NJDOT Bureau of Research
QUARTERLY PROGRESS REPORT

Project Title:	Portable Work Zone Barrier-Balsi Beam
RFP NUMBER: Project 2007-14	NJDOT RESEARCH PROJECT MANAGER: Ed Kondrath
TASK ORDER NUMBER:: RFCUNY	PRINCIPAL INVESTIGATOR: Robert E. Paaswell, Ph.D.
Project Starting Date: 01/01/07 **Original** Project Ending Date: 12/31/07 **Modified Completion Date:**	Period Starting Date: 1/01/07 Period Ending Date: 3/31/07

Task	% of Total	% of Task this quarter	% of Task to date	% of Total Complete
Phase I – Fabrication: Task 1: Advisory Committee and Presentations	10%	100%	100%	10%
Task 2: Licensing, Bidding, and Contract Award	20%	20%	20%	4%
Task 3: Fabrication and Inspection	50%	0%	0%	0%
Task 4: Receive Beam and Final Inspection	10%	0%	0%	0%
Task 5: Documentation of Phase 1	10%	0%	0%	0%
TOTAL	100%			14%

Project Objectives:
The objectives of this project are the fabrication, implementation, and evaluation of the Caltrans Balsi Beam portable protection device for the safety of New Jersey Department of Transportation workers in short duration highway work operations. This two-phase project will build on the results of the previous study, "Identification of Traffic Control Devices for Mobile and Short Duration Work Operations," which identified the potential for the Balsi Beam to protect exposed highway workers along the shoulder and in the traveled lanes of high traffic, high speed areas.

Project Abstract:
This work will focus on the fabrication and implementation of the Balsi Beam which is a truck mounted, moveable, expandable beam that provides positive work zone protection comparable to a fixed concrete barrier. It is specifically intended to enhance worker safety when carrying out shoulder repair in work zones adjacent to guardrails, inlet repair, bridge rails, bridge deck repair, sound walls and other work where workers are normally exposed to traffic or behind cones in limited work areas for several hours. Usually the shadow vehicle or the truck mounted attenuator provides protection from rear end collisions; the new device provides protection from adjacent lane traffic.

The Balsi Beam provides positive, steel beam protection system for exposed workers who normally work behind temporary cones and barrels in limited work areas. The TL-3 crash test at the Texas Transportation Institute shows that the beam does not deflect as conventional unpinned portable concrete median barrier in such crashes. The Balsi Beam is practically applicable to bridge and concrete repair projects where workers are concentrated in small areas over a one day period or less.

The Balsi Beam was developed by the California Department of Transportation, Federal Highway Administration and the Texas Transportation Institute under the Strategic Highway Research Program. The device was implemented by Caltrans on Interstate Route 80 in northern California. The Caltrans implementation identified the ease of transporting the beam to the job site, ease of set up and ability of workers to work in the protected areas. Caltrans is able to use small front end loaders, compressors and other such equipment in the protected area. Workers like the protection of a positive barrier between them and high speed traffic.

1. Progress this quarter by task:
   - Task 1 was completed. The project team met with the advisory committee and gave a presentation of the tasks and project goals.
   - The team contacted the California Department of Transportation to initiate the Balsi Beam licensing agreement. Caltrans has contacted their attorney to begin the agreement process. When the agreement is prepared it will be sent to the NJDOT for execution.

2. Proposed activities for next quarter by task:
   - When the licensing agreement is completed and the plans are received, the team will present and review the plans with the NJDOT and begin the bidding and contacting as outlined in Task 2 of the proposal.

3. List of deliverables provided in this quarter by task (product date)
   - Meeting and presentation to the advisory committee as outlined in Task 1 and the beginning of Task 2, licensing, bidding and contacting with a vendor for fabrication.

4. Progress on Implementation and Training Activities
   NA

5. Problems/Proposed Solutions
   NA

Total Project Budget	$40,365
Modified Contract Amount:	
Total Project Expenditure to date	$5,650 est.
% of Total Project Budget Expended	14%

NJDOT Bureau of Research
QUARTERLY PROGRESS REPORT

Project Title:	Technology Transfer 2007
RFP NUMBER: NA	NJDOT RESEARCH PROJECT MANAGER: Camille Crichton-Sumners
TASK ORDER NUMBER:: NA	PRINCIPAL INVESTIGATOR: Robert Paaswell
Project Starting Date: 01-01-07 Original Project Ending Date: 12-31-07 **Modified Completion Date:**	Period Starting Date: 01-01-07 Period Ending Date: 03-31-07

