

Ms. Teri Dixon
Chicago Metropolitan Agency for Planning
Transportation Committee
233 South Wacker Drive, Suite 800
Chicago, IL 60606

November 5, 2013

Dear Teri:

On behalf of the faculty, staff and students at the Urban Transportation Center at UIC, I very much look forward to addressing the CMAP Transportation Committee at the regular meeting on Friday, November 15.

Through the national research centers to which we belong, regular support from IDOT, and other sponsors, the UTC is engaged a wide range of research that is not only applicable to advancing transportation in our region and state, but many of which has national import. Attached you'll find a document providing a complete summary of UTC research underway or scheduled to begin in 2014 for the Transportation Committee meeting packet. This report provides insight on these key project elements:

- The name of the project and a short description.
- The agency or organization providing the funding.
- The dollar amount of the project.
- And, the research project manager.

We look forward to getting the Committee's reaction to our current research and discuss with them ideas for future research that would be helpful to the region that we might pursue. In the meeting I plan to deliver a ten to fifteen minute presentation using PowerPoint slides. Please reply with questions, and thanks again for this opportunity.

Sincerely,



Stephen E. Schlickman
Executive Director

TRANSPORTATION RESEARCH PROJECTS UNDERWAY IN 2013

1. "Behavioral Freight Movement Model." CFIRE Partnership. Research centers on a behavioral microsimulation model for multimodal freight movement that can be used to develop strategies to cope with the changes in both the volume and the flow pattern of freight traffic in the United States.
Budget: \$500,000. Project Managers: Prof. Kouros Mohammadian/Prof. Kazuya Kawamura.
2. "Evaluation of Urban Freight Delivery Strategies." CFIRE Partnership. This research examines effectiveness of common strategies to improve efficiencies and reduce conflicts associated with urban freight delivery. Modeling of delivery vehicle tour patterns and cooperative delivery and examination of truck/pedestrian/bicyclist conflicts using video recordings are being carried out.
Budget: \$300,000. Project Manager: Prof. Jane Lin/Prof. Kazuya Kawamura.
3. "Transit Agency Adaptation to Extreme Weather Events." National Center for Transit Research. This project will develop greater detail about the decision process, costs, perceived risks and tradeoffs transit planners and managers consider when coping with potentially damaging weather. The impact of this research is on the engineering/construction industry and provides a possible approach for minimizing the construction timeframe.
Budget: \$300,256. Project Manager: Prof. P.S. Sriraj.
4. "CN Freight Intermodal Terminals." NuRail. This project examines land use impacts of intermodal terminals in Will County, Illinois using industrial and commercial property assessment data. The researchers will analyze not only the areas adjacent to the terminals, but also examine effects on the areas along the area expressways that carry freight traffic generated by the terminals.
Budget: \$12,654. Project Manager: Prof. Kazuya Kawamura.

5. “Cook County Traffic Counts.” Cook County Department of Transportation and Highways. Student researchers from the Urban Transportation Center will be engaged as needed to record traffic counts at selected highways within the county.
Budget: \$15,000. Project Manager: Prof. Kazuya Kawamura.
6. “Cook County Long-Range Plan.” URS Corporation. As a sub-contractor to URS, the Urban Transportation Center will provide support for land use/socioeconomic projections through various modeling applications, support the Regional I freight analysis, and oversee the strategic implementation of the recommended plan.
Budget: \$90,000. Project Manager: Prof. Steve Schlickman.
7. “Chicago Public Schools Children and Public Transportation.” National Center for Transit Research. Researchers will study how to encourage physically challenged Chicago public school children to use existing forms of public transportation over paratransit options.
Budget: \$253,672. Project Manager: Prof. P.S. Sriraj.
8. “Environmental Impact of Rail Infrastructure in Illinois.” NuRail. This project aims to increase the effectiveness and efficiency of environmental impact assessment of rail infrastructure by providing a system view of sustainability and a spatial database for rail planning and management. It has incorporated state-of-the-art academic research findings as well as legislation and government guidelines in a comprehensive “sustainable rail scorecard” that covers the efficiency, safety, public health, ecological stress, emissions, and socioeconomic impacts.
Budget: \$26,623. Project Manager: Prof. Ning Ai.
9. “High-Speed Rail in Illinois.” Illinois Department of Transportation. This research is a key component in a larger project concerning the engineering, ridership, and financial viability of 220 m.p.h. rail service in the State of Illinois. A full report was released in mid-2013. Further study will address ridership and the costs for developing the project.
Budget: \$293,333. Project Manager: Prof. Kazuya Kawamura.
10. “Integration of Transportation Modes.” Illinois Department of Transportation. Chicago area roadways are chronically congested. This study will attempt to increase interconnectivity between various transit modes to attract more new riders off existing roads, reduce travel times for existing riders, and create more travel opportunities for all commuters and travelers.
Budget: \$237,655. Project Manager: P.S. Sriraj .

