The Travel Model Improvement Program

Summary Report

East Central Intergovernmental Association (ECIA) (Dubuque MPO)

Travel Demand Model Peer Review

Dubuque, Iowa
October 2008

Helping Agencies Improve Their Planning Analysis Techniques

TMIP

Travel Model Improvement Program

DISCLAIMER

The views expressed in this document do not represent the opinions of FHWA and do not constitute an endorsement, recommendation or specification by FHWA. The document is based solely on the discussions that took place during the peer review sessions and supporting technical documentation provided by the peer review host agency.

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Introduction

Report Purpose

A travel demand model peer review is conducted at the request of the agency hosting the peer review panel as a means of soliciting:

- External guidance on addressing identified issues
- The identification of possible model deficiencies
- Recommendations for potential model enhancements
- Experienced advice on model development and application

Moreover, as noted on the Travel Model Improvement Program (TMIP) website, "few individuals have had the opportunity to develop and apply more than one travel demand forecasting procedure. No individual can foresee all the issues that may arise in developing or applying a new model set. One approach to improving travel forecasting procedures has been the use of Peer Review Panels. These panels, composed of individuals who have "hands-on" experience with both developing and applying travel forecasting models, assist local agency staff in both identifying possible problems and in developing workable solutions".

After a peer review panel meeting has been conducted a summary report is prepared that documents the panel's findings, recommendations and suggested course of action. While this is the primary purpose of the report, a secondary purpose is equally valuable; to identify issues and workable solutions as a means of providing modeling practitioners with concepts and approaches to consider for incorporation into their own model set. Ideally these concepts and approaches should offer new perspectives to question our standard assumptions regarding model development.

Report Structure

To facilitate assessing whether any noted recommendation is worth implementing, the peer review summary report does not extensively document the reviewed model's current structure. Instead, a brief summary of the model component is offered to merely place the topic of discussion in context. The majority of discussion for a given topic will focus on summarizing the technical issue, its significance, and providing context for the recommended approach or solution. Thus, each topic of discussion will be structured as follows:

- Model Component
  - Issue Synopsis
  - Overview of Existing Model Structure
  - Issue Significance
  - Panel Recommendation

Peer Review Panel Meeting and Recommendations

This report, *Summary Report East Central Intergovernmental Association Travel Demand Model Peer Review,* documents the travel demand model peer review panel meeting held at the East Central Intergovernmental Association (ECIA) office in Dubuque, Iowa on October 22nd of 2008. The one day peer review panel meeting was held as part of the TMIP that is sponsored by the Federal Highway Administration (FHWA). The peer review panel consisted of four travel demand modeling experts (ref. Appendix A, List of Peer Review Panel Participants, for list of panel members and meeting participants).

Appendix B, Peer Review Panel Meeting Agenda, provides the meeting agenda. The meeting began with ECIA staff providing presentations on the MPO, overview of the MPO's long-range transportation plan, socio-economic data and existing travel demand model. Peer review panel discussion was based on questions and answers occurring throughout staff presentations.

Apart from a brief model overview, the majority of this report summarizes the findings and recommendations of the peer review panel. During the process of identifying issues and recommendations the Peer Review Panel was appreciative and complimentary of the effort involved in developing and calibrating the ECIA travel demand model. Panel members commended ECIA staff for their dedication and knowledge of the travel modeling process.

Structuring the peer review panel report to primarily focus on issues and recommendations may leave one with an impression that the model was not sound; that is not the case nor is it the intent of this report. In fact, the consensus of the Peer Review Panel was that the ECIA travel demand model represents state-of-the practice in traditional four-step travel modeling. The recommendations made by the panel were in the spirit of advancing an already satisfactory travel model.

For purposes of documenting and summarizing the peer review of the ECIA model, it is assumed that the typical reader is more interested in identified issues and model nuances that required thoughtful consideration and that more can be learned from discussing aspects of a model with potential for enhancement, as opposed to reviewing existing model structure and what works. To that end, ECIA staff has been gracious enough to openly share their model's inner workings. Following the model overview the remainder of the report documents the identified issues and peer review panel recommendations.

