



SLOCOG
SAN LUIS OBISPO COUNCIL OF GOVERNMENTS



Association of Monterey Bay Area Governments (AMBAG)

San Luis Obispo Council of Governments (SLOCOG)

Santa Barbara County Association of Governments (SBCAG)

Request for Proposals

for

Central Coast Supra-regional Activity-Based OR Hybrid Model Upgrade

Addendum No. 1

RFP Budget Range \$800,000 – \$1,000,000

Issued: March 24, 2017

Questions Due: April 7, 2017

Deadline for Submission (received by AMBAG): 4 p.m. April 21, 2017

Submit all questions and proposals to:

Bhupendra Patel, Ph.D., Project Manager

AMBAG | 24580 Silver Cloud Court | Monterey, CA 93940 | bpatel@ambag.org | fax 831.883.3755

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Introduction/Goal and Purpose of Project

The Association of Monterey Bay Area Governments (AMBAG), San Luis Obispo Council of Governments (SLOCOG) and the Santa Barbara County Association of Governments (SBCAG) (hereinafter collectively referred to as the “Agency Partners”), have issued this Request for Proposals (RFP) to procure services for the development and implementation of a Central Coast Supra-regional Activity-Based or Hybrid Model Upgrade.

The Central Coast (Figure 1) is composed of three, separate metropolitan planning organizations (MPO) and three, distinct regions covering five counties. Geographically, the three-MPO supra-region as a whole exhibits many similarities with respect to land use patterns, growth, and socio-demographic and travel behavior. A common state-of-the-art, activity-based or hybrid travel-modeling framework will achieve more consistent, reliable travel predictions and modeling results while reducing the overall costs of maintenance and development associated with isolated model implementations. The Agency Partners will benefit from integration of enhancements envisioned by each agency partner and a common platform should expand the modeling knowledge base.

Under this project, the selected Consultant will analyze recent travel behavior survey data (including California Household Travel Survey [CHTS] and National Household Travel Survey [NHTS], amongst others) to develop, calibrate, validate and forecast passenger travel using daily simulated activity patterns. The selected Consultant will then use the newly developed activity-based or hybrid model framework to replace or enhance AMBAG, SLOCOG and SBCAG's separate, existing (4-Step) regional travel demand models, which will allow for the evaluation of transportation policies and performance of the transportation system to meet MPO travel demand modeling needs, including in particular evaluation of scenarios for development of their Regional Transportation Plans (RTPs) and Sustainable Communities Strategies (SCS). The resulting three, fully functional models will also be used by Caltrans, RTPAs, transit agencies and local jurisdictions in their various planning as well as project implementation activities.

Analysis of transportation scenarios and policies as well as responding to statutory and regulatory requirements such as SB 375 and Governor’s Executive Order B-30-15 in California requires model systems that are able to represent activity-travel patterns accurately at a fine resolution. The regional models proposed to be developed as part of this project are expected to be able to simulate integrated land use and transportation scenarios and represent transportation system performance via specific, quantitative performance measure outputs in the medium and the longer term planning horizons. The designed new model framework should be flexible and should include model specifications or features that would allow the travel model to be sensitive and responsive to policies, trends, and scenarios such as those listed in Table 1.

The Agency Partners have committed to a collaborative governance structure to manage the work of the consultant and funding of a technical program to develop this common platform over an approximately 2 to 3 year period from 2017 to 2020. **Appendix 1** contains the Memorandum of Understanding (MOU) between the Agency Partners related to this work.

