very lucky and blessed individual!"



Luke Stafford (right) in Cairo, Egypt after making a presentation on his UTCA Project.

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### 3. Student Success Story - International Service Project by Undergrad Research Assistants

UTCA undergraduate assistants Marlo Wright and Justina Quinney were among 17 students from the University of Alabama who visited Iquitos, Peru with the UA Engineering Students Without Borders (ESWB) Student Chapter. The Faculty Advisors, Drs. Philip and Pauline Brown, accompanied the students on the May, 2006 service project.

In addition to learning about other cultures and creating good will, the ESWB group set out to conduct two projects. The first project was to construct a tower in the Allpahuayo Mishana Reserve to increase bird watching and ecotourism. This will bring more attention and awareness to the reserve to help undeveloped village communities along the Amazon River. The second project was to improve drinking water and waste systems in these communities. The 2006 trip was conducted to gather input from local leaders and engineering design data, and to identify appropriate sites for the projects. The students will do the design work during the 2006-07 academic year, and the construction will occur during a second ESWB trip in the late spring of 2007.

Team members found their lives turned upside down for two weeks, with travel possible only by boat or air, constant mosquito bites, strange food, and wooden boards for beds. But they also saw the smiles of children with whom they played, met Peruvian university students, and found their perspectives of life changing.

After two weeks of committed work the team returned to the United States with a great deal of valuable information for both projects. A bird watching tower in Allpahuayo Mishana, improved septic systems for the visited villages and new relations with Universidad Particular de Iquitos will result from this 2006 trip to Peru. But more deeply, 17 students found a lifelong commitment to using their education and skills to help others.



Justina Quinney 4<sup>th</sup> from left bottom row  
Marlo Wright 4<sup>th</sup> from right 2<sup>nd</sup> row

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#### 4. Education Success Story - 2006 Summer Program at UAH

For the seventh year, the University of Alabama at Huntsville (UAH) conducted an engineering summer program to encourage females and underrepresented students to consider careers in transportation engineering.

Over 200 middle school students have participated in this event since its inception. The participants for the week-long event learned basics of materials, structures, safety and other transportation engineering topics by performing hands-on experiments. UAH civil engineering professors and local professional engineers acted as instructors. Field trips were incorporated into the program to reinforce the importance of transportation engineers to our community. This included a session on public transportation in which the students had to plan and implement a route to transport the group from campus to the downtown Huntsville traffic operations center and the railroad depot museum.

Contact:

Also, 12 program “alumni” returned to campus and work with faculty for a day in one area of civil engineering. For example, they used GPS to locate areas on the UAH campus and then downloaded their data onto a digital map with Dr. Michael Anderson. Another day they designed, built, and raced solar-powered cars with Dr. Kate Leonard.

2006 Participants



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## 5. Education Success Story - IITS Program

UTCA continues to serve as a role model of efficiency for instructional programs within the University of Alabama System. Four Years ago, transportation faculty members on the three campuses devised a standard curriculum that could be offered over the “Intercampus Interactive Television System,” which provides real-time televised classes to other campuses. This allows transportation students to obtain access to specialized faculty expertise on the other two campuses. It also relieves transportation faculty members of a portion of their teaching loads, allowing that time to be shifted to research and scholarly activities. As shown in Table 3, the schedule of courses allows students to choose from a range of transportation courses.

**Table 3: Transportation courses taught via IITS**

Term	Faculty	Course	Term	Faculty	Course
SP 02	Jones, UAB	Trans Planning	FA 02	Sisiopiku, UAB	Intelligent Trans Systems
SU 02	Turner, UA	Traffic Engineering	FA 02	Turner, UA	Traffic Safety
SP 03	Anderson, UAH	Traffic Engineering	FA 03	Haynes, UA	Airport Planning and Design
SP 03	Turner, UA	Geometric Design of Highways	FA 03	Sisiopiku, UAB	Traffic Flow Theory
			FA 03	Anderson, UAH	Trans Planning
SP 04	Turner, UA	Traffic Safety	FA 04	Lindly, UA	Pavement Rehabilitation
SP 04	Sisiopiku, UAB	Simulation for Transportation	FA 04	Anderson, UAH	Urban Trans Planning
SP 04	Anderson, UAH	Traffic Engineering Operations	FA 04	Sisiopiku, UAB	Intelligent Trans Systems
SP 05	Turner, UA	Geometric Design of Roadways	FA 05	Anderson, UAH	Urban Trans Planning
SP 05	Anderson, UAH	Traffic Engineering Design	FA 05	Lindly, UA	Pavement Rehabilitation
SP 05	Sisiopiku, UAB	Non-motorized Trans Design and Planning			

One of the strong points of the IITS program is that the students from the three campuses get to meet each other and interact with each other. In some classes the students meet at a joint location at least once in a semester, and team together for lab and design experiences.

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## **6. Tech Transfer Success - Researcher Presents International Papers**

Dr. Virginia Sisiopiku of UAB has been selected to present two papers at the 1st International Symposium of Freeway and Toll way Operations to be held in Athens, Greece July 4-7, 2006. Both papers are based on her UTCA research and both will be published in the conference proceedings. This is a wonderful opportunity for her to showcase the quality of work that faculty in the University of Alabama System perform as a result of UTCA funding.

