



Staff Report

TO: Honorable Mayor and Town Council Members

FROM: Mary Beth Van Voorhis, Planning Director

DATE: October 12, 2021

**RE: HIDDEN GROVE – APPLICATION #21-10
CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) REVIEW
INCLUDING TRAFFIC STUDY – AWARD OF SERVICES CONTRACT
ECORP CONSULTING, INC. and GHD**

Recommendation

Adopt Resolution #21-___ awarding the California Environmental Quality Act (CEQA) review agreement to ECORP CONSULTING, INC. (ECORP) including Traffic Study consultant GHD and authorizing the Town Manager to execute an agreement acceptable to the Town for the preparation of an Environmental Impact Report (EIR) consistent with the California Environmental Quality Act (CEQA) for the evaluation of the proposed Hidden Grove Project #21-10 not to exceed \$410,240 (ECORP = \$340,200 / GHD = \$70,040).

Issue Statement and Discussion

StoneBridge Properties, LLC has submitted a Senate Bill 330 preliminary application and concept plan for a tentative map application for the subdivision of approximately 61.6 acres of land currently consisting of seven parcels. The Project proposes 319 residential units in five residential areas identified as medium, medium-high, and high density in the Town's General Plan land use diagram. The residential units include 120 apartments and 199 single-family homes. The project also includes 12.5 acres of open space, 1.3 acres of parkland, and 0.8 acres of Town Center Commercial, and internal roadways. Upon review of the application, it was determined an EIR is required as per the CEQA Guidelines.

Staff sent out Request for Proposals to 16 qualified environmental consulting firms and received four proposals. They were evaluated by the Town Manager, Town Engineer, Town Planning Staff, and Planning Consultants from Hauge, Brueck and Associates. After evaluation, ECORP was selected to prepare the EIR and GHD to prepare a Traffic Study based on the following factors.

1. ECORP's proposal demonstrated a better understanding of the project's issues and was more specific in addressing the objectives of the Town.
2. ECORP had the shortest timeline, maintaining a tight schedule for project completion.
3. The ECORP proposal's cost was the median between the highest and lowest bids.

4. ECORP's local experience in the unincorporated Placer County area and Rocklin area, along with experience in similar projects, assures the work will be done on time and on budget.
5. GHD's proposal for a Traffic Study, will ensure both consistency with the Town's General Plan and CEQA transportation analysis requirements (SB 743) under ECORP's

ECORP has accepted the Town's selection of GHD to prepare the traffic impact analysis for the Project and will retain GHD under contract to ECORP.

CEQA Requirements

As required by the California Environmental Quality Act, ECORP will prepare an Environmental Impact Report to evaluate the Hidden Grove Project Application #21-10 including updated technical studies for air quality/GHG/HRA, biological resources, cultural resources, hydrology, and noise along with GHD's Traffic Study. ECORP will address all impact areas identified in CEQA Guidelines Appendix G as a part of the CEQA process.

The project area includes:

<u>Address</u>	<u>Assessor Parcel Number</u>
3627 Gates Lane	043-080-044
3621 Laird Street	044-094-001
5913 Horseshoe Bar Road	044-094-005, 006, & 010
5901 Horseshoe Bar Road	044-094-004
5885 Horseshoe Bar Road	043-080-015
5895 Horseshoe Bar Road	043-080-007 & 008

Financial and/or Policy Implications

The project applicant, StoneBridge Properties has signed a Reimbursement Agreement with the Town, to fund the cost of the preparation of the Environmental Impact Report, and deposited the full cost of its preparation in the Town' Trust account.

Attachments

- Exhibit A – ECORP Consulting, Inc. – Proposal
- Exhibit B – GHD – Proposal

TOWN OF LOOMIS

RESOLUTION NO. 21-___

RESOLUTION AWARDING AN ENVIRONMENTAL SERVICES AGREEMENT TO ECORP CONSULTING, INC., INCLUDING TRAFFIC STUDY BY GHD AND AUTHORIZING THE TOWN MANAGER TO EXECUTE AN AGREEMENT ACCEPTABLE TO THE TOWN FOR THE PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT FOR THE EVALUATION OF THE HIDDEN GROVE PROJECT (APPLICATION #21-10) NOT TO EXCEED \$410,240.

WHEREAS, Stonebridge Properties submitted an application for the subdivision of approximately 61.6 acres of land currently consisting of seven parcels. The Project proposes 319 residential units in five residential areas identified as medium, medium-high, and high density in the Town's General Plan land use diagram. The residential units include 120 apartments and 199 single-family homes. The project also includes 12.5 acres of open space, 1.3 acres of parkland, and 0.8 acres of Town Center Commercial, and internal roadways.; and

WHEREAS, upon review of the application, it was determined an Environmental Impact Report is required as per the California Environmental Quality Act (CEQA); and

WHEREAS, Staff sent out Request for Proposals to 16 qualified environmental consulting firms and received four proposals that were evaluated by the Town Manager, Town Engineer, Town Planning Staff, and Planning Consultants from Hauge, Brueck and Associates; and

WHEREAS, after careful evaluation, ECORP Consulting, Inc. was selected to prepare the Environmental Impact Report at a cost not to exceed \$340,200 in addition to GHD to provide a Traffic Study at a cost not to exceed \$70,040 for a total combined not to exceed amount of \$410,240; and

WHEREAS, the project applicant has signed a Reimbursement Agreement with the Town to fund the cost of the preparation of the Environmental Impact Report and deposited the full cost of its preparation in the Town's Trust Account.

NOW, THEREFORE, IT IS HEREBY RESOLVED that the Town of Loomis accepts the proposal of ECORP, CONSULTING, Inc, with GHD for the Traffic Study and hereby authorizes the Town Manager to execute an agreement acceptable to the Town for the preparation of an Environmental Impact Report for the evaluation of the Hidden Grove Project (Application #21-10) not-to-exceed \$410,240.

PASSED AND ADOPTED by the Council of the Town of Loomis this 12th day of October, 2021 by the following vote:

AYES:
NOES:
ABSTAINED:
ABSENT:

Jeff Duncan, Mayor

ATTEST:

Carol Parker, Deputy Town Clerk



October 5, 2021

Mary Beth Van Voorhis, Planning Director
Town of Loomis
3665 Taylor Road
Loomis, CA 95650

Subject: *Proposal to Provide a CEQA Review Document for the Hidden Grove Project*

Dear Ms. Van Voorhis:

ECORP Consulting, Inc. (ECORP) is pleased to present our proposal to provide a CEQA Review Document for the proposed Hidden Grove Project in the Town of Loomis. This proposal includes a brief discussion of our understanding of the Project and proposed approach for efficient completion of tasks; summaries of the experience of key members of the ECORP Project Team; and a detailed scope of work, schedule, and cost estimate.

1 – PROJECT UNDERSTANDING/APPROACH

The Proposed Project is the subdivision of approximately 61.6 acres of land currently consisting of seven parcels. The Project proposes 319 residential units in five residential areas identified as medium density, medium-high density, and high density residential in the Town's General Plan land use diagram. The residential units include 120 apartments and 199 single family homes. The Project also includes 12.5-acres of open space, 1.3-acres of parkland, and 0.8-acres of Town Center Commercial, and internal roadways.

The Project site had been previously approved by the City Council for development of the Village at Loomis project in 2018. However, circumstances did not allow this project to proceed. The approval process for the project included the analysis of environmental impacts resulting in an Environmental Impact Report (EIR). While many of the technical studies provided for the EIR are out of date or are not consistent with the Proposed Project, some of the information provided in this EIR is still relevant to the current project. This information will be used by ECORP, as much as possible, to provide background information for the Proposed Project's EIR. New technical studies for air quality/GHG, biological resources, cultural resources, noise and traffic will be required for the proposed Hidden Grove Project. It is ECORP's understanding that the Town will be selecting a firm to prepare the traffic impact analysis for the Project and that the firm will be retained under contract to ECORP. ECORP will prepare updated technical studies for air quality/GHG including a Health Risk Assessment (HRA), biological resources, cultural resources, and noise.

ECORP recommends that a new EIR should be prepared for the Project and that a subsequent or supplemental EIR based on the Village at Loomis EIR would not be the best avenue for environmental analysis for the Hidden Grove Project. Our recommendation is based on a number of factors.

