



# Chicago Metropolitan Agency for Planning

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## MEMORANDUM

**To:** CMAP Board and MPO Policy Committee

**Date:** June 3, 2009

**From:** Bob Dean, Principal Regional Planner

**Re:** Major Transportation Capital Project Evaluation Measures

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As the region's long-range transportation plan, *GO TO 2040* is required by federal law to identify major transportation capital projects that will be pursued between now and 2040. These projects must be fiscally constrained, meaning that sufficient revenues must be reasonably available to implement the identified projects. Because there are far more potential projects than the region is able to fund, a means of evaluating projects is needed. A set of evaluation measures has been developed to help characterize the impacts of major transportation capital projects and evaluate how well proposed systems of projects support the preferred scenario. These measures and the process used to develop them are described in the remainder of this memo.

The endorsement of the draft recommended evaluation measures by the CMAP Board and the MPO Policy Committee is requested. The Planning Coordinating Committee will be requested to recommend endorsement at its June 10 meeting, immediately preceding the joint meeting of the CMAP Board and MPO Policy Committee, and staff will report on the results of this meeting. The Transportation Committee recommended the endorsement of these measures at their meeting on May 15.

### **Definition of major capital project**

Only a small subset of transportation projects are considered "major capital projects." They are large projects with a significant effect on the capacity of the region's transportation system, including extensions or additional lanes on the interstate system, entirely new expressways, or similar changes to the passenger rail system. Arterial expansions and intersection improvements are not defined as major capital projects; neither are bus facilities, unless they involve a dedicated lane on an expressway. This definition is consistent with federal guidance

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as well as the definition of major capital projects used in past regional transportation plans prepared by CATS.

A list of major capital projects under consideration for inclusion in *GO TO 2040* is available online at: <http://www.goto2040.org/ideazone/default.aspx?id=15130>. Many of these projects were considered in developing the CATS 2030 Regional Transportation Plan, and have been updated with new information from the project sponsors when available. New project suggestions are welcome and will be solicited through the public engagement activities over the summer.

#### **Draft recommended evaluation measures**

The attached table lists the information that will be reported for each project. As it shows, for each project, two types of information are recommended to be reported. The first type, "basic project information," describes location, limits, cost, type of improvement, and connections or multimodal linkages that the project makes possible. The second type of information, "evaluation measures," requires either quantitative or qualitative analysis of a project's impacts. Both of these types of information are important to report, but they are separated to indicate that one type requires the use of analytical tools or processes while the other is descriptive.

Two additional measures will be used to evaluate systems of projects, but will not be part of the evaluation of individual projects. These include environmental justice, or ensuring that the benefits and burdens of investment decisions are shared across geographic and socioeconomic groups; and cost effectiveness, which is addressed in conjunction with the financial constraint described earlier.

#### **Development process for draft recommended evaluation measures**

The first step in developing these measures involved a contract with the Volpe Center, the research branch of USDOT, to scan the approaches of other regions to evaluating transportation projects and summarize best practices, and to recommend a candidate set of measures to consider for use in evaluating projects and scenarios in northeastern Illinois. The best practices summary is available online at:

<http://www.goto2040.org/WorkArea/DownloadAsset.aspx?id=15110>

The draft recommended measures represent the results of this best practices review, in addition to additional screening to ensure consistency with the *GO TO 2040* Regional Vision as well as the eight factors laid out in USDOT's planning regulations. In particular, measures were sought that were consistent with the regional indicators that were preliminarily adopted in late 2008. The attached table identifies, for each recommended measure, the other regions that have used this measure, the indicator sets it aligns with, and the USDOT planning factors that it responds to.

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CMAP's working committees were asked for comment in April and May, and specific suggestions from the Environment and Natural Resources Committee and the Transportation Committee are reflected in the draft recommended measures.