Figure 1: Central Coast Region/Modeling Area

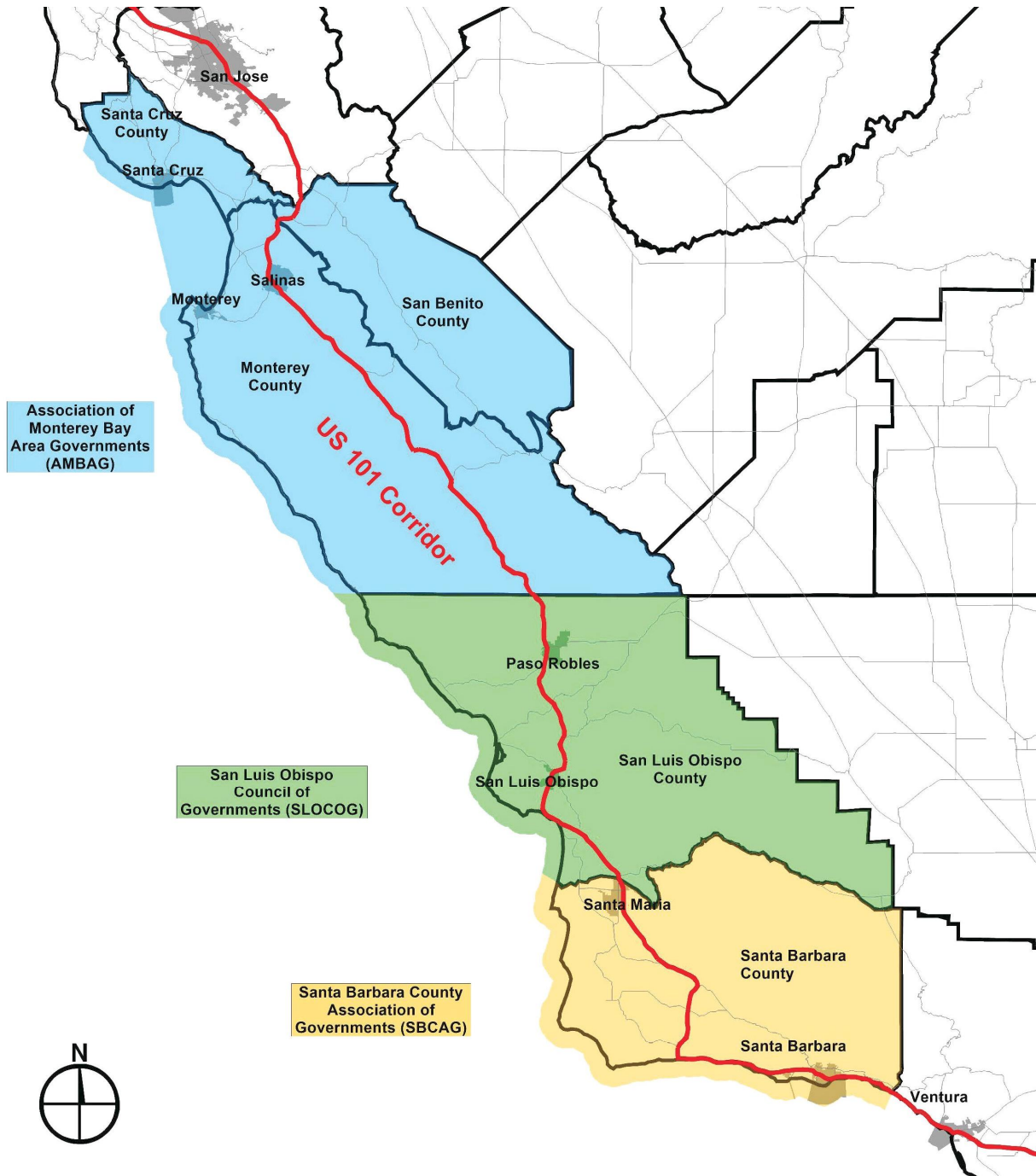


Table 1: Desired Policy, Strategy, and Scenario Analysis Capabilities of Regional Model

Policies and Strategies	Emerging Trends/Scenarios
<p>Travel Demand Management</p> <ul style="list-style-type: none"> • High occupancy vehicle(HOV) and managed lanes, congestion pricing • Reducing SOV/auto traffic • Parking pricing • VMT tax/road user charge 	<ul style="list-style-type: none"> • Aging/childless/multigenerational households & populations • Work from home and/or flexible work hours • Traffic congestion/peak spreading • Fuel prices • Zero emission technologies (electric/hydrogen) • Land use/economic activities & transportation system interaction • Air quality & GHG emissions (e.g., EMFAC Emissions Model) • Equity & social justice issues • Transportation Demand Management (TDM) including telecommuting • Intelligent Transportation Systems (ITS) • Autonomous/connected/platooned vehicles
<p>Land Use</p> <ul style="list-style-type: none"> • Transit oriented developments (TOD) • Livability concepts • Mixed use developments 	
<p>Transit Network Improvements & Conditions</p>	
<p>Roadway Network Improvements (Induced Demand) & Conditions</p>	

Scope of Work & Project Deliverables

The following description provides details of the scope of services required under this contract. Respondents to this RFP should build on this general description by proposing a scope of work with specific sub-tasks as deemed appropriate. Some tasks may require additional information from respondents as called out under the description of each task. Respondents should also refer to the “Proposal Content & Scoring” section (page 14) for additional requirements. Respondents are encouraged to suggest modifications to these tasks that would facilitate a successful work program.

Additional tasks and work elements may be added or deleted during contract negotiations. At the option of the Agency Partners and upon conclusion of the negotiation process, the selected Consultant will be required to prepare a final work plan and schedule for inclusion into a final contract. The project is anticipated to take approximately 2 to 3 years following the award of a contract, but final model deliverables must be completed before the dates listed below for respective MPO:

- SBCAG – September 2019
- AMBAG – September 2020
- SLOCOG – January 2021

General Requirements

The selected Consultant shall be well experienced in development and application of regional travel models for long-range transportation plans as well as projects. The three MPOs’ current regional travel demand models utilize the software package TransCAD. The selected Consultant should be familiar with

the TransCAD modeling software package and is encouraged to provide the final model applications within the TransCAD platform. The Agency Partners wish to maintain their travel models in the TransCAD platform and strongly encourage proposals which develop and implement the ABM framework in a TransCAD modeling platform, meet the project objectives and for ease of modification. Model applications developed outside the TransCAD platform, if any, should be an open-source programming language and must have committed long-term upgrade and maintenance plans. The developed models must meet all applicable federal, state and local requirements.

Outlined below are the nine (9) major tasks of this project to be completed over an anticipated 2 to 3-year period of time. The consultant should provide, as a part of its proposal, a proposed project work plan and schedule for completion of the entire project.

Task 1: Project Administration and Public Outreach

1.1 Project Administration and Public Outreach: Work with the Central Coast Model Development Committee (CCMDC), composed of one staff member and one alternate from the Agency Partners, one Caltrans District 5 representative and one alternate, and the selected Consultant to guide and manage the collaborative project. The CCMDC will work with the Consultant to define and develop a detailed project work plan for the entire project. This work plan will include any final adjustments to the scope of work and tasks. This task may include considering the extent of data needs, literature review, as well as capabilities needed to provide alternatives development and technical analysis in consultation and coordination with Caltrans District 5.

Stakeholders and the general public will be engaged through outreach meetings associated with the Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) update led by the Agency Partners throughout the Caltrans District 5 area. The Agency Partners will also take input from the public and other stakeholders, including modeling peers, during pre-existing recurring meetings with the Central Coast Model Users Group (CCMUG) and city and counties, such as county-based transportation Technical Advisory Committees (TACs), Planning Directors Forums (PDFs), Regional Advisory Committees (RACs), economic development groups, and rural task forces. The Agency Partners will act as the intermediary between these entities and the consultant and this approach will assure that the public, public agency stakeholders, and other interested groups are included in the project development process through numerous input opportunities.

1.2 Kick-off Meeting: The CCMDC will organize a one-day workshop at the Caltrans District 5 office. Caltrans, along with relevant local, regional, and transit agency representatives from the Central Coast Region will also be invited. The CCMDC will also extend the invitation to other transportation modeling professionals for their input and participation.

1.3 Quarterly meetings, reporting and invoicing: The CCMDC will meet at least quarterly to discuss the project progress and provide inputs on the work completed as well as next steps. The overall direction of the project will be guided by the CCMDC. The CCMDC will also communicate about the progress via email or conference calls monthly over the period of the project.

