

METROPOLITAN TRANSPORTATION SUPPORT INITIATIVE (METSU)

QUARTERLY REPORT for the quarter ending June 30, 2004

CURRENT QUARTER ACTIVITIES

GENERAL AND ADMINISTRATIVE

During the quarter, completed and distributed the Spring issue of the UTC newsletter the *Connector*. Also, at the request of CATS with IDOT concurrence, staff began developing phase 1 of the CATS Household Travel Survey. After several meetings with CATS staff, we developed a scope of work to review the existing model and develop information needs in order to calibrate the CATS model. Significant progress has been made and is contained in the attached draft task report. Finally, planning for the Fall 2004 Annual Symposium and 25th anniversary of the UTC has begun. The title of this years symposium is “Non-Traditional Approaches to Fund Transportation and Manage Demand.” The keynote speaker is Glenn Lyons, Professor at the University of West England who will present the results of the congestion pricing experience in downtown London.

Below in the progress report on the activities of the Research Program, Technical Assistance, Workshops and Training during the recent quarter.

RESEARCH PROGRAM

Regional Intermodal Freight Planning

Kazuya Kawamura and Sue McNeil continue to chair the subcommittees of CATS Intermodal Advisory Task Force (IATF). Involvement continues with the Data Working Group whose objectives are to identify the freight data needs and gaps and also develop a strategy to fill the data gaps. Dr. Kawamura also serves on the editorial board of the IATF News an e-newsletter available at www.catsmpo.com and is a regular contributor to the News.

Freight Impact Analysis Methodology: Phase Three

The study uses parcel level data for the city of Chicago and traffic count data from the CDOT to analyze the relationship between the several traffic characteristics, such as night time truck volumes, daily traffic volume data, peak hourly traffic volume, etc. and the value of single family residence properties. Currently applying spatial econometrics techniques to take into account the spatial autocorrelation of the property values that exist among the houses in close proximity. A paper will be submitted to the TRB meeting in January, 2005.

Large Scale Dynamic Simulation and Optimization Tools for Chicago Freight Infrastructure and Operations

As a member of the team led by the Transportation Center at the Northwestern University, Dr. Kawamura is responsible for assessing the benefit of various innovative strategies to improve efficiency of Intermodal truck operation in Chicago including reducing empty truck movements and constructing truck-only facilities. Dr. Kawamura continues to wait for the data from the simulation group to begin the calculation of the benefits.

Development of Integrated Economic Impact Analysis Tool for Equity Sensitive Projects

Dr. Kawamura is collaborating with Dr. Ranier Vom Hoffe to develop the Computable General Equilibrium (CGE) model for the Chicago six-county region to assess the economic benefits of reducing truck congestion. Current tasks include modifying the Social Accounting Matrix, a crucial input to the CGE model to treat in-house freight transportation as a separate industry sector and calibrating the CGE model. To accomplish the former, it is necessary to find a factor that can be used to translate inter-industry transactions specified by the National Transportation Satellite Account for the six-county Chicago region. Preliminary analysis based on the Vehicle Inventory and Use Survey, Commodity Flow Survey and Economic Census indicates the total employment is a powerful estimator of the in-house freight transportation activity level.

Job Access Reverse Commute (JARC)

Staff is working cooperatively with various agencies in the state and the region to assist in the development of a plan, strategy and goals to address access to work and reverse commute issues in the Chicago region and the state of Illinois. Staff has developed a phase 3 project to the JARC funded Clearinghouse project for consideration by RTA and a child care van project with the City of Chicago Mayors Office of Workforce Development (MOWD).

Kane County Transit Opportunity Assessment

Nothing new to report on phase 2 study to be funded by Metra.

Rail-Highway Grade Crossing Collision Report

Undertook an analysis of highway grade crossing accidents for CATS pertaining to the whistle ban issue in northeastern Illinois. A preliminary phase one report has been submitted to CATS for review and they indicated a review and comments would be forthcoming. Still waiting comments.

Data Mining and Knowledge Discovery in Civil Infrastructure Systems

This project resulted in several journal articles and is closed.

