University of Connecticut
Tier 2 University Transportation Center
Strategic Plan

Submitted to the
US Department of Transportation
Research and Innovative Technologies Administration (RITA)

October 2007
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I. Program Overview
Within federal legislation entitled the “Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users,” or SAFETEA-LU, the University of Connecticut was designated a Tier 2 University Transportation Center in August 2005. Since 1987, the United States Department of Transportation (USDOT) has funded a series of University Transportation Centers (UTC) throughout the nation to advance technology and expertise in transportation through combined efforts of research, education and technology transfer. The history of excellence in transportation research at the University of Connecticut resulted in the Connecticut delegation, the Connecticut Department of Transportation (ConnDOT) and the University of Connecticut (UConn) supporting the proposal to place a UTC at UConn in this most recent legislation.

The UTC will operate as an independent unit within the university as a strategic partner to the Connecticut Transportation Institute (CTI). CTI will provide the primary administrative staff support needed for the day to day running of the UTC. The UTC and CTI will also work collaboratively in programming activities, such as workshops and workforce development, in areas of overlapping interest for the two organizations. The UTC director will report to the Vice Provost for Research and Graduate Education.

The contents of this plan have been developed through a series of collaborative meetings with stakeholders including university faculty, the State DOT, and other transportation agencies. These formal and informal meetings were held between September 2005 and June 2006. The Director of CTI at that time, Dr. Lisa Aultman-Hall, took the lead in making presentations to various groups regarding the definition and objectives of the USDOT UTC program. Stakeholders were asked to indicate how the USDOT UTC investment at UConn could be used to promote graduate research program growth consistent with The University of Connecticut’s School of Engineering strategic plans as well as advance the number of multidisciplinary activities in transportation on both the UConn campus and within Connecticut communities.

As a result of these stakeholder meetings, the Center’s theme will be Transportation for Smart Growth. Within this theme research will be focused on the following three (3) target areas:

- Document, evaluate and disseminate transportation and land use policies that support the goals for smart growth
- Evaluate the impact of various transportation and land use systems on economic, environmental, and societal sustainability
- Develop operating protocols and designs that maximize the efficiency, convenience and competitiveness of green modes of transportation
This theme directly includes the following modes of transportation: walking, bicycling, transit and automobiles.

This theme represents the intersection of expertise of UConn faculty, critical needs within the State of Connecticut and the strategic goals of the Research and Innovative Technologies Administration (RITA) and the USDOT. This theme will provide common foci for the following proposed activities of the Center:

1. A competitive research grant program;
2. Undergraduate multidisciplinary fellowships;
3. Development of a transportation lab;
4. A new seminar series in transportation and urban planning; and;
5. Professional development courses and workshops.

Together these activities will allow the UTC at UConn to advance research, as well as increased transportation education, technology transfer and workforce development. US DOT RITA guidelines require that research programs awarded funds by the National University Transportation Centers program are complementary to one or more of the national transportation research priorities.

There are four FHWA Policy Analysis, Planning, and Systems Analysis Emphasis Areas. The UTC at UConn will directly address three of these areas. By focusing on the interaction between land use and transportation, the Center will improve the understanding of the interactions between transportation and society. Efforts in the research program will be specifically aimed to enhance decision-making tools and quantitative metrics especially for transportation policy and design that support smart growth. All of the programs of the UTC will advance multimodal transportation planning.

The programs of the UTC at UConn will directly advance two of the five goals set by the Federal Transit Administration’s Strategic Research Plan. The FTA seeks to increase transit ridership and protect the environment and promote energy independence. The Center will contribute to these goals by evaluating metrics to promote transportation planning that is consistent with smart growth, which in tum will reduce vehicular travel and replace it with more energy and cost-effective options.

Similarly, the USDOT’s Strategic Plan outlines safety, connectivity and environmental stewardship as strategic objectives. Also, SAFETY-LU requires that land use be given due consideration in transportation planning and program development. The premise of the UTC program at UConn is that the link between transportation and land use is critical to developing safer and smarter solutions. Therefore, we propose research that creates data-driven tools as well
as programs that communicate the need for smart growth for transportation to
graduate and undergraduate students through development of new
multidisciplinary courses, and to practicing professionals through professional
workshops. This contribution to workforce development is essential and will
benefit from, as well as, enhance the current efforts of CTI’s Technology Transfer
Center.

IA. Glossary
CAP Lab Connecticut Advanced Pavement Laboratory
CCHRP Connecticut Cooperative Highway Research Program
ConnDOT Connecticut Department of Transportation
CTI Connecticut Transportation Institute
FHWA Federal Highway Administration
FTA Federal Transit Administration
JHRAC Joint Highway Research Advisory Committee
LTAP Local Technical Assistance Program
RFP Request for Proposals
RITA Research and Innovative Technology Administration of the USDOT
SAFETEA-LU Safe, Accountable, Flexible, and Efficient Transportation Equity Act –
A Legacy for Users
SOE School of Engineering
T2 Technology Transfer
UConn University of Connecticut
USDOT United States Department of Transportation
UTC University Transportation Centers Program in the RITA

IB. Theme

The theme of the University of Connecticut University Transportation Center is
Transportation for Smart Growth. Within this theme research will be focused on
the following three (3) target areas:

- Document, evaluate and disseminate transportation and land use policies
  that support the goals for smart growth
- Evaluate the impact of various transportation and land use systems on
  economic, environmental, and societal sustainability
- Develop operating protocols and designs that maximize the efficiency,
  convenience and competitiveness of green modes of transportation

IC. Center Director’s Summary

In August 2005, UConn’s President Austin appointed CTI’s Director, Dr. Lisa
Aultman-Hall, as Director of the UTC. Dr. Aultman-Hall left the University in August
2006 after drafting this plan and Dr. Norman Garrick was appointed Director. Dr.
Garrick is an Associate Professor in Civil and Environmental Engineering whose research and service, nationally and internationally, falls directly in the Smart Growth arena. Dr. Garrick’s CV is found in Appendix B.

