

Exhibit A

Scope of Work

COMPONENT 1 - Update Traffic Model to 2010 Baseline

Task 1.1: Project Management

CONSULTANT will provide a detailed project schedule for the completion of services of all tasks within each Component within the Scope of Work. Time frames will be stated in terms of the number weeks required to complete the specified tasks using the County's notice to proceed as the start date. This task also includes time for administrative activities not included within Component 2 and Component 3 of this Scope of Work, including time related to discussing the Scope of Work with the Contract Administrator, invoicing, and other required project and Subconsultant management activities. Upon acceptance by the Contract Administrator, the CONSULTANT will create a schedule and provide periodic updates with substantial schedule modifications to the Contract Administrator for review and approval. Schedule changes will be handled via email approval.

Deliverables:

- Project schedule with periodic updates

Task 1.2: TDM Meetings

CONSULTANT will attend up to six (6) meetings with the El Dorado County staff (COUNTY), as directed by the Contract Administrator, in addition to those specifically identified within other tasks of this Scope of Work. Anticipated meeting purposes include:

- Meeting #1: establish the schedule, and to discuss meeting protocols and times, lines of communication, Traffic Demand Model (TDM) goals and objectives, and the existing COUNTY GIS data/layers and traffic information.
- Meeting#2: discuss data gaps (i.e., TAZ, roadway network, etc.) and TDM update progress.
- Meeting #3: discuss the evaluation of the 2010 baseline analysis for the TDM update.
- Meeting #4: discuss TDM system expectations for the COUNTY, which will include a peer agency/COUNTY participation in the Traffic Demand Model (TDM) system update process, and to determine the best approach to meet the expectations of the TDM system design.
- Meeting #5 and #6: coordinate with the Contract Administrator with respect to the purpose and need for the remaining two (2) meetings. If requested, the CONSULTANT and Contract Administrator will coordinate the specific dates of each meeting, which will be included within the schedule as developed within Task 1.1.

All decisions from these meetings will be formalized by the COUNTY and the CONSULTANT will provide an email summary of all meetings to the COUNTY no later than five (5) days following the meeting date.

Deliverables:

- Up to six (6) email summaries of each meeting's decisions and discussions

Task 1.3: Software Vendor Presentations

CONSULTANT will organize an online presentation of the TransCAD and CUBE modeling software platforms by the vendors. The CONSULTANT will be in attendance and facilitate discussions with the vendors.

The CONSULTANT will facilitate the purchase of the selected software platform. The COUNTY will be responsible for payment to the vendor and execution of all relevant software agreements and purchase agreements.

Task 1.4: Existing Land Use and Socio-Economic Data Collection

CONSULTANT will coordinate with COUNTY'S Development Services Department and Surveyor's Office to obtain an up-to-date GIS database of parcels, as well as a GIS file depicting the General Plan land use designations. CONSULTANT will generate a combined GIS database containing both spatial data (parcel and land use boundaries) and tabular data (existing parcel characteristics) using existing, readily available El Dorado County electronic databases. CONSULTANT will determine what data already exists and what additional data needs to be derived. The following existing land use information will be required:

Existing Land Use Inventory

- 2010 Baseline - Parcel square footage and acreage
- 2010 Baseline - Number of single-family dwelling units
- 2010 Baseline - Number of multi-family dwelling units
- 2010 Baseline - Building square footage for non-residential uses (retail, office, industrial, medical, or other).
- Acreage planned for other uses, such as schools, parks, golf courses, etc.

CONSULTANT will develop methods to effectively incorporate the above data into the new traffic model. To handle data inconsistency issues, CONSULTANT will develop and calibrate conversion factors resolving consistency issues arising from data unit and data definitional differences. CONSULTANT will work with the existing COUNTY data to develop a comprehensive existing land use inventory consistent with the socio-economic inputs required for the TDM. CONSULTANT will coordinate with SACOG and EDCTC, as necessary, to obtain additional available data required for the TDM.

CONSULTANT will prepare a brief technical memorandum documenting the sources of zonal data and how they will be used to construct the necessary zonal data files for the model. This memorandum will include appropriate graphics and discussion to provide an understanding of differences between existing Baseline assumptions and updated 2010 Baseline assumptions.