Economic and Productivity Impacts of Intelligent Transportation Systems (ITS)

Developing a proposal to undertake this research project. Continue the development of the data needs for economic productivity analysis in the Chicago region. This project has been chosen as a thesis by one of the student research assistants.

Exploration of Tools for Regional Transportation and Land Use Modeling

As the Northeastern Illinois Planning Commission (NIPC) continues with the Common Ground project, we are providing technical support and developing a framework for evaluating the project. Current activities include a review of existing plans of municipalities and counties in the region as well as developing an understanding the role of transportation measures in the stakeholder input software.

National Environmental Policy Act (NEPA) and the Planning Process

The research team has completed the literature review, the draft survey instrument and is putting together a list of contacts from the states identified by IDOT as crucial to learn from. The survey has received approval from the Institutional Review Board (IRB) and it is planned that the

survey will be administered electronically (email, webpage) and followed up with telephone calls to assure a high return rate and to gather missing information.

McHenry County Transportation Study

During the quarter, attended a meeting with the County Board Transportation Committee, staff and the consultant, TransSystems on June 28. Also provided review and comment on the telephone survey, employer and employee surveys, the public outreach program, data collection, stakeholder interviews and the Existing Conditions report. The project is moving along on schedule.

Sprawl

Our current sprawl-relate work continues in the areas identified in the previous quarterly reports. Below is a description of the current status:

Census 2000: We are still in the preliminary stages of our efforts to analyze the Census of Transportation Planning Package (CTPP). We anticipate beginning our assessment of the relationship between highways and sprawl with this data.

Census Public Micro-Use Data (PUMS): While we continue to wait for CTPP, we have also examined the Census PUMS data with a particular interest in travel times to work. We know from earlier studies that work-trip travel times decrease with density, i.e., low density neighborhoods have lower travel times than high density neighborhoods. We used PUMS data to examine the relationship between income and travel times. The analysis shows a negative relationship, that is, as incomes rise travel times decrease. Two areas illustrate this well. Of all the PUMS areas, the Highland Park area in southeastern Lake County, has the second highest income and the lowest mean travel times to work (24 minutes). Conversely in the southern part of the City of Chicago just west of Lake Calumet industrial area has the highest mean travel times to work (42 minutes) and among the lowest incomes.

Sprawl and Public Health -- Obesity: We continue our plans to assess the relationship between sprawl and obesity. Unfortunately, we are still awaiting the driver's license data that will allow us to proceed with this task.

Routine Use of Locomotive Horns

We have been asked by CATS with IDOT concurrence, to study the impacts of routine horn use at highway-rail crossings on traffic fatalities. The Executive Summary and Technical Report have been completed. This builds on our previous study that demonstrated that at the six-county Chicago region crossings where locomotive horns were routinely sounded were not safer than crossings where horn-use was banned, that is, only used when necessary. The current effort consists of reproducing the FRA model used to establish the 17.3 percent standard to be applied to the rail-highway crossings in the Chicago area where horns are not routinely used. We considered several intuitively reasonable models and found several that suggested that the Chicago area had lower collision rates than the 17.3 percent figure of the FRA model. While the rates were lower than 17.3 percent the results were not statistically significant—neither is the FRA model. Our final model and the simplest version provides statistically significant results and indicates the Chicago-area crossings where locomotive horns are not routinely used are safer than the national average crossings where horns are routinely used.

The technical report describes six models used to fit the relationship between fatalities and locomotive horn use. The first model described is the Westat version for the FRA model. The

other five were produced by the UTC jointly with Ashish Sen of TransInfo LLC. As in the case of the FRA model, three had positive relationships, though the coefficients were lower than the 17.3 percent in the FRA model, suggesting a small impact. The models, however, were not statistically significant. The only model that was statistically significant (at the 0.05 level) was one that had the negative coefficient, indicating that routine locomotive horn use is not associated with lower fatality rates. The model clearly suggests that the FRA call to address gated crossings would not achieve the intended purpose.

Midwest Regional University Transportation Center Proposals

Two proposals to MRUTC have been prepared and submitted; Mode Matters: A Tool to Measure Impacts of Air Quality of Multi-Modal Investments and An Impact Analysis of Changes in the Warehousing and Distribution Industry on Modal Investments in Freight Transportation. Nothing new to report.

