ATTACHMENT 3G

DRAFT SCOPE OF WORK

Green Valley Road currently extends from Folsom, jogs through the County, and ends at Placerville Drive. Green Valley Road is a two-lane rural highway from the City of Folsom that transitions to a four-lane roadway west of Sophia Parkway. The four-lane roadway extends to Francisco Drive, then transitions back to a two-lane rural highway east of Francisco Drive. Several Capital Improvement Program (CIP) projects have been completed along the Corridor. There are also several other projects programmed along the Corridor in the Current Year, 5-Year, 10-Year, and 20-Year CIP. In addition, the City of Folsom is in the process of pursuing a grant to widen Green Valley Road from East Natoma Street to Sophia Parkway. If the grant is obtained, construction may begin in 2016. On September 30, 2013, the Board of Supervisors (BOARD) directed staff to move forward with the Green Valley Road Corridor Analysis to identify the baseline traffic conditions on Green Valley Road from the County line to Lotus Road.

Additional study locations and analysis tasks based on Board and public input have been outlined in the Scope of Work, which may be incorporated contingent upon approval from Board of Supervisors (Board). At the September 30th Board meeting the Board advised to analyze additional study locations. At a separate public scoping meeting held on October 24, 2013, public comments were solicited and have also been included for Board consideration.

TASK 1: FIELD VISIT AND ROAD CHARATERISTIC INFORMATION GATHERING

Kittelson & Associates, Inc. (KAI) will conduct a field visit and gather inventory of roadway characteristics for the segments and intersections listed below. Data for segments should include, at a minimum, road widths, number and location of driveways with direct access onto Green Valley Road, striping and signing, identification of bike lanes, number of lanes and allowable movements, existing Right of Way and access control. Data for intersections should include, at a minimum, number and type of lanes entering the intersection, sight distance measurements, type of traffic control. If an intersection is signalized, data should include signal timing, signing and striping, existing Right of Way, and whether the intersection is included in a school safety zone.

Road Segments:

1. County line to Sophia Parkway
2. Sophia Parkway to Francisco Drive
3. Francisco Drive to El Dorado Hills Blvd./Salmon Falls Road
4. El Dorado Hills Blvd./Salmon Falls Road to Silva Valley Parkway/Allegheny Road
5. Silva Valley Parkway/Allegheny Road to Bass Lake Road

6. Bass Lake Road to Cameron Park Drive
7. Cameron Park Drive to Ponderosa Road

Intersections**:**

1. Green Valley Road @ Sophia Parkway
2. Green Valley Road @ Francisco Drive
3. Green Valley Road @ El Dorado Hills Blvd./Salmon Falls Road
4. Green Valley Road @ Silva Valley Parkway/Allegheny Road
5. Green Valley Road@ Deer Valley Road (West)
6. Green Valley Road @ Bass Lake Road
7. Green Valley Road @ Cambridge Road/Peridot Drive
8. Green Valley Road @ Cameron Park Drive/Starbuck Road
9. Green Valley Road @Deer Valley Road (East)
10. Green Valley Road @ Ponderosa Road

1A. Board Recommended Additional Study Locations (Alternative 1)	
Segments	Intersections
1. Ponderosa Road to N. Shingle Road 2. N. Shingle Road to Lotus Road	1. Green Valley Road @ N. Shingle Road 2. Green Valley Road @ Lotus Road

1B. Additional Study Locations from Public Scoping (Alternatives 2 & 3 – Staff recommendations are indicated by asterisks*)	
Segments	Intersections
None	1. *Green Valley Road @ Loch Way 2. *Green Valley Road @ Malcolm Dixon Road 3. Green Valley Road @ Rocky Springs Road/Steves Way 4. *Green Valley Road @ Pleasant Grove Middle School

Task 1 Deliverable: Field visit inventory and observations to be included in Technical Memorandum of Results

TASK 2: TRAFFIC DATA COLLECTION AND REVIEW

KAI will use the most recent turning movement counts from the Dixon Ranch Traffic Impact Analysis and Arco AM/PM Traffic Impact Analysis. These two studies collected turning movement counts in 2013 for the study intersection #1 through #8. KAI will perform an analysis of historical counts within the study area to determine if these traffic counts reflect existing conditions. Adjustments will be suggested and discussed with County staff prior to continuing with the next task.

KAI will administer AM and PM Peak Period turning movement traffic counts at the remaining two (2) study intersections and for up to 7 roadway segments (three-weekday tube counts). The tube data will be comprised of volumes, speed and vehicle classification.

2A. Board Recommended Additional Data (Alternative 1)
Collect similar traffic data, as described above, for additional two (2) intersections and two (2) roadway segments**.**

2B. Additional Data from Public Scoping (Alternatives 2 & 3 – Staff recommendations are indicated by asterisks*)
2B-1. *Peak hour turning movement counts at the Loch Way and Malcolm Dixon Road intersections will be obtained from the Dixon Ranch Traffic Impact Study. Collect AM and PM peak period turning movement counts for additional two (2) study intersections.
2B-2. *Collect new segment (up to 10) and intersection (up to 16) counts in April or May to verify the monthly variations of traffic on Green Valley Road.
2B-3. Collect speed surveys for the road segments. Roadway tubes will be set to collect speed measurements in Task 2. No additional data is needed to address this request.
2B-4. *Collect counts on several different days at several different times of the day including weekends. KAI has scoped to collect 72-hour (Tuesday, Wednesday and Thursday) tube counts for the study segments. The count period can be expanded to capture traffic and associated variations for the entire week.