The first paper, *Analysis of Benefits and Costs from Ramp Metering Implementation* is based upon UTCA Project 04203 – “Freeway Ramp Metering in Alabama” that was completed in March of 2005. The second paper, *Dynamic Traffic Assignment Applications for Incident Management*, reports on preliminary results from her ongoing UTCA Project 06202 - “Transportation Facilities Management under Emergencies.”

The conference is a four-day long event organized by the Transportation Research Board (TRB Freeway Operations Committee, AHB20). The U.S. Department of Transportation and the Federal Highway Administration are co-sponsors of the event. Additional information including a schedule of events can be found in the attachment.

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## **7. Administration Success Story – Evaluation by AAAS**

UTCA was recently visited by an evaluation team from the American Association for the Advancement of Science (AAAS) “Research Competitiveness Program.” The AAAS program is well known for conducting rigorous reviews of ongoing research centers. In this case, the visit was designed to help UTCA identify the effectiveness of its current research activities, and to identify methods and activities to enhance them.

The University of Alabama requested the evaluation as part of an overall plan to strengthen its research centers. The UTCA review was the pilot effort in the UA plan, and based upon the positive results of the UTCA review a commitment is already in place for several other large centers to be evaluated.

The evaluation team reviewed UTCA Annual Reports, the most recent strategic plan and other documents, and interviewed over 20 representatives from UA System campuses (faculty researchers, UTCA Executive Committee members, Vice Presidents for Research, etc.). The AAAS team made preliminary recommendations for sharpening the focus on national issues, mentoring young faculty members, using internal marketing to create expectations of success, and similar actions.

Overall, UTCA was very pleased to with the evaluation process and the constructive comments that emerged from the process.

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## **8. Research Success Story - Functionally Impaired Drivers**

A UTCA research project is directly supporting one of the five emphasis areas in the Alabama Highway Strategic Plan (SHSP). The plan is required by SAFETEA-LU, the 2005 act that reauthorized the federal surface transportation program. The investigators for this multidisciplinary project are Dr. Kate Leonard (Civil Engineering), Dr. Jerri Edwards (Psychology) and Dr. Dawn Utley (Engineering Management).

Project 05312, “Management of Functionally Impaired Drivers” has produced excellent data to assist in implementation of the SHSP and several papers generated by the project have already received warm national reception. Recently Dr. Edwards attended the national Association of Psychological Sciences meeting in Washington, DC and presented two papers from these results. The first paper, “Age Performance, and Attitudes Regarding mandatory Driver-License Testing” summarized the survey data gleaned over the past 12 months. Overall, younger and older adults felt the same about the Driving Health Inventory and mandatory testing, with one exception. Surprisingly, younger drivers were more likely to support screening for all ages while older drivers were more likely to endorse screening for older drivers.

The second Association of Psychological Sciences paper was titled “Driving health® Inventory (DHI) Performance and Self-Perceptions among Older Drivers.” The results of testing at UAH provided evidence of the validity of the DHI in that it could distinguish between older drivers that had experienced traffic crashes and those who had not experienced them. The lack of relationship between self-ratings and performance on the inventory provided support for the use of mandatory, performance-based testing of driving fitness rather than allowing self-regulation of driving with advancing age. Further research will examine the predictive validity of the inventory.

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## 9. Technology Transfer Success Story – Enhanced 2006 Activities

In March, the Technology Transfer Program held a meeting of its Steering Committee to evaluate and enhance its activities. As a result, during the first half of 2006 the UTCA Technology Transfer Program expanded its normal slate of activities.

For example, the program hosted a meeting of the Alabama Section of the Institute of Transportation Engineers. The events consisted of half day program of three technical presentations followed by a keynote address by the Federal Highway Administration on its *Traffic Analysis Toolbox*. During the luncheon, participants reviewed UTCA's new Intelligent Transportation Systems and Traffic Analysis/Simulation labs. The event was attended by more than 90 participants including 25 students from among the three UTCA campuses.

New activities have been added to the annual Research Symposium to “retool” it into a flagship event that will promote UTCA and its research to audiences beyond Alabama. Researchers from other UTCs will be invited to the symposium to present their UTC-derived work and to share research experiences with UTCA researchers in focused workshops. A job fair is being planned in conjunction with the 2006 symposium to increase student attendance at the symposium as well as participation from the private sector.

The UTCA Technology Transfer program has assisted in the implementation of two short courses so far in 2006. One was a direct result of UTCA Project 05209, “Culvert Management System Implementation and Seminar” and the other was a training program developed for the Alabama Department of Transportation (ALDOT). Pending final approval from ALDOT, a series of short courses are under development through the ALDOT-funded UTCA project 04407 “Development of a Statewide Traffic Signal Design/Timing Manual and Online Guide.”

In addition, the program is finalizing a new issue of its research brief, *The UTCA Signal* that will showcase homeland security-related projects conducted under UTCA. It will also describe programmatic relationships UTCA has formed with other Alabama centers involved in safety and security research in an effort to raise the visibility of this type of collaboration.