- 1) While similar, the Proposed Project is different in key areas including the number of housing units, commercial square footage, proposed land uses, and the inclusion of a road thru the proposed open space.
- 2) Technical studies provided in the Village at Loomis EIR are out of date and studies including air quality/GHG and traffic do not represent the Proposed Project potential for impacts under current conditions.
- 3) Land uses for the Proposed Project are consistent with the Town's General Plan. While the Town's zoning is generally consistent with the General Plan, SB 330 allows for inconsistencies as long as the project is consistent with the General Plan. . Processing the project consistent with SB 330 will negate the need for a rezone or General Plan amendment to approve the Project.
- 4) Given ECORP did not author the Village at Loomis EIR, we cannot defend the environmental determination in the EIR as may be required if a subsequent or supplemental EIR were to be used.

ECORP's Approach

The proposed project involves various components that would be analyzed using a project level analysis. CEQA Guidelines Section 15161 describes a project EIR as:

The most common type of EIR examines the environmental impacts of a specific development project. This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation.

Based on a review of the Project, knowledge of the Project site and conditions in the Town of Loomis, ECORP anticipates that the following will be key issues to be addressed in the environmental document:

- Air Quality/GHG/HRA
- Biological Resources
- Cultural Resources
- Traffic/Transportation
- Noise
- Hydrology

However, all impacts areas identified in CEQA Guidelines Appendix G will be addressed as a part of the CEQA process.

The key components of our approach and successful project completion are close and regular coordination with the Town and applicant to ensure we achieve the project's goals and meet the schedule and budget; early engagement with the project team in developing the project description and avoiding sensitive resources that could cause project delays; and leveraging our excellent working knowledge of the municipal planning process and relationships with regulatory agency staff to avoid any surprises that could adversely affect the project.

2 – PROJECT TEAM

ECORP has assembled a highly qualified team of in-house technical experts to successfully complete this project. ECORP will provide project management, CEQA documentation and analysis including technical analysis for air quality/greenhouse gas, noise, biological resources and cultural resources.

A description of the key personnel and their assigned role is provided below. These key personnel are dedicated to the project.

Chris Stabenfeldt, AICP – Project Director. Mr. Stabenfeldt is a certified planner, team and project manager, and environmental analyst with more than 37 years of professional environmental and planning consulting experience. He has served in a broad range of roles including group manager, office manager, director of business development, and project manager. He has managed comprehensive and complex environmental documents and planning projects for public agencies and private sector clients including documentation and related compliance activities under NEPA and CEQA throughout the west. During his career he has worked on or managed numerous Specific Plan EIR's similar in scale to the proposed project. He has extensive experience preparing environmental documentation for large scale residential and mixed use projects (including Specific Plan EIR's) in political sensitive jurisdictions and is skilled at identifying issues early in the process and developing practical solutions to minimize impacts. He has a strong multidisciplinary background and has conducted technical studies in noise, air quality, geology, hydrology/water supply, infrastructure analysis, and land use policy assessment.

Scott Friend, AICP – Senior Environmental Planner/Project Manager. As a senior environmental planner for ECORP and the Project Manager for this effort, Mr. Friend will provide direct hands-on oversight of the project. Mr. Friend will provide primary quality control for all products resulting from the effort and will serve as the liaison and direct-contact for the ECORP-teams work.

Mr. Friend is a senior member of the ECORP team focusing primarily in the subject areas of land use planning and environmental analysis. He oversees the activities and work of ECORP's Chico office with a practice-area focus on the northern California area. He oversees all work in the office and provides senior-level planning, environmental, contract staffing and project management services. Prior to working for ECORP, Mr. Friend managed and oversaw the operations of the Chico office of Michael Baker International (formerly PMC). He has obtained professional planning experience in both local government planning and private sector consulting and has managed numerous public and private sector planning agencies, activities and programs.

For the past 20+ years, Mr. Friend has obtained a variety of local government experience in both current and advance planning including serving as a contract staff planner/department director for various Northern California counties, cities and towns. Mr. Friend has substantial direct experience in the City of Orland.

Mike Martin – Senior Environmental Planner/Assistant Project Manager. Mr. Martin's current responsibilities include environmental planning, policy document preparation, and contract planning services for client agencies. As a project manager and assistant project manager with 15 years of experience, Mr. Martin has completed environmental impact reports for large-scale residential developments, multi-use developments, commercial developments, and general plan updates. He has also written numerous initial studies/negative declarations for a variety of development types. In addition, Mr. Martin provides contract planning staff for various jurisdictions in northern California and has written zoning code and subdivision code updates, municipal service reviews, development impact fee updates, housing elements, and general plan updates. Finally, Mr. Martin has written housing condition and income surveys, and housing needs assessments, written Community Development Block Grant (CDBG) P/TA and General Allocation grants, and written over 35 Affordable Housing Feasibility studies throughout the United States.

Michelle Wilson – Project Coordinator. Ms. Wilson is a Senior Environmental Planner/Senior Biologist with more than 27 years of experience, specializing in both CEQA and NEPA compliance, permitting, water quality, and biological services. She recently joined ECORP and previously worked for another environmental consulting firm, as a Senior Planner with Santa Barbara Planning & Development, and as a permitting specialist for the oil and gas industry. Since 1997, she has authored and managed more than 30 CEQA, NEPA, or joint documents including numerous Environmental Impact Reports (EIRs) for multi-family and mixed-use development projects, commercial developments, recreational projects, industrial projects, and General Plan Updates. Ms. Wilson has processed major CUPs, development plans, tract maps, lot line adjustments, rezones/General Plan Amendments, land use permits, coastal development permits, Williamson Act withdrawals, and California Government Code Section 65402 determinations. While with Santa Barbara County she staffed the Board of Architectural Review and Historic Landmarks Advisory Commission.

Seth Myers – Project Manager/Senior Emissions and Noise Analyst. With 11 years of experience as an environmental planner and air quality/noise analyst, Mr. Myers is involved in the preparation of a full range of CEQA and NEPA environmental compliance and review documents, including environmental impact reports. He has extensive expertise conducting air quality, greenhouse gas, and noise analyses and has a comprehensive working knowledge of the associated regulatory environment. He is proficient in the use of CalEEMod, EMFAC2014, AERMOD, the Roadway Construction Model, the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model, and other industry standard emissions and noise modeling tools. In addition, Mr. Myers prepares implementation documents and programs such as zoning ordinance updates, design review programs, and planning program guidelines. He has prepared numerous environmental analyses for public works and public agency projects and works in ECORP's Chico office.

Jeremy Adams – Cultural Resources Task Manager. Mr. Adams is a Cultural Resources Manager and Architectural Historian with eight years of experience in developing cultural resources

management strategies and leading the implementation of cultural inventories, evaluations, effects analysis, and preparation of mitigation documents. He meets the Secretary of the Interior's Professional Qualification Standards for Architectural History and History. Mr. Adams serves as principal investigator for all architectural history components of projects and is well versed in the practical application of the laws and regulations of Section 106 of the NHPA and CEQA. He is highly skilled at historical research and analysis and is familiar with numerous archives, libraries, museums, and other historical repositories throughout California.

Keith Kwan – Senior Biologist/Avian Ecologist. Mr. Kwan has more than 30 years of experience as a wildlife biologist and wetland ecologist. He specializes in avian ecology, wetland delineations and wetland ecology, special-status species ecology, environmental impact assessment, regulatory compliance, and project management. He also has expertise in conducting biological resource assessments, bird censuses, special-status species surveys, general biotic inventories, and biodiversity monitoring of created, restored, and existing terrestrial habitats of California.

He has expertise in delineation of waters of the U.S. and has delineated over a hundred sites throughout California, Nevada, and Colorado. He also has expertise in California's Central Valley annual grassland and oak woodland communities, having conducted hundreds of wetland and biological resource evaluations related to site development, impact assessment, CEQA compliance, Clean Water Act 404 compliance, and CDFW 1602 compliance.

His expertise in avian ecology includes numerous breeding bird surveys, nest monitoring, and pre-construction clearance surveys in support of various local, state and federal regulations (e.g. CEQA, CDFW 1602). He has developed studies utilizing focal survey and point-count methodologies to assess bird use. He has been an active birdwatcher throughout California and has participated in National Audubon Society Christmas Bird Counts for more than 30 years.

He administers Quality Assurance/Quality Control for many of the biological reports produced in the Northern California office, including wetland delineations, special-status species assessment and survey reports, arborist survey reports, biological assessments, Section 404 mitigation and compliance reports. He also has expertise in identification and field sampling of federally-listed vernal pool branchiopods.

3 – SCOPE OF WORK

Provided below is ECORP's proposed scope of work for the proposed Hidden Grove Project. We have included a description of activities to be completed for each task and deliverables. Based on our experience, we suggest that an Initial Study, used to scope out the majority of environmental impact areas, and a subsequent Project EIR will be the appropriate environmental documentation for this project.