The CONSULTANT will finalize the memorandum based on one set of consolidated, non-conflicting comments provided by the COUNTY.

Deliverables:

- GIS parcel land use database for the TDM
- DRAFT Technical Memorandum #1: Existing Land Use and Socio Economic Data
- FINAL Technical Memorandum #1: Existing Land Use and Socio Economic Data

Task 1.5: Roadway Network

CONSULTANT will draw upon the COUNTY'S GIS roadway inventory databases to develop existing and future roadway networks. The COUNTY network will be developed in GIS to utilize

its database management functions. A database structure with appropriate indices and naming conventions will be developed to identify each specific network scenario as networks for future years or alternative plans are developed, allowing all scenario networks to have the same nodes and links at the same places. The networks will be reviewed for accuracy, consistency, and completeness by COUNTY.

COUNTY will assemble available roadway information on requested model attributes. COUNTY will assemble intersection information including, but not limited to, control type and lane geometries and provide this information to CONSULTANT. CONSULTANT shall supplement additional roadway information.

The CONSULTANT will participate in one (1) meeting with County staff or other individuals identified by the COUNTY for the purpose of establishing consensus on the roadways which will be included in the updated traffic model.

The CONSULTANT will prepare a brief technical memorandum documenting considerations related to the revised model network, and differences between the existing model network and the revised model network.

The CONSULTANT will finalize the memorandum based one set of consolidated, non-conflicting comments provided by the COUNTY.

Deliverables:

- One (1) email summary of meeting decisions and discussions
- Updated GIS roadway network.
- DRAFT Technical Memorandum #2: Summary of Network Changes
- FINAL Technical Memorandum #2: Summary of Network Changes

Task 1.6: Traffic Analysis Zone (TAZ) Structure

CONSULTANT will prepare a TAZ GIS layer for COUNTY review and approval. The CONSULTANT will utilize the County's 2010 TAZ structure in conjunction with the roadway network, reviewing locations and size of TAZs to make sure they have reasonable access to the roadway network and are consistent with land use, and reviewing the number of TAZs to make sure they are appropriate given the overall model design and are topologically consistent with parcel boundaries, roads, market areas, and other jurisdictional boundaries. The new TAZ structure will take into account information on the western edge of the County which generates traffic impacts on the County's road network. Upon revision/development of TAZ structure, CONSULTANT will splice it into the TDM roadway network. The CONSULTANT will confirm County TAZs will conform to census data and SACOG TAZ boundaries.

The CONSULTANT will participate in one (1) meeting with County staff or other individuals identified by the County Administrator for the purpose of reviewing Draft TAZs and identifying final changes to TAZs.

The CONSULTANT will prepare a brief technical memorandum documenting considerations related to the revised TAZ system, and differences between the existing model TAZs and the revised model TAZs.

The CONSULTANT will finalize the memorandum based one set of consolidated, non-conflicting comments provided by the COUNTY.

Deliverables:

- One (1) email summary of meeting decisions and discussions
- Updated Traffic Analysis Zone (TAZ) GIS layer in shape file format.
- DRAFT Technical Memorandum #3: TAZ Development and Considerations
- FINAL Technical Memorandum #3: TAZ Development and Considerations

Task 1.7: Traffic Counts and Transit Ridership Data

CONSULTANT will coordinate with the COUNTY to identify where roadway segment and intersection peak-hour counts are needed, and will assist COUNTY in gathering available state highway counts from California Department of Transportation (Caltrans) or SACOG or factoring available local traffic data to fill the gaps. CONSULTANT will collect available counts through the Performance Measurement System (PeMS) for US Highway 50. Available count data determined by the CONSULTANT to be relevant to the model development and calibration/validation processes will be added to the TDM GIS network. CONSULTANT will also work with El Dorado Transit to estimate ridership data.

The CONSULTANT will prepare a brief technical memorandum documenting available sources of traffic count and transit ridership data.

The CONSULTANT will finalize the memorandum based one set of consolidated, non-conflicting comments provided by the COUNTY.

