

March 31, 2010

Joung Lee
Deputy Director
AASHTO Center for Excellence in Project Finance
444 North Capitol St NW, Suite 249
Washington, D.C. 2001

Re: Request for Proposals on Transportation Briefing Papers

Dear Mr. Lee:

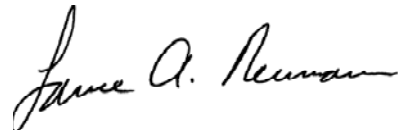
Cambridge Systematics, Inc. is pleased to submit a proposal to develop a briefing paper on *Using Performance Management Practices to Support Funding and Finance Initiatives* for the American Association of State Highway and Transportation Officials (AASHTO) Center for Excellence in Project Finance. Cambridge Systematics has been at the forefront of both performance management research and developing performance management programs for transportation agencies. We have helped many agencies move from performance measurement (tracking how an agency is performing) to performance management (using measures, targets, and related approaches to maximize the efficient allocation of resources).

We propose to draw on recent research we have conducted for AASHTO, the National Cooperative Highway Research Program (NCHRP), and the Federal Highway Administration (FHWA) to identify the appropriate topics and examples for the briefing paper. We will supplement this effort with selected outreach to agencies that have especially relevant practices. The end product will be a briefing paper that captures the specific ways that performance management can improve funding and finance activities at state departments of transportation (DOT).

Please contact me at (617) 354-0167 with any questions you have about our proposal.

Sincerely,

CAMBRIDGE SYSTEMATICS, INC.



Lance A. Neumann
President

LAN/ned/4989.000
Attachment

Using Performance Management Practices to Support Funding and Finance Initiatives

Understanding

Current circumstances – an aging transportation system, a recent run-up in construction costs, the most significant economic recession since the Great Depression, and other factors – have combined to exacerbate the gap between transportation investment needs and resources. In this context, performance management provides an approach to managing transportation systems and agencies that can improve the efficiency and accountability of investments. Performance management has been used by transportation agencies for more than a decade; in that time, it has evolved from a focus on measuring and tracking performance to using performance measures to support decision-making. This focus on managing with performance measures has shifted the basic question from “How are we doing” to “How can we do better.”

Cambridge Systematics, Inc. (CS) is well positioned to develop a briefing paper for the American Association of State Highway and Transportation Officials (AASHTO) that addresses how performance management can support funding and finance activities. Recent CS efforts in this area include:

- Helping AASHTO develop a national performance management strategy, including identification of potential national goal areas and measures. CS developed a white paper for AASHTO and conducted a CEO forum to share the results and refine the strategy.
- Conducting research on performance management for the Federal Highway Administration (FHWA) that casts a wide net across public and private sectors, domestic and international agencies, and includes evaluation of nontransportation approaches, all with a focus on how to use performance measures to better allocate resources.
- Authoring recent National Cooperative Highway Research Program (NCHRP) guidebooks on performance management, including: Report 660, *Transportation Performance Management Systems: Insight from Practitioners* and NCHRP 08-70, *Target-Setting Methods and Data Management to Support Performance-Based Resource Allocation by Transportation Agencies*. These guidebooks capture best practices in linking performance management to decision-making process, including improving the allocation of resources across program areas and increasing the efficient use of resources.

In addition, CS has worked with departments of transportation (DOT) and metropolitan planning organizations (MPO) to develop performance measures and performance management programs, including recent efforts in for the Maryland, Oregon, and Georgia DOTs, and for MPOs in Michigan and Northern New Jersey.

Approach

The purpose of this effort is to develop a briefing paper that focuses narrowly on the question of how performance management techniques can improve the funding and finance activities of state DOTs. From previous work in this area, we suggest that there are three basic ways that

transportation agencies are making clear links between performance management and funding and finance activities:

- Making the case for increased funding or implementation of new financing options. For example, both Minnesota and Washington State DOTs have used performance management to help justify funding increases by the legislature. In Florida, a performance-based allocation to system preservation is made before any other funding decisions.
- Increasing the efficiency of project, program, and day-to-day staff efficiency, including cost control efforts, pay for performance, and other strategies. For example, the Maryland, Missouri, Ohio, and Virginia DOTs provide examples of transportation agencies with initiatives focused on improving the efficient use of resources. Missouri has instituted a pay-for-performance program focused on construction change orders that has been remarkably successful in reducing costs. Ohio has made significant reallocation of funding across districts based on relative performance. Other agencies have similar efforts.
- Using measures to improve transportation agency financial management. Many transportation agencies track on-time and on-budget performance of projects and use this information to manage their programs and staff.

