

Transportation Committee

Meeting date: August 24, 2015

For the Metropolitan Council meeting of August 26, 2015

Subject: 2015 UPWP Administrative Amendment
District(s), Member(s): All
Policy/Legal Reference: MAP-21
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Division/Department: Transportation/Metropolitan Transportation Services (MTS)

Proposed Action

That the Metropolitan Council adopt an administrative amendment to the Unified Planning Work Program to include the Regional Truck Highway Corridor Study.

Background

Every year the Unified Planning Work Program (UPWP) is recommended through the TAC and TAB committee structure before adoption by the Metropolitan Council and approval from MnDOT and the Federal Highway Administration. This document establishes activities for which MTS will use federal planning funds in the coming calendar year, including the titles of studies that will be undertaken. The 2040 Transportation Policy Plan adopted in January 2015 includes a work program of studies to be carried out over the next four years in preparation for the 2018 Transportation Policy Plan update. Shortly after the plan adoption, staff began scoping the logical sequencing of the studies and determined that the Regional Truck Highway Corridor Study should commence soon.

MTS staff began scoping a Regional Truck Highway Corridor Study in the spring to focus on freight issues (see attached scope). While the original 2015 UPWP identifies freight planning as an activity it does not explicitly call out the Regional Truck Highway Corridor Study. MnDOT and FHWA are requesting an administrative amendment to the 2015 UPWP to document the Council’s approval to undertake this study prior to engaging a consultant.

Rationale

The main purpose of the UPWP is to serve as an application to the US DOT for federal transportation planning funds and to ensure coordination of planning activities among the various agencies involved in the transportation planning process. The purpose of this administrative amendment is to reiterate our compliance.

Funding

This resolution carries no associated funding change as there is sufficient consultant funding in the UPWP.

Known Support / Opposition

There is no known opposition. In considering this item TAB suggested some amendments to the proposed work scope; that the study analyze weight



restrictions on heavily-used truck routes, and that the study advisory group include local planners and engineers.

Regional Truck Highway Corridor Study

Background

Freight transportation is receiving increased attention for highway investment at both the state and federal levels. The current federal transportation bill, MAP-21, includes freight movement and economic vitality as one of six national performance goals. In addition, the State of Minnesota created the Corridors of Commerce program which authorized \$300 million in new bonds for highway projects that improve commerce in the state.

The Twin Cities metro region is a major distribution hub for goods produced and consumed in the Upper Midwest, including Minnesota, Wisconsin, and the Dakotas. The region offers freight connections to national and international markets for businesses throughout Minnesota. As a freight hub, the Twin Cities region is at the center of many of the mobility and access issues affecting Minnesota's overall freight transportation system. The performance of the freight system in the Twin Cities region affects the ability of businesses to cost-effectively move goods and products. In addition, much of the truck traffic in the region is related to satisfying the day to day needs of the 3 million residents of the area.

The region's freight transportation system enables the annual transport of millions of tons of goods worth billions of dollars. Access to this high-functioning system enables the Twin Cities to remain a top business center in the U.S. The region's residents and many of its industries depend on a robust and effective freight transportation system. Issues such as highway traffic congestion and aging infrastructure have been cited as constraints to the region's economic growth and competitiveness. Unfortunately, detailed freight data has not been available to study the extent to which these issues impact truck freight movement, and the regional economy as a whole. New advances in continuous vehicle speed and GPS location monitoring technology make data available that will potentially allow for additional analysis of these issues.

Study Purpose

This study is intended to develop a better understanding of the most important highway freight corridors in the Twin Cities and to use this information to better inform highway investment decisions in the region. High-level data on truck freight movements are available for the principal arterial system, but the region lacks detailed data on freight movements and travel speeds with respect to how roadway congestion impacts truck movements within and through the metro region. Subsequently, it is difficult to prioritize investments that benefit freight. This study will examine existing and emerging freight data on the principal and A-minor arterial system from public and private sources. The purpose of the study is to:

- Identify the most important truck corridors on the region's Principal and A-Minor Arterials
- Identify where, when, and to what degree congestion affects truck freight movements on key freight corridors
- Identify major safety issues and geometric constraints on key freight corridors
- Develop recommendations for how new truck data and the identification of regional truck corridors can be used to affect investment decisions to benefit regional freight mobility and economic competitiveness

This study is being led by the Metropolitan Council and a Met Council staff person will serve as Project Manager. The Project Manager will oversee the technical details and coordination tasks of the study

consultant team. The study will also include a Technical Advisory Group (TAG) consisting of MnDOT staff, other local government stakeholders, and freight industry practitioners who will provide input throughout the study process.

