

TAHOE REGIONAL PLANNING AGENCY
Transportation Division
REQUEST FOR PROPOSALS (RFP)
Tahoe Travel Demand Model Update
RFP19002

Announcement: April 12, 2019

Project Description:

The Tahoe Regional Planning Agency (TRPA) is requesting proposals for the services of a qualified vender to provide travel demand modeling expertise in accordance with the scope of services provided within this RFP. Services are requested to update and validate the activity-based Tahoe Travel Demand Model.

Evaluation:

Bids will be evaluated based on team qualifications, ability to meet timelines, proposed scope of work, proposed budget, references, and sample products. If oral interviews are needed, the qualified consulting firms will be invited to make a formal presentation to a selection committee (see above for more information). TRPA reserves the right to select a consultant based solely on the written proposals and not convene oral interviews. TRPA is not required to contract with a consultant, and may choose not to select any of the submitted consultants.

Deadline: May 8, 2019

Questions: All questions should be submitted in writing to the RFP Coordinator:

Reid Haefer
Tahoe Regional Planning Agency
PO Box 5310
128 Market Street
Stateline, NV 89449
775-589-5289
rhaefer@trpa.org

SECTION 1: GENERAL BACKGROUND AND SCHEDULE

Introduction:

This RFP is part of the TRPA Transportation Division's work to update the Tahoe Travel Demand Model in preparation for the next regional transportation plan. The objective of the project is to bring the model up-to-date with new data and methodologies that allow for better estimation of current and future transportation conditions throughout the Tahoe region. The project is funded by state and federal grants.

TRPA Background Information:

Established in 1969, by a Federally sponsored, interstate compact between California and Nevada, TRPA is authorized under California law (California Government Code sections 66800 through 66801), Nevada law (NRS 277.190 through 277.200), and Federal law (PL 96-551).

The mission of TRPA is to "lead the cooperative effort to preserve, restore, and enhance the unique, natural, and human environment of the Lake Tahoe Region." TRPA is the leading partner for plans and actions to preserve the environment of the Tahoe region. TRPA establishes transportation and land use policy and works with local, regional, state, and Federal organizations and governments to facilitate a cooperative approach in implementing these plans and programs. The TRPA Regional Plan is designed to maintain a healthy natural environment, meet adopted environmental standards, maintain social and economic health, and allow orderly growth in the Region.

TRPA is governed by a 15-member Board. California and Nevada each have seven members comprised of elected officials and governmental appointees. In addition, a non-voting member is appointed by the President of the United States. Further information can be obtained at TRPA's website at www.trpa.org.

TRPA is granted environmental planning and regulatory authority at Lake Tahoe pursuant to the Tahoe Regional Planning Compact (Public Law 96-551). TRPA requires all projects to be consistent with the applicable development and environmental standards found throughout the TRPA Regional Plan package.

PUBLIC RECORDS

The documents submitted in response to this RFP should be considered public information and subject to FOIA disclosure. Restrictions on any information submitted will render a bid non-responsive.

TRPA assumes no contractual obligation to enforce any exemption on behalf of a respondent to the RFP.

RFP COORDINATOR:

Upon release of this RFP, all communications concerning this proposal request should be directed to the RFP Coordinator listed below. All written questions and requests for clarification must be received by the deadline on the RFP schedule listed below. Email shall have the subject line: **"RFP INQUIRY"**

RFP19002 – Travel Demand Model.” Responses will be posted to the website <http://www.trpa.org/document/rfps/> in accordance with the RFP schedule listed below. The respondent should rely only on written statements issued by the RFP Coordinator.