Dr. Garrick strongly believes that the UConn UTC will become a National Center of Excellence for Transportation and Urban Planning by the end of the grant period. This national contribution will include development, application and dissemination of our ‘Smart Transportation Index’ as a tool to assess how well the states are performing in implementing transportation policy and programs that support smart growth. This index will be reported annually and will be used not just as an evaluation tool but also as a way to promote a wider discussion of smart transportation principles. Foundation and private funding will be sought to make this activity sustainable after the grant has terminated.

The technology transfer activities, such as workshops, are expected to be sustainable in the same way the current CTI T2 programs are partially or completely funded by charging registration fees. The UTC funding will be used to start a new set of research programs related to Smart Growth planning and development - ultimately these programs will be self sufficient. The research grants awarded during this UTC program will be evaluated on their potential to attract funding from other agencies and companies.

II. Program Activities

The following activities are proposed for the UTC:

1. A competitive research grant program;
2. An undergraduate multidisciplinary fellowships;
3. A new transportation lab;
4. A new seminar series in transportation and urban planning; and;
5. Professional development courses and workshops.

IIA. Research Selection

Goal
To ensure an objective process for selecting and reviewing research that balances multiple objectives of the program.

Baseline Measures
Progress toward the UTC Research Selection Goal will be measured by:
1. The number of transportation research projects selected for funding, reported as
   a) Basic research projects
   b) Advanced research projects
   c) Applied research projects

2. The total budgeted costs for those projects

**Planned Activities**

A total of $1.4M of the UTC grant and matching funds will be devoted to research sub-grants. Faculty from all departments on campus will be invited to submit proposals. Projects will be one or two years in length and may request up to $100,000 of federal funding. At least two calls for proposals will be issued over the duration of the UTC. Research teams will be asked to match 1 dollar for every 2 dollars awarded from the UTC. Other matching funds in other portions of the overall program or from internal UConn sources will ensure the total UTC match is 1:1 as required. The RFP, proposal screening and ranking will be handled by CTI staff on behalf of the UTC. The program coordinator in this position has served for numerous years for the Connecticut Cooperative Highway Research Program.

The procedure that we will use in 2007 for developing and selecting projects for funding is outlined below (the dates given are tentative pending the approval of this strategic plan):

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>UConn Smart Growth Research Forum</td>
<td>First week in September</td>
</tr>
<tr>
<td>Submit Intent to Propose</td>
<td>September 20, 2007</td>
</tr>
<tr>
<td>Deadline for Full Proposal</td>
<td>November 1, 2007</td>
</tr>
<tr>
<td>Announcement of Projects for Funding</td>
<td>December 1, 2007</td>
</tr>
<tr>
<td>First Year Projects Starts</td>
<td>January 1, 2008</td>
</tr>
</tbody>
</table>

The process will kick off with the research forum, which is designed to introduce the UTC and to outline our research program to potential PI’s at UConn. We will send out notification and an invitation to all schools and departments in the university that might be involved in work that supports smart growth. One of the goals of this forum will be to encourage researchers that are doing complimentary work in different disciplines to submit joint projects. We will further foster this goal by requiring researchers that are interested in developing proposals to submit an intent to propose – a short document outlining their area of expertise and likely project subject. This will allow the UTC Director and coordinator to pre-screen the researchers with the intention of encouraging researchers with similar ideas to work together on a joint proposal.
A research panel consisting of seven to nine panelists will make the selection of the projects for funding. The panelists will be drawn from national and statewide groups, and will represent both governmental and community based organizations. As required under the UTC grant this panel will include one representative from the US-DOT. We also plan to invite representatives from other federal and state agencies such as the US-EPA Office of Smart Growth, Connecticut Office of Responsible Growth, Connecticut DOT Office of Transit Oriented Development, Connecticut Department of Economic and Community Development, and Connecticut Department of Environmental Protection. We will also seek to have members representing the regional planning agencies and local municipal government. Amongst the planning and community groups that we will consider inviting to serve on this panel are Surface Transportation Policy Partnership (STPP), 1000 Friends of Connecticut, and Regional Plan Association (RPA). We will convene a one-day meeting of the panel to select the projects. Since most of the panelists are within commuting distance we anticipate that the cost of this meeting will be well within our budget for project selection.

Proposal will be expected to consist of the following or similar components:

1. **Project Description (10-page Maximum)**
   a) A statement of project objectives;
   b) A summary of background;
   c) An explicit work plan with a time-line and milestones;
   e) A clear description of the how the project fits within the UTC theme;
   f) A description of the project team including existing and likely external partners

2. **Budget and Budget Justification**
   A detailed budget as well as the DOT template must be provided along with an explicit discussion of the strategy for accomplishing the 50% non-federal funding match required of this sub grant program. In-kind non-federal resources are eligible for match. The budget and budget discussion are not included in the 10-page limit project description limit.

3. **Project Team Experience**
   Two-page resumes of senior project team members should be included and will not count against the 10-page project description.