Task	Deliverable
1.1	<ul style="list-style-type: none"> Project work plan; public outreach materials
1.2	<ul style="list-style-type: none"> Project kick-off meeting materials
1.3	<ul style="list-style-type: none"> Agendas, meeting materials, and meeting notes; quarterly reports and invoicing

Task 2: Analysis of California Household Travel Survey (CHTS), National Household Travel Survey (NHTS), American Community Survey (ACS), Longitudinal Employer-Household Dynamics (LEHD) and other relevant data for the five-county Central Coast Region

2.1 Household Travel Survey Data analysis: The 2011/2012 CHTS, 2009 and 2015 NHTS, American Community Survey (ACS), Longitudinal Employer-Household Dynamics (LEHD), and other similar survey data, will be used to generate observed travel behavior, such as person tours (primary and secondary), trip length frequencies, and travel modes by trip purpose, which will be used for model calibration and validation. Review and compare any local jurisdiction traffic models and the California Statewide Travel Demand Model (CSTDm) structures, their key inputs and outputs to establish backward and forward linkages to the proposed Central Coast model framework. The CSTDm will also provide important interregional and through-trip data comparisons for both base and future years. The CSTDm future year forecasts will also be comparable with the proposed model’s future year forecasts, which can be updated as needed.

2.2 Collection and analysis of American Community Survey (ACS), employment data, transit surveys /studies and Origin-Destination survey data: Explore and implement other relevant available data, such as Census information, transit onboard surveys/studies, origin-destination studies, and freight studies. This secondary data will be collected, analyzed, and used for model development and validation.

Task	Deliverable
2.1 & 2.2	<ul style="list-style-type: none"> Household and other travel survey data analysis report with methodology to implement into model framework; processed survey data, tables, charts for future use

Task 3: Development of recommended (ABM or Hybrid) model framework using Task 2’s local and comparable data

3.1 Population synthesis for the base 2015 year and future 2020, 2035, 2040, and 2050 years as necessary (for five counties): In order to generate the daily activity patterns for all the regions’ residents, the model will use a “synthetic population” representative of the regions’ residents, which reflects key socio-demographic attributes. The selected Consultant, with CCMDC input, will work to design a synthesis approach reflective of the region’s unique population, gather all data required to implement the design, and validate the outputs against external control data. Under this task, the Consultant will develop prototypical synthetic population characteristics, procedures, and necessary input data sets for

the base year 2015, and future years of 2020, 2035, 2040, and 2050 as necessary at the county level. The final outputs of this task will be used as inputs for Task 3.2.

3.2 Develop, calibrate and validate model (at County or MPO level): The selected Consultant along with the CCMDC will work together to establish model calibration and validation targets. At minimum, Federal Highway Administration’s (FHWA’s) *Travel Model Validation and Reasonableness Checking Manual* as well as *California State RTP guideline* will be utilized as a reference to define validation targets and criteria. As per industry standard, the first phase of calibration and validation will focus on individual component performance. The second phase of model validation will focus on overall model convergence and validation for base year and performance in forecasting travel behavior. Model development, calibration and validation will involve industry standards as recommended by the consultant and agreed to by the CCMDC. Normally, Model development, calibration and validation is not a single task, it is done in conjunction with other tasks in multiple rounds until each model result meets validation targets.

The project will incorporate a bicycle and pedestrian modeling component and congestion pricing sensitivities along with other desired strategies contained in Table 1 on page 5 to the maximum extent practicable. The model will also develop and implement time-of-day choice models and combine with mode choice, so that variations in auto and transit travel times across times of day can be incorporated into both choice dimensions.

Task	Deliverable
3.1	<ul style="list-style-type: none"> Population synthesis for the base 2015 year and future 2020, 2035, 2040, and 2050 years as necessary (for five counties)
3.2	<ul style="list-style-type: none"> Fully calibrated and validated model framework for the Central Coast (targeted at County level)

Task 4: Develop interface to integrate ABM or hybrid model framework with Metropolitan Planning Organizations’ (AMBAG/SLOCOG/SBCAG) Regional Models

4.1 Review and update the MPOs’ base year TAZs, highway, transit, and bike networks to a 2015 base year as described below:

AMBAG

The current AMBAG regional travel demand model (RTDM) has a base model year of 2010 which utilizes TAZs and demographics data based on 2010 Census block geography and data. Currently, AMBAG is updating 2010 base year model to a 2015 Base year and forecast year 2020, 2035 and 2040 and expected to be ready by September 2017. AMBAG staff will provide the consultant with an updated 2015, 2020, 2035 and 2040 model data including land use at TAZ level and population synthesis, highway, bike, and transit network for use. The highway and transit networks will be contained within a master network which includes both base and future year highway and transit geography and attributes.

The selected consultant will be required to assure integration with the 2015 AMBAG RTDM and support any necessary transitional requirements if the TAZ structure or any other structural changes may require.

SLOCOG

The current SLOCOG regional travel demand model (RTDM) has a base model year of 2010 which utilizes TAZs and demographics data based on 2010 Census block geography and data. SLOCOG also employs a Regional Land Use Model (RLUM) at the parcel or parcel-aggregate level. The RLUM 2010 and updated through 2014 currently, contains employment data (from EDD), general plan and zoning codes (generalized to a single regional classification structure), and at a larger geography (55 zones for the county) contains vacancy rates, and persons per household. Developed for the 2014 RTP, future model years of 2020 and 2035 were developed/approved. The 2050 Regional Growth Forecast (population, housing units, and employment) is anticipated for adoption Spring 2017. Early modeling efforts for the 2019 RTP is underway in 2017. Scenarios will be developed for a new horizon year, tentatively 2045, in the RLUM and RTDM in 2018; adoption in 2019. The selected consultant will be required to assure integration with the existing RLUM and support any necessary transitional requirements if the TAZ structure is changed.

SLOCOG staff will update the RTDM with the 2017 Transit routes and schedule and provide the consultant with an updated 2015 highway, bike, and transit network for use. The highway and transit networks will be contained within a master network which includes both base and future year highway and transit geography and attributes.