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PO Box 5310
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REQUEST FOR PROPOSAL SCHEDULE:

TRPA anticipates the following schedule, which is subject to change:

| | |
|--|----------------|
| Date of Announcement: | April 12, 2019 |
| Proposing Firms’ Questions Due: | April 26, 2019 |
| Questions and Answers posted to www.trpa.org | May 1, 2019 |
| Deadline for Proposal Submissions: | May 8, 2019 |
| Selection of Consultants for Interviews (if necessary): | May 14, 2019 |
| Consultant Interviews (if necessary): | May 20, 2019 |
| Anticipated Award of Contract: | May 31, 2019 |
| Commencement of Work: | July 1, 2019 |

Late proposal submissions will not be considered.

PROPOSAL SUBMISSION:

Proposals must be submitted electronically to bids@trpa.org by the specified deadline. Electronic submittals and supporting documentation (Microsoft Word or PDF) must be emailed with the subject line “**DO NOT OPEN – RFP19002 – Travel Demand Model**” to bids@trpa.org

Address electronic proposals to: Bids@trpa.org

Subject Line: “**DO NOT OPEN – RFP19002 – Travel Demand Model**”

All opened proposals and accompanying documentation become the property of TRPA and will not be returned.

TERMS AND CONDITIONS:

- TRPA reserves the right to amend the RFP schedule or issue amendments to the RFP at any time. TRPA also reserves the right to cancel or reissue the RFP, to reject any or all proposals, to waive any irregularities or informalities in the selection process, and to accept or reject any item or combination of items. TRPA reserves the right to request clarification of information from any bidder or to request supplemental material deemed necessary to assist in the evaluation of the proposal. TRPA reserves the right to accept any agreement deemed by the agency to be in its

best interest. This RFP does not obligate the TRPA to accept or contract for any expressed or implied services.

- In the event that the bidder to whom any services are awarded does not execute a contract within thirty (30) calendar days after TRPA approval, TRPA may give notice to such bidder of intent to award the contract to the next most qualified bidder or to call for new proposals and may proceed to act accordingly.
- TRPA will not reimburse any bidder for any of the costs involved in the preparation and submission of responses to this RFP or in the preparation for and attendance at subsequent interviews.
- Selected consultant(s) will be expected to sign the TRPA Consultant Services Agreement listed on <http://www.trpa.org/wp-content/uploads/TRPA-Two-Party-Contract.doc> . Any desired edits to this agreement should be included in the Contractor's proposal. Desired edits may not be accepted by TRPA.
- The Consultant or its employees may be subject to the provisions of Article III (a)(5) of the Tahoe Regional Planning Compact (P.L. 96-551, 94 Stat. 3233, Cal. Gov't Code Section 66801, N.R.S. 277.200), which requires disclosure of any defined economic interest and prohibits such persons from attempting to influence Agency decisions affecting certain economic interests.
- Bidder shall thoroughly examine and be familiar with these terms and conditions of the TRPA Consultant Services Agreement. The failure or omission of any bidder to receive or examine this document shall in no way relieve any bidder of obligations with respect to this proposal or the subsequent contract.
- Bidder must certify to the best of its knowledge and belief that it and its principals are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency. TRPA will verify bidders' status by checking the SAM system.
- All subcontractors, if any, used by the selected consultant will require prior written consent of TRPA and will be subject to all provisions stipulated in the TRPA Consultant Services Agreement.
- This contract will be funded by federal and state grant awards and is subject to federal and state grant award requirements including, but not limited to, cost principles and administrative regulations including but not limited to travel and per diem rates, mileage rates, and allowable cost requirements.

SECTION 2: SCOPE OF SERVICES

PROJECT DESCRIPTION:

1. **Objectives.** – The objective of this project is to update and validate the Tahoe Travel Demand Model. The deliverables include updated sub-model components and a validated model with documentation of each deliverable.
2. **Context of the Project.** – The Tahoe Regional Planning Agency (TRPA) is a bistate regional planning agency and metropolitan planning organization (MPO) located on the border of California and Nevada. Created through a Bi-State Compact between California and Nevada, TRPA leads the cooperative effort to preserve, restore, and enhance the Lake Tahoe Region, while improving local communities and visitors' interactions with its irreplaceable environment. As the Lake Tahoe Region's federally-designated metropolitan planning organization, TRPA plays a leading role in identifying and planning solutions for its transportation challenges.