**Required Activities**

**Proposal Review**
Proposals will be reviewed by a team of four external reviewers including at least one individual from the U.S. Department of Transportation. The panel of peer reviewers will be paid and if possible will meet in person or by phone to discuss
and rank projects. In addition to the quality of Project Description, proposal reviews will be strongly guided by the following criteria:

1. Is the project truly relevant to the UTC theme?
2. Is the project relevant to broad, national strategic planning goals of the US Department of Transportation for research and development, including the UTC program?
3. Does the project have the potential to make fundamental research, education and policy contributions, as well as offer technology transfer and community outreach?
4. Is the project feasible within the time frame presented?
5. Does the project involve both undergraduate and graduate students in research?
6. Does the project encourage cross-disciplinary and multi-school collaboration?

The final selection of the projects will be made by the center director following the recommendation of the research panel.

II. Research Performance

Goal
The goal is to create an ongoing program of basic and applied research whose products are judged by peers or other experts in the field to advance the body of knowledge in transportation.

Baseline Measures
Progress toward the UTC Research Performance Goal will be measured by:

1. The number of transportation research reports published
2. The number of transportation research papers presented at academic/professional meetings

Planned Activities
The UConn UTC has a commitment to “an ongoing program of basic and applied research, the products of which are judged by peers or other experts in the field to advance the body of knowledge in transportation.” Proposed projects will be focused in the following theme areas:

- Document, evaluate and disseminate transportation and land use policies that support the goals for smart growth
- Evaluate the impact of various transportation and land use systems on economic, environmental, and societal sustainability
• Develop operating protocols and designs that maximize the efficiency, convenience and competitiveness of green modes of transportation

We will build on ongoing research at UConn in these areas. Some relevant projects that will serve as a foundation for our program include i) parking supply, design and policy and its impact on town and city centers; ii) context sensitive street and streetscape design and its effect on speed and safety; iii) ‘shared space’ design for streets and public places; iv) developing transportation sustainability index to help local communities and states evaluate their transportation policies to determine how well they are doing from a sustainable perspective; v) street network design and its effect on safety at the community level; vi) congestion charging and its transportation, economic and social impact; vii) GIS and remote sensing mapping to quantify the growth and type of urban development. In addition, we have recently hired a faculty whose specialty is transit system design who will help to broaden the scope of our research.

The UTC will develop a process such that the graduate students/post docs funded, journal articles produced, conference presentations/papers, and technical reports produced as a result of UTC research projects will be tracked into the future. This recognizes that the outcomes of a project many times come after the official end date.

When reports are presented to the UTC they will be peer-reviewed by at least one expert to ensure the report meets the standards of the program. This procedure will be waived if the research has been published in a peer-reviewed journal or conference by the research team. Research reports will be required three months after the end date of the project. If research teams have outstanding reports they will not be eligible to submit proposals to UTC.

II. Education

Goal
To offer a multidisciplinary program of course work and experiential learning that reinforces the University of Connecticut UTC’s theme of Transportation for Smart Growth.

Baseline Measures
Progress toward the UTC Education Goal will be measured by:

1. The number of courses offered that are considered to be part of the transportation curriculum, reported as
   a. undergraduate
   b. graduate
2. The number of students participating in transportation research projects, reported as
   a. undergraduate
   b. graduate

Required Activities
The UTC will use the grant to advance the existing “multidisciplinary program of course work and experiential learning that reinforces” the Smart Growth transportation theme. In particular, it is the goal of the Director to expand and enhance involvement of non-engineering faculty and students within the transportation planning courses. An undergraduate fellowship of $1000 will be awarded to students from any department with faculty affiliated with the UTC. There are already partnerships between the transportation engineering faculty and the following departments outside of Engineering: Geography, Psychology, Plant Science (Landscape Architecture Program), Political Science and Economics. We intend the fellowship program to increase our involvement with students and faculty of these departments and also to establish working relationship with additional departments.

Undergraduate student involvement in research is already solid at UConn and the UTC grants will involve student research (see evaluation criteria above).

The University of Connecticut UTC will participate in the UTC Outstanding Student of the Year program.

Because student email addresses have been standardized, we expect to be able to contact UTC students for follow-up evaluation throughout their time at UConn. We propose a web-based survey every year where we explicitly ask former students to indicate whether they have worked in transportation-related summer or permanent jobs.

IID. Human Resources

Goal
To increase the number of students, faculty, and staff who are attracted to and substantively involved in the undergraduate, graduate, and professional programs of the Center.

Baseline Measures
Progress toward the UTC Education Goal will be measured by:

1. The number of advanced degree programs offered that are considered to be transportation-related
2. The number of students enrolled in those transportation-related advanced degree programs

3. The number of students who received degrees through those transportation-related advanced degree programs

**Planned Activities**

As indicated above the UTC has the goal of increasing the “number of students, faculty, and staff who are attracted to and substantively involved in the undergraduate, graduate, and professional programs of the Center.” We will do this by offering grants, courses and fellowships beyond the traditional civil engineering department. The specific initiatives planned to advance these goals include the following:

**UTC Undergraduate Fellowship:** We have set aside $20,000 over the course of the grant for undergraduate fellowship. These fellowships will be offered to undergraduate studies across the university who interested in transportation and urban planning. The students will apply for the fellowships and will be required to participate in the seminar program of the UTC. They will also be encouraged to do research in the theme areas with affiliated faculty of the UTC.

**New UTC Faculty Members:** The University recently hired two new faculty members who focus on sustainable transportation – one in civil engineering and the other in geography. These faculty hires were specifically designed to strengthen teaching and research in the theme area of the UTC. The addition of these new faculty members will mean more course offerings in transportation and urban planning for students and research in a wider range of subject in the theme area of the UTC. The civil and environmental engineering department has specifically committed release time for their new faculty member to work on projects related to the UTC.