The consultant team should reference the following plans and reports available from MnDOT and the Metropolitan Council:

- Minnesota Statewide Freight Plan (MnDOT, 2005); currently being updated
- Transportation System Performance Evaluation report (Met Council, 2012)
- Statewide Multimodal Transportation Plan (MnDOT, 2012)
- Minnesota State Highway Investment Plan (MnDOT, 2013)
- Twin Cities Metropolitan Region Freight Study summary and topic reports (Metropolitan Council/MnDOT, 2013)
- MnDOT District Freight Plans (MnDOT, 2012-2014)
- Thrive MSP 2040 (Metropolitan Council, 2015)
- 2040 Transportation Policy Plan (Met Council, 2015)

Regional Truck Highway Freight Study Scope

Task 1: Review and Refine Work Scope Tasks and Project Schedule

1.1: Convene Kick-off Meeting with Project Manager and other Met Council staff to:

- Discuss and refine work scope tasks utilizing consultant's recommended approach
- Discuss study methodology and data requirements.
- Discuss Project Manager's role and expectations.
- Discuss pertinent study milestones to obtain Project Manager's input.
- Set tentative study meeting schedule.
- Identify members of the Technical Advisory Group (TAG)
- Set tentative TAG meeting schedule.

1.2: Monitor and refine work plan/schedule with the Project Manager, as needed, throughout the study process.

Deliverable: Study work plan and schedule

Task 2: Review available and needed truck freight data

2.1 Identify truck freight data availability and suitability to determine important truck corridors, major freight bottlenecks, and impact of congestion on truck movements. Data sources include, but are not limited to:

- 2.1.1 MnDOT Heavy Commercial traffic counts
- 2.1.2 MnDOT loop detector data
- 2.1.3 Freight Analysis Framework (FAF)
- 2.1.4 National Performance Measure Research Dataset (NPMRDS)
- 2.1.5 Third party Truck GPS Data

- 2.2 Utilizing data identified in Task 2.1, identify corridors and locations where additional truck counts should be taken
- 2.3 Identify other freight data sources that may not be readily available and are needed for a metro wide, truck freight analysis

Deliverables:

1. **Candidate list of locations for additional heavy commercial counts on the principal arterial and A-Minor arterial system**
2. **Identified list of existing and potential data sources for highway freight data in the region.**

Task 3: Identify major freight generators and destinations in the Metro area

- 3.1 Identify and map the region's major truck generators and destinations by compiling and analyzing the data sources identified in Task 2.1
- 3.2 Combine map of freight generators/destinations with map of region's manufacturing and extraction land uses (to be provided by Met Council) for the analysis of corridors to be conducted in Task 5

Deliverable: Map identifying the region's major truck generators, destinations, and manufacturing and extraction land uses.

Task 4: Engage owner/operators of major truck generators and motor freight carriers in the region through a series of in-person interviews and/or focus group sessions

- 4.1 Develop an interview questionnaire for use in industry interviews and/or focus groups to provide qualitative information about the flow of commodities into and out of the region and identify freight-related issues on specific highway corridors, including the identification of key truck routes between major freight generators and the region's principal arterials.
- 4.2 Working with the Project Manager and other Met Council and MnDOT staff, identify potential candidates for industry interviews
- 4.3 Set up and conduct up to 12 in-person interviews and/or develop and conduct one or two focus group sessions with a varied sample of motor freight carriers, manufacturers, warehouse/distributors, and other industry experts/practitioners

Deliverables:

1. **Interview framework questionnaire for industry experts/practitioners**
2. **Technical memorandum summarizing input received and conclusions derived from industry interviews and/or focus group sessions**

Task 5: Identify key truck corridors on the region's Principal and A-Minor Arterials

- 5.1 Identify criteria to determine important freight corridors
 - 5.1.1 Based on experience and/or research from other metropolitan areas and states, develop a draft list of criteria for defining key truck corridors. Work with the Project Manager and the TAG to develop appropriate criteria to determine important freight corridors. Potential criteria include, but are not limited to, HCAADT, AADT, proximity to major freight generators and destinations, and recurring and non-recurring congestion. Criteria and thresholds will likely vary between the principal and A-minor arterial systems.
- 5.2 Complete high-level screening of highway corridors in the region to identify a list of candidate regional truck corridors
 - 5.2.1 Analyze the highway corridors in the region based on the criteria identified in Task 5.1 to determine a candidate list of key truck corridors
- 5.3 Identify key truck corridors based on established criteria with direct input from the TAG
 - 5.3.1 Apply the selected criteria to the region's highway corridors while also incorporating input from the TAG and industry interviews
- 5.4 Develop recommended preliminary key truck corridors
 - 5.4.1 Work with the Project Manager and TAG to identify the list of preliminary key freight corridors.