Model Overview

This section of the report offers a brief overview of the ECIA model components to provide some context for the discussion comprising the remainder of the report. ECIA staff is responsible for the development and maintenance of the travel model for the Dubuque Metropolitan Planning Organization (MPO), which is commonly referred to as the Dubuque Metropolitan Area Transportation Study (DMATS).

Data

Demographics
Population and household estimates for the model base year are based on 2000 Census with the 2000 Census CTPP used to verify aspects of the population and household estimates. Zonal employment estimates are based on Iowa, Illinois and Wisconsin Workforce Development data obtained through the Iowa Department of Transportation (IADOT). In the case of population, household and employment estimates, ECIA consults with local cities and economic development agencies to review and provide supplemental data to refine the population and employment estimates. The estimates are then reviewed and approved by the MPO Technical Review Board. The year 2000 study area demographic data are presented in Table 1 – Year 2000 Demographic Data.

Table 1 – Year 2000 Demographic Data

Demographic Data	Total
Population	77,018
Households	29,910
Persons per Household	2.57
Employment	46,745
Employees per Person	0.61

Source: Slides for Peer Review Panel Meeting, ECIA, October 2008

Household Travel Survey
ECIA made use of the Des Moines area add-on to the 2001 National Household Travel Survey (NHTS) to support model calibration efforts. This survey included data for 1,231 households and 7,506 vehicle trips.

Traffic Counts
A total 285 twenty-four hour traffic counts were used to support the base year model validation.

Study Area

The MPO study area includes portions of three states – Iowa, Illinois and Wisconsin. The largest city in the study area is the city of Dubuque, Iowa. The study area is divided into 138 traffic analysis zones (TAZs) and includes 15 external stations. Major roadways in the region include US 61, US 20 and US 151.

Network

The base year model network is comprised of all facilities functionally classified as collector and above. The base year network consists of 1,460 non-centroid links. Network capacities are based on the Highway Capacity Manual 2000 for mid level of service (LOS) D.

Trip Generation

The travel model estimates trips for four internal trip purposes:

- Home-based work (HBW)
- Home-based other (HBO)
- Non-home-based (NHB)
- Commercial vehicle

And two external trip purposes:

- Internal-external
- External-external

The trip production model is a two-way cross-classification model. Production rates for Des Moines, Iowa, developed from the Des Moines 2001 NHTS add-on are used in

the Dubuque MPO model. The rates are stratified by household size (1 to 3+) and number of autos owned (1 to 3+). This results in a cross-classification table of three vehicle ownership categories and three household size categories.

The trip attraction rates are also from the Des Moines 2001 NHTS add-on. The rates for home-based trips are trips per employee stratified by four employment categories (total, retail, school and other). Non-home-based attractions are estimated based on a regression model using population and total employment along with household size and auto-ownership as additional variables. For commercial vehicles, a similar model is used, but with rates based upon dwelling units and two employment types (retail and other).

Trip Distribution

The trip distribution model is a conventional gravity model. Friction factors are derived using a standard gamma function with values for a, b and c of 1.0, 0.3 and 0.01, respectively.

Trip Assignment

The 24-hour assignment model is applied using the stochastic user-equilibrium procedures. The standard BPR function is used along with standard alpha and beta values of 0.15 and 4.00, respectively.

Issues and Recommendations

The Issues and Recommendations chapter concentrates on examining each of the technical issues that arose during the peer Review meeting, its significance, and providing context for the Peer Review Panel's recommendations.

Demographic Data

Land Use-Transportation Linkages

Issue Synopsis
During the development of the demographic data for input to the travel model, the MPO staff works with local agencies to coordinate the development of zonal and study area socio-economic forecasts in a qualitative manner. To improve the consistency between the zonal socio-economic forecasts and future roadway expansion, a review of existing and anticipated roadway projects is conducted. If a project is inconsistent with future SE data, it is reconsidered. In this way, potential future roadway infrastructure improvements are consistent with forecasted socio-economic data.