Task 1: Project Initiation

ECORP will attend a combined start-up meeting and site visit with Town staff to discuss project objectives and project characteristics. Topics to be discussed will include the schedule, key project issues, communication protocol, the procedure for data gathering, project characteristics and the proposed scope of work. Following the start-up meeting, ECORP will conduct an internal team meeting to initiate the project and debrief staff on issues discussed during the meeting with the Town.

Deliverables:

- ◆ None

Task 2: Develop Project Description

ECORP will prepare a detailed project description for review by the Town. Obtaining agreement on the project description early in the process will ensure that the first draft of the Initial Study (IS) and Environmental Impact Report (EIR) are comprehensive. The project description will be based on information provided by the applicant, Town staff, and ECORP's knowledge of the Town of Loomis. The expanded project description for the EIR will contain a discussion of the project objectives; it is important that the project objectives be clearly stated, because they are the basis of determining which alternatives are carried forward for analysis in the EIR.

Deliverables:

- ◆ Project Description section for the IS/EIR document, provided electronically via email in a MSWord file format. We assume one round of comments.

Task 3: Prepare Initial Study (IS) and Notice of Preparation (NOP)

Following completion of the Project Description, ECORP will coordinate closely with Town staff to complete the Notice of Preparation (NOP). The NOP will include a description of the project, the project location, a description of probable environmental effects a list of issues areas that would not be evaluated in the EIR, and graphics depicting the project location and proposed site plan.

ECORP will prepare an Administrative Draft IS for staff review. The IS will include a description of the project, the project location, a brief description of probable environmental effects, mitigation that would reduce any impacts to a less than significant level, and graphics depicting the project location and proposed site plan.

The purpose of the IS will be to provide substantial evidence required to scope out those issues that will not be evaluated in the EIR. The IS will be prepared using the Town's preferred format. ECORP recognizes that, as lead agency, the Town of Loomis will make the final determination of what issue areas will be evaluated in the EIR. The IS will include appropriate mitigation measures, references to

applicable state and federal regulations, and Town policies and standards, in order to support the significance determinations in the document.

Following receipt of comments from Town staff on the Administrative Draft IS, ECORP will prepare the final IS and will file the NOP and IS with the County Clerk and the State Clearinghouse. ECORP will review the comments received on the IS and consider these comments as part of the Draft EIR, as necessary. If specific comments are received from Responsible or Trustee Agencies or the public that request the EIR evaluate additional issues, ECORP will consult with Town staff to determine how to address those comments in the EIR.

Within the 30-day public review and comment period, we would suggest that two scoping meetings, one for the general public and one for government agencies and local service providers, be held to introduce the EIR approach and receive comments. The ECORP project manager and staff will facilitate the meeting and provide visual exhibits to assist in the understanding of the project.

A summary of all comments received on the NOP/IS will be included in the EIR.

Deliverables:

- ◆ Electronic submittal of the Administrative Draft NOP/IS in MS Word for staff review
- ◆ Submittal of NOP/IS + NOC to OPR-State Clearinghouse
- ◆ One (1) hard copy and one (1) electronic copy of NOP/IS to the Town
- ◆ Master copy of the NOP/IS in MS Word and PDF on CD for posting on the Town's website.
- ◆ Two scoping meetings.

Task 4: Technical Studies.

The following technical studies will be conducted by ECORP for the Proposed Project. It has been assumed that the data required to support and document answers to all other CEQA checklist items can be obtained from existing documentation (i.e., Project's traffic impact analysis, Town of Loomis General Plan and EIR, environmental documents for nearby projects, floodplain maps, and other standard environmental references), consultation with Town staff, or information being prepared separately by the applicant's project team. Please note: per discussions with the Town, the traffic impact analysis will not be provided by ECORP but by the Project applicant or Town.

Air Quality and Green House Gas Emissions Assessment and Health Risk Assessment (HRA)

The assessment of air quality and greenhouse gas emissions will quantify short-term (i.e., construction) and long-term (i.e., operational) emissions generated by the Proposed Project using the California Emissions Estimator Model version 2020.4.0 (CalEEMod) software. CalEEMod is a statewide land use emissions computer model designed to quantify potential pollutant emissions associated with a variety of land use projects. Emission-related impacts will be conducted in accordance with the recommended methodologies and significance thresholds promulgated by the

Placer County Air Pollution Control District (PCAPCD), the air pollution officer with jurisdiction of the air basin encompassing the Project Area.

The Project proposes to locate sensitive residential receptors in proximity to an interstate highway (I-80) and three major arterial roadway facilities (Taylor, Horseshoe Bar and King roads). These facilities are sources of total organic gases (TOG). TOG emissions are compounds of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. In December 2015, the California Supreme Court issued an opinion in "California Building Industry Association v. Bay Area Air Quality Management District, 62 Cal. 4th 369 (BIA v. BAAQMD)" holding that CEQA is primarily concerned with the impacts of a project on the environment and generally does not require agencies to analyze the impact of existing conditions on a project's future users or residents unless the project risks exacerbate those environmental hazards or risks that already exist. Nevertheless, though not a CEQA issue due to this California Supreme Court decision, ECORP proposes to prepare a health risk assessment (HRA), as a component of the Air Quality and Greenhouse Gas Emissions Assessment, to evaluate the potential health risk associated with locating residential receptors in proximity to Interstate 80 as well as the local arterials, Taylor Road, Horseshoe Bar Road and King Road.

The air dispersion modeling for the HRA would be performed using the U.S. EPA AERMOD dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources (not a factor in this case). AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. The quantitative impact analysis will involve the development of an emissions inventory for the existing toxic air contaminant (TAC) sources (i.e., vehicular emissions on Interstate 80, Taylor Road, and King Road), dispersion modeling to determine concentrations at the proposed residential receptors, and determination of the chronic and acute health impacts along with the projected increase in cancer risk due to exposure to TACs. The HRA would be prepared in accordance with PCAPCD guidance. The modeled concentrations will be used to estimate the increased cancer risk and health hazard in accordance with the California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHA) *Air Toxics Hot Spots Program Risk Assessment Guidelines - The Air Toxics Hot Spot Program Guidance Manual for Preparation of Health Risk Assessment* (2015). The assessment will present background information on TACs and health risks, the assumptions used for the modeling and modeling methodology and the results of the analysis. Pollutant concentrations and corresponding cancer risk at the Project site will be identified.

ECORP proposes to evaluate potential emissions-related impacts, including potential health risk, in a technical report. The analysis would be supported by modeling documentation, which would be included as an appendix to the technical report.

Biological Resources

ECORP will conduct a biological resources assessment (BRA) of the proposed Hidden Grove Project Area that consists of approximately 61.6 acres located in the Town of Loomis, Placer County, California. This assessment will cover a review of existing biological information in the region and documentation specific to the project including the Biological Resource Assessment prepared for the Village at Loomis EIR, including a literature review. The literature review will include available information such as aerial photography and database queries of the CDFW California Natural Diversity Database (CNDDDB), California Native Plant Society (CNPS), U.S. Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS) for potentially occurring special-status species in the vicinity of the project. This assessment will also include aerial photograph interpretation and a reconnaissance-level site investigation to identify and characterize vegetation communities present onsite and the approximate extent of potential aquatic resources. Vegetation communities, including riparian vegetation, will be assessed, and mapped using the Manual of California Vegetation (Sawyer et al., 2009). The assessment will also include an evaluation of special-status species with potential to occur onsite based on the literature review and reconnaissance-level site visit.

A summary of the findings will be incorporated into the BRA report. The report will provide the regulatory context, as well as the methods, results, and recommendations for appropriate mitigation measures to address potential impacts to biological resources for incorporation into the California Environmental Quality Act (CEQA) review document. Potential impacts to biological resources will be assessed using the CEQA Appendix G Checklist. As part of the biological resource assessment, ECORP will also identify the likely required permits and approvals to implement the project design and construct the project.

Cultural Resources

Cultural Resources Inventory and Evaluation Update, and Integrity Assessment

ECORP will conduct a cultural resources inventory of the proposed Hidden Grove Project Area that consists of approximately 61.6 acres located in the Town of Loomis, Placer County, California.

The cultural resources inventory will include review of the 2014 cultural resources study completed by Ric Windmiller for the Village at Loomis that covered the current 61.6-acre Hidden Grove Project Area. ECORP will utilize any appropriate information from the Windmiller report that is current enough to support the cultural study for the Hidden Grove project, so as not to duplicate effort. ECORP will conduct an updated inventory which will consist of a records search and field survey in pursuit of compliance with current standards for both the California Environmental Quality Act (CEQA) and Section 106 of the National Historic Preservation Act (NHPA).