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## **B. RESEARCH PROJECT STATUS**

Table 1: New Projects (Since 2005 Annual Report)

Table 2: Projects Underway

Table 3: Projects Completed

Table 4: Non UTC Projects

## Lists of Projects

**Table 1: New Projects (since 2005 Annual Report)**

<b>Project No.</b>	<b>Project Title</b>	<b>PI</b>	<b>Start-Date</b>	<b>End-Date</b>
05409	Evaluate Double Drop Bead Edge Lines	Lindly, J.	29-Mar-06	30-Apr-09
06101	Transportation Curriculum for High Schools	Elam, M.	1-Jan-06	31-Jan-06
06109	Warranties in Highway Projects	Qui, Q.	1-Jan-06	31-Jan-06
06112	ITS Educational Activities	Jones, S.	1-Jan-06	31-Jan-06
06113	Annual Tech. Transfer Program 06	Jones, S.	1-Jan-06	31-Jan-06
06115	Advanced Transportation Institute 2006	Turner, D.	1-Jan-06	31-Jan-06
06202	Trans Facilities in Emergency Mgmt.	Sisiopiku, V.	1-Jan-06	31-Jan-06
06210	Deck Forms for Bridge Construction	Davidson, J.	1-Jan-06	31-Jan-06
06211	Emergency Reconstruction Infrastructure	Hitchcock, W.	1-Jan-06	31-Jan-06
06217	Strengthening Steel Bridge Girders-CFRP	Abu-Amra, T.	1-Jan-06	31-Jan-06
06303	Multimedia-LRFD Concrete Bridges	Touting, H.	1-Jan-06	31-Jan-06
06304	Transportation Summer Institute 2006	Leonard, K.	1-Jan-06	31-Jan-06
06306	Alabama MPO Freight Trans Forecast	Anderson, M.	1-Jan-06	31-Jan-06
06311	Student Funding TRB 2006	Anderson, M.	1-Jan-06	31-Jan-06
06403	School Bus Load Rating for Bridges	Richardson, J.	29-Mar-06	30-Apr-07
06406	ASAP Air Quality Evaluation	Jones, S.	1-Jan-06	31-Jan-06
06407	ITS Education Activities	Jones, S.	1-Jan-06	31-Jan-06

**Table 2: Projects Underway**

<b>Project No.</b>	<b>Project Title</b>	<b>Faculty Name</b>	<b>Start Date</b>	<b>End Date</b>
03112	Bridge Decay/Maintenance Forecasting	Sharpe, S.	1/1/03	12/31/03
03416	Pavement Management System Review	Hale, D.	5/1/03	6/31/04
03417	GASB 34 Compliance – Phase III	Hale, D.	8/1/03	5/31/04
03418	GASB 34 Compliance – Phase III (Bridges)	Hale, J.	8/1/03	5/31/04
03419	Trans Network: Data-Analysis-Visualization	Hale, D.	4/1/03	12/31/03
04101	Minimizing Hwy. Const. Emissions	Williamson, D.	1/1/04	12/31/04
04215	Alt. Hwy. Project Delivery Systems	Rizk, T.	1/1/04	12/31/04
04308	Bridge Vulnerability Assessment	Youngblood	7/31/04	11/30/06
04402	Sect. 5310 and 5311 FTA Compliance	Anderson, M.	1/1/04	12/31/06
04403	Statewide Implementation of MIMS	Anderson, M.	1/1/04	6/30/06
04405	Evaluation of Profiled Pavement Markings	Lindly, J.	10/1/03	12/31/05
05104	Develop. Bridge Testing Manual	Richardson, J.	6/1/05	8/15/06
05106	Optimum Document Repository	Duggan, E.	7/1/05	6/30/06
05109	Risk-Based Bridge Inspect-Mgmt.	Fridley, K.	6/1/05	5/31/05
05114	Alt. Financing Sources for AL Highways	McLeod, R.	1/1/05	12/31/05
05209	Culvert Management System	Davidson, J.	6/1/05	12/31/05
05231	Transportation CIP Education	Hitchcock, W.	8/1/05	7/31/06
05302	Internet Surveys-Traffic Modeling	Anderson, M.	7/1/05	7/31/06
05215	Prefab. Concrete Bridge Systems	Rizk, T.	1/1/05	12/31/05
05228	Thermoplastic Bridge Superstructure	Uddin, N.	6/1/06	6/1/06
05307	Transportation Cyber Security	Murphy	1/1/05	12/31/05
05312	Identify-Mgmt Impaired Drivers	Leonard, K.	6/1/05	5/6/06
05315	Multimedia for LRFD Steel Bridges	Toutanji, H.	6/1/05	5/31/06
05402	Training Program Enhancements	Wingenter, T.	1/1/05	12/31/05
05403	Signalized Intersection Crashes	Turner, D.	1/1/05	8/31/06
05404	Exec. Bridge Maint. Mgmt. Sys. Phase I	Hale, D.	7/1/05	12/31/06