Overview
The development of the zonal-level socio-economic estimates and forecasts for the region are a cooperative effort of the MPO and staff from local governmental entities such as the cities and counties as well as local business and economic development entities.

The MPO coordinates the allocation of zonal demographic data with the City of Dubuque Planning Department to improve the consistency between the base and forecast land use data and existing and future land development patterns and assumptions. The MPO also works with economic development entities to review business location information as part of the allocation of socio-economic forecasts to the TAZ-level. Furthermore, the MPO, along with public and private partners, review known and anticipated future roadway improvements to bring consistency to the development assumptions used in travel modeling.

This process represents an informal linkage between the transportation system and land use. There are techniques that would bring a quantitative linkage of transportation and land use to the travel model. Such techniques could be implemented without substantial effort.

Issues Significance
The Panel agreed that the informal process used by the MPO to coordinate city and county land development information and roadway project information is adequate for the region.

However, bringing a more formal, quantitative method of accounting for future roadway improvements in socio-economic forecasts would represent a substantial advancement of modeling practice in the region.

Panel Recommendation
The Panel suggested that the MPO consider incorporating a review of accessibility information, such as network travel times as part of the socio-economic forecasting process. The panel felt that by doing so, the transportation-land use linkage of the modeling process would be strengthened. The Panel emphasized that they viewed this simply as a suggestion to enhance the modeling process and did not view this as a requirement to improve the travel model.

Base Employment Data

Issue Synopsis
The employment data obtained from the Workforce Development agencies by the Iowa DOT is based on Bureau of Labor Statistics (BLS) ES-202 data. ES-202

data is known to have issues related to the scope of employment covered and definition of work site employment.

Overview
Base Year employment data used in the model calibration was obtained from workforce development agencies through the Iowa DOT. As such, this data is based on BLS ES-202 data. Nationally, several issues have been identified with ES-202 data by agencies that have used this database as a source of employment data. One significant issue with ES-202 data is that the data may include more employees at a particular employer headquarter offices than actually work at the site.

As a result, the MPO coordinates with cities and counties in the region to verify employment at larger employment sites as a way to cross-check employment based on the ES-202 data.

Issue Significance
The potential inclusion of headquarters employment data in the ES-202 data can lead to an overestimate of employment at the zonal and regional level. Overestimation of employment could impact the trip generation and trip distribution results. Total trip attractions may be inaccurate and produce erroneous estimates of trip patterns derived from the trip distribution model. The staff from the Dubuque MPO indicated that employment estimates are coordinated with local cities and economic development agencies to improve the employment estimates of specific employers and zones. While this effort probably eliminates some of the "headquarters" issues inherent in ES-202 data, without a comparison data source, some uncertainties still exist.

Panel Recommendation
Given the importance that accurate demographic data has in model development and its impact on model performance, the panel recommended that the MPO consider acquiring, either directly, or in conjunction with the Iowa DOT, a second source of employment data. The panel noted third-party employment datasets as well as publicly available employment data sets as potential secondary sources of socio-economic data that could be used a comparative data.

Forecast of Future Demographics

Issue Synopsis
The Dubuque MPO uses trend analysis coupled with local agency review to develop future year population and employment forecasts for the region. No formal process is used to develop a consensus on regional or sub-regional growth trends.

Overview
The Dubuque MPO initially develops regional forecasts of population and employment based on trend analysis. Professional judgment is used in determining the length of time over which to establish a trend line. The regional forecasts are approved by the MPO Policy Board before being used in model applications. Input from staff from cities and counties in the region provides a mechanism for including "expert" or "informed" opinions in guiding the development of the regional demographic forecast.

Issue Significance
Demographic inputs are a critical element of base year travel demand model calibration/validation. Similarly, forecast demographic data is one of the critical elements of model application in support of long range transportation plan development as well as corridor studies

Panel Recommendation
The panel agreed that the current process for developing demographic

forecasts is appropriate and defensible given the size and level of expected growth in the region.