ECORP will complete a records search and literature review with the California Historical Resources Information System's (CHRIS) North Central Information Center (NCIC). The CHRIS records search will

identify the locations and extent of previous surveys conducted within 0.5-mile of the Project area and will determine if there are any newly recorded known cultural resources (i.e., pre-contact [prehistoric] or historic archaeological sites or historic-period features) located within or near the Project area in addition to those identified by Windmiller in 2014. ECORP will request a search of the Sacred Lands File from the California Native American Heritage Commission (NAHC). The Sacred Lands Files search will identify any known sensitive or sacred Native American resources located within or near the Project area that have been previously reported to the NAHC.

ECORP will complete an intensive field survey of the 61.6-acre Project area using pedestrian transect intervals spaced 15 meters apart. The Project area will be examined for evidence of cultural resources, including pre-contact and historic-period (i.e., over 50 years of age) archaeological deposits and built environment features. All 12 previously identified and recorded resources (six historic-period archaeological sites and six residential buildings) will be revisited, and their records will be updated to reflect current conditions.

As seven years have passed since the 2014 report, conditions and integrity of the 12 previously identified resources may have changed. This scope includes an updated evaluation and integrity assessment of the 12 resources to determine, based on current considerations and integrity, if eligibility status for inclusion in the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR) has changed .

A summary of the findings will be provided in an inventory and evaluation report, following OHP's recommended content and format. The report will provide the historic context, which is also necessary for incorporation into the CEQA document, as well as the methods, results, and recommendations

AB 52 Tribal Coordination Support

ECORP will assist the Town of Loomis in consulting with California Native American tribes under Assembly Bill 52 (AB 52). ECORP will draft all required notification letters, coordinate tribal meetings, maintain the AB 52 administrative record, and provide technical support to the Town in determining whether or not Tribal Cultural Resources will be significantly impacted by the project. ECORP will document the consultation process and comments discussed and advise the Town on how to come to reach a conclusion to the consultation, as specified by AB 52. This consultation will be used to inform the development of mitigation measures for the Tribal Cultural resources section of the CEQA document.

Noise Assessment

The evaluation of noise impacts associated with the Project will be completed by Senior-level staff members who are noise experts. We will review the Village at Loomis EIR noise study prepared for the project site and use any relevant information. In order to establish the existing ambient noise levels currently experienced at the Project site, and thus noise/land use compatibility, ECORP will first

conduct up to four (4) long-term (24-hours) baseline noise measurement at the site in order to obtain a general representation of the existing ambient noise currently experienced in the area. The results will be reported in the Community Noise Equivalent Level (CNEL) noise metric. CNEL is a 24-hour average measurement of sound with a five decibel "weighting" during the hours of 7:00 p.m. to 10:00 p.m. and a 10 decibel "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. In addition to the 24-hour measurement, ECORP will also conduct up to five (5) short-term (15 minutes) measurements in the Project vicinity surrounding the site in order to establish the existing ambient noise levels currently experienced in the areas surrounding the Project.

The applicable noise standards for the Project area (i.e., Town of Loomis Public Health and Safety, and Noise Element and Loomis Municipal Code Section 13.30.070, *Noise Standards*) will be reviewed and discussed as these standards will be the basis for the Project impact determination and whether mitigation is necessary.

Construction would occur during implementation of the Proposed Project. Noise levels from construction sources will be analyzed using the Federal Transit Administration Roadway Construction Noise Model and based on the anticipated equipment to be used. In order to evaluate the potential health-related effects (physical damage to the ear) from construction noise, construction noise will be evaluated in terms of hourly equivalent continuous noise levels (L_{eq}) and the frequency of occurrence at the nearby residences. In addition to construction noise, an analysis of vibration impacts will be prepared based on the California Department of Transportation's vibration analysis guidance.

The evaluation of the Project's contribution to noise increases over existing conditions will be addressed. The predominate sources of onsite noise include automobile circulation on internal roadways, common residential neighborhood noises such as landscaping equipment and dogs barking, and activities associated with the proposed commercial land uses. The analysis of onsite noise will rely on the SoundPLAN 3D noise model, which will be used to calculate the propagation/spread of onsite Project noise levels from onsite Project operations. The SoundPLAN 3D noise model predicts noise levels based on the location, noise level, and frequency spectra of the noise sources as well as the geometry and reflective properties of the local terrain, buildings and barriers. A noise contour graphic will be prepared to depict the noise levels at the surrounding receptors. The modeling results and noise contour graphics will be discussed and summarized in the analysis.

Another major source of noise associated with the Project would be offsite automobile traffic. Potential noise impacts from vehicular traffic will be assessed using the U.S. Federal Highway Traffic Noise Prediction Model (FHWA-RD-77-108). The 24-hour weighted Community Noise Equivalent Levels (CNEL) will be presented in a tabular format. ECORP will require the completed Traffic Impact Assessment to complete the evaluation of offsite traffic noise.

ECORP proposes to evaluate noise impacts in a technical report. Where appropriate, the analysis would be supported by modeling documentation, which would be included as an appendix to the report.

Task 5: Draft EIR

Task 5.1: Administrative Draft EIR.

Project Description and Alternatives. ECORP will prepare a detailed project description of the Hidden Grove Project and description of alternatives for review by the Town. Obtaining agreement on the project description and alternatives early in the process will ensure that the first draft of the EIR is comprehensive. The project description will be based on the project description in the NOP, with changes, if any, based on input obtained during the scoping period. The expanded project description for the EIR will contain a discussion of the project objectives; it is important that the project objectives be clearly stated, because they are the basis of determining which alternatives are carried forward for analysis in the EIR.

Administrative Draft EIR. An Administrative Draft EIR will be submitted to the Town for review and comment prior to the preparation of the Public Draft EIR. The EIR will be prepared using the Town's preferred format. Thresholds of Significance and criteria will be determined in consultation with Town staff and existing state and federal criteria. In addition, any technical and environmental reports provided by the applicant, will be reviewed by ECORP and incorporated into the EIR as necessary. The work effort will encompass both primary and secondary research to establish the ambient environmental conditions, understand in detail the environmental impacts associated with the proposed project, evaluate proposed mitigation measures and project alternatives, and/or recommend additional mitigation measures to eliminate or reduce environmental impacts to an acceptable level (i.e., a level of insignificance). Depending on the physical resources on the site, this task may require early consultation with Responsible and Trustee Agencies (e.g., California Department of Fish and Wildlife [CDFW], U.S. Fish and Wildlife Service [USFWS]), and other public agencies with an interest in the proposed project. ECORP will review and incorporate relevant Town and County planning documents, data, and project technical reports. The EIR will utilize information contained in the EIR prepared for the Village at Loomis project and background information generated by the current General Plan update process to the maximum extent possible. The EIR will contain an Executive Summary and summary table of impacts and mitigation measures.

Task 5.2: Prepare Prepublication Draft EIR

ECORP will prepare a Prepublication DEIR that incorporates all modifications made to the first ADEIR. This will allow the Town to review the document before it is published to ensure all comments have been addressed.

Task 5.3: Prepare Draft EIR

ECORP will revise the Pre-publication DEIR based on one set of consolidated comments received from the Town and prepare the DEIR for a 45-day public review period. ECORP will also prepare the required Notice of Completion (NOC) and Summary Form for Town review. Upon approval of the NOC and Summary Form by the Town, ECORP will file the NOC, Summary Form and Draft EIR with the Office of Planning and Research (OPR) for distribution to applicable state agencies for review. ECORP will provide the Town with electronic files of the project in pdf format for posting on the Town's web page, as encouraged by the CEQA Guidelines. It has been assumed as part of this effort that the Town will be responsible for the filing and posting of the DEIR availability with the County Clerk and local newspaper.

Deliverables:

- ◆ Four (4) bound copies of the ADEIR and one electronic copy for internal review
- ◆ Electronic copies of the Prepublication DEIR will be submitted for final review
- ◆ Twenty (20) bound copies of the DEIR with the appendix attached as a CD, one (1) CD of the DEIR in MS Word, and one (1) CD of the DEIR in PDF format for use and distribution at the Town.
- ◆ NOC, Summary Form, and Draft EIR provided to OPR

Task 6: Prepare Final EIR

Task 6.1: Prepare AFEIR

Responses to Comments. ECORP will prepare an Administrative Final EIR, consisting of copies of comment letters received during the public review period for the Draft EIR, responses to these comments, and any changes to the EIR required based on the comments. We have assumed that up to 80 comment letters containing up to 600 comments requiring detailed responses will be submitted.