Deliverables:

- Traffic count data included in the GIS based model network
- DRAFT Technical Memorandum #4: Traffic Count and Transit Ridership Data
- FINAL Technical Memorandum #4: Traffic Count and Transit Ridership Data

Task 1.8: Trip Generation and Trip Distribution

CONSULTANT will convert the GIS based parcel level land use update into land use information that will be incorporated into the TAZ structure defined in Task 1.6. CONSULTANT will review the current SACOG-SACMET trip generation function for its applicability in developing an El Dorado County specific trip generation. In addition, CONSULTANT will determine the most appropriate way to represent the necessary Traffic Impact Mitigation (TIM) Fee land uses categories (i.e., single family, office, retail, warehouse, etc.) and the General Plan land use designations identified for the model. CONSULTANT will review available information from SACOG's most recent household travel survey to determine its applicability in developing an El Dorado County specific trip generation function.

The CONSULTANT will participate in one (1) meeting with County staff or other individuals identified by the County Administrator for the purpose of reviewing the recommended trip generation approach and categories.

CONSULTANT will work with COUNTY in selecting a distribution model appropriate to the updated El Dorado County model.

The CONSULTANT will prepare a brief technical memorandum documenting the following:

- County and SACOG trip generation and distribution comparison
- Assumptions of original traffic model compared to the updated trip generation and trip distribution

- Trip production-attraction purpose trip matrices
- Summary statistics of trip lengths.

The CONSULTANT will finalize the memorandum based on one set of consolidated, non-conflicting comments provided by the COUNTY.

Deliverables:

- One (1) email summary of meeting decisions and discussions
- DRAFT Technical Memorandum #5: Trip Generation and Distribution
- FINAL Technical Memorandum #5: Trip Generation and Distribution

Task 1.9: Mode Choice

CONSULTANT will develop a method or model appropriate to account for transit trips in El Dorado County in coordination with the COUNTY. The CONSULTANT will prepare a brief technical memorandum documenting the mode choice approach.

The CONSULTANT will finalize the memorandum based on one set of consolidated, non-conflicting comments provided by the COUNTY.

Deliverables:

- DRAFT Technical Memorandum #6: Mode Choice
- FINAL Technical Memorandum #6: Mode Choice

Task 1.10: Trip Assignment and Model Calibration/Validation

CONSULTANT will prepare average daily trip assignments for validation. Additionally, the CONSULTANT will develop methodologies for determining AM and PM peak period assignments. CONSULTANT may modify the time periods based upon direction from the COUNTY. The model calibration and validation process will be an iterative process that will focus on traffic counts in the COUNTY. The process will entail comparing the Daily, AM peak hour, and PM peak hour traffic volumes estimated by the model to actual traffic counts taken at specific locations throughout the COUNTY.

Traffic model accuracy will be tested using the techniques listed below:

- The volume-to-count ratio is computed by dividing the traffic volume forecast from the model by the actual traffic volume counted on various segments. The deviation is the difference between the model volume and the actual count divided by the actual count.
- The correlation coefficient estimates the correlation between the actual traffic counts and the estimated traffic volumes from the model.
- The percent root mean square error (RMSE) is the square root of the model volume minus the actual count squared, divided by the number of counts. It is a measure similar to standard deviation in that it assesses the accuracy of the entire model.
- Current Caltrans modeling guidelines.

The CONSULTANT will prepare a brief technical memorandum documenting the following:

- Selected assignment algorithm(s)
- Peak Hour Percentages of Daily Travel by Trip Purpose
- Summary statistics of trip lengths.

- Initial Trip Assignment Results for chosen Model Time Periods (including summary statistics).
- ADTs and peak hour volumes on key roadways
- Calibration and Validation results and statistics.
- Comparison of existing model and new model results

The CONSULTANT will finalize the memorandum based on one set of consolidated, non-conflicting comments provided by the COUNTY.

Deliverables:

- DRAFT Technical Memorandum #7: Trip Assignment and Model Calibration/Validation
- FINAL Technical Memorandum #7: Trip Assignment and Model Calibration/Validation

Task 1.11: Special Tools - Software Automation and Administration

CONSULTANT will develop special tools for the COUNTY to set-up, run, and utilize model output. These tools are either linked with the model software, or developed in a spreadsheet. Additional model tools are anticipated to include:

- Simplified process to produce TAZ or district level land use summaries in a table format.
- Simplified process to output Vehicle Miles Traveled (VMT) by roadway classification, VMT by speed, or congested VMT.
- Simplified process to output and visualize peak hour intersection turning volumes.
- Select node/link assignments to visualize the paths of vehicles using a specific facility.
- Summaries of trip lengths based on trip purpose.
- Develop a scenario tool (i.e. scenario manager or catalog) tailored to the needs of the updated El Dorado County model.
- Create up to five standardized GIS based templates, which include thematic mapping options and the ability to include existing GIS layers that display landmarks such as political boundaries and waters feature, for presenting model output.