**UTC Seminars:** We have budgeted $32,000 to put on workshops and seminars in the theme area of the UTC. We will organize joint events with international, national and statewide organizations that we already have a relationship with, such as, The UK based Princes Foundation for the Built Environment, The Seaside Institute, and the Connecticut Main Street Program. This collaborative effort will allow us to reach as wide an audience as possible and to have maximum impact nationally. We will also team with CTI's Technology Transfer Center drawing on their proven skills at administering workshops.
UTC Transportation Lab: The School of Engineering at UConn has committed $150,000 to develop a new transportation laboratory that will support research and teaching in the theme area of the UTC. We are currently working on plans for the lab which will have two focuses: Traffic Simulation and Intelligent Transportation System (ITS) for Public Transit. We plan to implement the lab in stages with the first stage to be developed in the academic year 2007 to 2008.

UTC Research: We have discussed the research program at length about but we want to re-emphasis that our core programs stress inter-disciplinary collaboration and are designed to attract talented students and faculty from varied disciplines in the university to use their skills and training to tackle transportation problems. We will prioritize those research projects that build and strengthen relationships across disciplines.

We are confident that these programs will increase the visibility of the UTC at UConn and will lead to more faculty and staff being involved in focused research in transportation and urban planning. Moreover, we believe that these programs will significantly increase the interaction across disciplines bringing the cross fertilization that is needed to truly advance the state of the art in terms of research and education relating to smart transportation planning.

IIE. Diversity

Goal
To ensure that students, faculty, and staff who reflect the growing diversity of the US workforce and are substantively involved in the undergraduate, graduate, and professional programs of the Center.

Planned Activities
The UTC seeks to promote diversity of faculty, students, staff and the future workforce in transportation. We will partner with UConn’s existing diversity programs to cast a broad net to ensure the opportunity to participate in our programs is known to all. Furthermore, in our case study and transportation courses we seek to include study of how transportation needs and services differ by community and group. Although RITA does not require collection of race and gender data, the UTC may consider collection of this data for internal use.

IIF. Technology Transfer

Goal
To ensure the availability of research results to potential users in a form that can be directly implemented, utilized or otherwise applied.

**Baseline Measures**
Progress toward the Technology Transfer Goal will be measured by:

1. the number of transportation seminars, symposia, distance learning classes, etc. conducted for transportation professionals

2. the number of transportation professionals participating in those events

**Planned Activities**
UConn embraces the USDOT goal to increase the “availability of research results to potential users in a form that can be directly implemented, utilized or otherwise applied.”

In 2005-2006 the Connecticut Technology Transfer (T2) Program accomplished the following goals:

- Provided 35 workshops to 3,350 participants
- Coordinated the Eastern Winter Road Maintenance Symposium at the new Connecticut Convention Center in Hartford (800 participants)
- Co-hosted Construction Career Day for 1100 high school juniors and seniors
- Started a partnership with ConnDOT for a state-wide Safe Routes to School program.
- Staff provided outreach technical support for 53 technical materials requests, 48 information and equipment loan requests and 5 field-based assists. This list is missing critical topics and audiences essential for the promotion of Smart Growth. These topics include planning for transit, bicycle and pedestrian design, and parking. It is our intention to use the UTC funding to spark new program development within the T2 center to expand the audience beyond the local agencies targeted in the LTAP grant and to expand the topics covered.

Activities planned for 2007-8 include: i) UTC research forum which will introduce the UTC to the wider university community; ii) UTC webpage; iii) presentation to Connecticut state agencies (ConnDOT, Office of Responsible Growth, DEP, Department of Economic and Community Development) by the director; iv) inter-disciplinary seminar series; v) research call for proposal (including a meeting of the research advisory committee); vi) articles in the popular press from the director and other affiliated staff.
Performance Indicators
We will use the same performance measures in the UTC-sponsored T2 as used in the LTAP program: participants, events, request for information, and a well-established formal course evaluation technique. In recent years the T2 program has moved toward using more active learning techniques and roundtables in delivery of programs - we think that that is a good model for the UTC also.

III. Management Approach

The UTC will operate as an independent unit within the university but as a strategic partner to CTI. CTI will provide the primary administrative staff support needed for the day to day running of the UTC. The UTC and CTI will work collaboratively in programming activities, such as workshops and workforce development, in areas of overlapping interest for the two organizations. The proposed organizational chart of the UTC is shown in Appendix C.

We plan to develop a UTC advisory board that will consist of representatives from national and statewide groups, and will represent both governmental, community based organizations and the business sector. The federal and state government organizations that we will consider inviting to provide representation on the panel will include the US-DOT, US-EPA Office of Smart Growth, Connecticut Office of Responsible Growth, Connecticut DOT Office of Transit Oriented Development, Connecticut Department of Economic and Community Development, and Connecticut Department of Environmental Protection. We will also seek to have members representing the regional planning agencies and local municipal government. Amongst the planning and community groups that we will consider inviting to serve on this panel are Surface Transportation Policy Partnership (STPP), 1000 Friends of Connecticut, and Regional Plan Association (RPA).

IIIA. Institutional Resources

All office equipment and facilities are already set up for use by the UTC. The Technology Transfer library at UConn is an excellent resource for our smart growth UTC. The Office of Sponsored Programs will provide grant management and assistance with reporting on the contract. CTI will coordinate all performance metrics.