Task 6.2: Prepare Prepublication FEIR

Prepublication Draft AFEIR. All comments on the information and analysis contained in the Administrative Final EIR made by Town staff during its review will be incorporated by ECORP into the Final EIR. ECORP will provide the Town with a review copy of the Final EIR to ensure that the information contained within it is adequate and complete before the Final EIR is printed and distributed.

Task 6.3: Prepare FEIR

ECORP will prepare the Final EIR. Responses will be distributed (either hard copy or CD depending on number of comments) via certified mail to all commenting agencies at least three weeks prior to the Town's certification of the Final EIR.

Five (5) printed copies will be submitted to the Town for internal distribution purposes. This document will also be provided electronically in Microsoft Word and PDF.

Notice of Determination. ECORP will prepare the NOD. ECORP assumes that the Town will file the NOD with the County Clerk's office within 5 working days of certification of the Final EIR. We assume that the Town will pay the CDFW filing fee.

Administrative Record. Throughout the EIR process ECORP will catalog and maintain the administrative record. Upon certification of the Final EIR, ECORP will complete and deliver the administrative record as directed by the Town.

Deliverables:

- ◆ Electronic copy of the AFEIR in MS Word for staff review
- ◆ Electronic copy of the prepublication FEIR for staff review
- ◆ Five (5) bound copies, and one (1) Master CD with the FEIR in MS Word and PDF for posting on the Town's website, fifteen (15) CDs with the FEIR in PDF

Task 6.4: Mitigation Monitoring and Reporting Program.

ECORP will prepare the Mitigation Monitoring and Reporting Program (MMRP) to create a legally enforceable mechanism for the implementation of mitigation measures required in the EIR. This document will identify each mitigation measure to be carried out if the project is implemented, the entity that will be responsible for implementing the mitigation measures, and when each will be implemented. A Draft and Final MMRP will be prepared.

Deliverables:

- ◆ Electronic copy of the Draft MMRP in MS Word for staff review
- ◆ Electronic copy of the Final MMRP

Task 6.5: Findings of Fact and Statement of Overriding Considerations

ECORP will prepare a draft set of Findings of Fact to allow for certification of the EIR. The draft Findings of Fact and will summarize significant impacts, present mitigation measures required to reduce impacts to less-than-significant levels, identify the environmentally superior alternative, and permit adoption of the MMRP. If necessary, a Statement of Overriding Considerations will be prepared, in accordance with Section 15093 of the CEQA Guidelines. A Draft and Final Statement of Findings of Fact will be prepared.

ECORP has assumed that the Town will engage legal counsel for assistance with the review of the draft Facts and Findings associated with this task and that the legal counsel will be actively engaged in the preparation and review of any necessary Statements of Overriding Considerations prepared for the Project.

Deliverables:

- ◆ Electronic copy of the Draft Findings of Fact and Statement of Overriding Considerations in MS Word for staff review
- ◆ Electronic copy of the Final Findings of Fact and Statement of Overriding Considerations in MS Word

Task 7: Project Management and Meetings

ECORP's Project Manager and appropriate staff will attend up to three (3) public meetings at Planning Commission and City Council hearings (in addition to the two proposed scoping meetings). ECORP will be available to answer questions during the hearings and provide a brief overview of the findings of the EIR, if requested. It is assumed that the Town will coordinate all public meetings associated the proposed project. ECORP can provide exhibits and make presentations at the meetings. This task includes ongoing project management time for team coordination and interface with the Town and applicant including bi-weekly onsite meetings with the project team.

Deliverables:

- ◆ Attendance of up to three (3) public hearings
- ◆ Attendance of two (2) scoping meetings
- ◆ Bi-weekly onsite meetings with the project team
- ◆ EIR project management

4 – SCHEDULE OF WORK

ECORP estimates that the overall schedule, assuming two-week turnaround of any and all comments on documents by the Town, will be 12 - 13 months from start to completion of the Final EIR and MMRP.

ECORP can be available to begin work on the project immediately upon receipt of a Notice to Proceed from the Town. ECORP understands that there is often a desire to expedite the start of a project prior to the taking of a formal action by the agency and is willing to talk with and work with the Town to consider options that could allow ECORP to start work on the project prior to the conclusion of the formal contracting process.

CEQA Compliance Schedule

Task/Deliverable	Time Frame	Total Weeks from Start ¹
Task 1 – Project Initiation		
Kickoff meeting with Town	1 week from receipt of notice to proceed from Town	1
Task 2 – Develop Project Description		
Project Description	Within 2 weeks of notice to proceed from Town	3
Task 4 – Prepare Initial Study/NOP		
Prepare Admin IS/NOP	Within 3 weeks of approval of Project Description.	6
Town Review of Admin IS	2 weeks	8
Revise and publish IS/NOP	2 weeks for IS.	10
Public Review Period for IS	30 days	14
Scoping Meetings	Within the last two weeks of Public Review Period for IS	
Task 3 – Technical Studies		
Prepare technical studies	Within 8 weeks of notice to proceed	
Task 5 – Draft EIR		
Revised Project Description, if necessary, and Alternatives	Within 2 weeks from end of IS Public Review Period	16
Administrative Draft EIR	Within 12 weeks of start of IS Public Review Period	22 ¹
Town Review	3 weeks	25
Prepublication DEIR	2 weeks from City review	27
Town Review of Prepublication DEIR	1 week	28
Public Draft EIR	Within 2 weeks from receipt of City approval of Prepublication DEIR	30
Draft Notices (NOC & NOA)	With Administrative Draft EIR	
Final Notices (NOC & NOA)	With Public Draft EIR	
Public Review Period	45 days	37
Task 6 – Final EIR		
Administrative Final EIR	Within 5 weeks from the end of Public Review Period and receipt of comments from the City ²	42
Town Review of Admin FEIR	3 weeks	45
Prepublication FEIR	2 weeks	47
Town Review of Prepublication FEIR	2 weeks	49
Final EIR, NOD	Within 2 weeks of City approval of Prepublication FEIR	51
Draft MMRP	With Administrative Final EIR	
Final MMRP	With Final EIR	
Draft Findings of Fact	Within 2 weeks of Final EIR approval	53
Town review of Draft F of F	3 weeks	56
Final Findings of Fact	1 week	57
Task 7 – Project Management		
Project management	Throughout project	
Bi-weekly Team meetings	Throughout project	
Public hearings ()	During adoption of project	
Scoping meetings (2)	During IS Public Review Period	

- 1) Some timeframes in "Time Frame" column overlap
- 2) Timeline assumes that the Traffic Impact Study will be provided to ECORP within the 8 week Technical Studies preparation period.
- 3) Timeline assumes that all comment letters received by the Town will be provided to ECORP in a single delivery and assumes that no more than 80 letters having differing content are received. Letters in excess of 80, having a length or depth of content beyond what would be considered normal for the letters received, or letters requiring additional study or analysis may result in the need for an extended timeline for the task.

5 – COST PROPOSAL

The services provided above will be billed on a Time-and-Materials, Not-to-Exceed Basis per task. The estimated costs to complete the work are shown in the following table.

Cost Breakdown by Task

Task/Activity	Cost
Task 1: Project Initiation	\$3,370
Task 2: Project Description	\$9,910
Task 3: Initial Study	\$16,995
Task 4: Technical Studies	
Air Quality/GHG/Energy	\$10,025
Biological Resources	\$9,340
Cultural Resources	\$19,345
Noise	\$9,270
Task 5: Draft EIR	\$99,290
Task 6: Final EIR, NOD, MMRP, Findings	\$60,000
Task 7: Project Management and Meetings	\$25,665
Scoping Meetings (2)	\$4,930
Public Hearings (3)	\$15,295
Contingency (20%)	\$56,765
TOTAL COSTS	\$340,200

Assumptions:

The scope of work and budget provisions of this proposal assume the following:

- ◆ The cost proposal is presented on a Time-and-Materials basis.
- ◆ The cost proposal will remain valid for ninety (90) days.
- ◆ The cost proposal is for the purposes of compliance with California Environmental Policy Act (CEQA) only. This proposal does not include nor anticipate analysis for purpose of compliance with the National Environmental Quality Act (NEPA).
- ◆ Cost and schedule estimates are based on our best judgment of the requirements known at the time of the proposal and can be influenced favorably or adversely by the Town’s needs and other circumstances. ECORP Consulting, Inc. will endeavor to perform the services and accomplish the objectives within the estimated costs and schedule. However, if the scope of work or schedule changes, ECORP Consulting, Inc., reserves the right to revise costs accordingly.

