



S A C O G

SACOG Board of Directors

Item #08-2-12
Consent

February 14, 2008

Land Use Model Development Sole-Source Consultant Selection

Issue: The next step in the development of a state-of-the-art economic-land use model can be accomplished by continuing work with HBA Specto, Inc. This type of model is complementary to the I-PLACE³S planning model used in our Blueprint Study and Metropolitan Transportation Plan.

Recommendation: The Land Use & Housing Committee recommends that the Board authorize the Executive Director to execute a contract with HBA Specto, Inc. for \$90,000 for the development of the land use model.

Committee Action/Discussion: At the February 11 Land Use & Housing Committee meeting, this item was forwarded by unanimous vote for Board approval. The Committee requested additional information in the scope of work on level of effort per task. This information is included in the scope and schedule of work (attached). A land use model is needed that can represent the spatial economy of the region and the land development market within the context of government policies and the regional transportation system. In 2003 model development was started but was not completed due to other Blueprint Study needs. The contract this year will continue the project.

Staff recommends a sole-source contract to continue this project. Dr. Doug Hunt and Dr. John Abraham of HBA Specto, Inc. are the model design and development team we have worked with since 2001 on this model. They are uniquely qualified for this project due to their development of the model frame work, knowledge of SACOG's planning efforts, and long-standing working relationship with staff. The Production, Exchange, and Consumption Allocation System (PECAS) is a replacement to the MEPLAN integrated model that was used in the Base Case Future scenario of the Blueprint Study. It offers many advantages over the MEPLAN model including smaller zones for greater spatial detail, improved representation of an urban economy, and a direct connection to the SACMET travel demand model.

The three main objectives are a) staff training, b) data and design updates, and c) model calibration (primarily by SACOG staff). Two other land use models are under development in California using the PECAS framework. Caltrans is developing a statewide model and SANDAG is developing a regional model for the San Diego region. Staff will be cooperating with these projects to maximize use of data, staff training, and inter-model compatibility.

This project is funded in the current budget.

Approved by:

Mike McKeever
Executive Director

MM:GG:ts
Attachment

Key Staff: Kenneth Hough, Director of Community Planning & Operations, (916) 340-6229
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Scope and Schedule of Work

Project administration

Project administration is more complicated in this project because two other PECAS model development projects are underway in California. Thus there are two aspects to this task, a) schedule and task monitoring and coordination between the consultant and SACOG staff, and b) coordination with the other PECAS projects to share data, data management techniques, model operation processes, and user experiences in order to maximize benefits to all three applications. A working paper will document this task.

Revise and update model design

Since the prior PECAS model project ended in 2003, several other model applications in California and elsewhere have improved the model design and the computer code. These improvements will be incorporated into the current model design. The model estimation completed in 2003 will be updated to incorporate the new design features. A working paper will document this task.

Incorporate new data

The PECAS model has many similarities with the I-PLACE³S planning model including data sources. The new data that has been collected for I-PLACE³S will update the estimation and calibration data sets. These data items include land uses, general plans, developer costs and rents, and travel model data. A working paper will document this task.

Training SACOG staff for calibration

The majority of the calibration work will be done by SACOG staff. This task then is to train staff on model calibration, model operations and data management. A working paper will document this task.

Model estimation and calibration

Consultants and staff will work cooperatively to estimate and calibrate the model. A draft working paper and a final model development report will be prepared.

Consultant Hours by Task

Task	Dr. Hunt	Dr. Abraham	Total	Time frame
Project administration	40	10	50	March-October
Revise and update model design	40	35	75	March-April
Incorporate new data	5	45	50	April-May
Training SACOG staff for calibration	50	100	150	March-August
Model estimation and calibration	100	75	175	May-October
Total	235	265	500	