SBCAG

The current SBCAG regional travel demand model (RTDM) has a base model year of 2010 which utilizes TAZs and demographics data based on 2010 Census block geography and data. Other datasets used include ACS block group 2005-2009 demographics, 2010 InfoUSA employment data, ACS Public Use Micro Sample (PUMS) data and 2009 Longitudinal Employment Dynamics (LEHD) data. Future model years of 2020, 2035, and 2040 are based on the Regional Growth Forecast projections of demographic and employment data at the regional, county, and zonal level. The selected consultant will be required to update SBCAG's current 2010 TAZs and socioeconomic database to a new base year of 2015 utilizing the abovementioned datasets.

SBCAG's model highway network contains traffic counts compiled by SBCAG, Caltrans, and the local agencies. Both hourly and daily Annual Average Daily Traffic (AADT) counts are compiled. Most counts are for year 2010, but some counts stretch back to 2007. The selected consultant will be required to utilize any available updated count data (Caltrans, local jurisdiction, HPMS, etc.) for incorporation into the model environment for comparison to the model flows.

SBCAG will provide the consultant with updated 2015 highway, bike, and transit networks for use in the updated model. The highway and transit networks will be contained within a master network which includes both base and future year highway and transit geography and attributes.

4.2 Integrate model framework into the three regional models: The Consultant shall replace AMBAG, SLOCOG and SBCAG's separate, existing (4-Step) regional travel demand models with the selected calibrated and validated model from Task 3.2.

Task	Deliverable
4.1	<ul style="list-style-type: none"> Review and update the MPOs' base year TAZs, land use models, and highway, transit, bike networks to a 2015 base year
4.2	<ul style="list-style-type: none"> Integrated fully functional updated models for each MPO (AMBAG, SLOCOG and SBCAG); hands-on training for CCMDC

Task 5: Develop and integrate truck, visitor, and special generator models for each Metropolitan Planning Organization

5.1 Develop 2015, 2020, 2035, 2040, and 2050 truck, visitor, and special generator models: The model system will predict the passenger travel demand generated by regional residents when travelling within the region but does not capture the demand associated with trucks and commercial vehicles, travel made in the region by non-residents, or travel associated with key special generators. Because these travel markets contribute to the overall performance of the transportation system, it is necessary to explicitly represent this demand in the model system.

The Consultant team and CCMDC will work together to assess the need for special generators and the integration of the existing visitor and internal to external trip (IX-XI) models. The Consultant team will evaluate current truck models of each MPO and develop commercial and truck travel demand and external travel as well. The Consultant team will analyze the CSTDM's long distance trip model as well as the freight model for applicability in the Central Coast region. In this project, the Consultant should use and/or refer to data analysis and major recommendations of the recently concluded joint study, "U.S. 101 Central Coast California Freight Strategy". These items, including special generators, truck, IX-XI, and visitor models, will be derived for base and forecast year data and integrated in to final models for 2015, 2020, 2035, 2040, and 2050.

Task	Deliverable
5.1	<ul style="list-style-type: none"> Develop 2015, 2020, 2035, 2040, and 2050 truck, visitor, and special generator model by county

Task 6: Validation and Assignment of Highway, Transit, and Bicycle Modes

6.1 Highway, Transit and Bike Assignments for each Metropolitan Planning Organization (time-of-day assignments): The Consultant will develop and calibrate highway assignments for multiple periods as appropriate (e.g., AM, midday, PM, evening, and night), which then add to a daily total (ADT). For all periods, the model should compute and apply a flow-intensity equivalence, since vehicles experience on

average, more congestion during peak periods than if spread evenly across the period. Auxiliary trips (not from the regional model) would be split with time-of-day factors derived from 2010 California Household Travel Survey data, if possible, or other survey or traffic-count based data where necessary.

The Consultant will test multi-path alternative methods and make efforts to calibrate the transit/traffic assignment parameters, including but not limited to flow intensity factors, speed-flow curves, and link capacities to successfully validate traffic assignment performance, compared to traffic counts aggregated into sub-areas, screen lines, county lines, and functional classes. Validation and calibration at the county level is critically important. The agency partners, their cities, counties, and Caltrans all collect traffic counts. The selected consultant should assure the quality and quantity of these counts are sufficient. The highway and transit validation checks may indicate the need for adjustments elsewhere in the model stream, including the demand models, through an iterative process.

Task	Deliverable
6.1	<ul style="list-style-type: none"> • 2015 validated highway assignments with validation results for: peak, off-peak periods (AM & PM), 24 hours, and summary report by functional class and county • 2020, 2035, 2040, and 2050 highway assignments • 2015 validated transit assignment with validation results • 2020, 2035, 2040 and 2050 transit assignments • Bike assignment

Task 7: Model Sensitivity Testing

7.1 Transportation, land use, and parameter sensitivity testing: As a part of the model development, sensitivity tests should be conducted for each model. The following key model inputs and parameters, at a minimum, will be checked:

- **Transportation Input Networks:** The model’s reasonableness in modeling capital improvement projects by varying highway and transit projects, including managed lanes and transit modes, and check sensitivity around free flow speed, congested speed and transit speed.
- **Land Use Inputs:** Test the model’s reasonableness in forecasting travel demand related to changes to land use by performing longitudinal tests between the base and future-year land uses developed for the Regional Transportation Plan (RTP)/Sustainable Communities Strategies(SCS), including variations in the amount and spatial distribution of residential and employment data, household size and income.
- **Model Parameters:** Test the travel model’s sensitivity to parameters such as gas price, parking availability/cost, the value of time, congestion, zonal and transit accessibility, amongst others identified in Table 1.

- Compare key performance metrics, including but not limited to trips and VMT, to the existing MPOs’ 4-step models.
- Research and evaluate off-model tools to address lack of model sensitivity.

As an extension of the sensitivity testing performed for model validation, the final report will identify key variables to which the model is most sensitive. These tests will be used to better understand the degree to which certain variables or parameters may need to be developed. Confidence intervals around results should be given when a model is being applied to help inform better decision-making.

