



Chicago Metropolitan Agency for Planning

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MEMORANDUM

To: Regional Coordinating Committee

From: CMAP staff

Date: October 5, 2011

Re: Performance-Based Evaluation Criteria and Transportation Funding

GO TO 2040 [recommends](#) that transportation funding decisions be based on transparent evaluation criteria, and calls on the State and the region's transportation stakeholders to develop and utilize the necessary performance measures. This memorandum reviews the status of CMAP staff research on the topic of performance-based evaluation criteria and transportation funding, in the context of IDOT and the General Assembly's "55-45 split" allocation practice. It first discusses current practice in Illinois, and then reviews current practice in peer states, among selected federal programs, and at the regional and subregional level in northeastern Illinois. It closes by offering potential ways forward for the State.

Current Practice in Illinois

IDOT documentation refers to a variety of evaluation criteria the agency uses to allocate transportation funds, including pavement condition ratings, crash statistics, and traffic volumes. These criteria tend to emphasize the transportation system's physical condition, not its economic or environmental impact. Because a well-maintained, modern transportation system is integral to economic growth—and given that northeastern Illinois is the engine of the state and national economies—this issue is especially important in the current economic climate.

Second, IDOT's public documentation does not specify exactly how IDOT uses these measures to evaluate and prioritize projects, or how it navigates the inherent tradeoffs when allocating funds. While the agency identifies goals and assigns weights to various performance criteria, these tasks are done internally and are not publicly available. Additionally, relevant stakeholders, including metropolitan planning organizations, do not participate in these processes.

Third, IDOT's performance-based process does not apply statewide. Rather, a longstanding ad hoc agreement within the General Assembly directs 45 percent of transportation funds to District 1 in northeastern Illinois and the remaining 55 percent to the eight downstate districts¹; an issue brief on the "55/45 split", which has been discussed by the CMAP Board and the Regional Coordinating Committee, is available [here](#). While IDOT uses performance measures to allocate funding within District 1 and among Districts 2 through 9, the fundamental distribution of funds in Illinois is predicated on an arbitrary formula.

A 45 percent share does not accurately reflect metropolitan Chicago's economic, fiscal and transportation contributions to the state as a whole. Table 1 provides a summary of northeast Illinois's contribution to the state's transportation system and finances. The Chicago region accounts for a small proportion of total roads, rail, and bridges, but these facilities are heavily used. Additionally, the CMAP region contributes a disproportionate share of total transportation revenues. Northeast Illinois is the driver of the state's economy, which suggests higher returns to transportation investments in our region. Construction in northeast Illinois is inherently expensive and complex, further contributing to the region's funding requirements.

Table 1. CMAP Region's Share of Illinois Total, Multiple Metrics²

Bridges	13%	Vehicle-miles traveled	56%
Structurally deficient bridges	15%	Gasoline sales	60%
Rail miles	17%	Motor vehicle fees	61%
Road miles	18%	Population	66%
Interstate miles	20%	Taxable sales	66%
Arterial bridges	27%	Injury crashes	66%
Interstate bridges	31%	Property damage crashes	69%
National Highway System bridges	33%	Taxable individual income	71%
Functionally obsolete bridges	44%	Bicycle and pedestrian crashes	84%
Fatal highway crashes	44%		

Current Practices at the Federal, State, and Regional Levels

Several peer states, including Ohio and Missouri, incorporate performance-based evaluation criteria into their transportation capital programs. Ohio and Missouri, like Illinois, must

¹ District 1 includes Cook, DuPage, Kane, Lake, McHenry, and Will Counties. Kendall County is located in IDOT District 3.

² Data in this table come from IDOT Highway Statistics 2010, National Bridge Inventory 2010, Illinois Department of Public Health 2009, National Transit Database 2009, Federal Aviation Administration 2010, CMAP "Highway Ride Quality in the Chicago Region as of 2006". Road measures are in centerline miles and bridge measures are in bridge counts; these metrics likely underestimate funding needs for northeastern Illinois compared to road lane-miles and square footage of bridge deck area, respectively.

allocate resources between major urban and rural areas and among various modes, reduce congestion and protect the environment, and maintain safety on an aging transportation system. Unlike Illinois, Missouri and Ohio have codified their performance-based prioritization and funding systems in law, divide their funding into various program areas, formalize the participation of metropolitan planning organizations, and use separate commissions to evaluate and select projects. Both states use a mix of formula and competitive processes to distribute funds, which helps to ensure that all facilities are adequately maintained while the transportation system is expanded judiciously.