Traffic Impacts of In-fill Development

Partial support is being provided a project to develop a case study on the traffic impacts of in-fill development. The project will explore brownfield vs. greenfield development traffic impacts. A student research assistant has chosen this project for their thesis.

CATS Household Travel Survey

Held several meetings with CATS staff to define scope of project. Completed draft Trip Generation Review Task Report and submitted to CATS staff. The report reviewed trip generation in the CATS model, the trip generation code and identified calibration issues and recommendations.

Emergency Ride Home (ERH)

In conjunction with CATS, EPA, MPC and RTA, researched and reviewed various ERH programs around the country in order to assist in the development of a program for the six-county Chicago Region.

TECHNICAL ASSISTANCE

CATS Community Mobility Task Force

Participating with the Task Force but no meetings held during the quarter.

CATS Intermodal Advisory Task Force (IATF)

Continued participation with the Task Force and Subcommittees (See Regional Intermodal Freight Planning project)..

CATS Private Providers Task Force

Participating with the Task Force and providing assistance in the areas of inventorying private transit providers and in JARC issues. Also assisting in the ERH project.

CATS Rideshare Project

The project is complete and functioning on the CATS website. We provided input and assistance during the project design. This project is closed.

Commuter Choice

Jointly sponsored a workshop with CATS and ACT to market Commuter Choice benefit program and the RTA Transit Check to facilitate the use of the tax-free transit benefit for employers and employees through the use of payroll deduction.

Greater North Michigan Avenue Association (GNMAA)

Staff continues its participation as a member of the GNMAA Traffic and Transportation Committee and attended meetings on April 29 and May 14..

Environmental Protection Agency (EPA)- Ongoing assistance the EPA in their Partnership for Clean Air program by promoting Best Workplaces Campaign (BWC) designation in conjunction with the Metropolitan Planning Council (MPC) and the RTA.

City of North Chicago

Met with the City on April 8 to develop a Transit Management Association (TMA) with Abbott Labs and Great Lakes Naval Training Center.

WORKSHOPS, TRAINING AND VISITING SCHOLARS

Telework & America's Greatest Employers

Jointly sponsored a net conference workshop with the Association for Commuter Transportation (ACT) on April 7.

How Best Workplaces for Commuters (BWC) Can Work For You

Jointly sponsored a teleseminar with the United States Environmental Protection Agency (EPA) on April 7.

ACT Western Regional Conference

Attended conference and Board of Directors meeting on April 23 to 25

Conference on Research and Public Policy

Presentations were given on May 13 at the University of Chicago on the Transportation Information Clearinghouse project and Transportation and Affordable Housing.

Commuter Choice Workshop

Participated in conjunction with Pace and the village of Glenview on May 18.

Talk the Talk: Communicating the TDM Concept in Business Terms

Jointly sponsored a net conference with ACT on June 3.

Innovative Funding Sources for TDM

Jointly sponsored a BWC teleseminar with EPA on June 8.

Commuter Choice/TDM Strategies Workshop

Presented University strategies to Mid-America Regional Council on June 18.

Chicagoland Chamber of Commerce

Attended the Chicagoland Chamber of Commerce Annual Meeting on June 24.

PLANNED ACTIVITIES FOR NEXT QUARTER

RESEARCH PROGRAM

Regional Intermodal Freight Planning- Continued participation with the CATS IATF.

Freight Impact Analysis Methodology- Social and Environmental Impacts- continued data collection and analysis of social and environmental impacts of freight traffic on property values.

Large Scale Dynamic Simulation and Optimization Tools for Chicago Freight Infrastructure and Operations- ongoing project with Northwestern University and NSF.

Integrated Economic Impact Analysis Tool for Equity Sensitive Projects- developing data for calibrating modeling of factors impacting the economy from freight movements.

Job Access Reverse Commute- continue communications with project partners, pursue second phase of the Transportation Information Clearinghouse project and identify local match for child care van project.

Kane County Transit Opportunity Study- nothing new to report.