Task	Deliverable
7.1	<ul style="list-style-type: none"> • <i>Draft model sensitivity report</i> • <i>Presentation of sensitivity testing results to CCMDC and peer review panel</i>

Task 8: Conduct Peer Review

8.1 Peer review with modelers, consultants, and third parties: The new models developed will be peer reviewed by professional modelers, academics and consultants. The peer review provides a forum for the exchange of knowledge by experienced travel demand model practitioners. The peer review panel will be selected by the CCMDC and will meet to review and discuss the model at Caltrans’ District 5 office.

Task	Deliverable
8.1	<ul style="list-style-type: none"> • <i>Draft model calibration and validation statistic report for peer review panel</i> • <i>PowerPoint presentation and other handouts for peer review panel</i> • <i>Draft peer review report/recommendations</i> • <i>Final model technical report</i>

Task 9: Implement Model Reporting & Model Training

9.1 Streamline data management, air quality analysis-related outputs, performance measures reports and train Metropolitan Planning Organization and Caltrans staff on use of modeling products: To improve the usability of the model and reduce the processing time for the user, the model should have standard reporting capabilities. As part of a standard model run, the user will have summarized data and reports, including, but not limited to:

- Demographic summaries by county district
- Trip summaries by purpose
- Time and distance trip length frequency tables
- District-level trip table summaries of origin-destination patterns
- Mode share reports by trip purpose
- Transit boarding and route summaries

- County and district VMT and VHT summaries
- Average speed by functional type by period
- Total lane miles and centerline miles by functional type
- Highway volume summary by screenline
- EMFAC emissions model input files

In addition, reports and data summaries that will be used for model calibration and validation will also be scripted into the model.

<i>Task</i>	<i>Deliverable</i>
9.1	<ul style="list-style-type: none"> • <i>Selected performance reports by county and MPO</i> • <i>Training materials and model user guide</i> • <i>Hands on training workshop for Central Coast model users group</i>

RFP Timetable

Task	Completion Date
Release RFP	03/24/2017
Submission of Written Questions Due	04/07/2017
Post Responses to Questions on AMBAG Website	04/14/2017
Proposals Due	04/21/2017
Short Listed Consultants Notified	04/26/2017
Evaluation Committee Completes Proposal Review	04/28/2017
Consultant Selection Interviews	05/01-05/02/2017
Candidates not recommended for selection notified	05/05/2017
Board Approval of Contract	05/10/2017
Contract Negotiation & Contract Execution Complete	05/19/2017

Proposal Submittal

Proposers must submit five printed copies and one digital copy (in PDF form) of the proposal to the Project Manager. All proposals must be received by AMBAG before **April 21, 2017 at 4pm (PST)**.

Until award of the contract, the proposals shall be held in confidence and shall not be available for public review. Upon award of a contract to the successful Consultant, all proposals shall become public record. No proposal shall be returned after the date and time set for opening thereof.

Submittal Questions and Addenda

All questions regarding the RFP should be received no later than **April 07, 2017** by fax or e-mail to Bhupendra Patel, CCMDC representative, at 831-883-3755/bpatel@ambag.org. All questions received by the CCMDC representative will be responded to in writing and posted on the AMBAG website (www.ambag.org) no later than **April 14, 2017**. If an additional addendum is issued to the RFP, it will be

posted on the AMBAG website on or before **April 17, 2017 at 5 p.m. PST**. It is the responsibility of proposers to determine if addenda have been issued. Any addenda to the RFP will become part of the RFP.

Project Managers

The Central Coast Model Development Committee (CCMDC) will act as project manager. The CCMDC will be represented by:

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Director of Modeling
Direct: 831-264-5091
Association of Monterey Bay Area Governments (AMBAG)
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Transportation Planner II
Direct: 805-961-8910
Santa Barbara County Association of Governments (SBCAG)
260 N San Antonio Rd, Santa Barbara, CA 93110

Proposal Content & Scoring

Participation of qualified disadvantaged and minority-owned firms in this project is strongly encouraged. Each proposal, to be considered responsive, must include the following:

- (1) A copy of the consultant's affirmative action policy (applicable for firms with 50 or more employees).
- (2) Discussion of the consultant's program for use of DBEs in the performance of this work, including the following (Attachment 3 - DBE Commitment form):
 - The names and addresses of DBE firms that will participate
 - The description of the work each named firm will perform
 - The dollar amount of participation by each DBE firm
- (3) A conflict of interest statement (see Terms and Conditions, section F).

Proposals should include the following sections and should not exceed 25 pages, excluding resumes and attachments with any supplemental information. Incomplete proposals will be considered non-responsive and will not be evaluated.

1. Transmittal Letter

Include the name, title, address, phone number, email address and original signature of an individual with authority to negotiate on behalf of and contractually bind the consultant or consulting firm, and who may be contacted during the period of proposal evaluation. Only one transmittal letter need be prepared to accompany all copies of the technical and cost proposals.

2. Table of Contents

Provide a listing of the major sections in the proposal and the associated page numbers.

3. Introduction (5 points)

Provide an overview and framework for the proposal as well as the consultant. This section should demonstrate a strong understanding of the background and purpose of the project.

4. Methodology Recommendation (20 points)

Provide a comparative analysis of the proposed model framework alternative(s) with specifications in terms of expected performance, compatibility with current land use model, ease of use, and cost (including initiation cost through model development by tasks, license fees, upgrade and annual maintenance cost).

- ActivitySim + TransCAD
- CentralSIM + TransCAD
- CT-RAMP + TransCAD
- DaySim + TransCAD
- TourCast + TransCAD
- Enhanced/Hybrid 4-Step Model + TransCAD
- Other (specify) + TransCAD

Additionally, provide a comparison of the proposed alternative(s) to the three MPOs current 4-step travel demand models and the advantages and disadvantages of each (existing model documentations are available to view/download along with the RFP at www.ambag.org). Finally, prepare a model implementation work plan using the recommended alternative from the list above with a flow chart and identify stage-by-stage data requirements and time estimates (Project timeline: May or June 2017 – December 2020).

5. Project Schedule/Management (20 points)

Prepare a milestone chart and supporting narrative which thoroughly identifies activities, deliverables and deadlines as described in the scope of work along with all associated tasks. The milestone chart must identify the critical path between activities, tasks, resource requirements, and deliverables. Describe how the consultant will keep the Project Manager and all project partners informed regarding progress of the project.

