



Memorandum

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To: Claudia Wade, P.E.
El Dorado County DOT

Cc: Steve Kooyman, P.E.
El Dorado County DOT

From: Michael Schmitt, AICP, PTP
Matt Weir, P.E., T.E., PTOE

Date: December 8, 2011

Subject: Technical Memorandum #2 – Summary of Stakeholder and Agency
Interviews/Meetings

Kimley-Horn and Associates, Inc. (KHA), as of the preparation of this memorandum, had completed eight of ten planned interviews of select El Dorado County staff and other stakeholders for the purpose of understanding perspectives on the existing El Dorado County model including: its usage, its value in existing and future planning processes, and any challenges or opportunities that might exist. Particular attention was given to understanding how existing GIS capabilities, as well as existing transportation and land use data bases are utilized during transportation planning processes.

Following is a list of the interviewees and information regarding their organizational affiliation and the date of interview:

- El Dorado County Department of Transportation, Design - Steve Kooyman and Paul Hom (11/2/11)
- El Dorado County Department of Transportation, Discretionary & Planning - Eileen Crawford and Claudia Wade (11/2/11)
- El Dorado County Surveyors Office (GIS) - Jose Crummet and Shawna Purvines (11/2/11)
- El Dorado County Planning Services - Peter Maurer, Pierre Rivas, and Shawna Purvines (11/2/11 and 11/10/11)
- El Dorado County Transportation Commission (EDCTC) - Dan Bolster (11/2/11)
- Sacramento Area Council of Governments (SACOG) – Bruce Griensenbeck (11/3/11)
- Dowling Associates, Inc. – Rick Dowling, Jim Damkowitch, and Abhishek Parikh (11/8/11)

- El Dorado County Transportation Commission (EDCTC) – Kathy Matthews (scheduled for 11/22/11)
- El Dorado County Department of Transportation, Director – Jim Ware (scheduled for 11/22/11)

Significant Findings

Although many of the perspectives and information captured during the interviews are important to the development of an updated traffic forecast process, the following significant findings are provided to help frame future discussions regarding the traffic forecasting process:

- There are several examples where output from the existing traffic forecast model has been contrary to expectations as a result of:
 - Network access issues resulting from centroid connector placement and the size and shape of some Traffic Analysis Zones (TAZs)
 - Location and intensity of future land uses
- There is universal support amongst County staff to have in-house modeling capabilities.
- There are several opportunities to leverage existing GIS capabilities to assist in the development of a future model, and to organize and display existing and future transportation data. Some of which can be implemented with minimal effort.
- The land use forecast will need to be updated if the traffic model is to evolve beyond its existing 300+ TAZ arrangement in a timely manner.

A more thorough summary of discussion items and findings from the interviews is provided in the **Summary of Interviews** attached to this memorandum.

Summary of Interviews

Existing Model

- The existing model is maintained by Dowling Associates, Inc., Dowling Associate's contract for another three years of on-call as-needed modeling support was recently requested by staff and extended by action of the Board of Supervisors.
- All current model files are maintained by Dowling Associates at its offices.
- There is recognition of the value of having consistency in traffic forecasting with adjacent models (Connector project was provided as an example).
- County staff expressed interest in having the capability to "true" existing count data to make sure that it truly reflects existing conditions and can be better used to develop a trend of conditions.
- Interviewees cited examples where forecasted volumes were contrary to expectations given known conditions. One example cited forecast volumes that were less than existing on a major roadway without a logical change to conditions to explain. Under some circumstances, issues with output resulted in project delays and additional costs (the worst example noted was an approximately \$30k to \$40k in additional project costs) to address model output issues.
- There have been instances where the model output was a flashpoint when dealing with the development community.
- County staff indicated very little understanding regarding model inputs and the accuracy of recent development within the model. In general, it is widely regarded by staff to be a "black box".
- County staff did not indicate an ability to operate the existing model or having any direct "hands on" experience with the El Dorado County model.
- County staff indicated that they were not aware of any existing travel demand software licenses the County might own.
- No preference for any particular software package was indicated by County staff.
- There is agreement amongst interviewees that numerous existing TAZs should be further disaggregated given recent development.
- Interviewees indicated that the existing model has access issues as the result of centroid connector placement and size and shape of some TAZs.
- County staff discussed the recurring need to shift-share TAZ land uses between adjacent zones, for the purpose of analysis, given limitations related to land use data within TAZs.
- County staff indicated that Dowling Associates would be asked to undertake a process to update recent developments within the model to match their current status (including removing those that are no longer active).