In the absence of more sophisticated quantitative econometric models, which are not called for in the Dubuque region, trend analysis coupled with input from local experts represents a very adequate and appropriate way in which to develop demographic forecasts.

The panel did suggest that the MPO consider using a formal "Delphi" process to supplement the development of the demographic forecasts. In this way, the MPO could make use of its existing contacts from the public and private sector in a more formal manner than is currently the case.

Trip Generation

Trip Generation Rates

Issue Synopsis
The trip rates used in the Dubuque travel model are the trip rates developed from the 2001 Des Moines NHTS add-on. Des Moines does posses some characteristics which are similar to Dubuque. However, given the difference in size of the two areas, the trip rates may not be directly transferrable from Des Moines to Dubuque.

Overview
Vehicle trip production rates for the internal trip purposes are the rates developed for the Des Moines region from a 2001 NHTS add-on. The production rates are stratified by household size (1 to 3+) and number of vehicles owned (1 to 3+) resulting in a cross-classification table of three vehicle ownership categories and three household size categories.

Issue Significance
The Des Moines region may be comparable to Dubuque at some levels in terms of population characteristics (i.e., household size, household income, workers per household, auto ownership) and the trip production and attraction rates appear to be reasonable. However, the Des Moines region is much larger than the Dubuque region; about five times the size in terms of total population. The size difference between the two regions and the use of the trip rates directly from the Des Moines NHTS add-on survey may result in the use of trip rates that are not exactly appropriate for the Dubuque region.

Panel Recommendation
With regard to the survey data used to develop the trip production and attraction rates, the panel recommended reviewing rates from Midwestern cities of similar population size and geography. The NHTS web site has a data comparison/transferability utility that allows a user to cluster NHTS data for different regions and develop rates of the cluster data. In this way, the MPO could cluster data from cities of similar size to Dubuque and compare the current trip rates to those develop from clustered NHTS data.

Stratification of Rates by Auto Ownership

Issue Synopsis
Trip productions for 0-car households are not estimated. Additionally, auto ownership rates for non-zero car households are held constant for all model applications.

Overview
The trip production rates used in the trip generation model are stratified by household size (1 to 3+) and auto ownership (1 to 3+). The stratification of the production rates by auto ownership

does not include rates for households that do not own a car.

Also, the MPO uses Census data to establish the stratification of households by size and auto ownership. This stratification is used for all application of the models for future year analysis.

Issue Significance
Households that do not own vehicles make very few auto vehicle trips. But survey data from other regions has shown that vehicle trips do occur from these households. Although the proportion of households in the Dubuque region that do not own a vehicle is very small, the number of trip productions is probably underestimated slightly by not including a trip rate for zero-car households.

Additionally, by using Census auto ownership for all future years, the model is not impacted by changes in auto ownership resulting from changes in employment rates or workers per household. Increases or decreases in these variables would not be reflected in the auto ownership rates and therefore would not affect the number of trips produced in the region.

Panel Recommendation
The panel recommended that the MPO modify the trip production model to include trip production rates for 0-car households in order to capture trips made by such households.

The panel also suggested that the MPO look into the possibility of developing a simple auto ownership model to replace the practice of using census-based auto ownership information for all model applications. This suggestion was qualified as one that could be considered over the long-term and was not something that needed to be immediately addressed.

Trip Attraction Rates

Issue Synopsis
Trip attraction rates do not include a rate for attractions of HBO trips to households.

Overview
The trip attraction models estimate attractions for NHB trips but not HBO trips. Households attract not only NHB trips but also HBO trips. The MPO attraction models do not include population or households as a variable in the calculation of attractions.

Issue Significance
Although the total final number of attractions would not be affected as attractions are scaled to match productions, the geographic locations of attractions and, hence, the distribution of trips is affected.