6. Qualifications and Experience (25 points)

The proposal must describe the qualifications and experience of each professional who will participate in the project, including a resume for each member of the consultant and any sub-consultant project team. Describe the experience the project team has in researching, developing, and implementing advanced activity-based models for regional, MPO, and local jurisdiction use as well any other relevant agencies. Describe experience and familiarity with the advanced modeling issues confronting the MPO community. Examples of prior work, including survey instruments and final reports, should be included as attachments to the proposal where applicable.

The proposer shall provide a listing, as well as references, of similar work completed or in progress for other clients. Preferred references will be from work conducted within the last three years. References will include complete contact information (name, title, organization, address, email address, and telephone number). A minimum of five professional references should be included in the proposal.

If the firm is submitting a joint proposal, summarize how the firms will work together. A Project Manager must be designated, and an organizational chart showing the manager and all project staff must be included. If a subcontractor will be used, the proposer must include a letter from the subcontractor committing to perform at least the work shown for subcontractor in the above-referenced chart. Any staffing changes to the consultant team after the contract has been awarded must be approved, in writing, by the Agency Partners. Include references with contact information in the proposal.

7. Cost Proposal and Effectiveness (30 points)

Proposals should state the combined cost of completing all required tasks and deliverables. Identify all consultant and subcontractor staff in hours and total expenditures allocated to each task identified in the project management chart, or provide a supporting chart with this information. Discuss the cost effectiveness of the proposal and vendor's support cost if the model framework is proposed in a vendor supported software platform.

Selection Process

The Selection Committee will review all submitted proposals. Based on the score of the written submittal, selected high scoring proposals may be invited to appear for oral interviews on **May 01-02, 2017 at the Caltrans District 5 office (50 Higuera St, San Luis Obispo, CA 93401)**. The proposers will be requested to explain their project approach, methodology and cost aspects. The proposer will also be requested to provide responses to Selection Committee questions. The oral interviews will be scored as follows:

Project Approach	10 points
Methodology	10 points
Cost aspects	20 points
Responses to Selection Committee questions	10 points

The panel will reach a consensus and make recommendations to the Agency Partners' Executive Directors following evaluation of 1) written proposals and 2) performance at the oral interview. The Agency Partners reserve the right to select a consultant based solely on written proposals and to not convene oral interviews.

The Agency Partners' Executive Directors will review the recommendation and make a recommendation to the Agency Partners' respective Boards of Directors. If the Boards of Directors select a different consultant than the one recommended, the Agency Partners, in consultation with their Executive Directors, will prepare a memo explaining the selection.

Contractual Information

The contract agreement for the Central Coast Supra-regional Activity-Based or Hybrid Model Upgrade will be between the Agency Partners and the Consultant. The consultant will invoice AMBAG monthly for services rendered, and AMBAG will compensate the consultant for these services as set forth in the agreement.

The Consultant will be paid based on work actually performed, and accepted in writing by CCMDC, during the preceding month. The consultant should forward a copy of all invoices for payment for work performed and associated expenses by the 15th day of the month. This project is funded by Caltrans planning grant and Agency Partners.

Terms & Conditions

A. Limitations

This RFP does not commit the Agency Partners to award a contract, to pay any pre-contractual expenses, or to procure or contract for services or supplies. The Agency Partners expressly reserve the right to reject any and all proposals or to waive any irregularity or informality in any proposal or in the RFP procedure and to be the sole judge of the responsibility of any Proposer and of the suitability of the materials and/or services to be rendered. The Agency Partners reserve the right to withdraw this RFP at any time without prior notice. Further, The Agency Partners reserves the right to modify the RFP schedule described above.

B. Award

The Agency Partners may ask RFP finalists to present oral briefings of their proposals. All finalists may be required to participate in negotiations and submit such price, technical, or other revisions of their proposals as may result from negotiations. The Agency Partners also reserve the right to award the contract without oral briefings or discussion, based upon the initial written proposals. Accordingly, each initial proposal should be submitted on the most favorable terms from a price and a technical viewpoint.

C. Verbal Agreement or Conversation

No prior, current, or post award verbal conversations or agreement(s) with any officer, agent, or employee of the Agency Partners shall affect or modify any terms or obligations of the RFP, or any contract resulting from this RFP.

D. Pre-contractual Expenses

Pre-contractual expenses include any expenses incurred by Proposers and selected contractor in:

- Preparing proposals in response to this RFP
- Submitting proposals to the Agency Partners
- Negotiations with the Agency Partners on any matter related to proposals.
- Other expenses incurred by a contractor or Proposer prior to the date of award of any agreement.

The Agency Partners shall not be liable for any pre-contractual expenses incurred by any Proposer or selected contractor. Proposers shall not include any such expenses as part of the price proposed in response to this RFP. The Agency Partners shall be held harmless and free from any and all liability, claims, or expenses whatsoever incurred by, or on behalf of, any person or organization responding to this RFP.

E. Signature

The proposal will also provide the following information: name, title, address, and telephone number of individual with authority to bind the consultant or consultant firm and also who may be contacted during the period of proposal evaluation. The proposal shall be signed by an official authorized to bind the consultant or consulting firm and shall contain a statement to the effect that the proposal is a firm offer for at least a ninety (90) day period. Execution of the contract is expected no later than May 19, 2017.

F. Conflict of Interest Statement

Consultants and consultant firms submitting proposals in response to this RFP must disclose to the Agency Partners any actual, apparent, or potential conflicts of interest that may exist relative to the services to be provided under Agreement for consultant services to be awarded pursuant to this RFP. If the consultant or firm has no conflict of interest, a statement to that effect shall be included in the proposal. The selected Consultant shall refrain from and disclose any subsequent potential conflicts during this contract.

G. Contract Arrangements

The successful consultant is expected to enter into an agreement based on the attached Agreement for Services (Attachment 3).

G1. Disadvantaged Business Enterprise (DBE) Policy: It is the policy of the U.S. Department of Transportation (USDOT) that minority-and women-owned business enterprises (hereby referred to as

DBEs) as defined in 49 CFR Part 23 shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with federal funds.