**Table 3: Projects Completed**

<b>Project No.</b>	<b>Project Title</b>	<b>Faculty Name</b>	<b>Start Date</b>	<b>End Date</b>
99101	Co. Bridge Replace Guide, Phase-1	Triche, M.	7/1/99	8/15/00
99104	Rural Public Transit Systems	Lindly, J.	7/1/99	8/15/00
99113	Crash Data Mining and Visualization	Conerly, M.	8/15/99	8/15/00
99115	Improving Crash Locations w/ GPS/GIS	Graettinger, A.	7/1/99	8/31/00
99118	Multidisciplinary Transportation/Logistics	Sterling, J.	10/1/99	9/30/00
99236	Trans Programs via Distance Learning	Lalor, M.	7/1/99	9/30/03
99238	Drivers with Diminished Capabilities	Owsley, C.	7/1/99	2/28/01
99244	GIS-Based Hazardous Materials. Routing	Pitt, R.	8/1/99	12/31/00
<sup>2</sup> 99247	Concrete Pavement Short-course	Delatte, N.	7/15/99	7/30/00
99249	Multi-campus Trans Education Program	Delatte, N.	1/1/00	12/31/00
99250	Crashes in Minorities/High Risk Groups	Wynn, T.	7/1/99	12/31/00
99252	UTCA & Other Safety-Related Centers	Davidson, J.	9/1/99	11/30/00
99324	3-D Safety Alarms for Drivers	Bliss, J.	7/1/99	8/31/00
<sup>3</sup> 99328	Transplan and GIS Support	Anderson, M.	7/1/99	2/28/01
00102	Video for Traffic Mgmt. and Safety	McFadden, J.	1/1/00	3/31/01
00103	ITS Expert Services	McFadden, J.	1/1/00	3/31/01
00107	Work Zone Enhancement Short course	Lindly, J.	1/1/00	3/31/01
00108	Air Quality Aspects of Traffic Mgmt.	Williamson, D.	1/1/00	12/31/00
00110	Traffic Mgmt./Emergency Communication	Bunn, M.	1/1/00	12/31/00
00202	Materials Short course/ITS Short course	Delatte, N.	1/1/00	12/31/00
00214	Health/Public Safety -Hazardous. Materials	Becker, S.	1/1/00	12/31/00
00304	Transportation Summer Institute 2000	Leonard, K.	1/1/00	12/31/00
00305	Cementitious Materials for Bridge Decks	Toutanji, H.	1/1/00	7/31/02
00456	Managing Construction Bidding	Turner, D.	1/19/00	5/19/01
00461	Highway Capacity Manual	Turner, D.	12/14/00	8/15/02
00462	MUTCD	McFadden, J.	12/14/00	5/4/02
00463	Video Tech/Traffic Mgmt	Graettinger, A.	3/5/01	6/30/02
00465	Work Zone Safety	Lindly, J.	1/2/01	1/2/02
00466	MOBILE-6	Williamson, D.	12/4/00	12/4/01
00467	Computer-based Sign Support Design	Davidson, J.	10/1/00	4/30/04
01101	Success Factors-Traffic Mgmt/Emerg. Com	Bunn, Mickey	1/1/00	9/30/03
01105	Emergency Evacuation Procedures	Triche, M.	1/1/01	8/31/05
<sup>4</sup> 01110	Intercity Bus Service Study	Lindly, J.	1/1/01	5/2/02
01111	Aviation Transportation Internship	Haynes, C.	1/1/01	12/31/01
01112	Maintenance System for Stormwater	Durrans, R.	5/16/01	10/15/02
01216	Advanced Public Trans in Birmingham	Jones, S.	1/1/01	9/30/03
01218	Flowable Fill - Local Bridge Replacement	Davidson, J.	1/1/01	9/30/03
01220	Concrete Overlays and Repairs	Delatte, N.	1/1/01	9/30/03
01326	Transportation Summer Institute 2001	Leonard, K.	1/1/01	9/30/03
01327	New Procedure for Bridge Deck Evaluation	Toutanji, H.	1/1/01	9/30/03
<sup>5</sup> 01328	Trip Generation & Travel Rate Indices	Anderson, M.	1/1/01	6/30/04
01453	Utility Pole Safety Program	Lindly, J.	2/15/01	3/15/02
01461	Software Support for ALDOT - Phase 3	Brown, D.	5/1/01	5/10/02
01465	Evaluate Profile Pavement Markings	Lindly, J.	8/13/01	8/13/03
02101	Web-Based Airport Licensing	Haynes, C.	1/1/02	12/31/02
02113	Adv. Transportation Summer Institute	Turner, D.	1/1/02	12/31/02
02114	GIS-Resource Allocation Visualization	Hale, D.	1/1/02	12/31/02
02115	Crash Safety - Data Mining Approach	Hardin, M.	1/1/02	12/31/02
02201	Catalysts/Zeolites for Diesel Exhaust	Peters, R.	1/1/02	6/31/03
02205	Trans Improvement Through Telework	Grimes	1/1/02	12/31/04
02209	High School Trans Education Program	Jones, S.	1/1/02	12/31/02
02215	Hazmat Crash Education	Clark, S.	1/1/02	12/31/04
02217	Traffic Simulation Software Comparison	Jones, S.	10/1/02	10/10/03