Panel Recommendation
The panel recommended that the MPO supplement the trip attraction rates to include rates for population and/or households for the HBO trip purpose. The panel noted that there were NCHRP reports available (187 and 365) that should provide a data source to develop household attraction rates for the HBO trip purpose. The consensus of the panel was that these should be among the highest priority recommendations to implement.

Generation of Vehicle Trips

Issue Synopsis
All trip rates are vehicle trip rates.

Overview
The trip generation rates borrowed from the Des Moines NHTS add-on are vehicle trip generation rates. The Dubuque models deal with vehicle trips and not person trips. Given past and current needs, there has not been a need to perform the type of analysis that

would require the estimation of person trips.

Issue Significance
The generation of vehicle trips instead of person trips, limits the types of analysis that the travel model can support to roadway-oriented studies. The ability to study transit alternatives or policies that might affect trip-making would be enhanced by modifying the trip generation model to estimate person trips.

Panel Recommendation
The panel suggested that the MPO review expected policy analysis needs and consider modifying the trip generation models to estimate person trips. The panel consensus was that this only be considered if, in the opinion of the MPO, there was sufficient policy analysis needs to make such a change.

Trip Distribution

Distribution Impedances

Issue Synopsis
For DMATS, highway network travel times based on speed limits are used to develop the zone-to-zone impedances for input to initial application of trip distribution. Following the trip assignment step, the resulting speeds are then recycled back to trip distribution. No terminal times are used in the development of zone-to-zone impedances.

Overview
The MPO obtains speed limit data from IADOT and includes the speed limit in the network attribute data. The initial travel times used for trip distribution are based on these speed limits. Following trip assignment, the resulting congested speeds are skimmed to produce new travel times. A second iteration of the trip distribution model is run with congested travel times. Terminal times are not used in the development of impedances. A comparison of the initial and second input speeds to trip distribution is performed.

Issue Significance
The MPO's practice of feeding back post-assignment congested speeds to trip distribution represents a standard process of model feedback. This process requires an initial traffic assignment in order to develop congested speeds. The process is improved by using congested speeds as input to the trip distribution instead of using posted speeds.

Trip distribution's resulting trip length frequencies are compressed and the resulting average trip lengths are shorter than they would otherwise be if terminal times are not used. As a result, this could cause underestimation of trip length and assigned vehicle miles of travel (VMT). The use of terminal times would decrease the number of intrazonal trips, which would also tend to increase VMT.

Panel Recommendation
The panel noted that the use of speed limits and not congested speeds in the development of initial impedances for trip distribution was a typical procedure for a small or medium size area. The panel underscored the point that there was no need to create sophisticated feedback of travel times to trip distribution for small and medium-sized regions that do not have substantial congestion.

The panel suggested that the MPO consider using congested speeds, perhaps based on free-flow speeds (which the MPO uses in trip assignment) in the development of initial zone-to-zone impedances for trip distribution. The MPO could then compare results of the distributions between those developed using congested speeds based on

observed data and those using assignment-based congested speeds based on posted speeds and determine if there was any difference in the results. The panel noted that local speed studies could be performed or data from other speed studies for other areas could be borrowed to establish free flow speeds.

With regard to terminal times, the consensus of the panel was that the MPO should include terminal times in the development of trip distribution travel impedances. The panel did not view this as a critical need, but one that should be implemented as part of the next model update cycle.

Trip Length Calibration

Issue Synopsis
Base year trip length distributions by trip purpose are produced and reviewed by the MPO for reasonableness. The resulting average trip lengths are also checked against FHWA recommended ranges for average trip length by purpose. The HBW average trip length appears to be somewhat shorter than might be expected.

Overview
The MPO uses a trip distribution model with a standard gravity formula. The friction factors are developed using the standard gamma function formulation from NCHRP 365. The resulting average trip lengths are checked against recommended ranges for average trip lengths by trip purpose. Table 2 – Base Year Avg. Trip Length presents the resulting average DMATS trip lengths. The MPO also reviews the proportion of trips estimated to be intrazonal by trip purpose.