Land Use Forecasts

- County staff indicated that they have not formally determined control totals for major land uses in 2030.
- County staff indicated an understanding of EDAC land use efforts but that they had not analyzed them in sufficient detail to draw any specific conclusions.
- County staff indicated that, given recent changes in development trends, the existing 2025 land use forecast is more likely representative of 2030 conditions. However, they indicated that the location of future development may not be the same as previously forecasted for 2025.
- There is not a specific course of action, at this time, to finalize a 2030 land use forecast.
- The TAZs were originally overlaid over larger market area forecasts. As a result, TAZ land uses may not be accurately reflected within the correct TAZ (they could in some instances be reflected in adjacent TAZs).
- County staff described the options identified previously to prepare a 2030 land use forecast. Staff indicated that they would forward information from a presentation prepared last spring regarding this topic (which has been received).

Resources and Costs

- There is universal support amongst County staff to have in-house modeling capabilities. At a minimum, staff want the ability to easily and quickly test project alternatives to identify significant impacts to transportation infrastructure.
- County staff expressed the desire to hire a part-time traffic/transportation planning resource to provide data quality control, run an updated travel demand model, and to evaluate developer generated data.
- There was some discussion regarding whether a new hire would require a P.E. to complete traffic studies on behalf of the County. A specific conclusion was not drawn, but it was agreed that this should be researched prior to making any hires.
- One of the benefits cited for having in house staff manage the model was that that person would have a heightened awareness of the status of ongoing projects within the County.
- County staff is sensitive to the cost of software, hardware, training, and required software maintenance agreements. It was indicated that cost would need to be a consideration when selecting a new software platform.

GIS & Data Considerations

- County staff indicated that GIS data is frequently updated, sometimes multiple times a day, and that the existing GIS layers are current.
- County staff indicated that a separate database can be joined to the land use layer to determine the number of multifamily homes that exist in locations where multi-family housing is not identified as an individual parcel (townhomes and patio homes are most often developed as their own parcel, apartment and condos are not).
- County staff indicated that GIS compatible building footprints are not widely available for commercial uses. While there is significant interest in having this data it would require resources that are not currently available. Alternatively, it was discussed that a vendor through the use of aerial photography and imaging software could provide this information to the County. It was suggested that it might be worthwhile to determine an order of magnitude cost for this activity.
- Although the County has aerial photography dating back to 2007, the 2006 data is more frequently used given quality concerns.
- It is anticipated that existing server storage and capabilities should be more than adequate to meet the needs of a typical travel forecast model. It was also indicated that there were no known network limitations that would make it difficult for DOT staff to utilize modeling/GIS applications.
- The County has an annual count program, but the data is not currently provided in a GIS format. Based on discussions, it is anticipated that this could be accomplished with minimal effort.
- There are approximately 35 active licenses for ESRI software products. Additionally, a viewing application is available for additional installs.
- Interviewees indicated that transportation results from any future model would be more useful if they could be easily displayed in a high quality GIS format.
- There was strong interest among County staff to be able to easily share information related to travel demand forecasts in a GIS friendly format.

Regional Considerations

- SACOG staff indicated that they are eager to provide assistance to El Dorado County.
- SACOG staff indicated they understood why it is important to some member jurisdictions to maintain separate land use and traffic forecasts.
- SACOG staff indicated that it would be helpful if El Dorado County could use the same base year data (2008) as the current SACOG model.
- SACOG staff indicated that they would provide multiple assignments as well as land use and TAZ information for use by El Dorado County during the development of its model.

- SACOG staff did not indicate a preference for which software package El Dorado County might select.

Model Update Considerations

- Interviewees recommended that the model avoid significant complexity to avoid potential issues where the model becomes solely reliant on a single individual's institutional knowledge.
- Interviewees indicated that the basic model design and functionality is not flawed, but rather data and network issues have been the primary source of issues in the past.
- Interviewees indicated that several different platforms could meet El Dorado County's needs. Some of the positive comments related to more common models included:
 - Cube – There is a good local user base and it is the same platform as SACOG
 - VISSUM – Increased control over the assignment which can be helpful in smaller models such as the El Dorado County's
 - TransCAD – GIS based model could be a good fit with County's desire to share more information in GIS format
- Interviewees indicated a need to include post-processing techniques (similar to those currently utilized) to improve model output.
- Interviewees indicated that the cost to operate should be a consideration when selecting a software package.