- ◆ ECORP Consulting, Inc. shall not be held responsible for work delays or cancellations caused by strikes, accidents, acts of God, delays imposed by the Client, or other delays beyond the control of ECORP Consulting, Inc.
- ◆ ECORP Consulting, Inc., assumes that, by receipt of notice to proceed, full access to the property will be provided by or through the Client, including keys to locked gates and advance notice to existing property tenants of our right of entry.
- ◆ The Project Description shall not be substantially changed by the Town after commencement of the scope of work.
- ◆ The ECORP Project Team will have access to all necessary project materials to include project site plans, engineering documents and available site information.
- ◆ The ECORP project team has budgeted for a set number of meetings with the Town for the project. Additional meetings can be coordinated on a time and materials cost basis.
- ◆ ECORP, Inc. assumes one round of consolidated comments on the Draft Initial Study, the Draft EIR (including the administrative draft and preproduction draft) and the Final EIR (including the administrative final and preproduction final) by the Town.
- ◆ ECORP, Inc. assumes the Town will be responsible for the publication of all project related public notices and legal notices in a local newspaper.
- ◆ If the schedule is delayed due to unresolved issues or review requirements the Town understands that the project schedule and budget may need to be modified.
- ◆ Staff and responsible agencies will cooperate with the ECORP Project Team in a timely manner. Work shall not be stopped or delayed by the Town or others outside of the project team. Should work be so stopped or delayed for a period exceeding sixty (60) days, ECORP, Inc. shall be reimbursed for costs incurred to date on the project.
- ◆ Color copies, equipment, and other direct expenses are reimbursed with a 14% administrative handling charge (excluding mileage). These charges are included in the cost estimate.
- ◆ Mileage is reimbursed at the current IRS rate. These charges are included in the cost estimate, below.
- ◆ Any changes to the above assumptions are not included in this scope and budget may result in additional time and cost.
- ◆ ECORP, Inc. may elect to move costs from task to task if required provided the total contract dollars are not exceeded.

Biological Resources Assumptions:

- ◆ The scope assumes that the project boundary will be provided by the client at the start of preparation, and that no changes to the original project boundary or land use components occur.
- ◆ The preliminary wetland assessment will not be conducted in accordance with the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987), Regional Supplement

to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (U.S. Army Corps of Engineers 2008), and the U.S. Army Corps of Engineers Sacramento District's Minimum Standards for Acceptance of Preliminary Wetland Delineations (U.S. Army Corps of Engineers 2001). The biological resource assessment does not include protocol level surveys for any of the potential status species evaluated as part of this study. One round of revisions is included in this report.

- ✦ One round of revisions is included in this report.
- ✦ The BRA will likely identify the need for focused surveys; however, this task does not include focused (protocol-level) surveys for sensitive species or coordination or consultation with the regulatory agencies.

Cultural Resources Assumptions:

- ✦ GIS or CAD data of the project area will be provided to ECORP prior to initiating any work.
- ✦ This scope assumes no archaeological testing will be required to complete an updated evaluation of any resources. If any cultural resources are identified that require testing to determine NRHP or CRHR eligibility, then a change order will be required to record, test, and/or evaluate the resources.
- ✦ This scope assumes no additional cultural resources, beyond those 12 identified by the 2014 Windmill report, will be identified as a result of the field survey or the records search.
- ✦ This scope assumes the 2014 Windmill report includes complete historic contexts for each of the 12 resources identified and evaluated for the NRHP and CRHR and new or focused historic contexts will not need to be prepared by ECORP.
- ✦ The proposed schedule is subject to property access constraints related to wildfires and road closures; as well as delays as a result of ongoing COVID-19 pandemic.
- ✦ The Client will notify ECORP of any hazards in the Project Area. Adverse weather conditions in the Project Area may delay field survey until ground conditions are suitable for fieldwork.
- ✦ Project meetings, hard copies of reports, responses to comments, and other tasks not specified above will require a contract change order.
- ✦ This cost estimate is provided on a time and materials, "best efforts" basis. If the consultation requests from the tribes will require more effort that will exceed the budget provided herein, then a contract change order would be required to complete the scope and AB 52 consultation.
- ✦ In compliance with the terms of agreement between ECORP and the OHP, one unbound copy of the final report will be submitted to the appropriate confidential OHP Information Center within 60 days of completion, where it will be archived and remain confidential (note that this is required, regardless of project status, and does not affect project approval).

COMPANY OVERVIEW

ECORP assists our public and private clients with a wide range of environmental services including technical studies for biological, cultural, and water resources; land use planning; and regulatory compliance with the CEQA, NEPA, Clean Water Act, federal and state Endangered Species Acts, National Historic Preservation Act (NHPA), and other laws and regulations. ECORP can provide support over the life of a project from initial baseline field surveys, special studies, and environmental planning; to environmental review, permit negotiation, liaison with resource agencies, and mitigation design; and through to construction supervision, monitoring, and compliance reporting. ECORP brings to our clients an experienced team of CEQA and NEPA specialists, environmental permitting specialists, environmental analysts, terrestrial and aquatic biologists, wetland specialists, landscape architects, engineers, hydrologists, water rights experts, archaeologists, cultural resource specialists, architectural historians, and geographic information system (GIS) analysts.

Founded in 1987, ECORP is committed to excellent service and client satisfaction. To ensure the success of our clients' projects, we use a combination of well tested practices. We build the best team for the job, drawing from our own professionals and a large network of relationships with other technical and scientific experts. We use a carefully honed project management approach based on a client-focused, responsive, and results-driven philosophy. We implement real quality control provided by seasoned technical professionals as peer reviewers and editors.

ECORP's environmental documentation and compliance experience includes the full range of CEQA and NEPA documents and experience with the regulatory requirements of Sections 401, 402, and 404 of the Clean Water Act; Sections 7 and 10 of the Endangered Species Act (ESA); California Endangered Species Act (CESA); Sections 106 and 110 of the NHPA; Section 1600-1616 of the California Fish and Game Code; Porter-Cologne Water Quality Control Act; California Coastal Act; and Coastal Zone Management Act. We have well established working relationships with regulatory agency staff including the U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Boards (RWQCB), and California Office of Historic Preservation. These agencies recognize our permit application documents to be of the highest quality based on our consistent technical excellence and thorough understanding of regulatory processes.

A partial list of our services includes:

Biological Resources

- ◆ Threatened, Endangered, and Special-Status Species Surveys and Permitting
- ◆ Wetland Delineations
- ◆ Terrestrial and Aquatic Species Surveys and Habitat Assessments
- ◆ Botanical Services
- ◆ Bat Surveys and Bat Exclusion Management
- ◆ Stream Bioassessment Studies (including Benthic Macroinvertebrate Sampling)
- ◆ Preparation and Implementation of Natural Community Conservation Plans (NCCPs) and Habitat Conservation Plans (HCPs)
- ◆ Support of In-formal and Formal Consultation under Section 7 of the Endangered Species Act
- ◆ California Rapid Assessment Method (CRAM) for Wetland, Riparian, and Stream Habitats

Construction Monitoring

- ◆ Mitigation Development and Monitoring
- ◆ Preconstruction Surveys
- ◆ Biological Resources Monitoring
- ◆ Cultural Resources Monitoring

CEQA and NEPA Documentation

- ◆ Preliminary Project Assessments/Constraints Analyses
- ◆ CEQA Review and Compliance (Categorical Exemptions, Initial Studies, Mitigated Negative Declarations, Environmental Impact Reports)
- ◆ NEPA Review and Compliance (Categorical Exclusions, Environmental Assessments, Environmental Impact Studies)
- ◆ Land Use Entitlement Support
- ◆ Third-Party Review of Applicant-Prepared Documents
- ◆ Public Participation, Including English-Spanish Translation of Public Notices and Public Information Materials
- ◆ Environmental Justice
- ◆ Coordination with Native American Monitors
- ◆ English-Spanish Translation of Worker Education Materials

Cultural Resources

- ◆ Cultural Resources Management
- ◆ Archaeological Services
- ◆ Architectural History Services
- ◆ Cultural Resources Consultation and Agreement Documents

- ◆ Native American Consultation
- ◆ Memoranda of Agreement/Programmatic Agreements
- ◆ Geoarchaeology

Interpretation and Aesthetics

- ◆ Visual Impact Analysis
- ◆ Interpretive and Educational Projects
- ◆ Native Habitat Interpretive Centers

Restoration, Permitting and Land Management

- ◆ Wetland Assessment and Delineation
- ◆ Environmental Permits under Clean Water Act Sections 401, 402, and 404; Fish and Game Code Section 1602; and Porter-Cologne Act