Table 2 – Base Year Avg. Trip Length (min.)

Home-based work	11.71
Home-based other	11.14
Non-home-based	10.48
Commercial vehicle	9.37

Source: Slides for Peer Review Panel Meeting, ECIA, October 2008

Issue Significance
Calibration of trip length distribution and average trip length are critical aspects of travel model development and calibration. Verification that trip length distributions and average trip lengths match local or comparable region trip length data is critical to establishing the validity of travel models. If no local or comparable area survey data exists, then, at a minimum, the average trip lengths of the trip length distributions should be checked for reasonableness against some established guidelines. Trip lengths that are not calibrated properly can lead to problems in trip assignment.

Panel Recommendation
The panel indicated that the HBW average trip length, despite being within the FHWA recommended range, was slightly lower than it should be. The panel noted that use of terminal times would likely boost the average trip length.

The panel also noted that the HBO average trip length was very similar to the HBW average trip length. The panel agreed that the HBO average trip length should be several minutes shorter than the HBW average trip length. It was noted by the panel that estimating HBO attractions for households, as was suggested by the panel as a high priority, could result in a lower HBO average trip length.

The panel suggested that the MPO could also use Census CTPP data to additionally check the HBW average trip length. It was recommended that either

the MPO use the self-reported travel times of Part 1 and Part 2 or use Part 3 to develop a journey-to-work (JTW) trip table and then estimate HBW average trip length with network travel times.

The panel was careful to note that none of their recommendations represented an immediate need, but instead, could be implemented or considered for implementation as part of the next scheduled model update.

External-Through Trips

Issue Synopsis
The procedure used by the MPO and IADOT staff to develop external-through trip tables from external station counts sometimes results in negative values.

Overview
The MPO and IADOT use procedures taken from NHCRP 365 to develop external-through trip tables. In cases where there was substantial imbalance among external stations, the application of the procedures is resulting in negative station-to-station flows in the output trip table. The trip table has to be manually adjusted to eliminate the zero interchanges values.

Issue Significance
Although the external-through trip table is adjusted to remove negative values, the adjustments are made manually. The manual adjustment is successful in removing the negative values, but manual adjustments may result in a trip table that introduces differences in the trip table that would not be present using a traditional automated procedure.

Recommendation
The panel suggested that the MPO and IADOT try balancing the inbound/outbound split at each station as a means of correcting the problem.

Trip Assignment

Assignment Technique

Issue Synopsis
The MPO model performs an assignment of total daily demand using 24-hour capacities. The use of 24-hour volumes and capacities is not as sensitive to moderate or severe regional congestion as peak-hour volumes and capacities.

Overview
The MPO develops estimates and forecasts of average weekday traffic volumes by assigning the total daily vehicle trip tables to a network that contains estimates of daily capacity. The daily capacities are developed from hourly capacities taken from the Highway Capacity Manual (HCM). Assumptions regarding peak hour factors, directional split and other parameters are made to convert peak hour capacity into daily capacity.

Issue Significance
For small and medium size urban areas with little or no congestion, 24-hour trip assignments are considered adequate. However, in situations where a region or corridors within a region experience moderate peak hour and peak period congestion, the fidelity of a 24-hour trip assignment is not sensitive to the congestion to reasonably account of the congestion effects on travel demand.

Additionally, the concept of a daily capacity is not well-accepted in engineering circles, because evaluations for design purposes are based on hourly capacities.

Panel Recommendation
The panel recommended that the MPO consider moving toward hourly trip assignments as congestion and/or analysis needs dictate. The panel explained procedures that can be used

to convert the daily vehicle trip tables currently produced by the model to peak period and peak hour trip tables. Even simple adjustments to either the trip table or the assigned volumes would be preferable for modeling applications.