Task 2 Deliverable: Traffic data and review of historical data to be included in Technical Memorandum of Results

TASK 3: ACCIDENT DATA COLLECTION

KAI will acquire and process by segment or location the collision data from County staff and the Statewide Integrated Traffic Records System (SWITRS) for the three most recent years covering approximately ten (10) miles of Green Valley Road from the County line to Ponderosa Road.

3A. Board Recommended Additional Data (Alternative 1)
Collect and process accident data for the segments and intersections of Green Valley Road from Ponderosa Road to Lotus Road.

Task 3 Deliverable: Accident data to be included in Technical Memorandum of Results

TASK 4: IDENTIFICATION OF TRAFFIC OPERATIONAL DEFICIENCIES

KAI will analyze existing traffic counts at intersections and roadway segments as deemed appropriate (up to 10 intersections and 7 roadway segments) using the Highway Capacity Manual (HCM) 2010 methodologies. Traffic operational deficiencies will be identified and improvements will be suggested.

4A. Board Recommended Additional Tasks (Alternative 1)
Analyze two (2) additional road segments and two (2) additional intersections to identify deficiencies and suggest improvements.

4B. Additional Tasks from Public Scoping (Alternatives 2 & 3 – Staff recommendations are indicated by asterisks*)
4B-1. *Split and analyze the Green Valley Road segment from Silva Valley Parkway/Allegheny Road to Bass Lake Road into smaller sub-segments to accommodate an analysis for the different types of traffic. Based on the local area knowledge, KAI suggests that this long stretch be divided into the following three smaller segments. Additional segment counts will be needed for the agreed upon time period. ○ Silva Valley Parkway to Malcolm Dixon Road ○ Malcolm Dixon Road to Deer Valley Road (W) ○ Deer Valley Road (W) to Bass Lake Road
4B-2. *Analyze four (4) additional intersections to identify deficiencies and suggest improvements.
4B-3. Analyze school traffic from Pleasant Grove Middle School and suggest improvements. The following sub tasks are associated with this task:

- Collect and analyze school peak (two hours in the afternoon) turning movements at the Silva Valley Parkway and El Dorado Hills/Salmon Falls intersections. Identify deficiencies and recommend improvements.
- Conduct a field visit in the vicinity of Pleasant Grove Middle school and prepare inventory of any traffic circulation issues to and from Green Valley Road. Qualitatively evaluate traffic conditions at the school access points, identify traffic related issues and recommend improvements.

Additional data and observations needed to evaluate school accesses may be combined with other field visits contained in previous tasks.

4B-4. Analyze the cut through traffic on Allegheny Road and Malcolm Dixon Road. The following sub tasks are associated with this task:

- Collect Origin-Destination (O-D) surveys at the Green Valley Road/Malcolm Dixon Road, Green Valley Road/Allegheny Road and Malcolm Dixon Road/Salmon Falls Road intersections using BlueMAC (http://www.mybluemac.com/?service=origin-destination).
- Evaluate the O-D survey data and determine cut-through traffic patterns.
- Suggest ways to re-route traffic to Green Valley Road.

4B-5. Analyze the "Mom" peak hour, school pick up and trips to after school activities. School pick-up and drop-off activities will be surveyed at the Pleasant Grove Middle School. KAI will document type and extent of mode (such as vehicular pick up/drop off, walk to school, bike to school, etc.) used to travel to the school. In addition, KAI will coordinate with the school to identify any traffic and circulation issues resulted due to characteristics of Green Valley Road.

Additional data and observations needed to evaluate drop-off and pick-up activities and their impact on Green Valley Road may be combined with other field visits contained in previous tasks.

4B-6. Address how to minimize vehicle trips added to Green Valley Road, but redirect cut-through traffic back onto Green Valley Road from Allegheny Road/Malcolm Dixon Road. Task 4B-4 above will address this request. No additional data or analysis is needed.

4B-7. Provide a financing plan for the suggested improvements. KAI will prepare a preliminary "financial strategy" since a detailed "financial plan" is beyond the scope and purpose of this analysis. KAI will identify potential funding sources to mitigate traffic and safety related issues in the study corridor. This may include a range of sources such as grant programs, additional taxes, use of general funds, CIP, etc. KAI will provide "planning level" cost estimates for all recommended traffic and safety improvements. A financing plan should be considered after the finalization of this project and with assistance from an economist or a transportation finance consultant.