11. “Management Pro Training.” Metra. This project will provide support for the development of a continuing education curriculum for Metra managers.
Budget: \$20,374. Project Manager: Prof. Erica Adams/ Kate Pravera.
12. “Mobility Management Surveys.” National Center for Transit Research. This study will include conducting surveys nationwide of human services transportation users to determine the effectiveness of these programs and the economic and quality of life impacts they have on their users. This study will attempt to answer these questions and investigate quality of service and ease of access from the perspective of the user
Budget: \$108,547. Project Manager: Prof. P.S. Sriraj.
13. “Mobility Management Case Studies.” Illinois Department of Transportation. This study proposes to conduct a series of case studies of states and regions that have explored the issue of integration of modes of transportation.
Budget: \$52,714. Project Manager: Prof. P.S. Sriraj.
14. “Development of a Transit Mode of Choice Model.” Illinois Department of Transportation. In this study, researchers will adopt a discrete choice modeling approach for the mode choice model and to evaluate its performance. The model will provide a state-of-the-art tool that will support a process for forecasting and policy analysis.
Budget: \$85,513. Project Manager: Prof. Kouros Mohammadian.
15. “New Starts Ranking.” Illinois Department of Transportation. The UTC will develop a method for the ranking of proposed rail transit expansion projects in Northeastern Illinois.
Budget: \$88,430. Project Manager: Prof. P.S. Sriraj.
16. “Next Generation Intermodal Passenger Transportation System.” Illinois Department of Transportation. This research is part of a planned two- phase study that seeks to identify challenges to intermodal transportation in the Northeastern Illinois Region and identify ways to rectify them, particularly focusing on “last mile” transit access problems.
Budget: \$249,970. Project Manager: Prof. Nebiyu Tilahun.
17. “Pedestrian and Bicyclist Safety at Rail Grade Crossings.” NuRail. This research will continue a previous study completed in mid-2013 by centering on rail grade crossings at Chicago Transit Authority rapid transit trains stations.
Budget: \$26,156. Project Manager: Prof. Paul Metaxatos.

18. “States Safety Oversight Agency.” Illinois Department of Transportation. This project will provide support for IDOT’s MAP 21 States Safety Oversight Agency (SSOA.) UTC researchers will help IDOT implement state safety oversight responsibilities under MAP 21, which mandates that state DOTs oversee transit bus and rail activities in their respective states. Budget: \$302,370. Project Manager: Prof. Nady Moini.
19. “The TRANPRO Information Management System.” Illinois Department of Transportation. The TRANPRO Information Management System is an online resource that hosts information on Illinois public and specialized transportation providers. The information is searchable by region or provider name and is available to the public. Budget: \$458,000. Project Manager: Lise Dirks.
20. “The TRANPRO Information Management System.” Illinois Department of Transportation. The Veterans Transportation and Community Livability Initiative project will develop a one-click website to assist Illinois veterans in accessing existing public and specialized transportation services targeting specific needs. The project will integrate local public transportation, intercity travel, and specialized services such as ride sharing, car sharing and volunteer driver programs. Budget: \$362,000. Project Manager: Lise Dirks
21. “Transit Value Capture.” National Center for Transit Research. This project has the goal of investigating best practices in cooperation between transit capital planners, municipal/regional taxing authorities, and private developers in using value capture as a funding tool. This academic year, the Value Capture project focused on completing a literature review and conducting case study site visits in selected major metropolitan markets. Visits to New York and San Francisco are completed, and research for Washington, D.C. and Chicago continues. Budget: \$314,550. Project Manager: Prof. P.S. Sriraj, Jordan Snow.
22. “Metropolitan Transportation Support Initiative.” METSI was created with a grant from the Illinois Department of Transportation (IDOT) to address current and emerging issues of urban transportation and to continue projects already in process. METSI research is managed by Prof. P.S. Sriraj.