<http://www.tahoeopendata.org/datasets/trpa-boundary>

As part of their Pathways 2007 project TRPA updated its travel-forecasting model. The previous model, a 3-step model developed in the 1980's, was originally developed in Tranplan and was converted to the TransCAD platform during the first phase of model work. While the model was successfully converted, it was not able to address many important policy issues because of the limitations of trip-based models. The current [Lake Tahoe Resident and Visitor Model](#) consists of an activity-based resident model and an activity-based visitor model. Because the number of resident households, employment locations, person activities, and the resident/visitor mix are potentially very different in the region during the summer versus the winter, socio-economic data has been developed for the two seasons. The current model is used to assist TRPA in analyzing a variety of planning policies and to estimate and forecast VMT in the region. The last major model run occurred for the [2017 Regional Transportation Plan](#).

During the winter of 2019, TRPA convened a model stakeholder working group to solicit feedback on the update to the TRPA travel demand model. A major outcome of the working group was a prioritized set of potential model updates that were developed and vetted by TRPA staff, a contractor, and the model working group stakeholders. These prioritized model updates comprise the tasks and deliverables contained within this RFP scope.

3. **Scope.** – With stakeholder and contractor guidance, TRPA staff have identified a set of updates to the model that should be implemented. The scope of the project is to make specified changes to the Tahoe Travel Demand Model and validate the model after updates have been implemented.

Task 1: Model Updates – Implement specified updates to the Tahoe Travel Demand Model.

- **Major Milestones:** Prior to producing the task deliverables, the contractor shall work with TRPA staff to understand and clarify Task 1 milestones.
- **Deliverable 1: Update Visitor Sub-Model w/ New Survey Data:**
 - A unique and important component of the Tahoe model is a visitor sub-model, which incorporates visitor travel patterns throughout the Tahoe region. The contractor shall implement changes to the visitor sub-model, including updating the overnight visitor and day visitor sample

records and patterns using data from the recent 2018 Summer Visitor Survey. This will help in getting a more representative sample as the new visitor population will reflect the changes in visitor composition that has occurred in recent years. The contractor shall work with TRPA staff to integrate the existing travel survey dataset into the model and provide detailed documentation of how that data was incorporated.

- **Deliverable 2: *Collect New External Worker Data & Re-Calibrate External Worker Model:***
 - The contractor shall update the external worker sub-model by proposing updated data sources, collecting new data, and re-calibrating the model. This update will provide revised estimates for the number of external workers coming into the region as well as which entry point they are using. Potential data sources include LODS, StreetLight, and AirSage. An updated employer-based survey may also be appropriate to understand the local jobs that are filled by external workers (to validate Big Data based assumptions) and the seasonal nature of those jobs. Once this data is incorporated, the reverse destination choice model shall be recalibrated. The contractor shall propose external worker data source(s), work with TRPA to collect the data, re-calibrate the sub-model, provide detailed documentation of calibration process and provide any collected data in csv or excel file format.
- **Deliverable 3: *Collect New External Traffic Station Data***
 - The contractor shall propose best data sources for model representation of the number and type of travelers (eg residents, visitors, commuters) that travel through the 7 locations (external traffic stations) where vehicles enter and exit the Tahoe basin. The composition of the 24-hour traffic volumes at the external stations informs several key model assumptions, such as percentage of thru (passenger and truck), external worker, overnight visitor, day visitor, and truck (service/delivery) traffic, resident worker to job factor, and external worker origin. Intercept surveys are the traditional method of data collection but this data could potentially be pieced together using other data sources such as Big Data, mobile app data, a license plate survey or count data. Once TRPA staff and the contractor agree upon data sources, the contractor should provide guidance on how to best collect and integrate the data into the model. The contractor shall collect the data, provide detailed documentation of the data collection methodology, integrate the data into the model and provide the collected data itself in csv or excel file formats.
- **Deliverable 4: *Update Visitor Destination Choice Model w/ Recreation Activity Data***
 - Update the visitor sub-model by creating a more data driven approach to calculate the 'attractiveness' of recreation locations throughout the