Additional Recommendations

In addition to the recommendations noted above the Peer Review Panel also offered the following comments:

Presentation of Assignment Validation Results

The panel suggested that the MPO expand the presentation of trip assignment results in model validation. The panel suggested a review of the ten or so most outlying data points in the volume/count scatter plot that was presented. The panel recommended expanding the number of volume groups by which the assigned and counted VMT is summarized. The panel also suggested performing thematic mapping of assignment results as a way to review the validation results geographically. The panel noted that the current MPO screenlines are in a grid layout and suggested the MPO consider developing screenlines that are oriented around corridors.

Production/Attraction Balancing

The panel suggested that the MPO review the procedure for scaling attractions to match productions and determine if special generator attractions are included in the scaling. The panel recommended that if the MPO has confidence in the special generator attraction estimates, then the special generator attractions not be scaled with the rest of the regional attractions.

Visitor Trips

The MPO staff inquired of the panel about possible techniques to better account for tourism related travel – both with respect to origins outside the Dubuque region and destinations inside the region (external-internal trips) as well as trips made by visitors while in the Dubuque region (i.e., non-resident travel). Panel members explained that in many cases these efforts start with external and/or visitor surveys and expand into the development of full model or model components. Panelists offered to provide MPO staff examples of such survey and model-development efforts.

Commercial Vehicle Trip Rates

The panel recommended that the MPO compare the commercial vehicle trip rates against those in the Quick Response Freight Manual. The panel felt this would serve as a benchmark comparison for the rates developed from the Des Moines NHTS add-on.

Appendix A

List of Peer Review Panel Participants

Peer Review Panel Members:

Name	Affiliation
Karen Faussett	Michigan Department of Transportation
Dane Ismart	Louis-Berger Group
Paul Hershkowitz	Wilbur Smith Associates
Ed Christopher	Federal Highway Administration

Supporting Staff to Peer Review Panel Members:

Name	Affiliation
Andy Mullins	Texas Transportation Institute (TTI)

Local Agency Staff:

Name	Affiliation
Chandra Ravada	East Central Intergovernmental Association (Dubuque MPO)
Kelley Deutmeyer	East Central Intergovernmental Association (Dubuque MPO)
Jake Ironside	East Central Intergovernmental Association (Dubuque MPO)
Kyle Kritz	City of Dubuque

State Agency Staff

Name	Affiliation
Phil Mescher	Iowa Department of Transportation
Phillip Meraz	Iowa Department of Transportation
Jason Huddle	Iowa Department of Transportation
Sam Shea	Iowa Department of Transportation
Adam Shell	Iowa Department of Transportation

Other Attendees

Name	Affiliation
Gena McCullogh	Bi-State Regional Commission (Quad Cities MPO)
Lalit Patel	Bi-State Regional Commission (Quad Cities MPO)

Appendix B

Peer Review Panel Meeting Agenda

Wednesday, October 22, 2008
Dubuque MPO
East Central
Intergovernmental Association (ECIA)
7600 Commerce Park
Dubuque, IA 52002

9:00 – 10:00	Introductions, MPO Background and Overview of Long Range Planning, Including Travel Model Input – Socio-Economic Data
10:00 – 10:15	Break
10:15 – 12:00	Presentation of Existing Travel Forecasting Techniques: Three Step Process – Distribution, Assignment and Validation
12:00 – 12:15	Break and Distribute Lunches for Next Working Session
12:15 – 2:45	Proposed Efforts for Next Plan Update – Data Sources, Model Software & Other Tools
2:45 – 3:00	Break
3:00 – 4:00	Panel Caucus: Initial Review/Critique and Comment on Practices (Peer Review Panelists meet to discuss information)
4:00 – 5:00	Panel Initial Report and Discussion (Peer Review Panelists present to MPO and others initial observations)

Invitation of participation extended to Technical Committee members and/or other local officials as determined by the MPO, including Federal Highway Administration and state DOTs.

Post- Meeting Activities:
Each MPO to summarize meeting presentations and discussion and the panel's initial findings or recommendations. Summary of each session will be sent to Peer Review Panel for additional remarks and comments. A final report will be prepared by the respective MPO and provided to the TMIP program.