**ACTION REQUESTED:** Endorsement of the draft recommended major capital project evaluation measures is requested.

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# Chicago Metropolitan Agency for Planning

## GO TO 2040 Major Transportation Capital Program Element Evaluation Measures for Board Consideration

Basic Project Information							
Location and Project Limits							
Overall Project Length							
Lane or Track Miles of Improvement							
Type(s) of Improvements							
Connections or Linkages with Existing Facilities							
Service Area (transit only)							
Hours of Service (transit only)							
Cost							
Proposed Completion Year							
Evaluation Measures	Case Studies					CMAP Indicator(s)	FHWA Planning Factor(s)
	Boston	Baltimore	Los Angeles	San Francisco	Portland		
Long-Term Economic Development, Including Freight System (jobs, income, and output)		X		X	X	EC 1, EC 2, EC 4, EC 5, He 3, R 1, Tr 1	1
Safety Features	X	X	X	X		He 6, S 7, Tr 7	2
Security Features			X			He 6, S 7	3
Congestion - Targeted Facilities or Corridors (vehicle hours of travel in congestion)	X		X		X	EC 5, Tr 1, Tr 2	4, 6
Congestion - System (vehicle hours of travel in congestion)	X	X	X		X	EC 5, Tr 1, Tr 2	4, 6
Travel Time Savings		X		X	X	EC 5, Ho 1, R 1, Tr 3	4, 6
Provision of Bicycle and Pedestrian Facilities				X	X	He 4, Tr 3, Tr 9	4, 6
Mode Share (trips by transportation mode)		X			X	Tr 2, Tr 4	4, 6
Jobs-Housing Access (number of jobs within specified travel times for auto and transit)		X	X		X	EC 5, Ho 1, R 1, Tr 9	4, 6
Air Quality - Emissions	X	X	X	X	X	ENR 1, He 4, Tr 9	5
Energy Consumption and Greenhouse Gas Emissions						EC 5, ENR 5, ENR 6, Tr 6, Tr 9	5
Natural Resources, Land Consumption, and Water Quality (amount of sensitive lands in impacted areas)	X	X			X	ENR 2, ENR 4, ENR 7, R 4	5
Support for Infill Development and Existing Densely-Developed Areas (infill potential in impacted areas)	X			X	X	ENR 4, R 1	5, 8
Mutual Consistency Between Regional and Sub-Regional Plans	X					Coord	5
Peak Period Utilization/Demand (volume/capacity ratios at peak hours)	X	X	X	X	X	Tr 4	7
Facility Condition				X	X	Tr 5	8
<b>Overall Cost-Effectiveness of Fiscally-Constrained Sets of Projects will be Evaluated</b>							
<b>Overall Distribution of Environmental Burdens and Benefits for Sets of Projects will be Evaluated with Respect to Disadvantaged Groups</b>							

**CMAP Indicator key:**

Coord - Coordinated Planning and Development (indicators still to be defined)

EC1 - Income

EC2 - Workforce

EC4 - Business Environment

EC5 - Other Economic Competitiveness

ENR1 - Air

ENR2 - Water

ENR4 - Land

ENR5 - Energy

ENR6 - Climate Change

ENR7 - Biodiversity

He3 - Social Health Factors

He4 - Environmental Health Factors

He6 - Other Health

Ho1 - Housing Stock

R1 - Development Potential and Location

R4 - Land and Water Preservation

S7 - Transportation System Safety

Tr1 - Transportation System Reliability

Tr2 - Transportation System Operations

Tr3 - Transportation System Accessibility

Tr4 - Travel Choices

Tr5 - Transportation System Maintenance

Tr6 - Transportation System Investment

Tr7 - Transportation System Safety

Tr9 - Other Transportation

The full list of indicators is available online at:

<http://www.goto2040.org/indicators.aspx>

**FHWA Planning Factors****§ 450.306 Scope of the metropolitan transportation planning process.**

- (a) The metropolitan transportation planning process shall be continuous, cooperative, and comprehensive, and provide for consideration and implementation of projects, strategies, and services that will address the following factors:
- (1) Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
  - (2) Increase the safety of the transportation system for motorized and non-motorized users;
  - (3) Increase the security of the transportation system for motorized and non-motorized users;
  - (4) Increase accessibility and mobility of people and freight;
  - (5) Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
  - (6) Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
  - (7) Promote efficient system management and operation; and
  - (8) Emphasize the preservation of the existing transportation system.