UConn has agreed to provide a combination of cash and in-kind match to ensure the 1:1 match of the UTC over the five-year period.
A comprehensive web page for the UTC will be designed by SOE staff and updated by CTI staff. The server is provided and backed-up by the SOE. There is no limit on the web space and resources, which can be devoted to the UTC.

CTI maintains a transportation library on the Depot Campus of UConn. It is currently funded by the Connecticut Department of Transportation and includes an on-line searchable database. The library is available to researchers in existing CTI programs and will be available to UTC project investigators as well.

CTI’s T2 Center maintains a comprehensive mailing list database of transportation stakeholders within the Northeast region. When appropriate this database will be used to promote the new T2 workshops and programs in the area of Smart Growth.

The University of Connecticut has provided funds to hire a new transportation faculty in the UTC theme area. This faculty is expected to contribute to research and teaching in Sustainable Transportation. The University’s School of Engineering and Department of Civil and Environmental Engineering have also committed start up funds for this faculty, that include graduate student support and funds to equip a new transportation lab.

IIIB. Center Director

The Center Director will be responsible for implementing the Center’s Strategic Plan and ensuring compliance with all other UTC Program requirements. The Center Director will be assisted in direction and oversight of the Center’s funds, personnel, and programs by a 0.65FTE program coordinator. The Center Director will represent the UTC at external meetings including up to two annual meetings held by USDOT with the directors of all of the University Transportation Centers. Dr. Garrick’s resume is attached.

IIIC. Center Faculty and Staff

The Center Director will be assisted in direction and oversight of the Center’s funds, personnel, and programs by a 0.65FTE program coordinator. Only the Director and Program Coordinator (above) will spend more than 50% FTE on the program. The Program Coordinator will manage the research proposal and review process, reporting of the projects, yearly collection of performance metrics, Student of the Year competition, monitoring of the UTC web site for updates, preparation of newsletters and organization of the UTC technology transfer programs.

IIID. Multiparty Arrangements
The University of Connecticut is the sole grantee of this program. Co-PIs at other Institutions will be allowed on Center grants but may not include more than 50% of the sub-grant amount. The project team can negotiate as they see fit to make the match requirement of 50% for the sub-grants. UConn will provide sub-contracting agreements with any subcontractor.

### III.E. Matching Funds

The overall full budget for the UTC is provided in Appendix D. This is the internal format used at CTI and UConn to determine and negotiate match. The USDOT format budget is also provided in this document. The objective of providing the full estimated budget in Appendix D is to illustrate the match strategy planned by UConn.

Sub-grant research teams will be expected to match 1:2 or 50%. Units within the University will provide cash contribution towards the research grant program of the UTC. The SOE will provide in-kind staff time for publication and web support. UConn will pay the academic year salary of the Director. Fringe benefits on match salaries are included as match. The indirect cost savings on cash and in-kind match is also tabulated as match.

The use of in-kind and cash contributions as matching funds are set forth in the most recent revision of OMB Circular A-110. The UConn Office for Sponsored Programs will provide oversight on match. UConn maintains a system of internal audit to ensure compliance.

### IV. Budget

#### Format

The full budget estimate is shown in Appendix D while the DOT format budget for DOT year 1 is shown in Table 1.

#### Grant Year

The UConn UTC year will start on August 22 and end on August 21. Phase 1 of the UConn program started in August 2005 for the purposes of strategic planning. We are requesting the grant be used in four phases ending in August 2010.

#### Salaries

Salaries for staff and faculty are those set by UConn and both parties are represented by unions. Fringe rates are set by the state of Connecticut, although some rates vary depending on the retirement plan selected by the individual employee.
Scholarships
Scholarship funds are used for $1000 fellowships to seniors. Graduate students are expected to be included as research assistants on research projects. The inclusion of students is an explicit criterion for evaluation of research proposals. When students are included as research assistants, the University provides for their tuition. This is used as match (although the indirect cost savings corresponding to this amount is not used).

Equipment
Equipment is not expected to exceed $5000. This will include computers and other related equipment necessary to conduct UTC business. Should the purchase of permanent equipment having a unit acquisition cost of $5,000 or more be necessary, written permission will be requested and obtained from RITA prior to the purchase.

Foreign Travel
Foreign travel will only be undertaken if approved prior to travel from RITA.

Facilities & Administrative (Indirect) Costs
The indirect cost rate of UConn was 48% in FY 05 but is estimated to rise to 52% and 53% during the life of this grant. These estimates have been used for budgeting purposes.
Table 1 - USDOT format budget for first 430K (Phase I)

**University Transportation Center (UTC) Budget Plan**

**Name of Grantee:** University of Connecticut  
**Grant Year:** 8/22/05 thru 8/21/07

<table>
<thead>
<tr>
<th>CATEGORIES</th>
<th>Budgeted Amount</th>
<th>Explanatory Notes</th>
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<td>Center Director Salary</td>
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<td>Faculty Salaries</td>
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<td>Student Salaries</td>
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<td><strong>Total Salaries and Benefits</strong></td>
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<td>Scholarships/Tuition</td>
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<td>F&amp;A (Indirect) Costs</td>
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<td><strong>TOTAL COSTS</strong></td>
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<td>Federal Share</td>
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<tr>
<td>Matching Share (if applicable)</td>
<td>$430,000</td>
<td></td>
</tr>
</tbody>
</table>

*Includes Federal and Matching Shares*
APPENDIX A - BASELINE MEASURES FOR UNIVERSITY TRANSPORTATION CENTERS

Report for the most recently completed academic year and for the institution comprising your UTC (2005-2006).