Tahoe basin. Currently there is an off-model approach where the model user assigns an attractiveness score to each TAZ. The contractor should propose a new methodology for representing the relative amount of visitor and resident activity at recreation locations throughout the region. This will include updating the visitor destination choice model using new data sources and incorporating capacity constraints such as parking or cost. The contractor shall provide detailed documentation of the proposed methodology including data sources and any code developed to analyze model data.

- **Deliverable 5: *Create external Transportation Analysis Zones (TAZ) system***
 - Currently, the Tahoe model only includes trip distances that occur within the TRPA jurisdictional boundary. The contractor shall update the model Transportation Analysis Zones to include travel distances that occur coming to and from the TRPA region but which are outside of the TRPA jurisdictional boundary. This could include creating a virtual TAZ system without an underlying roadway network with travel impedances represented in the model rather than the network or extending TAZ boundaries all the way to San Francisco Bay Area to properly address VMT resulting from inter-regional travel. The contractor shall provide detailed documentation of TAZ development methodology and integrate the newly created TAZ system into the existing travel demand model.

Task 2: Model Validation – Validate the Tahoe travel demand model.

- **Major Milestones:** Prior to producing the task deliverables, the contractor shall work with TRPA staff to understand and clarify Task 2 milestones.
- **Deliverable 6: *Static Model Validation***
 - Perform static validation to analyze modeled values compared against observed conditions, which should include but is not limited to comparing the assigned volumes and congested speeds against observed counts and speed data for the modeled day across facility type, screenlines, volume group, etc. To start, the contractor shall create a static validation plan and work with TRPA staff to gather validation data. Once the contractor has conducted the validation, they shall provide detailed documentation of the validation results. Validation methodology should satisfy all state and federal guidelines¹.

¹ Federal Highway Administration (FHWA), Transportation Model Improvement Program (TMIP), https://www.fhwa.dot.gov/planning/tmip/publications/other_reports/validation_and_reasonableness_2010/fhwahep10042.pdf

- **Deliverable 7: Dynamic Model Validation**

- Put the Tahoe Travel Demand Model through a series of tests to identify the degree of model sensitivity/insensitivity and to determine whether the model is appropriate for both regional and project-level analysis. To start, the contractor shall work with TRPA staff to create a dynamic validation plan by identifying a range of potential sensitivity tests. Next the contractor shall carry out dynamic validation tests and lastly create detailed documentation of the validation results. Validation methodology should satisfy state and federal guidelines¹.

Task 3: Additional Model Improvements (optional) – The deliverables listed above are part of a larger list of potential model updates that were established with guidance from the model stakeholder working group. Depending on project budget and need, there may be an opportunity to update additional elements of the model. If additional work is requested, TRPA staff shall work with the contractor to establish the scope for these deliverables.

4. **Responsibilities** – The contractor shall work with TRPA staff to produce all deliverables listed above. This will be a collaborative effort to implement updates and validate the model.

5. **Schedule** –

| | |
|-------------------------|--------------------------------|
| a. Commencement of work | July 1, 2019 |
| b. Deliverable 1 | October 1 st , 2019 |
| c. Deliverable 2 | October 1 st , 2019 |
| d. Deliverable 3 | October 1 st , 2019 |
| e. Deliverable 4 | October 1 st , 2019 |
| f. Deliverable 5 | October 1 st , 2019 |
| g. Deliverable 6 | November 15, 2019 |
| h. Deliverable 7 | November 15, 2019 |
| i. Contract End | December 31, 2019 |

Budget – Submissions should provide detailed cost for each deliverable. Budget will be determined based on consultant proposals.