Restoration, Permitting and Land Management

- ◆ Federal Energy Regulatory Commission Licensing Support
- ◆ Mitigation and Compensation Planning
- ◆ Mitigation Banking Support
- ◆ Habitat Restoration, Planning and Design
- ◆ Open Space Management
- ◆ Storm Water Pollution Prevention Plans (SWPPP)
- ◆ Long-term Monitoring and Management

Geographic Information Systems and Cartography

- ◆ Project-Specific and Regional Resource Mapping Services
- ◆ GIS Data Capture and Spatial Analysis
- ◆ Lidar Data Acquisition and Analysis
- ◆ Image Processing and Land Cover Analysis
- ◆ Computer-Based Cartography

Unmanned Aerial Systems (UAS) Services

- ◆ Rapid Collection of Aerial Photos for Projects Up to 400 Acres
- ◆ Repeated Site Visits for Monitoring and Change Detection
- ◆ Development of Digital Surface Models, 3D Data and Other Topographic Information
- ◆ Aerial Videography

Water Resources

- ◆ Hydrologic Modelling and Assessment
- ◆ Stream Surveys and Monitoring
- ◆ Stream Gaging and Related Services
- ◆ Water Resources Management
- ◆ Watershed Planning and Management
- ◆ Water Rights Determination and Accounting
- ◆ Hydropower Project Economics and Operations

If you have any questions regarding the scope, assumptions or cost, please call me at (530) 809-1328. If this proposal meets your approval, please contact me at your earliest convenience to set up a work order.

Thank you for the opportunity to submit this proposal.

Sincerely,

A handwritten signature in blue ink, appearing to read "Scott Friend", is written over a faint horizontal line.

Scott Friend

Cost Proposal to Provide a CEQA Review Document for the Hidden Grove Project

Labor	Grand Total (All Tasks)	Project Initiation		Develop Project Description		Prepare Initial Study/CEQ		Technical Studies		Draft EIS		Final EIS		Project Management		Construction			
		Task/Phase 1	Task/Phase 2	Task/Phase 1	Task/Phase 2	Task/Phase 1	Task/Phase 2	Task/Phase 1	Task/Phase 2	Task/Phase 1	Task/Phase 2	Task/Phase 1	Task/Phase 2	Task/Phase 1	Task/Phase 2				
Chris Robinson	\$ 210.00	77	\$ 16,500.00	8	\$ 810.00	3	\$ 630.00	2.5	\$ 157.50	0	\$ -	16.5	\$ 1,417.50	17	\$ 1,512.00	14	\$ 1,260.00	0	\$ -
Scott Frazier	\$ 180.00	20	\$ 9,000.00	6	\$ 3,150.00	10	\$ 3,000.00	7.5	\$ 1,417.50	0	\$ -	45	\$ 12,240.00	47.5	\$ 12,210.00	131	\$ 23,370.00	0	\$ -
Michael Martin	\$ 115.00	475	\$ 72,450.00	6	\$ 910.00	24	\$ 3,710.00	15	\$ 4,010.00	2	\$ 510.00	154	\$ 28,140.00	143	\$ 22,840.00	78	\$ 11,760.00	0	\$ -
Megan Ruggel	\$ 90.00	495.5	\$ 44,595.00	4	\$ 1,100.00	10	\$ 3,000.00	18.5	\$ 4,010.00	0	\$ -	70	\$ 18,000.00	131	\$ 11,500.00	47	\$ 3,600.00	0	\$ -
Rosary Woyten	\$ 105.00	241	\$ 25,305.00	0	\$ -	0	\$ -	0	\$ -	91	\$ 9,310.00	110	\$ 11,310.00	47	\$ 4,200.00	0	\$ -	0	\$ -
Clara Crawford-Martin	\$ 90.00	160	\$ 14,400.00	0	\$ -	0	\$ -	0	\$ -	50	\$ 4,500.00	110	\$ 9,900.00	0	\$ -	0	\$ -	0	\$ -
Scott Myers	\$ 115.00	23	\$ 2,300.00	0	\$ -	0	\$ -	0	\$ -	18	\$ 1,530.00	5	\$ 475.00	0	\$ -	0	\$ -	0	\$ -
Todd Clark	\$ 155.00	8.5	\$ 1,317.50	2	\$ 310.00	0	\$ -	5	\$ 715.00	1.3	\$ 211.50	0	\$ -	0	\$ -	0	\$ -	0	\$ -
Laura Hesse	\$ 100.00	61	\$ 6,100.00	0	\$ -	8	\$ 820.00	5	\$ 500.00	10	\$ 1,000.00	12	\$ 1,200.00	41	\$ 4,100.00	0	\$ -	0	\$ -
Richard Pearson	\$ 140.00	37	\$ 5,180.00	0	\$ -	4	\$ 560.00	5	\$ 600.00	8	\$ 1,040.00	29	\$ 3,800.00	0	\$ -	0	\$ -	0	\$ -
Jeff Sawyer	\$ 165.00	37	\$ 6,105.00	0	\$ -	8	\$ 1,310.00	4	\$ 600.00	17	\$ 2,800.00	8	\$ 1,200.00	10	\$ 1,500.00	0	\$ -	0	\$ -
Michelle Wilson	\$ 110.00	40	\$ 4,400.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -	20	\$ 2,200.00	10	\$ 1,100.00	0	\$ -	0	\$ -
Lisa Westwood	\$ 300.00	19	\$ 3,000.00	0	\$ -	0	\$ -	0	\$ -	10	\$ 1,000.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -
Bonny Adams	\$ 170.00	11	\$ 1,870.00	0	\$ -	0	\$ -	0	\$ -	12	\$ 2,040.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -
Brian Maize	\$ 155.00	22	\$ 3,410.00	0	\$ -	0	\$ -	0	\$ -	12	\$ 1,830.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -
Laura Kallen-Martin	\$ 110.00	24	\$ 2,640.00	0	\$ -	0	\$ -	0	\$ -	38	\$ 4,230.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -
Megan Smith	\$ 110.00	20	\$ 2,200.00	0	\$ -	0	\$ -	0	\$ -	10	\$ 1,100.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -
Shannon By	\$ 100.00	4	\$ 400.00	0	\$ -	0	\$ -	0	\$ -	4	\$ 400.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -
Laurie Gonzalez-Parish	\$ 115.00	2	\$ 230.00	0	\$ -	0	\$ -	0	\$ -	2	\$ 230.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -
Keith Iwan	\$ 115.00	32	\$ 3,660.00	0	\$ -	0	\$ -	0	\$ -	11	\$ 1,260.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -
Daniel Wang	\$ 110.00	4	\$ 440.00	0	\$ -	0	\$ -	0	\$ -	4	\$ 440.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -
Peter Kufner	\$ 110.00	1	\$ 110.00	0	\$ -	0	\$ -	0	\$ -	7	\$ 770.00	0	\$ -	0	\$ -	0	\$ -	0	\$ -
Total Labor	2076	\$ 279,673.50	21	\$ 3,370.00	47	\$ 9,510.00	144.5	\$ 14,770.00	343.5	\$ 45,212.50	733.5	\$ 96,490.00	412.5	\$ 59,815.00	273	\$ 48,890.00	8	\$ -	
Other Costs																			
CCC/Construction		\$ 5,115.00		\$ -		\$ -		\$ 200.00		\$ 2,430.00		\$ 700.00		\$ 210.00		\$ -		\$ 4,755.00	
Mark-up on CCC/Construction	14.0%	\$ 716.10		\$ -		\$ -		\$ 28.00		\$ 339.00		\$ 98.00		\$ 29.70		\$ -		\$ 881.80	
Total CCC/Construction		\$ 5,831.10		\$ -		\$ -		\$ 228.00		\$ 2,769.00		\$ 798.00		\$ 239.70		\$ -		\$ 5,636.80	
Travel		\$ 34.00		\$ -		\$ -		\$ -		\$ 30.00		\$ -		\$ -		\$ -		\$ 4.00	
Mark-up on Travel	14.0%	\$ 4.76		\$ -		\$ -		\$ -		\$ 4.20		\$ -		\$ -		\$ -		\$ 0.56	
Total Other Costs		\$ 6,180.86		\$ -		\$ -		\$ 232.00		\$ 2,803.20		\$ 798.00		\$ 239.70		\$ -		\$ 6,753.76	
Total Project		\$ 285,854.36		\$ 3,370.00		\$ 9,510.00		\$ 15,002.00		\$ 48,015.70		\$ 97,288.00		\$ 60,054.70		\$ 49,129.70		\$ -	



943 Reserve Drive
Roseville, California 95678
United States
www.ghd.com

1 September 2021

Merrill Buck
Town Engineer
Town of Loomis, California

Proposal to prepare a Traffic Study for the Hidden Grove Project in the Town of Loomis, CA

Dear Mr. Buck,

Thank you for the opportunity to provide Traffic Study services for the Hidden Grove Project. Attached please find our proposed Scope of Work for your input and feedback.