Research Selection

1. Number of transportation research projects selected for funding.

   24

1a. Number of those projects that you consider to be: basic research (16), advanced research (4), and applied research (8). Projects may be included in more than one category if applicable. (Four projects were included in more than one category.)

2. Total budgeted costs for the projects reported in 1 above.

   $ 1,254,581

Research Performance

3. Number of transportation research reports published.

   11

4. Number of transportation research papers presented at academic/professional meetings.

   13

Education

5. Number of courses offered that you consider to be part of a transportation curriculum. Report courses shown in the university course catalog as being offered, whether or not they were conducted during the academic year being reported.

   Undergraduate: 2
   Graduate: 4

6. Number of students participating in transportation research projects. Count
individual students (one student participating in two research projects counts as one student).

Undergraduate: 3
Graduate: 6

**Human Resources**

7. Number of advanced degree programs offered that you consider to be transportation-related.

   Master’s Level: 1
   Doctoral Level: 1

8. Number of students enrolled in those transportation-related advanced degree programs.

   Master’s Level: 4
   Doctoral Level: 3

9. Number of students who received degrees through those transportation-related advanced degree programs.

   Master’s Level: 3
   Doctoral Level: 1

**Technology Transfer**

10. Number of transportation seminars, symposia, distance learning classes, etc. conducted for transportation professionals.

5

11. Number of transportation professionals participating in those events.

10
APPENDIX B - RESUME OF DR. NORMAN GARRICK

Education
Ph.D. 1986 Purdue University
M.S.C.E. 1983 Purdue University
B.S.C.E. 1978 University of the West Indies, Trinidad

Experience
2006- Director, UTC at UConn
1994- Associate Professor, University of Connecticut
2004 Visiting Lecturer, University of the West Indies, Jamaica
2004 Visiting Researcher, University of California, Davis
1999-01 Director, Connecticut Transportation Institute, University of Connecticut
1996 Visiting Researcher, Cambridge University, UK
1990-94 Assistant Professor, University of Connecticut
1986-90 Visiting Assistant Professor, University of Connecticut
1979-81 Site Engineer, N.C. Smith Inc., Jamaica

Honors and Award
J. William Fulbright Fellow, 2004

Design and Consulting Projects
• Storrs Center Design, Storrs, CT (held in Pittsburgh, PA), August 2006 (for Leyland Alliance with Urban Design Associates)
• Rose Town Charrette, Trench Town, Kingston, Jamaica, July 2006 (with Prince of Wales Foundation and Duany Plater-Zyberk and Company)
• Norfolk Transportation Planning, Norfolk, VA, June 2006 (with Urban Design Associates)
• Pacifica Charrette, Pacifica, California, May 2006 with Duany Plater-Zyberk and Company
• St. Bernard Parish Plan, St. Bernard Parish, LA, March 2006 (for Louisiana Recovery Authority with Duany Plater-Zyberk and Company)
• Mississippi Renewal Forum, Biloxi, MS, Oct 2005
• Unionville Village Master Plan, Farmington, CT with Town 2002
• Storrs Downtown Master Plan, Mansfield, CT with Town/UCONN, 2001
• Parkville-Hartford Urban Designer, Hartford, CT with FHWA, 2000
• Connecticut Transportation Summit 2000, consult to Office of the Speaker of the House, 2000
Media: Articles and Interviews

**Engineering Professor Helping Revitalize Birthplace of Reggae Legend**
UCONN Advance, October 23, 2006

**Bad Roads Taking Toll**
Article on Transportation Funding, Connecticut Post, October 4, 2006

**Building, and, Rebuilding Communities**
Op-ed, Hartford Courant, August 27, 2006

**Disaster Recovery Meeting Packed**
Article on Louisiana Recovery Authority Workshop, Baton Rouge Advocate, Feb 14, 2006

**Both potential, problems seen in two-way traffic**
Article on downtown street design, South Bend Tribune, Feb 9, 2006

**Predictions often come all too true**
Article on Transportation Planning in Mississippi, Sun-Herald (South Mississippi), Feb 6, 2006

**Breaking cycle of urban sprawl**
Article on Presentation to Ocean Spring (MS) Chamber of Commerce, Sun-Herald (South Mississippi), Jan 13, 2006

**Imagine a park instead of rails**
Article on Mississippi Renewal Forum, Sun-Herald (South Mississippi), Oct 16, 2005

**“Excessive Parking a Downer for Shoppers”**
Article on Research Project, the Hartford Courant, Nov 28, 2005

“Study says too many parking spots”
Article on Research Project, the Manchester Journal-Inquirer, Nov 26, 2005

**“Rethinking the Urban Speedway”**
Article on Street Design, Governing Magazine, Oct 2005

“Quick Fix on Farmland Won’t Solve Planning Problems”
Op-ed, Hartford Courant, June 5, 2005

"From Here to There and Road Weary: Connecticut’s Transportation Dilemma"
Panelist, Connecticut Public Television (PBS), May 2001

**“Take a Train Lesson from Dallas, Of All Places”**

**“A New Approach to Unclogging the Highways”**

**“Transportation – The Missing Link in Hartford’s Revitalization”**
Op-ed, the Hartford Courant, April 1, 1999

Invited Talks

**“What is Transportation For?”**
New Urbanism in the Midwest, Seaside Institute, September 2006, Carmel, Indiana

“Back to the Future: Great Streets for America”
Context Sensitive Street Design Workshop, CNU and Metropolitan Planning Council
September 2006, Chicago, Illinois
“ITE/CNU Urban Thoroughfares Project”
Congress of the New Urbanism XIV
June 2006, Providence, RI