G2. DBE Obligation: The recipient or its subcontractor agrees to ensure that DBEs have the maximum opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with federal funds provided under this agreement. In this regard, all recipients or subcontractors shall take all necessary and reasonable steps in accordance with 49 CFR Part 23 to ensure that DBEs have the maximum opportunity to compete for and perform contracts. Recipients and their subcontractors shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of USDOT assisted contracts.

G3. Title VI of the Civil Rights Act of 1964: The contractor agrees to comply with all the requirements imposed by Title VI of the Civil Rights Act of 1964 (49 USC 2000d) and the regulations of the U.S. Department of Transportation issued there under in 49 CFR Part 21.

G4. Equal Employment Opportunity: In connection with the performance of the contract, the contractor shall not discriminate against any employee or applicant for employment because of race, color, age, creed, sex or national original. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

H. Americans with Disabilities Act (ADA) Provisions

To comply with the nondiscrimination requirements of the Americans with Disabilities Act (ADA), it is the policy of the Agency Partners to make every effort to ensure that its programs, activities and services are available to all persons, including persons with disabilities. For persons with a disability needing a reasonable modification to participate in the procurement process, or for persons having questions regarding reasonable modifications of the procurement process, you may contact the Agency Partners representative listed in this RFP. In order to ensure the proposal is in compliance with federal ADA guidelines, Proposers should review the federal ADA guidelines.

Protest Procedures

A. Purpose and Applicability

The procedures described in this section have been established to ensure uniform, timely, and equitable consideration of all complaints received by the Agency Partners concerning its procurement activities.

The following protest procedures shall be employed for procurements conducted by the Agency Partners. Such protests shall be applicable only to procurements wherein the Agency Partners requests bids, proposals or offers for goods or services financed in whole or in part by public funds.

Procurements involving FTA funds are subject to additional protest procedures established by that agency. Procedures applicable to FTA-funded procurements are so identified.

B. Definitions

The following definitions apply to terms used in this section:

DAYS: Unless otherwise specified, refers to the Agency Partners working days.

FILE OR SUBMIT: Refers to the date of receipt by the Agency Partners.

INTERESTED PARTY: All bidders or proposers involved in an Agency Partners procurement. This may also include a subcontractor or supplier who shows substantial economic interest in a provision of the IFB or RFP, or in the interpretation of such provision.

BID: Refers to and includes: i) the terms “offer” and “proposal” as employed in this document; ii) sealed bids; iii) competitive negotiation, and; iv) non-competitive negotiation.

C. Basis for Protest

If in the course of a procurement action an interested party has reason to believe that: a) free and open competition does not exist, or; b) the Agency Partners solicitation documents contain restrictive specifications, such party may file a protest in accordance with the procedures described herein.

In addition to the above, protests may be filed based upon the following factual or alleged circumstances:

- (a) Violation of federal, state or local law or regulation;
- (b) Sole source procurements;
- (c) Failure to adhere to evaluation criteria set forth in solicitation documents, or use of additional criteria not so published;
- (d) Changes to evaluation criteria made during the evaluation process;
- (e) Local or DBE preferences;
- (f) Solicitation advertising violating applicable laws or regulations;
- (g) Provision of inadequate time to prepare a proposal.

Protests of the Agency Partners procurements filed by interested parties shall be considered in two general categories: 1) those filed prior to contract award, and; 2) protests occurring after contract award has been made.

D. Pre-Award Protests

The following procedures shall be followed for all protests filed prior to award of contract:

1. Protests must be filed no later than five (5) days prior to the date established in the solicitation for receipt of bids or proposals. Protest information requests and follow-up arguments that are

submitted after the protest submission deadline, will not be considered to be part of the protest by the Agency Partners.

2. Protests must be submitted in writing to the attention of the Agency Partners' Executive Directors. The written protests shall include:
 - (a) The name, address, and telephone number of the protester;
 - (b) The Agency Partners solicitation number and project description;
 - (c) A statement of the grounds for the protest, accompanied by all supporting documentation. All grounds must be fully supported with documentation;
 - (d) The resolution sought from the Agency Partners by the protester.
3. The Agency Partners' Executive Directors shall receive the protest and issue written notification to the protester within (5) five days that the matter is undergoing review. Notice of the protest shall be given in writing to all known recipients of solicitation documents.
4. Procurement activity shall be suspended pending resolution of a protest unless one or more of the following conditions exists:
 - (a) The goods or services being procured are urgently required;
 - (b) Delivery or performance will be unduly delayed by failure to make an award promptly;
 - (c) Failure to make prompt award will result in termination of a critical Agency Partners function or activity or otherwise cause undue harm to the Agency Partners, or;
 - (d) The Agency Partners' Executive Directors prepares a written finding that such protest is clearly frivolous in nature, and therefore does not warrant a disruption of the procurement process.

The Agency Partners' Executive Directors shall be responsible for making a written determination that circumstances require the Agency Partners to proceed with procurement during a pending protest.

Unless such determination is made, the procurement shall be suspended pending resolution of the protest. All parties known to have received solicitation documents shall be notified in writing of such suspension by the Agency Partners' Executive Directors.

5. All protests received within the specified period shall be examined by the Agency Partners' Executive Directors, who shall evaluate the matter and, within seven (7) calendar days, forward a recommendation concerning its disposition to the Agency Partners' Executive Directors.

No additional material shall be accepted for consideration during the protest review unless specifically requested in writing by the Agency Partners.

6. The Agency Partners' Executive Directors may attempt to resolve the protest with the affected party. If a) after receipt of recommendations from the Agency Partners' Executive Directors, the Agency Partners' Executive Directors elect not to attempt such resolution, or b) resolution is attempted but not achieved, the protesting parties may appeal to the Agency Partners' Board of Directors (hereinafter "Boards") after thirty (30) calendar days and within thirty-five (35) calendar days after receipt of the protest submittal. Failure to appeal to the Boards shall be a waiver of any other rights under the Agency Partners Protest Procedures.

For these purposes, "resolution" shall mean the written withdrawal of a protest by the originating party.