4B-8. Analyze all individual driveways or access roads onto Green Valley Road. Forty-two (42) were identified between Silva Valley Parkway and Bass Lake Road by a member of the public. The task will include:

- Preparation of inventory of all individual driveways or access roads on Green Valley Road. The inventory will document type of access, traffic control, intersection geometry and lanes.
- Cursory evaluation of sight distance at all individual driveways or access roads. The driveways that are visually observed to provide limited sight distance will be identified.
- Qualitative evaluation of opportunities to consolidate accesses and restriction of movements.

Task 4 Deliverable: Traffic operational deficiencies and improvement recommendations in Technical Memorandum of Results

TASK 5: IDENTIFY ACCIDENT TYPES AND CAUSES

KAI will evaluate accident data and identify predominant accident types and causes for the study locations (up to seven (7) segments and (10) intersections). Solutions will be recommended to address any potential safety issues.

5A. Board Recommended Additional Tasks (Alternative 1)

Analyze accident data for two (2) additional road segments and two (2) additional intersections and suggest mitigations.

5B. Additional Tasks from Public Scoping (Alternatives 2 & 3 – Staff recommendations are indicated by asterisks*)

5B-1. *Analyze accident data for four (4) additional intersections and suggest mitigations.

5B-2. *Add more speed limit signs and find a way to make people slow down. The following tasks will be performed:

- Conduct a focused field visit to collect inventory of speed limit signs.
- Perform qualitative evaluation of placement and number of speed limit signs along Green Valley Road. The prevailing speeds will be analyzed in conjunction with the posted speed limit and associated accident data.
- Suggest improvements and traffic calming measures to alleviate speeding issues, if any.

Additional data and observations needed to prepare inventory of speed limit signs may be combined with other field visits contained in previous tasks.

5B-3. *Suggest improvements to the bike lanes to make them safer. The following tasks will be performed:

- Perform focused field surveys to prepare inventory of existing bicycle facilities in the study area.
- Identify gaps in bicycle network along the corridor and vehicular-bicycle conflict areas.
- Suggest improvements to enhance safety of bicyclists.

Additional data needed to prepare inventory of bicycle facilities may be combined with other field visit contained in previous tasks.

5B-4. Find a way to reduce rear end accidents. This comment will be addressed in Task 5 in general. No additional data or analysis is needed.

5B-5 Perform a noise analysis on Green Valley Road. KAI will retain Rincon Consultants as sub-consultant to perform noise analysis. The noise analysis will focus on the existing noise along Green Valley Road. The following tasks will be performed by Rincon Consultants:

- Ambient noise measurements will be taken in the field to characterize the existing noise conditions using an ANSI Type II sound level meter. Up to eight daytime measurements will be taken along key roadway segments and intersections (the eight segments or intersections will be determined with County staff and will be consistent with the segments/intersections analyzed within the traffic study prepared by KAI). These measurements will involve 20-minute samples at the individual locations.
- Existing traffic noise levels along key roadway segments (up to a total of eight, to be determined with County staff) will be modeled based upon traffic data from the traffic study prepared by KAI. Traffic noise will be forecast using the Federal Highway Administration Traffic Noise Model (TNM®) version 2.5.
- Forecast noise levels will be compared to applicable standards and thresholds found in the El Dorado County Noise Element or other pertinent County thresholds of significance.
- Appropriate mitigation measures will be developed, if necessary. Mitigation may involve various methods to minimize long-term traffic noise impacts.
- A technical memorandum will be prepared and two rounds of comments will be addressed.
- Attendance of one (1) meeting and one (1) site visit is assumed.

Task 5 Deliverable: High accident types and locations, and improvement recommendations in Technical Memorandum of Results

TASK 6: TECHNICAL MEMORANDUM OF RESULTS

KAI will produce a draft memo with appropriate graphics and tables, summarizing results and findings of the traffic and accident analysis. KAI will prepare a final memo after one round of consolidated comments from County staff.

6B. Additional Tasks from Public Scoping (Alternatives 2 & 3)
Present preliminary findings of existing deficiencies and constraints to the public to solicit input before finalizing the document.

Task 6 Deliverable: Draft and Final Technical Memorandum of Results

TASK 7: MEETINGS

KAI will prepare for and attend up to three (3) project meetings with designated County staff. For budget purpose, two meetings were assumed as teleconferences and one (1) in-person meeting at the County office or in KAI's Sacramento office.

Task 7 Deliverable: One (1) email summary of meeting discussions and decisions

TASK 8: PUBLIC OUTREACH

KAI will support County staff with public outreach to discuss results from the Green Valley Corridor Analysis. KAI will coordinate with the County staff to determine ways to present findings of the study. Discussion with County staff will be translated in graphics or exhibits to help facilitate the public meeting. The public outreach support is assumed to be limited to preparing materials and attending one (1) workshop in the County. It is also assumed that KAI will attend the public outreach workshop to answer questions that may come up.

Task 8 Deliverable: Exhibits/graphics illustrating findings of the analysis for public meeting

TASK 9: FINAL BOARD PRESENTATION OF FINDINGS AND RECOMMENDATIONS

KAI will prepare for and make a final presentation to the Board summarizing results and recommendations for mitigations. All presentation materials will be vetted by the County staff prior to the Board meeting.

Task 9 Deliverable: Presentation materials