“Transportation: Choices and Consequences”
Ocean Springs Chamber of Commerce
January 2006, Ocean Springs, MS

“Structuring of Settlements: An American Perspective”
Structuring Settlement Workshop, Prince of Wales Foundation,
January 2006, Poundbury, Dorset, UK

“Transportation: Choices and Consequences”
Mississippi Renewal Forum Workshop, Seaside Institute,
December 2005, Biloxi, MS

“Making Streets Fit for Cities and Towns”
Railvolution 2005,
October 2005, Salt Lake City, UT

“Context Sensitive Street Design”
AASHTO Subcommittee on Design,
June 2005, Chicago, Illinois

“From Main Roads to Mixed Use Streets”
Landor/University of Westminster Conference,
November 2004, London, UK

National and Statewide Service (since 2000)

- Congress for the New Urbanism, Board Member
- Congress for the New Urbanism, Transportation Task Force, Co-chair, 2005
- 1000 Friends of Connecticut (Smart Growth Advocates), Board Member
- Graduate Course for Context Sensitive Design, Center for Transportation and the Environment, North Carolina State University, Advisory Panel Member, 2005
- FHWA/EPA/CNU Research, Context Based Design of Major Streets, Steering Committee, 2004
- Connecticut DOT Advisory Committee on Context Sensitive Design, 2001
- Connecticut Transportation Strategy Board (Transportation Investment Area: I-91)
  Elected Member, CRCOG, 2001 (ongoing)
- National Cooperative Highway Research Program Committee Member, Aesthetic Concrete Barriers and Bridge Deck Design, 2001 (ongoing)

Journal Articles (since 2000)

• Baird, B.T., Garrick, N. W., “Decentralization in the Hartford Metropolitan Region, 1900 to 2000," Transportation Research Record (TRR), Transportation Research Board, 2004

Conference Proceedings (since 2000)


Research Projects: (since 2000)

• Strategies for Extending the Bicycle Network in Older Cities, Funded by US-DOT, New England University Transportation Center, September 2005 – August 2006, $65,000
• Value Pricing in Connecticut: Policy Simulation and Economic Impact, Funded by the Connecticut Department of Transportation, (co-PI with F. Carstensen, S. McMillen, B. Baird), June 2005 - May 2007, $100,000
• Designing Roads that Guide Drivers to Choose Safer Speeds, Funded by the Connecticut Department of Transportation, (co-PI with J. Ivan), June 2004 - May 2006, $100,000
• Parking Demand Management for Sustainable Development, Funded by US-DOT, New England University Transportation Center, (Co-PI with L. Aultman-Hall), September 2003 – August 2004, $65,000
• A Guide for Municipals to the Use and Performance of Permeable Pavements, Funded by Non-point Education for Municipal Officials (NEMO), September 2002 - August 2003, $22,000.
• A Best Practice Guide for the Design of Context Sensitive Roadway Cross-sections, Funded by the Connecticut Department of Transportation, (co-PI with P. Miniutti), June 2001 - May 2003, $90,000
• Complex Systems: Cities in Their Environment (Biocomplexity Incubation Activity), Funded by the National Science Foundation, (co-PI with R. Rockwell, R. Gilmore), September 1 2000 - August 31 2002, $100,000
APPENDIX D – ESTIMATED BUDGET DETAILS AND MATCH (FULL 5 YEAR BUDGET)

A. Personnel

<table>
<thead>
<tr>
<th></th>
<th>Salary</th>
<th>Appt</th>
<th>Effort</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Norman Garrick, UTC Director</td>
<td>100,000</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>2. Norman Garrick, UTC Director</td>
<td>22,222</td>
<td>2</td>
<td>30%</td>
</tr>
<tr>
<td>3. Lisa Aulman-Flah</td>
<td></td>
<td></td>
<td>sum</td>
</tr>
<tr>
<td>4. TEN, Program Coordinator</td>
<td>58,000</td>
<td>12</td>
<td>25%</td>
</tr>
<tr>
<td>5. TEN, Financial Assistant</td>
<td>38,200</td>
<td>12</td>
<td>20%</td>
</tr>
<tr>
<td>6. TEN, Program Aide</td>
<td>32,000</td>
<td>12</td>
<td>20%</td>
</tr>
<tr>
<td>7. TEN, Graduate Assistant</td>
<td>24,600</td>
<td>12</td>
<td>17%</td>
</tr>
</tbody>
</table>

Total Salaries


<table>
<thead>
<tr>
<th>Year 0</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>34,180</td>
<td>65,903</td>
<td>91,973</td>
<td>96,672</td>
<td>101,400</td>
<td>396,008</td>
</tr>
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</table>

B. Fringe Benefits

<table>
<thead>
<tr>
<th></th>
<th>Yr I</th>
<th>Yr II</th>
<th>Yr III</th>
<th>Yr IV</th>
<th>Yr V</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Norman Garrick, UTC Director</td>
<td>40.1%</td>
<td>34.2%</td>
<td>36%</td>
<td>37%</td>
<td>36%</td>
</tr>
<tr>
<td>2. Norman Garrick, UTC Director</td>
<td>11.4%</td>
<td>15.7%</td>
<td>18%</td>
<td>19%</td>
<td>20%</td>
</tr>
<tr>
<td>3. Lisa Aulman-Flah</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. TEN, Program Coordinator</td>
<td>57.4%</td>
<td>53.1%</td>
<td>55%</td>
<td>58%</td>
<td>57%</td>
</tr>
<tr>
<td>5. TEN, Financial Assistant</td>
<td>40.1%</td>
<td>34.2%</td>
<td>36%</td>
<td>37%</td>
<td>36%</td>
</tr>
<tr>
<td>6. TEN, Program Aide</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. TEN, Graduate Assistant</td>
<td>5.9%</td>
<td>11.8%</td>
<td>13%</td>
<td>14%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Total Fringe