Several federal programs—the Transportation Infrastructure Finance Innovation Act (TIFIA) program, State Infrastructure Banks (SIB), and the Transportation Investment Generating Economic Recovery (TIGER) grant program—also emphasize performance measures, and their experience suggests ways to move forward. For example, a portion of Illinois state funding could be reserved for projects of regional significance and allocated discretionally. To do so, transportation decision-makers could use a more objective point-based scoring system or a multistep subjective narrative-based evaluation system, as in TIGER. Additionally, Illinois could enact enabling legislation to establish a state infrastructure bank, and submit applications for TIFIA assistance.

Local and regional entities, including CMAP and the various Councils of Mayors, also consider explicit performance-based evaluation criteria in transportation funding. CMAP's [evaluation of major capital projects](#) includes both quantitative and qualitative measures, including long-term economic development measures (jobs in the region, total regional income, and gross regional product), travel times, vehicle emissions, impacts on the connectivity of the transportation system, and consistency with subregional plans. Projects under CMAP's Congestion Mitigation and Air Quality Improvement program are scored by their cost-effectiveness in advancing the program's chief goals: reducing congestion and improving air quality. Additionally, they must demonstrate consistency with the regional comprehensive plan, *GO TO 2040*. And the various Councils of Mayors' Surface Transportation Program prioritization processes use explicit quantitative measures to score and rank local projects according to transportation and institutional objectives.

Potential Ways Forward for Illinois

The review of federal, state, and local programs suggests how such a performance-based evaluation system may work in Illinois. These examples identify overarching goals for the program, which generally fall into the following broad categories: transportation system, economic development, environment and energy, institutional factors and financing, and safety. They select performance criteria to measure progress toward these goals, link at least some

funding to these criteria, and often establish a more collaborative project evaluation and selection process.

Performance-based programs typically operationalize these goals by assigning weights to these categories and/or by identifying and weighting specific performance measures under each category. These measures range from the fairly general to the very specific. In the programs surveyed by CMAP staff, the performance measures tend to favor specific, readily available, and easily quantifiable metrics. The following list identifies common performance metrics, grouped by four common objectives:

Maintain the transportation system

- Pavement smoothness/condition
- Functional classification
- Average annual daily traffic
- Level of service
- Volume to capacity ratio
- Bridge condition ratings
- Accident rates

Promote economic development

- Travel time savings
- Economic distress/economic growth potential
- Job creation/retention
- Cost effectiveness

Protect environmental quality

- Air quality
- Water quality
- Fuel consumption

Efficient implementation

- Public/private/local participation
- Availability of matching funds
- Project readiness
- Consistency with existing plans (including MPOs)
- Public support or opposition
- Innovation – unique project delivery, ITS, TCM, intermodal projects
- Equity – geographic, modal, project type

A solely quantitative process cannot capture the full value of a project, and the quantitative scores profiled in this report do not determine final funding decisions, even under the most aggressive performance-based system. Rather, they help to illustrate the inherent tradeoffs among competing goals in a context of fiscal constraint. And, if publicly available, they help to demonstrate to the public how projects are chosen, improving transparency and accountability.

The limitations of the quantitative approach highlight the need for a strong institutional context. The Governor and General Assembly could establish explicit performance goals, measures, evaluation processes to select transportation projects, and allow provisions to review and update these goals, measures, and processes at reasonable intervals. Additionally, the Governor and General Assembly could pool current revenues and divide them into programmatic categories, each with unique objectives and evaluation criteria. While the General Assembly or IDOT could define metrics and processes directly, they could alternatively determine these measures and mechanisms in collaboration with the state's metropolitan planning organizations, or could choose to delegate these tasks entirely to other entities. In any approach, IDOT would operate under and implement these objectives and performance

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measures. Further, the Governor and General Assembly could require more detailed information from IDOT, such as an annual report that details the goals of its current improvement program, the processes used to allocate funding, the rationale for these processes, and the relevant performance data.

ACTION REQUESTED: Discussion

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