**Table 3: Projects Completed** (continued)

<b>Project No.</b>	<b>Project Title</b>	<b>Faculty Name</b>	<b>Start Date</b>	<b>End Date</b>
02304	EDTR for Bridge Strain Monitoring	Lin, M.	1/1/03	12/31/03
02402	Evaluation of Retroreflectometers	Lindly, J.	11/1/01	6/01/02
02403	Bridge Database and Data Retrieval	Graettinger, A.	2/14/02	11/14/02
02409	Adj. of Pavement Life Cycle Cost Factors	Lindly, J.	6/4/02	4/30/02
02410	Revise System of Airport Licensing	Haynes, C.	6/4/03	9/4/03
02411	Phase 2: GASB-34 Compliance	Hale, D.	2/12/02	5/31/03
03102	GIS & Crash Data	Graettinger, A.	4/1/03	12/31/04
03103	St. Clair Co. Trans. Needs Assessment	Lindly, J.	1/1/03	12/31/03
03105	PM2.5 Emissions from B'ham Roads	Williamson, D.	1/1/03	12/31/03
03108	Runway Topography Considerations	Haynes, C.	1/1/03	12/31/03
03113	Advanced Transportation Institute II	Turner, D.	1/1/03	12/31/03
03114	ITS Applications for Trans. Infrastructure	Turner, D.	1/1/03	12/31/03
03217	Technology Transfer Program	Jones, S.	1/1/03	12/31/03
03226	Regional Emergency-Traffic Sim.	Sisiopiku, V.	1/1/03	12/31/03
03228	Stability-Curved Bridges During Construction	Davidson, J.	1/1/03	12/31/03
03229	Vulnerability Reduction for Bridges	Uddin, N.	6/1/03	8/24/05
03235	Access Management Training	Sisiopiku, V.	7/15/03	7/31/04
03301	Multimedia Tech-Timber Bridge Repair	Toutanji, H.	1/1/03	12/31/03
03303	Sensor Networks for Auto Tracking	Yoo, S.	1/1/03	12/31/03
03304	GIS to Accompany CARE	Gholston, S.	1/1/03	12/31/03
03305	Transportation Summer Institute 2003	Leonard, K.	1/1/03	12/31/03
03306	Hand-held Explosives Sensor System	Bosco, C.	1/1/03	12/31/03
03308	Student Funding for TRB	Anderson, M.	1/1/03	2/28/04
03309	Expert Sys – Drilled Shaft Const. Inspect.	Gopu, V.	1/1/03	12/31/03
03401	Study of 511 Traveler Information System	Lindly	1/1/03	12/31/03
03402	Proof Load Test concrete Bridges	Richardson, J.	1/1/03	12/31/03
03404	Computerize ALDOT R&D Library	Lindly	1/1/03	12/31/03
03405	I-565 Bridge Girder Repair- VARTM	Uddin, N.	9/1/02	6/1/04
03412	CO Air Qual. Model for Trans. Analysis	Jones, S.	2/15/02	2/14/04
03415	Trans. Modeling Support – AL MPOs	Anderson, M.	1/1/03	12/31/03
04107	Data Mining to Improve Traffic Safety	Smith, R.	1/1/04	12/31/04
04108	Impact of Sprawl AL Commuting	Weber, K.	1/1/04	4/30/05
04111	Web Bridge Sufficiency Calculator	Malloy, A.	10/1/04	12/31/04
04112	NPDES Technology Transfer	Johnson, P.	1/1/04	12/31/04
04115	Advanced Transportation Institute 2004	Turner, D.	1/1/04	12/31/04
04116	Trans. Labs/Facilities Shelby Hall	Turner, D.	1/1/04	11/30/05
04117	Hwy. Drainage Conservation Practices	Pitt, R.	1/1/04	11/31/05
04203	Freeway Ramp Metering in Alabama	Sisiopiku, V.	1/1/04	12/31/04
04210	Low Cost Thermoplastic Treat Bridges	Uddin, N.	1/1/04	12/31/04
04213	Tech Transfer Program Continuation	Jones, S.	1/1/04	12/31/04
04219	New Criteria – Traffic Signal Supports	Fouad, F.	1/1/02	8/31/05
04301	Transportation Summer Institute 2004	Leonard, K.	1/1/04	12/31/04
04303	County Pavement Management System	Anderson, M.	1/1/04	9/1/05
04306	TRB and TRB Conference Attendance	Anderson, M.	1/1/03	1/1/04
04310	Data Mining – Safety/Road Condition	Graves, S.	1/1/04	2/1/05
04312	Multimedia Tech. for Bridge Repair; II	Toutanji, H.	1/1/04	8/1/04
04401	Vehicle Fleet Database & Asset Mgmt.	Anderson, M.	10/1/03	5/5/05
04404	Off-Road Accidents Safety Planning	Turner, D.	1/1/04	10/15/04
04406	Work Zone Configurations and Effects	Lindly, J.	1/1/04	12/31/04
04407	Statewide Traffic Signal Design Manual	Jones, S.	1/1/04	12/31/05

**Table 3: Projects Completed** (continued)

<b>Project No.</b>	<b>Project Title</b>	<b>Faculty Name</b>	<b>Start Date</b>	<b>End Date</b>
05107	Advanced Transportation Institute 05	Turner, D.	1/1/05	12/31/05
05205	Annual Tech Transfer Program	Jones, S.	1/1/05	12/31/05
05301	Student Funding for TRB Conference	Anderson, M	1/1/05	12/31/05
05303	Summer Trans. Engr. Institute Phase IV	Leonard, K.	1/1/05	12/31/05
05406	AL DOT R&D Peer Exchange	Turner, D.	3/15/05	5/31/05

<sup>1</sup>Partially funded by UTC monies; partially funded by other sources. Cancelled in early 2001 by UTCA Executive Committee

<sup>2</sup>Partially funded by UTC monies; partially funded by other sources.