The CONSULTANT will prepare a brief technical memorandum with recommendations and information related to the following topics:

- How to manage the different levels of user operation desired (i.e. manipulate the entirety of the model, run with a scenario tool only, need output only).
- Methods to establish an electronic file management plan to document scenarios and organize scenario input and output files.
- Methods to make select output files available to El Dorado County and/or public GIS users.
- A draft version of a model user's agreement for the County's use with outside CONSULTANTS.
- Policies regarding the use of forecasts (SACOG, El Dorado County, or Caltrans) on particular roads or roadway types.
- Differences between the updated El Dorado County model and SACOG model; including model assumptions, input data, and traffic forecasts.
- How to track applications, tentative and final maps, and permit inventory/status for the purpose of updating the model Specific recommendations.

The CONSULTANT will finalize the memorandum based on one set of consolidated, non-conflicting comments provided by the COUNTY.

Deliverables:

- Tools to set-up, run, and utilize the model output
- DRAFT Technical Memorandum # 8: Model Automation and Administration
- FINAL Technical Memorandum # 8: Model Automation and Administration

Task 1.12: Model Presentations to County and Peer Agencies

CONSULTANT will work with the COUNTY to develop a TDM Preview presentation for one specific Community Region to present for up to two (2) presentations to an audience to be identified by the COUNTY. The purpose of this presentation will be to explain the model development process in layman terms using a case study approach.

The CONSULTANT will prepare a single model presentation to be presented up to four (4) times providing an overview of the model, its functionality, and initial results. Anticipated presentation audiences, to be finalized by the COUNTY include: 1) the COUNTY 2) SACOG, Caltrans, EDCTC; 3) El Dorado County Planning Commission; and 4) El Dorado County Board of Supervisors. CONSULTANT will include in this effort a summary of the TDM update process and the 2010 base year results.

As part of this effort, CONSULTANT will prepare a Model Summary Sheet which will be a one-page (front and back) summary handout with appropriate graphics that can be distributed to those who are not technically skilled to understand the more detailed technical reports developed during the course of this project.

Deliverables:

- Up to two (2) Model Preview Presentations
- Model Summary Sheet
- Up to four (4) presentations to: 1) COUNTY; 2) SACOG, Caltrans, EDCTC; 3) El Dorado County Planning Commission; and 4) El Dorado County Board of Supervisors.
- Up to four (4) email summaries of meeting discussions and comments

Task 1.13: Final Traffic Demand Model, Users' Manual, and Documentation

CONSULTANT will prepare a Model Users' Manual for COUNTY containing diagrams and step-by-step explanations on how to use the model. The Users' Manual will be designed to help the user learn and understand the components of the travel model, basic information about the models, and how to setup and make edits to the model. The Users' Manual will demonstrate post-processing routines to obtain intersection turn output and air quality modeling inputs. The Users' Manual will include:

- Basics of the Model inputs
- Description of Model Components
- Set up and Running a Base Scenario and use of the Scenario Manager
- Viewing Inputs and Outputs
- Displaying Results and use of Thematic Templates
- Set up and Running Additional Scenarios
- Comparing Results
- Post-Processing Turn Movements
- Discussion on data maintenance for the purpose of keeping the model reasonably current

The CONSULTANT will finalize the User's Manual based one set of consolidated, non-conflicting comments provided by the COUNTY.

CONSULTANT will prepare a report documenting the development process that will include a summary of model inputs such as land use assumptions, socio-economic data, network lane plots, and transit routes. The report will also describe the model structure, the coefficients built into the model, and the calibration/validation process. Documentation will include:

- Model development overview
- Summary on hardware/software needs for the model.
- Summary on integration of GIS into the model.
- Zonal Land Use and Socio-Economic Data
- Transit and Highway Networks
- Trip Generation
- Trip Distribution
- Mode Choice
- Person Trip Summaries by Purpose and Model
- Traffic and Transit Assignment
- Performance Statistics

The CONSULTANT will finalize the Model Documentation Report based one set of consolidated, non-conflicting comments provided by the COUNTY

At the conclusion of this Task, the CONSULTANT will deliver the final electronic version of the model to the COUNTY.