Our proposed approach will build off of previous work we have conducted to identify examples from transportation agencies in each of these three areas. The above examples present several ideas that may be included in this effort, but others, including state, metropolitan, foreign, and private sector examples will be drawn from recent research and the experience of CS staff to capture the various ways that performance management can directly support a transportation agency's funding and finance activities.

Scope

We propose the following task structure to develop the briefing paper.

- **Task 1 – Kickoff Meeting.** Immediately after notice to proceed, the CS team will conduct a conference call with the AASHTO Center for Excellence in Project Finance to review the proposed topics for organizing the briefing paper (described in the *Approach* section); an outline for the briefing paper; and the schedule for developing the briefing paper.
- **Task 2 – Review of Topics and Recent Research.** We will review existing performance management and measurement research and key funding and finance activities. This effort will follow the set of topic areas identified in the *Approach* section, as revised during the kickoff meeting. The effort will include a review of recent research on performance management to identify example practices that highlight the key methods to link performance management and funding and finance activities.
- **Task 3 – Outreach.** Based on the review of recent research, we may reach out to select transportation agencies. We anticipate that most of the relevant information needed for this effort is available in reports or interim products developed as part of recent performance management research. However, there may be some specific examples that require clarification. We anticipate conducting outreach with three to five agencies.

- **Task 4 – Draft and Final Briefing Paper.** We will draft the briefing paper for internal review, then review by the Center. A final briefing paper will be developed after comments have been received. The anticipated components of the briefing paper are likely to include:
 - An introduction that describes the funding challenges that transportation agencies currently face; summarizes the purpose and uses of performance management; and introduces the topics that organize the briefing paper (as modified);
 - For each method, a summary description of how performance management can support funding and finance activities and examples of transportation agencies that have successfully made this linkage; and
 - A conclusion with suggestions for additional relevant reports for individuals seeking more information and potential first steps for those interested in implementing the practices of other agencies.

Deliverables and Schedule

The deliverables of this effort, assuming a notice to proceed (NTP) by April 16, include:

- A draft briefing paper for review by the Center, delivered by June 4; and
- A final briefing paper addressing all comments and concerns, delivered by June 25.

Staff

Erik E. Cempel, P.E., a Senior Associate of Cambridge Systematics, will be the primary author of the briefing paper. Mr. Cempel was the Deputy Project Manager for NCHRP Project 08-70 that provides several potential examples of the specific link between performance management and funding; supported the AASHTO CEO Leadership Forum on performance management practices; is the Deputy Project Manager for FHWA’s *Performance-Based Management of Federal-Aid Highway Programs* effort; and has supported applications of performance management at the state and regional level. In addition, Mr. Cempel’s work abroad has exposed him to international best practices in performance management and project financing.

Hugh W. Louch, a Senior Associate of Cambridge Systematics, will help identify relevant examples and review the briefing paper. Mr. Louch is the principal author of NCHRP Report 660, *Transportation Performance Management Systems: Insight from Practitioners*. Mr. Louch has been the Principal Investigator for the Strategic Highway Research Program (SHRP) 2 Project C02, *A Systems-Based Performance Measurement Framework for Highway Capacity Decision-Making* and NCHRP Project 8-67, *Integrating Individual Transportation System-Level Performance Programs to Determine Network Performance*, and has developed performance management and measurement efforts for Oregon, Arizona, New Mexico, and Maryland.

Iris N. Ortiz, a Senior Associate of Cambridge Systematics, will review the funding and finance activities to be addressed by the briefing paper. Ms. Ortiz has evaluated and forecasted existing and potential funding sources for transportation needs in several projects, including the Hudson Institute, Transportation Research Board (TRB), FHWA, and AASHTO, developing a spreadsheet model to forecast future revenues from both existing and potential transportation funding sources. She is a member of the TRB Committee on Taxation and Finance.

Budget

The total proposed budget for this effort is \$20,000, which includes 129 labor hours and limited direct costs. No travel is anticipated for this effort. Table 1 provides detailed cost information.