7. The Boards shall formally consider the protests at a public meeting within forty-five (45) calendar days after the date on which the matter was appealed to the Boards. The Boards may elect to appoint a sub-committee to review the protest and make a recommendation to the Boards at the public meeting. Protesting parties shall be notified in writing of the date on which their matters shall be considered by the Boards. Such parties shall be afforded an opportunity to present their case at the Board meetings.
8. The Boards shall then make a formal decision on such protests at a public meeting. The decision of the Boards, along with a formal record of the protest, shall become a matter of public record, and shall be considered final. The Agency Partners' Executive Directors shall notify protesting parties in writing of any protest decision made by the Boards.

Except under conditions described in item 4 above, such decision by the Boards shall be made prior to award of any contract related to the subject procurement.

9. Should the Boards deny the protest, the Agency Partners may proceed with the procurement process. In the case of FTA-funded procurements, no contract shall be awarded within five (5) days following the Boards' decision unless such award is necessary due to circumstances described in item 4 above. If the decision of the Boards is to uphold the protest, then the Agency Partners shall proceed pursuant to Board direction.

E. Post-Award Protests

Protests received after award of contract shall be considered only if received within five (5) days following the date on which the Agency Partners' Executive Directors award recommendation is made. Post-award protests received after that time shall not be considered. Protest information requests and follow-up arguments that are submitted after the protest submission deadline, will not be considered to be part of the protest by the Agency Partners.

Post-award protests shall be processed in the same fashion as that employed for pre-award protests. However, the award shall remain valid and procurement activities shall continue unless the Agency Partners' Executive Directors determine in writing that suspension of such award is necessary pending protest resolution. In that event the awardee shall be so notified in writing, and the Agency Partners' Executive Directors shall effect an agreement with the Contractor for suspension of activity.

F. Additional Protest Procedures for FTA-Funded Procurements

FTA Protest Review Procedures

The Agency Partners shall inform protesting parties that circumstances under which FTA will accept and review protests are limited to the following:

- (a) The alleged failure of the Agency Partners to have written protest procedures;
- (b) The alleged failure of the Agency Partners to follow such procedures;
- (c) The alleged violation by the Agency Partners of a specific federal requirement which provides an applicable complaint procedure.

In the instance of (c) above, the applicable complaint procedure shall be submitted and processed in accordance with pertinent federal regulations e.g., 49 CFR Part 661, Section 661.15 for Buy America, or 49 CFR Section 23.73 for Minority Business Enterprise participation.

Should a protest be filed with FTA under either (a) or (c) above, the following process will be used by FTA pursuant to Circular 4220.1B, Chapter V:

1. Parties shall file a protest with FTA no later than five (5) days after a final decision is rendered by the Boards as provided herein. In instances where the protester alleges that the Agency Partners failed to make a final determination on the protest, protesters shall file a protest with FTA no later than five (5) days after the protester knew or should have known of the Agency Partners' failure to render a final determination on the protest;
2. The Agency Partners shall not award a contract for five (5) days following its decision on a bid protest except in accordance with the provisions and limitations of item 9 and item 4 of the protest procedures. After five (5) days, the Agency Partners shall confirm with FTA that FTA has not received a protest on the contract in question;
3. Protests shall be filed with the FTA Region IX office;
4. The protest filed with FTA shall:
 - (a) include the name and address of the protester;
 - (b) identify the grantee, project number, and the number, if any, of the contract solicitation;
 - (c) contain a statement of the grounds for protest and any supporting documentation. This should detail the alleged failure to follow protest procedures or the alleged failure to have procedures, and should be supported by documentation to the extent possible;
 - (d) include a copy of the local protest filed with the Agency Partners along with a copy of the Agency Partners' decision, if any.

5. FTA shall notify the Agency Partners in a timely manner of the receipt of a protest. FTA shall instruct the Agency Partners to notify the contractor of the protest if award has been made or, if no award has been made, to notify all interested parties. The Agency Partners shall instruct all who receive such notice that they may communicate further directly with FTA;
6. The Agency Partners shall submit the following information to FTA not later than ten (10) days after receipt of notification by FTA of the protest:
 - (a) a copy of the Agency Partners' protest procedures;
 - (b) a description of the process followed concerning the protest, and;
 - (c) any supporting documentation.
7. The Agency Partners shall provide the protester with a copy of the above submission;
8. The protester may provide any comments on the Agency Partners' submission no later than ten (10) days after the protester's receipt of such material;
9. When a protest has been filed in a timely fashion with the Agency Partners before award, the Agency Partners shall not make an award prior to five (5) days after the resolution of the protest, or if a protest has been filed with FTA, during the period in which the protest is pending, unless the Agency Partners determines that:
 - (a) The items to be procured are urgently required;
 - (b) Delivery or performance will be unduly delayed by failure to make the award promptly, or;
 - (c) Failure to make prompt award will otherwise cause undue harm to the Agency Partners or the Federal Government

In the event that the Agency Partners determine that the award is to be made during the five (5) day period following the local protest decision or the period in which the protest is pending, the Agency Partners shall notify FTA prior to making such award;
10. Upon receipt of the material described herein, FTA will either request further information or a conference among the parties, or will render a decision on the protest;
11. The protest procedures contained herein shall be included in solicitation documents issued by the Agency Partners for all federally assisted procurements.

Incorporation of Attachments

The following documents are attached and incorporated in the RFP by reference.

Appendix 1: Memorandum of Understanding (MOU) between the Agency Partners

Attachment 1- Deliverables for ABM Framework Project

Attachment 2 – Sub-Consultant List

Attachment 3 – DBE Commitment form

Attachment 4- California Levine Act Statement

Attachment 5 – Certification Debarment, Suspension and Other Responsibility Matters

Attachment 6 – Certification of Restrictions on Lobbying

Attachment 7 - Draft Agreement for Services

Attachment 8 – AMBAG Regional Travel Demand Model: Technical Document

Attachment 9 - SBCAG Regional Travel Demand Model: Technical Document

Attachment 10 - SLOCOG Regional Travel Demand Model: Technical Document