Deliverables:

- DRAFT Model Users' Manual
- DRAFT Model Documentation Report
- FINAL Traffic Demand Model
- FINAL Model User's Manual
- FINAL Model Documentation Report

Task 1.14: Staff Training

CONSULTANT will conduct one, one (1) day training session for COUNTY staff at a location to be determined by COUNTY. Topics covered during the training session will include methods to modify the model inputs, the use and understand the modeling software's interface, how to run the model, how to display output, and how to use automated features.

Deliverables:

- One (1), one-day training session.

COMPONENT 2 – Environmental Impact Analysis for Targeted General Plan Amendment and Zoning Ordinance Update

CONSULTANT will work with the COUNTY to analyze the potential environmental impacts of the Targeted General Plan Amendment (Resolution of Intention 182-2011) and Zoning Ordinance update (Resolutions of Intention 183-2011 and 184-2011). CONSULTANT will develop methodologies to define traffic impacts as a result of the Targeted General Plan

Amendment (TGPA) and Zoning Code Ordinance Update. The CONSULTANT will coordinate the deliverables from this task with the TGPA and Zoning Ordinance update schedule.

Task 2.1: Preparation of Administrative Draft Traffic Section

If available within the time frame required for the DEIR, the CONSULTANT shall use the new traffic model and the specific land use forecast developed to reflect the Targeted General Plan Amendment and Zoning Ordinance Update (the EIR Project) to evaluate existing and planned roadways to determine facility type/lane requirements based on volume/capacity analysis. Planning level mitigation measures to address roadways deficiencies will be identified and documented during the course of this analysis. Note that if new roadways, revisions to land use forecasts, or significant improvements beyond those currently identified by the County require analysis using the model, this will be completed as an additional service to this Scope of Work.

CONSULTANT will evaluate up to five (5) scenarios for up to three (3) alternatives as defined and provided to the CONSULTANT by the County. Traffic impacts associated, beyond those identified in the single model alternative outlined above, will be analyzed qualitatively for incorporation into the alternatives chapter of the Draft Environmental Impact Report (DEIR). The alternatives are anticipated to include No Project, and two (2) project alternatives to be provided by COUNTY.

In the event the updated model is not available within the time frame required for the DEIR, the CONSULTANT will work with the COUNTY to identify an alternative methodology to address traffic analysis requirements.

The CONSULTANT will prepare a Traffic Impact Analysis Chapter which will be included in the DEIR. The chapter will include impacts and mitigation measures related to the impacts.

In the settings section, the CONSULTANT will summarize existing traffic infrastructure and constraints. In the impact section, thresholds of significance will be based on existing County standards will be discussed and defined. Traffic forecast data prepared by the CONSULTANT during the course of this task will be provided to the COUNTY in a format usable by others for the purpose of noise analysis.

Where significant traffic impacts are identified, program-level mitigation measures will be identified and discussed. The COUNTY expects that potential traffic impacts will be mitigated by the TIM fee program and other policies and regulations under the project. CONSULTANT will identify any additional mitigation measures, within the parameters of this task, if applicable.

The CONSULTANT will attend up to three (3) meetings, as requested by the COUNTY, to coordinate with others working on the DEIR.

Deliverables:

- Up to three (3) email summaries of meeting decisions and discussions
- Traffic Impact Analysis Chapter for inclusion in the Administrative Draft EIR
- Traffic modeling data prepared in a format usable by others for the purpose of noise analysis.

Task 2.2: County and Peer Review Comments

CONSULTANT will prepare a revised report based on a single set of consolidated, non-conflicting comments provided by the COUNTY which includes County comments and any

comments provided by a third party peer review provided by EIR CONSULTANT under separate contract.

Deliverables:

- Response to comments as a result of a Peer Review
- Revised draft based on COUNTY and Peer Review Comments for inclusion in the Draft EIR

Task 2.3: Response to Comments

COUNTY will supply copies of all traffic-related comments to CONSULTANT.