Table 1. Summary of Cost

Staff	Labor Category	Rate	Hours	Cost
Labor				
Erik Cempel	Principal Investigator	\$50.56	97	\$4,904
Hugh Louch	Senior Associate	\$62.78	14	\$880
Iris Ortiz	Senior Associate	\$49.44	14	\$693
Neil Dugas	Production	\$31.11	4	\$124
Subtotal Direct Labor			129	\$6,601
Overhead (175%)				\$11,552
Total Labor				\$18,153
Direct Costs				
Teleconferencing				\$28
Total Labor and Direct Cost				\$18,181
Fixed Fee (10%)				\$1,819
Total Plus Fee				\$20,000

ERIK E. CEMPEL, P.E.

Senior Associate

Cambridge Systematics, Inc.

PROFESSIONAL EXPERIENCE

Performance-Based Management of Federal-Aid Highway Programs. CS is assisting the Federal Highway Administration (FHWA) in preparing for Congressional authorization by identifying and evaluating options for implementing a performance-based Federal-Aid Highway Program. As Deputy Project Manager, Mr. Cempel is identifying how performance management is used by state, local, and foreign transportation agencies, as well as nontransportation governmental agencies and private companies, for resource allocation, project/program evaluation, finance and funding, and overall accountability.

NCHRP 8-70 – Target-Setting Methods and Data Management to Support Performance-Based Resource Allocation by Transportation Agencies.

For the National Cooperative Highway Research Program (NCHRP), CS led an effort to help agencies establish and apply performance-based resource allocation decision-making. As Deputy Project Manager, Mr. Cempel prepared a guide that focuses on target-setting methodologies as well as data management and stewardship, including best-practice case studies from public and private sectors.

NCHRP 20-24 (67) – State DOT CEO Leadership Forum. For the University of Minnesota, CS supported the AASHTO 2009 CEO Leadership Forum. Mr. Cempel prepared a white paper summarizing recent state DOT experiences related to performance-based program management with consideration of upcoming Congressional authorization, presented the paper at the Forum held April 19-21, and led a breakout session to help determine future AASHTO and TRB action items for state-level transportation performance management.

Minnesota DOT MnPASS System Study Phase 2. For the Minnesota DOT, CS is preparing an update to the managed lane study previously completed in 2005. As Deputy Project Manager, Mr. Cempel is preparing performance measures that will help identify a prioritized list of candidate MnPASS lanes. He is also conducting a financial analysis that considers the potential for using revenue from earlier MnPASS projects to fund later projects, and is identifying the technological, policy, financial, and institutional issues and barriers that will need to be addressed.

Illiana Expressway Feasibility Study. As Deputy Project Manager, Mr. Cempel is performing and overseeing the development of a purpose and need, traffic and revenue analysis, and finance and funding options for a proposed expressway between Illinois and Indiana.

SELECTED PUBLICATIONS AND PAPERS

Decision-Making for Major Infrastructure Investments: Measuring Feasibility in the United States, Improving Public Investment Management for Large-Scale Government Projects: Focusing on the Feasibility Studies (joint Korea Development Institute-World Bank Conference), May 22, 2007.

EDUCATION

M.E., Civil Engineering (Transportation Systems), Cornell University, 2001

B.S., Civil Engineering, Cornell University, 2000

AREAS OF EXPERTISE

Performance Measurement
Statewide Transportation Planning

HUGH W. LOUCH

Senior Associate

Cambridge Systematics, Inc.

PROFESSIONAL EXPERIENCE

Strategic Planning and Performance Management.

Mr. Louch has developed and applied performance measures and management to transportation agencies. He has led Federal research in the areas of performance measurement and long-range planning and has developed practical applications of these research for specific transportation agencies. For the National Cooperative Highway Research Program, Mr. Louch was the Principal Investigator for two projects designed to improve the practice of performance measurement and management at U.S. transportation agencies. For 08-62, Mr. Louch identified best practices for linking performance management programs to decision-making. For 08-67, Mr. Louch is leading an effort to identify performance measures and processes that allow for an integrated analysis of transportation investments across jurisdictions (local, regional, state), investment types (operations, capacity expansion) and modes (highway, transit). Mr. Louch was also the Principal Investigator for the Strategic Highway Research Program Co2 project (A Systems-Based Performance Measurement Framework for Highway Capacity Decision-Making).