Economic and Productivity Impacts of ITS- continue the development of data needs to estimate economic productivity due to ITS in Illinois.

Exploration of Tools for Regional Transportation and Land Use Modeling- continue to provide technical support and review of existing municipal plans in the region.

NEPA and the Planning Process- administer and follow up with the survey of state departments of transportation experience with the NEPA process and planning issues. The survey will be developed in the next quarter as a Research Assistant has been identified and assigned to the project in the fall semester.

McHenry County Transportation Study- assist and review consultant work on paratransit coordination and development component, transit needs and opportunities, preliminary transit development, website, newsletter and community workshops.

Sprawl- Research will continue in the areas of Census 2000 and Sprawl and Public Health-Obesity and the National Household Travel Survey.

Routine Use of Locomotive Horns

Continue analysis of alternative models to the FRA model to explain the Chicago experience.

Midwest Regional University Transportation Center Proposals- awaiting status.

Traffic Impacts of In-fill Development- explore traffic impacts of brown and green field development.

CATS Household Travel Survey- Complete the identification of data needs and develop survey questions that satisfy data needs.

Emergency Ride Home (ERH)

Sponsor a kick-off meeting of the regional ERH Working Group, define needs and specific program elements associated with a regional program.

TECHNICAL ASSISTANCE

Association for Commuter Transportation (ACT)- continued activity on Board of Directors and seek to co-sponsoring workshops.

CATS Community Mobility Task Force- ongoing assistance to CATS.

CATS Intermodal Advisory Task Force (IATF)- ongoing assistance to CATS.

CATS Private Providers Task Force- ongoing assistance to CATS

Commuter Choice- continue to develop marketing plan for pre-tax RTA Transit Check and for Commuter Choice statewide and assist CATS in giving presentations and workshops.

GNMAA- ongoing assistance with GNMAA and the Traffic Operations Committee.

EPA- ongoing assistance in conjunction with Best Workplaces for Commuters (BWC). Also, planning to attend a series of four BWC Campaign Coordinator Training in July and August.

City of North Chicago- set up meeting to pursue formation of a TMA.

WORKSHOPS, TRAINING AND VISITING SCHOLARS

Set Your Community Apart: Become a Best Workplace for Commuters District- planning to jointly sponsor a workshop with EPA on July 7.

Create Ads and Public Service Announcements that Get Action- planning to jointly sponsor a teleseminar with EPA on September 5.

Welcome to the Network!- planning to jointly sponsor a teleseminar with EPA on November 3.

Fifth Annual Symposium and 25th Anniversary- have begun planning for the event on October 29 on the topic of Innovative Financing. A reception is planned for the evening of October 28. The keynote speaker will be Glenn Lyons, of the United Kingdom to speak on the Congestion Pricing scheme implemented to reduce congestion in downtown London.

PROJECTS COMPLETED DURING CURRENT FISCAL YEAR*

Bus Rapid Transit Virtual Seminar

Work Welfare and Families

Incident Command System Management Workshop

Visitors from Houston

Access Management Workshop

Presentation of Transportation Funding Database

IDOT Fall Planning Conference Presentation

Freight Impact Analysis Methodology – Impact of Truck Traffic on the Value of Land

Sprawl and Pedestrian Safety

UTC Fourth Fall Symposium

Commuter Choice Benefits Workshop

Traffic Management for Special Events

Research + Action = Results

UIC Campus Shuttle Program

General Accounting Office

Visitors from Germany

Women's Transportation Seminar Panel

Transportation, Warehousing and Logistics Work Force Summit

River North Corridor Commuter Choice Workshop

Transit Oriented Develop Webinar

Work, Welfare and Families

CATS Rideshare Project

Environmental Justice

Data Mining and Knowledge Discovery in Civil Infrastructure Systems

Routine Use of Locomotive Horns:Executive Summary and Technical Report

Telework & America's Greatest Employers

How Best Workplaces for Commuter Can Work for You

Conference on Research and Public Policy

Talk the Talk: Communicating TDM Concept in Business Terms

Innovative Funding Sources for TDM

Chicagoland Chamber of Commerce

*Only those projects completed in the current fiscal year are included.

7/04