6. **Consultant Requirements** –

Demonstrated ability to work with government clients
Knowledge of Federal and State transportation modeling guidelines
Experience with travel demand models that incorporate visitor and commuter travel patterns
Experience with activity-based travel demand models
Experience with static and dynamic model validation
Experience with ‘big data’ sources, collection, and analysis, such as Streetlight or Airsage
Proficiency with TransCAD and programming languages such as Java, Python, & R
Desirable: Knowledge of California and Nevada transportation modeling guidelines, including California SB 743 legislation

SECTION 3: Proposal Contents and Selection Process

MINIMUM REQUIRED PROPOSAL CONTENTS:

All proposal responses should address the following matters:

1. Definition of the Project: Indicate your understanding of the Project objectives and TRPA travel demand model. Max page limit: 1 page
2. Project approach: Describe how the Project will be managed, implemented, and evaluated to accomplish the objectives and requirements outlined in this request. Max page limit: 2 pages
3. Team Organization: Describe how the project team will be organized to facilitate effective management, implementation, and evaluation. Max page limit: 1 page
4. Qualifications and Experience: Provide a summary of company and project team qualifications related to travel demand modeling. Max page limit: 2 pages
5. Schedule and Cost: The initial term of this contract shall be for July 1-December 31, 2019, with an option to extend for one additional year. Provide an itemized cost estimate based on the Tasks described in Scope of Work section. Max page limit: 1 page
6. References: Provide a minimum of three (3) client references of similar sized and/or governmental accounts which the bidder has served in a similar capacity over the past two years and/or is currently serving. Provide a contact person, telephone number, and email address for each reference customer. References should be submitted as an attachment to this response. Max page limit: 3 pages

NOTIFICATION AND SELECTION PROCESS:

The process for selecting the Applicant is as follows:

1. General proposal evaluation criteria will include content of the proposal, project approach and understanding, qualifications, references, cost, service availability, and timing.

| Section | Evaluation Criteria |
|------------------------------|--|
| 1. Definition of the Project | <ul style="list-style-type: none">• Demonstrates exceptional knowledge of the overall goals and objectives |
| 2. Project Approach | <ul style="list-style-type: none">• Overall project approach including overall project approach including role, philosophy, and project process used by the firm. Overall strategy and deliverables. |

| | |
|----------------------------------|--|
| 3. Team Organization | <ul style="list-style-type: none"> • Project team and leadership. Planning activities, support tools, and reporting methodology. |
| 4. Qualifications and Experience | <ul style="list-style-type: none"> • Depth of relevant experience, verifiable ability of proposed firm to meet Agency expectations. |
| 5. Schedule & Cost | <ul style="list-style-type: none"> • Acceptability of proposed overall cost and specific cost formulation the Agency • Availability and accessibility of the firm during the duration of this project. |
| 6. References | <ul style="list-style-type: none"> • Satisfactory responses from prior engagement references provided for proposed firm. |
| 7. Content | <ul style="list-style-type: none"> • Satisfactory completion of all general RFP content and submission requirements |

2. An initial screening of applicants will determine level of knowledge, experience, and qualifications. Only responses from qualified applicants will be evaluated further.

3. Qualified applicants may be invited to an interview.

4. Should the selected applicant and TRPA be unable to agree to the terms of a contract within thirty (30) calendar days after TRPA approval, TRPA will reserve the right to disqualify the consultant and select another qualified applicant. Should this process not result in the hiring of a consultant, the RFP may be reissued.

5. TRPA agrees to make a good faith effort to contract with small, minority, and women owned business enterprises. Accordingly, the TRPA strongly encourages small, minority, and women owned businesses to reply to this RFP and submit DBEWE Certification as an attachment to this RFP.

TRPA will contract with the party that will best accomplish the project objectives for the best value and in the best interests of the Agency.