<sup>3</sup>Projects 99328 and 99458 were initially reported as separate projects. They were merged and are now reported as project 99328

<sup>4</sup>Projects 01110 and 01452 were initially reported as separate projects. They were merged and are now reported as project 01110.

<sup>5</sup>Projects 01328 and 01451 were initially reported as separate projects. They were merged and are now reported as project 01328.

In addition to conducting projects with funding provided by US DOT as part of the University Transportation Centers program, UTCA actively seeks other partners for its activities. These efforts have been quite successful, as shown in Table 4.

**Table 4: Non-UTC projects**

<b>Year</b>	<b>Number of Non-UTC Projects</b>	<b>Non-UTC Funding</b>
1999	7	\$2.94 M
2000	12	\$3.58 M
2001	20	\$3.06 M
2002	21	\$1.77 M
2003	16	\$2.16 M
2004	9	\$0.89 M
2005	6	\$0.55 M
*2006	3	\$0.12 M
Total	94	\$14.71 M

\*Partial year

## **C. FINANCIAL STATUS REPORTS**

Semi-Annual Financial Report Grant Year 1999  
Semi-Annual Financial Report Grant Year 2000  
Semi-Annual Financial Report Grant Year 2001  
Semi-Annual Financial Report Grant Year 2002  
Semi-Annual Financial Report Grant Year 2003  
Semi-Annual Financial Report Grant Year 2004  
Semi-Annual Financial Report Grant Year 2005  
Semi-Annual Financial Report Grant Year 2006

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 Annual Financial Status Report  
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Grant year 1999 Fund Status as of June 30, 2006

	<b>Approved (Revised) Budget<sup>1</sup></b>	<b>Committed to Date<sup>2</sup></b>
<b>Salaries</b>		
Director	59,318	\$59,318
Associate Directors	26,523	\$31,272
1/4 FTE Faculty, each campus	41,198	\$41,198
Faculty Project Salaries	430,154	\$407,670
Administrative Staff Salaries	16,846	\$17,216
Student Salaries	172,486	\$116,945
Benefits	128,852	\$113,554
<i>Total salaries and benefits</i>	<i>875,377</i>	<i>\$787,173</i>
<b>Expenses</b>		
Scholarships/Grad Tuition	13,766	\$25,368
Permanent Equipment	0	\$4,453
Expendable Prop/Supplies/Services	64,917	\$77,441
Other – Expendable Equipment	40,465	\$11,345
Domestic Travel	31,689	\$20,071
Foreign Travel	0	\$0
Other – Peer Review Honoraria	1,850	\$1,850
Other – Student of the Year	1,000	\$1,000
<i>Total expenses</i>	<i>153,687</i>	<i>\$141,528</i>
Total Direct Costs	1,029,064	\$928,701
F&A – Indirect Costs	358,851	\$347,889
<b>99 Grant Year Totals</b>	<b>1,387,915</b>	<b>\$1,276,590</b>
Federal Share	686,000	\$621,111
Matching Share	701,915	\$649,771
<sup>1</sup> Revised Budget Approved by RSPA on September 8, 2000		
<sup>2</sup> Expended or Encumbered		

**EXHIBIT A**  
 Annual Financial Status Report  
 University Transportation Centers Program  
**University Transportation Center for Alabama**  
Grant year 2000 Fund Status as of June 30, 2006

	Approved (Revised) Budget <sup>1</sup>	Committed to Date <sup>2</sup>
<b>Salaries</b>		
Director	\$60,925	\$61,861
Associate Directors	\$32,084	\$41,483
Faculty Project Salaries	\$27,666	\$27,688
Administrative Staff Salaries	\$303,405	\$417,620
Student Salaries	\$210,132	\$297,813
Benefits	\$104,238	\$107,945
<i>Total salaries and benefits</i>	<i>\$738,450</i>	<i>\$954,411</i>
<b>Expenses</b>		
Scholarships/Grad Tuition	\$67,306	\$61,650
Permanent Equipment	\$0	\$1,979
Expendable Prop/Supplies/Services	\$64,917	\$118,877
Other – Expendable Equipment	\$13,250	\$30,885
Domestic Travel	\$52,654	\$63,597
Foreign Travel	\$0	\$0
Other – Peer Review Honoraria	\$4,400	\$8,766
Other – Student of the Year	\$2,000	\$1,338
<i>Total expenses</i>	<i>\$242,150</i>	<i>\$287,092</i>
Total Direct Costs	\$980,600	\$1,241,502
F&A – Indirect Costs	\$342,858	\$394,301
<b>00 Grant Year Totals</b>	<b>\$1,323,458</b>	<b>\$1,635,803</b>
Federal Share	\$655,500	\$615,030
Matching Share	\$667,958	\$1,028,939
<sup>1</sup> Revised Budget Approved by RSPA on September 8, 2000		
<sup>2</sup> Expended or Encumbered		

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Annual Financial Status Report  
University Transportation Centers Program  
**University Transportation Center for Alabama**