CONSULTANT will prepare responses to the traffic-related comments and provide an administrative draft of the responses to the COUNTY. Report revisions and/or public comment responses exceeding the number of hours allotted for this Task will be provided as an additional service to this Scope of Work.

Deliverables:

- Response to comments as a result of the public comment period

COMPONENT 3 – Land Use Forecast for TDM

Task 3.1: Land Use Forecast Assumptions

CONSULTANT will prepare for and attend up to two (2) meetings with the COUNTY to finalize the assumptions that will be the basis for developing the two (2) future land use forecasts. Specific items that will be addressed and approved by the County during the course of this task include control totals for housing and employment, distribution of housing and employment between Community Regions and Rural Regions/Rural Centers, basic approach/methodology for determining the intensity/location of land uses within Community Regions and Rural Regions/Rural Centers, and data collection/input participants and meeting schedules.

The CONSULTANT will prepare a brief technical memorandum summarizing land use forecast assumptions for approval by the County. The CONSULTANT will not undertake other land use forecast activities prior to County acceptance of this memorandum.

Deliverables:

- Up to two (2) email summaries of meeting decisions and discussions
- Technical Memorandum # 9: Land use Forecast Assumptions

Task 3.2: Land Use Forecast Activities

The CONSULTANT will prepare two land use forecast scenarios: 2025 based on the existing General Plan, and 2035 based on Targeted General Plan Amendment and Zoning Ordinance Update. CONSULTANT will update jobs forecast and allocate forecasted dwelling units and jobs to meet the intent of General Plan Objective 2.2.1: Land Use Designations and Planning Concept Areas.

This task Includes attending up to five (5) meetings with the COUNTY and other participants, designated by the COUNTY, to provide data and input prior to preparing the draft land use forecasts. It is intended that one (1) meeting shall be limited focusing on identifying the location and intensity of future land uses in Rural Regions/Rural Centers. The CONSULTANT will work

with the COUNTY to identify meeting participants.

Land use forecasts within Community Regions will be based on a review of development considerations at the parcel level. This methodology will consider materials previously prepared by the County and EDAC maps previously presented to the County. Land Use forecasts within Rural Regions/Rural Centers will be based on CONSULTANT and COUNTY knowledge and expertise related to development patterns in these areas.

The CONSULTANT will use GIS both as a primary tool to develop land use forecasts and to capture the data inputs and develop findings during this task. GIS will be used to summarize parcel level data at the Community Region, Rural Region/Rural Center, and County-wide levels for the purpose of ensuring the final products meet the assumption finalized during Task 3.1. Parcel level land use forecast data will be summarized into both the existing TAZs and the updated TAZs developed during Task 1.6 for purposes of comparison and for use during Task 3.3.

The CONSULTANT will prepare a brief technical memorandum summarizing the input received during the course of this task, the forecast methodology(s), and findings. A special focus of this memorandum will be to identify and discuss differences between the two (2) land use forecasts developed over the course of this Task and the forecast documented in the 2002 *El Dorado County Land Use Forecasts for Draft General Plan* (EPS).

Deliverables:

- Up to five (5) email summaries of meeting decisions and discussions
- GIS based DRAFT Land Use Forecast(s)
- Technical Memorandum #10: Land Use Forecast Activities

Task 3.3: Land Use Forecast Workshop

CONSULTANT will present preliminary findings and results, review land use maps, and solicit COUNTY comments during a workshop. The COUNTY is responsible for providing CONSULTANT with one set of consolidated, non-conflicting specific comments/directions that will be the sole basis for finalizing the two (2) land use forecasts.

The CONSULTANT will, based on the County's comments, finalize the two (2) land use forecasts at the parcel level in GIS. Subsequently, the CONSULTANT will convert the parcel level data into TAZ level data for use in the TDM

The CONSULTANT will prepare a brief technical memorandum summarizing the activities method

Deliverables:

- GIS based FINAL land use forecast(s)

Contingency Task

This task provides for unanticipated services or costs necessary to successfully complete the project. Services covered under this task, include but are not limited to:

- Additional meetings

- Public outreach activities
- Additional staff training
- Data collection activities

The CONSULTANT will not undertake any additional services under this Task without the express written approval of the Contract Administrator.

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