Mr. Louch also has helped transportation agencies apply and develop performance measures to support their strategic planning efforts. He recently supported the Maryland DOT in updating their Annual Attainment Report, which provides a means to assess how well the agency and its partners are doing in achieving the goals of the Maryland Transportation Plan. Mr. Louch also developed a performance management program for the Oregon DOT's Highway Division that assesses how the Division is performing across all of its functional areas (project delivery, finance, support services, and others) through a set of indicators that capture both fundamental outcomes (lagging indicators) and the interim steps that the Oregon DOT is taking to improve those steps (leading indicators).

Transportation Planning. Mr. Louch has led or supported state, regional, and corridor long-range transportation planning efforts in New Jersey, Maryland, Arizona, Oregon, New Mexico, and Nebraska. Mr. Louch is the contract manager for the New Jersey DOT Research Bureau on-call, addressing quick response transportation research issues identified from across the DOT. Mr. Louch recently managed the development of the Maryland Transportation Plan, which set the strategic direction for transportation investments in the State, and is currently supporting to the Ohio DOT's Transportation Futures Plan.

EDUCATION

M.A., Sociology, Princeton University, 1998

B.A., Sociology, University of California at Santa Barbara, 1995

AREAS OF EXPERTISE

Transportation Planning
Performance Measurement
Freight and Economic Planning

SELECTED PUBLICATIONS AND PAPERS

Transportation Performance Management Systems: Insight from Practitioners, NCHRP Report 660. Transportation Research Board, National Academy Press, Washington, D.C., forthcoming.

Performance Measurement Framework for Highway Capacity Decision-Making. *SHRP 2 Report S2-Co2-RR.* Transportation Research Board, National Academy Press, Washington, D.C., 2009.

IRIS N. ORTIZ

Senior Associate

Cambridge Systematics, Inc.

PROFESSIONAL EXPERIENCE

Evaluation of National Highway and Transit Funding Needs. At the national level, Ms. Ortiz has evaluated and forecasted existing and potential revenue sources for transportation needs in several projects for the Hudson Institute, FHWA, the National Chamber Foundation, and AASHTO. As part of these projects, she developed a spreadsheet model to forecast future revenues from existing and potential transportation funding sources (e.g., motor fuel taxes, vehicle fees, VMT-based fees, local option transportation taxes) that could be used to close the gap between needed transportation investments and existing revenues. She is currently updating the revenue forecast model as part of an FHWA Policy study to evaluate potential revenue options that may be considered as part of the next transportation bill reauthorization.

Public-Private Partnerships (P3) Synthesis of Public Concerns. For both the University of Southern California (USC) and for the National Cooperative Highway Research Program (NCHRP), Cambridge Systematics conducted research on recent P3 experience in the U.S., the public concerns raised by long-term concessions and other P3, and how these concerns have been addressed in the process. Ms. Ortiz led the research and co-authored the reports for both projects.

State and Local Long-Range Transportation Plans. Ms. Ortiz has assisted in the preparation of the financial element of several Long-Range Transportation Plans (LRTP), including the First Coast Metropolitan Planning Organization (MPO) and the Broward County MPO updates of their 2025 LRTPs, the DeKalb County Comprehensive Transportation Plan (CTP), and both the Georgia DOT Interstate Highway System Plan (ISP) and the most recent Statewide Transportation Plan. Ms. Ortiz was responsible for updating the financial portion of those plans. She compiled information on existing transportation revenue sources at the Federal, state, and local levels; and estimated the future revenues available for the financially constrained plan. As part of this work, she also developed forecast for potential revenue sources that could be implemented to support their unfunded transportation programs.

FHWA Project Finance and P3 Primers. For the FHWA Office of Innovative Program Delivery, Cambridge Systematics is updating the Project Finance Primer (formerly known as the Innovative Finance Primer) and developing a new P3 Primer. The primers are intended to provide high-level, introductory information about these financing and project delivery approaches to help state, regional, and local planners consider the best ways to deliver their transportation programs. Ms. Ortiz is leading the development of both primers.

PROFESSIONAL AFFILIATIONS

TRB Committee ABE10, Taxation and Finance – Member

Women’s Transportation Seminar – Boston Chapter, Professional Development Co-Chair

EDUCATION

M.S., Transportation, Massachusetts Institute of Technology, 2000

B.S., Civil Engineering, University of Puerto Rico, 1997

AREAS OF EXPERTISE

Transportation Finance

Transportation Engineering and Planning

Alternatives Analysis