Total Salaries & Fringes

C. Equipment

D. Travel

E. Other Direct Costs

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Supplies</td>
<td>850</td>
<td>938</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
</tr>
<tr>
<td>2. Internal Research Grant Projects</td>
<td>121,000</td>
<td>100,000</td>
<td>200,000</td>
<td>200,000</td>
<td>65,000</td>
</tr>
<tr>
<td>3. Matching by Grant FIs (AY &amp; Tuition)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Undergraduate Fellowships</td>
<td>5,000</td>
<td>6,000</td>
<td>5,000</td>
<td>5,000</td>
<td>20,000</td>
</tr>
<tr>
<td>5. Workshops/Seminars</td>
<td>8,000</td>
<td>9,000</td>
<td>9,000</td>
<td>9,000</td>
<td>32,000</td>
</tr>
<tr>
<td>6. Consultants: Outside Review Panel</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
<td>9,000</td>
</tr>
<tr>
<td>7. Software Licenses</td>
<td>-</td>
<td>2,000</td>
<td>2,000</td>
<td>2,000</td>
<td>6,000</td>
</tr>
</tbody>
</table>

Total Other Direct Costs


<table>
<thead>
<tr>
<th>Year 0</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>48,788</td>
<td>93,704</td>
<td>125,345</td>
<td>132,579</td>
<td>140,220</td>
<td>546,838</td>
</tr>
</tbody>
</table>

F. Total Direct Costs

G. Indirects (F&A) @

46% | 52% | 52% | 52% | 52%

"no F & A applied," "F & A on 1st $25,000"

H. Total Costs

$ 73,464 | $ 355,536 | $ 473,127 | $ 543,770 | $ 551,548 | $ 1,398,445

$ 430,000
### COST SHARE

**A. Personnel**

1. Norman Garrick, UTC Director  
   - Salary: 160,000  
   - Effort: 100%  
   - Yr 1: 17.77%  
   - Yr 2: 38%  
   - Total: 17,772

2. TBN. STS Faculty  
   - Salary: 85,000  
   - Effort: 12  
   - Yr 1: 50%  
   - Yr 2: 49,085

3. TBN. Graduate Assistant  
   - Salary: -  
   - Effort: -  
   - Yr 1: 20,185

4. SOE Staff (Pub & Web Support)  
   - Salary: 72,000  
   - Effort: 12  
   - Yr 1: 8%  
   - Yr 2: 3,500

**Total Salaries**

- Yr 1: 23,332
- Yr 2: 45,848
- Yr 3: 144,246
- Yr 4: 103,700
- TOTAL: 408,073

**B. Fringe Benefits**

- Yr 1: 7,327
- Yr 2: 13,845
- Yr 3: 11,710
- Yr 4: 58,606
- TOTAL: 83,588

**Total Fringes**

- Yr 1: 9,487
- Yr 2: 15,114
- Yr 3: 39,405
- Yr 4: 140,947
- TOTAL: 140,947

**C. Equipment**

- Domestic: 50,000
- Foreign: 50,000
- TOTAL: 100,000

**D. Travel**

- Domestic: -
- Foreign: -
- TOTAL: -

**E. Other Direct Costs**

1. CTI Lab Renovation  
   - Yr 1: 25,000  
   - Yr 2: 25,000

2. Internal Research Grant Projects  
   - Yr 1: 75,000  
   - Yr 2: 60,000

3. Matching by Grant PIs (AY & Tuition, 1:2)  
   - Yr 1: 90,000  
   - Yr 2: 112,500

4. Workshops/Seminars  
   - Yr 1: -  
   - Yr 2: -

5. Consultants: Outside Review Panel  
   - Yr 1: -  
   - Yr 2: -

6. Software Licenses  
   - Yr 1: -  
   - Yr 2: -

**Total Other Direct Costs**

- Yr 1: 173,000
- Yr 2: 202,500
- Yr 3: 100,000
- Yr 4: 750,500
- TOTAL: 1,236,000

**F. Total Direct Costs**

- Yr 1: 23,332  
- Yr 2: 45,848  
- Yr 3: 144,246  
- Yr 4: 103,700  
- TOTAL: 322,126

**G. Indirects (F&A)**

- Yr 1: 46%  
- Yr 2: 52%  
- Yr 3: 52%  
- Yr 4: 53%  
- TOTAL: 15,625

**H. Total Costs**

- Yr 1: 408,073  
- Yr 2: 408,073  
- Yr 3: 408,073  
- Yr 4: 408,073  
- TOTAL: 1,632,289

---

**Cost Share Breakdown**

<table>
<thead>
<tr>
<th>Phase</th>
<th>Total Project</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Phase 1</td>
</tr>
<tr>
<td></td>
<td>$48,704</td>
</tr>
<tr>
<td></td>
<td>$640,400</td>
</tr>
<tr>
<td></td>
<td>$381,200</td>
</tr>
<tr>
<td></td>
<td>$544,565</td>
</tr>
<tr>
<td></td>
<td>$475,201</td>
</tr>
</tbody>
</table>

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Garrick US DOT - 5 Year 01 18 07.xls 5 YR Cost Share