The UTC currently is working on these projects:

- “Land Use Model Development.” This project was implemented to calibrate the Urbansim Land use model for the Chicago Metropolitan region.
- “Transit Sustainability Indicators.” This project intended to shed light on and understand the concepts of livability and sustainability as well as the indicators and factors associated.

“Freight & Built Environment.” The aim of this research is to analyse and understand truck parking problems in urban areas using truck parking violation records in Chicago.

- “Volunteer Transportation Information System.” The core idea behind the Volunteer Transportation Information System (VTIS) is to utilize crowd-sourcing technology to obtain real-time transportation information from travelers.

TRANSPORTATION RESEARCH PROJECTS SCHEDULED TO BEGIN IN 2014

1. “A Prioritization Framework to Improve Resource Allocations for Bike and Pedestrian Facilities.” National Center for Transit Research match. This study proposes development of a comprehensive framework to prioritize projects seeking to improve opportunities for walking and cycling, considering user safety and existing conditions. This approach can provide a tool in the hand of decision makers to incorporate cost-effective and educated decisions to allocate budget dollars efficiently.
Estimated Budget: \$76,200. Project Manager: Prof. Nady Moini.
2. “Optimal Rail Service Planning in a Passenger-Freight Shared Corridor.” National Center for Transit Research match. Shared rail corridors between freight and passenger trains are prevalent in the U.S. This study proposed development of an integrated, hypergraph-based approach that will attempt to minimize system costs within shared corridors while meeting operating requirements.
Estimated Budget: \$71,000. Project Manager: Prof. Bo Zou.
3. “Stakeholder Decision Support Tool for Economic Development and Transit Planning for Metropolitan Chicago.” NuRail match. The migration of labor and capital from the city to suburban communities pose transit planning challenges. This research will expand upon an existing planning tool in these ways: Updating with recent data, expanding to make it relevant for business location decisions, and expanding for use by suburban planning bodies.
Estimated Budget: \$100,000. Project Manager: Prof. Teresa Cordova, Great Cities Institute.
4. “Manufacturers’ Use of Industrial Rail Spurs in Metropolitan Chicago.” NuRail match. This research will explore use of rail spurs by manufacturers as an alternative to trucking. It will address the kinds of manufacturers that use and don’t use rail spurs, the perspective from railroads, and whether new technology is changing perceptions.
Estimated Budget: \$60,000. Project Manager: Howard Wial, Center for Economic Development.

5. “Online Tool for Computing and Presenting Regional Accessibility Measures.” National Center for Transit Research match. The goal of this project is to develop innovative metrics for measuring *multimodal accessibility* in the Chicago metropolitan region and integrating these measures into an open online interactive tool for use by planners.
Estimated Budget: \$100,000. Project Manager: Nibyou Tilahun.

6. “How Can Healthcare and Municipal Planning Lead to Greener Transportation Outcomes?” National Center for Transit Research match. The City of Chicago issued an ordinance requiring large employers to reduce the number of employees who drive alone. This research will study commuting patterns by workers, patients and visitors at two Chicago healthcare organizations to ascertain factors that lead to their commuting decisions.
Estimated Budget: \$139,917. Project Manager: Prof. Ning Ai.

7. “Public Transit to Public Lands: The Nature Express.” National Center for Transit Research match. In partnership with the Cook County Forest Preserve District, this project will develop transit strategies to connect low-income individuals, disadvantaged families and people of color to Cook County Forest Preserves in a meaningful way.
Estimated Budget: TBD. Project Manager: Prof. Steve Schlickman.

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