Grant year 2001 Fund Status as of June 30, 2006

	<b>Approved (Revised) Budget<sup>1</sup></b>	<b>Committed to Date<sup>2</sup></b>
<b>Salaries</b>		
Director	\$61,000	\$60,942
Associate Directors	\$43,000	\$9,916
Faculty Project Salaries	\$33,000	\$26,197
Administrative Staff Salaries	\$288,000	\$462,294
Student Salaries	\$200,000	\$208,231
Benefits	\$106,250	\$115,650
<i>Total salaries and benefits</i>	<i>\$731,250</i>	<i>\$883,229</i>
<b>Expenses</b>		
Scholarships/Grad Tuition	\$65,000	\$53,685
Permanent Equipment	\$0	\$20,926
Expendable Prop/Supplies/Services	\$100,000	\$116,988
Other – Expendable Equipment	\$10,000	\$0
Domestic Travel	\$50,000	\$42,431
Foreign Travel	\$0	\$0
Other – Peer Review		
Honoraria	\$4,000	\$7,050
Other – Student of the Year	\$2,000	\$2,000
<i>Total expenses</i>	<i>\$231,000</i>	<i>\$243,080</i>
Total Direct Costs	\$962,250	\$1,126,309
F&A – Indirect Costs	\$336,788	\$375,113
<b>01 Grant Year Totals</b>	<b>\$1,299,038</b>	<b>\$1,501,422</b>
Federal Share	\$646,000	\$611,303
Matching Share	\$653,038	\$890,119
<sup>1</sup> Submitted Oct 29, and approved by RSPA on Nov 8, 2000		
<sup>2</sup> Expended or Encumbered		

**EXHIBIT A**  
Annual Financial Status Report  
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**University Transportation Center for Alabama**

Grant year 2002 Fund Status as of June 30, 2006

	<b>Approved (Revised) Budget<sup>1</sup></b>	<b>Committed to Date<sup>2</sup></b>
<b>Salaries</b>		
Director	\$61,000	\$67,619
Associate Directors	\$0	\$0
Faculty Project Salaries	\$33,000	\$89,315
Administrative Staff		
Salaries	\$305,000	\$499,481
Student Salaries	\$225,000	\$195,511
Benefits	\$99,750	\$130,980
<i>Total salaries and benefits</i>	<i>\$723,750</i>	<i>\$982,906</i>
<b>Expenses</b>		
Scholarships/Grad Tuition	\$72,000	\$28,284
Permanent Equipment	\$0	\$14,737
Expendable Prop/Supplies/Services	\$100,000	\$136,223
Other – Expendable Equipment	\$10,000	\$35,483
Domestic Travel	\$55,000	\$48,778
Foreign Travel	\$0	0
Other – Peer Review Honoraria	\$5,000	\$1,950
Other – Student of the Year	\$2,000	\$2,000
<i>Total expenses</i>	<i>\$244,000</i>	<i>\$265,121</i>
	<i>\$267,455</i>	<i>\$265,121</i>
Total Direct Costs	\$967,750	\$1,250,361
F&A – Indirect Costs	\$338,713	\$374,536
<b>02 Grant Year Totals</b>	<b>\$1,306,463</b>	<b>\$1,624,898</b>
Federal Share	\$652,700	\$598,736
Matching Share	\$653,763	\$1,016,161
<sup>1</sup> Submitted Oct 29, and approved by RSPA on Nov 8, 2001		
<sup>2</sup> Expended or Encumbered		

**EXHIBIT A**  
Annual Financial Status Report  
University Transportation Centers Program  
**University Transportation Center for Alabama**

Grant year 2003 Fund Status as of June 30, 2006

	<b>Approved (Revised) Budget<sup>1</sup></b>	<b>Committed to Date<sup>2</sup></b>
<b>Salaries</b>		
Director	\$61,000	\$55,639
Associate Directors	\$5,000	\$0
Faculty Project Salaries	\$21,000	\$28,085
Administrative Staff		
Salaries	\$422,000	\$566,009
Student Salaries	\$325,000	\$346,735
Benefits	\$140,000	\$162,273
<i>Total salaries and benefits</i>	<i>\$974,000</i>	<i>\$1,158,740</i>
<b>Expenses</b>		
Scholarships/Grad Tuition	\$110,000	\$33,979
Permanent Equipment	\$0	\$8,640
Expendable Prop/Supplies/Services	\$145,000	\$172,908
Other – Expendable Equipment	\$30,000	\$12,148
Domestic Travel	\$41,390	\$41,330
Foreign Travel	\$2,322	\$2,322
Other – Peer Review Honoraria	\$75,000	\$800
Other – Student of the Year	\$2,000	\$1,925
<i>Total expenses</i>	<i>\$384,500</i>	<i>\$274,111</i>
Total Direct Costs	\$1,358,500	\$1,432,852
F&A – Indirect Costs	\$475,475	\$518,434
<b>03 Grant Year Totals</b>	<b>\$1,833,975</b>	<b>\$1,951,286</b>
Federal Share	\$916,300	\$900,422
Matching Share	\$917,675	\$1,052,557