Task	% of Total	% of Task this quarter	% of Task to date	% of Total Complete
Lecture Series	15%	0	0	0
Research Newsletter	15%	20%	20%	3%
NJDOT Annual Report	10%	0	0	0
US DOT Reporting Requirements (Annual Report, Semi-Annual Report, etc…)	25%	0	0	0
Publication & Distribution of Research Papers	10%	10%	10%	1%
Process Request for Proposals	15%	10%	10%	2%
Participate in Conferences	10%	0	0	0
Total	100%			5%

Project Objectives:
The objectives of the Technology Transfer program are:

- To increase the awareness and level of information concerning transportation issues facing US DOT Region 2;
- To improve the knowledge base and approach to problem solving of the region's transportation workforce, from those operating the systems to those at the most senior levels of managing the system; by doing so, to improve the overall professional capability of the transportation workforce;
- To stimulate discussion and debate concerning the integration of new technologies into our culture, our work and our transportation systems;
- To provide the more traditional but extremely important job of dissemination of research and project reports, studies, analysis and use of tools to the education, research and practicing community;
- To provide unbiased information and testimony to decision-makers concerning regional transportation issues consistent with the UTRC theme.

Project Abstract:
The goal of the Technology Transfer Program for the New Jersey Department of Transportation is to provide research results to potential users in a form that can be directly implemented, utilized and applied to transportation operations.

1. Progress this quarter by task (2006):

- The UTRC completed the first of several newsletters, and e-mailed and posted the newsletter to interested professionals and the NJDOT
- The UTRC completed the 2007 Year Proposal and 2006 Annual Report. Both documents are being reviewed internally at the UTRC and will be sent to the NJDOT by the end of March.
- The UTRC is preparing a list of prospective brown bag presenters for the NJDOT. The list will be available at the April 13, 2007 quarterly meeting.
- The NJDOT Assistant Commissioner has expressed an interest in Alain Kornhauser's GPS presentation. The UTRC will coordinate his presentation to the commissioner and future interest by the NJDOT.

2. Proposed activities for next quarter by task:

- The UTRC and the NJDOT will sign and process the program task order.
- The UTRC will complete the 2007 Proposal and 2006 Annual Report

3. List of deliverables provided in this quarter by task (product date)

- List of potential speakers and presenters for the NJDOT lecture seminars.

4. Progress on Implementation and Training Activities:

NA

5. Problems/Proposed Solutions

NA

Total Project Budget	$50,000
Modified Contract Amount:	
Total Project Expenditure to date	$2,500 est.
% of Total Project Budget Expended	5%

QUARTERLY PROGRESS REPORT

Project Title:	**Water Quality Mitigation and Banking**
RFP NUMBER: **2007-11**	NJDOT RESEARCH PROJECT MANAGER: **Camille Crichton-Sumners**
TASK ORDER NUMBER/Study Number: **Task Order #30**	PRINCIPAL INVESTIGATOR: **Anil K. Agrawal**
Period Starting:**January 1, 2007**	Period Ending: **March 31, 2007**
Ending Date: **December 31, 2007**	

Task	% of Total	% of Task this quarter	% of Task to date	% of Total Complete
Phase I *- Literature Search*	**5**	**50%**		
Task 1*: Literature Search*	12			
Task 2*: Assemble a technical panel composed of representatives from various agencies*	12			
Task 3*: Make an inventory of future projects and determining the impact to impervious surface within watersheds*	12			
Task 4*: Investigate water quality mitigation/banking/retrofit sites along State owned roadways within local watershed area*	8			
Task 5*: Identifying potential mitigation areas and retrofitting those with stormwater enhancements. Propose a methodology to plan, analyze and track improvements and banking credits*	8			
Task 6*: Select a specific mitigation/Bank location for the study. The feasibility evaluation will consider ROW, environmental constraints, watershed characteristics, and drainage data. List all environmental constraints, recommend BMP solution and cost estimates*	12			
Task 7*: Propose a tracking mitigation program to offset future program needs*	**8**			
Task 8*: Prepare Final Report documenting the finding of the research*	**18**			
Implementation	**5**			
TOTAL	**100%**			

1. Progress this quarter by task: **Although the official stat date is January 1, 2007, the contract is still under processing. Hence, funds are not available yet. The PI has done the preliminary literature review and completed 50% of the literature review till now.**

2. Proposed activities for next quarter by task: **In the next quarter, literature review will be finished and task 2 will be partially done.**

3. List of deliverables provided in this quarter by task (product date): **None**

4. Progress on Implementation and Training Activities: **None**

5. Problems/Proposed Solutions: **None**

6. Budget Summary: **Not available yet.**

Total Project Budget(# of years)	***$310,000/2***
Total Project Expenditure to date	N/A
% of Total Project Budget Expended	N/A
Task Order Number/Study Number:	
Current Task Order Budget (# of years)	
Actual Expenditure to date against current task order	
% of current task order budget expended	%