Deliverable: Technical memorandum describing the development of selection criteria, the evaluation process for identifying the key truck corridors and including a detailed map of proposed key regional truck corridors

Task 6: Identify and analyze freight mobility and safety issues on the key truck corridors

- 6.1 Identify the extent to which truck traffic is impacted by congestion in the key corridors identified in Task 5
 - 6.1.1 Working with the Project Manager and MnDOT, analyze freight data sources identified in task 2.1 to assess congestion impacts on freight movements
- 6.2 Identify major congestion chokepoints that impact truck movements in key truck corridors
 - 6.2.1 Working with the Project Manager and the TAG, develop and apply specific criteria to determine major congestion chokepoints on the key truck corridors
- 6.3 Analyze freight related crash data on the key truck corridors identified in Task 5
- 6.4 Identify and describe locations on the key truck corridors that have safety or geometric constraints to the movement of trucks. Potential safety issues or constraints include:
 - i. Bridge clearance issues
 - ii. Tight turning radii
 - iii. Short merge zones
 - iv. Long segments of significant gradient (4% plus)
 - v. Rail crossings on heavy truck routes

Deliverables:

- 1. Technical memorandum describing the impact of congestion on truck movements within the key truck corridors**
- 2. Technical memorandum describing the most significant safety issues and geometric constraints on the identified key truck corridors**

Task 7: Develop recommendations for how truck data and the identification of regional truck corridors should be used to influence investment decisions in the Twin Cities

- 7.1 Review other MPO and state DOT efforts to incorporate truck freight needs into investment decision making processes
- 7.2 Examine policy issues and considerations related to truck freight and provide recommendations for regional policy changes that could benefit regional transportation investments to affect regional truck mobility

Deliverable: Technical memorandum that includes review of task 7.1 results and provides recommendations for how projects that benefit truck freight can be emphasized in the regional solicitation and other state funding programs

Task 8: Produce Draft Study Report

- 8.1 Compile all technical memoranda, maps, and data into a single draft report
- 8.2 Provide opportunities for review by the Project Manager and others such as MFAC and the TAG

Deliverable: Draft final study report and maps

Task 9: Produce Final Report

- 9.1 Incorporate comments on the Draft Study Report from the Project Manager and the TAG into a final report
- 9.2 Provide final report to Project Manager for final review
- 9.3 Draft executive summary
- 9.4 Develop a summary Powerpoint presentation complete with graphs, charts, photos (some will be available from Met Council) for a general business audience that summarizes the technical study process, analysis methods used, and summary findings, conclusions and recommendations

Deliverables:

- 1. Final study report, complete with appendices that include all technical data summaries, technical memoranda, and a lucidly written executive summary**
- 2. All data files and analytical spreadsheets**
- 3. All maps and GIS data layers developed during the study**
- 4. Final Powerpoint presentation of study process, methodology, findings, and conclusions**

Task 10: Inter-Agency and Stakeholder Coordination

A Technical Advisory Group (TAG) will be established to advise the study team on the selection of criteria and identification of key regional freight corridors and to identify significant policy implications or issues for further analysis. The TAG will consist of staff from the Met Council and MnDOT, and may include planners and engineers from cities and counties, as well as industry practitioners in the distribution and transport of freight via trucking.

- 10.1 Prepare study materials for review and discussion with the Met Council staff (meetings to be held approximately every 4 to 6 weeks)
- 10.2 Participate in at least weekly phone calls with the Project Manager and other Met Council staff
- 10.3 Prepare meeting materials for review and discussion with the established TAG (approximate frequency of every 6-8 weeks)
- 10.3 Lead meeting discussions and record meeting summaries for up to 8 TAG meetings
- 10.4 Prepare presentation materials and participate in up to 6 meetings of the Minnesota Freight Advisory Committee, the Transportation Advisory Board, or the Metropolitan Council

Project Work Schedule

- Summer 2015: RFP Released
- Late Summer 2015: Consultant Selected
- Fall 2015: Study begins
- Fall 2016: Study complete