<sup>1</sup>Submitted Oct 24, and approved by RSPA on Oct 28, 2002

<sup>2</sup>Expended or Encumbered



**EXHIBIT A**  
Annual Financial Status Report  
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Grant year 2004 Fund Status as of June 30, 2004

	<b>Approved (Revised) Budget<sup>1</sup></b>	<b>Committed to Date<sup>2</sup></b>
<b>Salaries</b>		
Director	\$60,925	\$60,277
Associate Directors	\$9,926	\$12,000
Faculty Project Salaries	\$392,621	\$539,934
Administrative Staff Salaries	\$183,063	\$108,769
Student Salaries	\$251,613	\$155,842
Benefits	\$141,735	\$160,269
<i>Total salaries and benefits</i>	<i>\$1,039,883</i>	<i>\$1,037,091</i>
<b>Expenses</b>		
Scholarships/Grad Tuition	\$72,797	\$55,685
Permanent Equipment	\$58,250	\$28,394
Expendable Prop/Supplies/Services	\$66,245	\$268,472
Other – Expendable Equipment	\$300	\$11,772
Domestic Travel	\$45,028	\$36,613
Foreign Travel	\$0	\$0
Other – Peer Review Honoraria	\$4,400	\$800
Other – Student of the Year	\$2,000	\$1,720
<i>Total expenses</i>	<i>\$249,020</i>	<i>\$403,456</i>
Total Direct Costs	\$1,288,903	\$1,440,547
F&A – Indirect Costs	\$527,618	\$480,822
<b>04 Grant Year Totals</b>	<b>\$1,816,521</b>	<b>\$1,921,369</b>
Federal Share	\$906,000	\$873,788
Matching Share	\$910,521	\$1,047,581
<sup>1</sup> Budget Approved by RSPA on December 4, 2003		
<sup>2</sup> Expended or Encumbered		

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 Annual Financial Status Report  
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Grant year 2005 Fund Status as of June 30, 2004

	<b>Approved (Revised) Budget<sup>1</sup></b>	<b>Committed to Date<sup>2</sup></b>
<b>Salaries</b>		
Director	\$60,925	\$60,277
Associate Directors	\$9,926	\$12,000
Faculty Project Salaries	\$392,621	\$539,934
Administrative Staff Salaries	\$183,063	\$108,769
Student Salaries	\$251,613	\$155,842
Benefits	\$141,735	\$160,269
<i>Total salaries and benefits</i>	<i>\$1,039,883</i>	<i>\$1,037,091</i>
<b>Expenses</b>		
Scholarships/Grad Tuition	\$72,797	\$55,685
Permanent Equipment	\$58,250	\$28,394
Expendable Prop/Supplies/Services	\$66,245	\$268,472
Other – Expendable Equipment	\$300	\$11,772
Domestic Travel	\$45,028	\$36,613
Foreign Travel	\$0	\$0
Other – Peer Review Honoraria	\$4,400	\$800
Other – Student of the Year	\$2,000	\$1,720
<i>Total expenses</i>	<i>\$249,020</i>	<i>\$403,456</i>
Total Direct Costs	\$1,288,903	\$1,440,547
F&A – Indirect Costs	\$527,618	\$480,822
<b>05 Grant Year Totals</b>	<b>\$1,816,521</b>	<b>\$1,921,369</b>
Federal Share	\$906,000	\$873,788
Matching Share	\$910,521	\$1,047,581
<sup>1</sup> Budget Approved by RSPA on December 4, 2003		
<sup>2</sup> Expended or Encumbered		

**EXHIBIT A**  
Annual Financial Status Report  
University Transportation Centers Program  
**University Transportation Center for Alabama**

Grant year 2006 Fund Status as of June 30, 2006

	<b>Approved (Revised) Budget<sup>1</sup></b>	<b>Committed to Date<sup>2</sup></b>
<b>Salaries</b>		
Director	\$60,925	\$60,925
Associate Directors	\$52,628	\$52,628
Faculty Project Salaries	\$406,907	\$403,912
Administrative Staff		
Salaries	\$30,065	\$55,066
Student Salaries	\$274,345	\$257,526
Benefits	\$148,494	\$150,958
<i>Total salaries and benefits</i>	<i>\$973,364</i>	<i>\$981,015</i>
<b>Expenses</b>		
Scholarships/Grad Tuition	\$49,348	\$50,765
Permanent Equipment	\$5,730	\$0
Expendable Prop/Supplies/Services	\$147,897	\$71,741
Other – Expendable Equipment	\$3,000	\$3,230
Domestic Travel	\$47,890	\$39,560
Foreign Travel	\$0	\$4,000
Other – Peer Review Honoraria	\$4,500	\$4,500
Other – Student of the Year	\$2,000	\$2,000
<i>Total expenses</i>	<i>\$260,365</i>	<i>\$171,796</i>
Total Direct Costs	\$1,233,729	\$1,152,811
F&A – Indirect Costs	\$487,213	\$477,284
<b>06 Grant Year Totals</b>	<b>\$1,720,942</b>	<b>\$1,630,095</b>
Federal Share	\$860,000	\$828,160
Matching Share	\$860,942	\$801,935
<sup>1</sup> Partial budget approved by RSPA July , 2005; full budget on Feb 9, 2006		
<sup>2</sup> Expended and encumbered funds		