It is our understanding that the Town of Loomis will be selecting the consultant for the traffic component of this project evaluation, and that ECORP is preparing the environmental document. Our scope of work is based on conversations with Anders Hauge and information provided in the Hidden Grove Pre-Application Submittal (March 17, 2021). We have reviewed relevant planning and policy documents and have developed an approach to this traffic study that ensures both consistency with the Town's General Plan and CEQA transportation analysis requirements, namely SB 743. Included with our scope of work is a proposed schedule and our proposed budget.

We look forward to the opportunity to work with you on this project. Please feel free to give me a call if you have any questions.

Regards

A handwritten signature in blue ink, appearing to read "Tregenza", written over a horizontal line.

Todd Tregenza
Project Manager
916-245-4216
Todd.Tregenza@ghd.com

Makinzie Clark
Transportation Planner
916-245-4211
Makinzie.Clark@ghd.com

Copy to: Anders Hauge

This document is in draft form. The contents, including any opinions, conclusions or recommendations contained in, or which may be implied from, this draft document must not be relied upon. GHD reserves the right, at any time, without notice, to modify or retract any part or all of the draft document. To the maximum extent permitted by law, GHD disclaims any responsibility or liability arising from or in connection with this draft document.

Detailed Scope of Work

1. Task 1: Project Management and Meetings

GHD will serve as overall Project Manager for all tasks included in this Scope of Work. Project management responsibilities include but are not limited to: Prepare and keep master project schedule; Coordinate project status meetings; Effectively manage budget; Implement Quality Assurance and Quality Control Measures; Prepare Invoices with monthly progress reports; Prepare for and attend up to 3 project team meetings. Additional meetings can be added on a time and materials basis with the Town's prior authorization.

Task 1 deliverables will include monthly invoicing, progress reports, Project Schedule maintenance, meeting notices, agendas, meeting handouts/exhibits and meeting minutes.

2. Task 2: Data Collection & Memorandum of Assumptions

The following tasks have been created based on Project information provided within the Hidden Grove Pre-Application Submittal (March 17, 2021) and the Loomis General Plan (July 22, 2021). Additional information is requested of the Town:

- The Town of Loomis Transportation Impact Study Guidelines
- The Town of Loomis Travel Demand Model
- The Town of Loomis Vehicle Miles Travelled (VMT) guidelines
- Hidden Grove land use and circulation assumptions

Task 2.1 Study Initiation Meeting

GHD will review all project related material, including; site maps, land use quantities, site access locations, project descriptions, project applications, recent traffic studies within the study area, and agency transportation planning documents (including general plan circulations elements and traffic impact fee programs.).

GHD will provide all project management responsibilities for the traffic study including: coordination with the environmental consultant and with all affected agencies, attend meetings, engineering staff management, quality control review, and project billings.

Task 2.2 Data Collection

To provide a database of existing and future conditions, GHD will work with Town staff to obtain other pertinent transportation data, including road improved plans. Traffic data collection will be scheduled for the following study locations, to be confirmed with the Town. The Caltrans Traffic Census and PeMS database will serve as the primary traffic count data sources for mainline and ramp analyses for I-80 freeway facilities serving the project.

Intersections

- Library Drive / Horseshoe Bar Road
- Horseshoe Bar Road / Laird Street
- Webb Street / Laird Street
- Webb Street / Taylor Road
- Court 9 (proposed) / King Road
- King Road / Boyington Road
- King Road / Taylor Road
- Taylor Road / Horseshoe Bar Road
- Horseshoe Bar Road / I-80 WB Ramps
- Horseshoe Bar Road / I-80 EB Ramps

I-80 Freeway Facilities

- WB On/Off Ramps
- EB On/Off Ramps

Due to the current low traffic patterns associated with shelter-in-place orders and social distancing related to Covid-19, current traffic counts may not reflect typical travel demand. GHD will utilize "big data" from Streetlight to access recent traffic volumes that predates Covid-19 conditions to provide peak hour intersection traffic counts.

Task 2.3 Estimate Project Trip Generation

The total number of vehicle trips expected to be generated by the proposed project will be estimated. Local trip generation data will be obtained from similar sites in the area. These rates will be supplemented with information from the latest Trip Generation Manual published by the Institute of Transportation Engineers. These rates will be adjusted accordingly for the specific site conditions, and reviewed with the appropriate agencies. Project trip generation volumes will be estimated for weekday and peak hour conditions.

Task 2.4 Directional Trip Distribution and Assignment

Trip distribution assumptions will be developed using the Town's travel demand model or Replica software. Based on an analysis of the trip making characteristics of the proposed project and area demographics, the directional trip distribution of the project generated traffic will be estimated. The project trips will be assigned to all study intersections based on determined trip distribution patterns.

Deliverable: Memorandum of Assumptions

Prior to completion of the following tasks, GHD will prepare a detailed Memorandum of Assumptions that documents all technical assumptions that will be used to complete the traffic study. Additionally, the memorandum will include a graphic that illustrates existing lane geometrics and control and traffic volumes. The memorandum will be submitted for review and comment to both the Town and Caltrans.

3. Task 3: General Plan Consistency

A level of service (LOS) analysis will be prepared and provided as a separate memorandum. LOS will be evaluated against adopted General Plan thresholds for the Town of Loomis. Improvements needed to maintain adopted LOS thresholds will also be identified for consideration as project conditions of approval, consistent with the General Plan.

GHD will obtain and review available existing files and databases from the Town pertaining to all applicable transportation infrastructure, including bicycle, pedestrian, and transit facilities. Based upon the information gathered and the input provided by Town staff, GHD will perform a comprehensive multimodal transportation and safety analysis of the street network in the study area to determine existing traffic operations and identify existing connectivity, accessibility, and safety issues. The analysis will take into consideration all road users, including bicyclists, pedestrians, and transit users.

Task 3.1 Vehicular Operations (Existing and Cumulative Conditions)

The analysis will provide an evaluation of Existing and Cumulative (2040) peak hour LOS and queuing vehicular operations with and without the proposed project based upon information provided in the Memorandum of Assumptions. GHD will utilize the Town's travel demand model to determine if the proposed circulation system is sufficient to accommodate future (20 year) traffic and is consistent with the Town's General Plan. Cumulative conditions circulation assumptions will be confirmed with the Town, specifically regarding construction of Boyinton Road between King Road and Horseshoe Bar Road.

Task 3.2 Circulation and Site Access Assessment

The proposed project internal circulation network will be confirmed by the project team and the Town. GHD will review the proposed roadway and intersection configurations of the future internal and public streets to ensure they meet the Town's design standards and future circulation needs.

GHD will review the site plan access driveways to determine appropriate measures are in place to address potential queues that could interrupt traffic flow, specifically referencing relevant policies in the General Plan related to "Neighborhood Environment".

Task 3.3 Safety Assessment

The analysis will also include transportation safety using history crash data from either the Town's crash database (such as Crossroads) or through SWITRS and TIMS. GHD will establish appropriate units of analysis within the study area (street segments and intersections) and aggregate available crash data to prepare a historical collision heat map. GHD will identify notable crash trends, such as factors associated with increased crash severity, factors associated with bicycle and pedestrian crashes, and a crash rate analysis to compare to statewide averages for similar facilities. Through this effort, it is anticipated that preliminary improvement strategies will be identified to address areas of concern.

Task 3.4 Multimodal Connectivity Assessment

Bicycle, pedestrian, and transit connectivity will be assessed using existing databases of transportation assets, such as sidewalk coverage, ADA ramps, transit stops and shelters, streetlights, crosswalks, and other pedestrian or transit amenities, as provided by the Town. GHD will provide a high-level assessment of existing multimodal connectivity and accessibility within the study area.

Task 3.5 Improvements for General Plan Consistency

The proposed project's contribution to any LOS deficiencies, relative to adopted General Plan thresholds, will be quantified by comparison of "No Project" to "Plus Project" conditions at the study locations. In coordination with Town staff, intersection improvements required to maintain adopted General Plan LOS thresholds, or reduce proportional project contributions towards deficiencies identified in previous Existing Plus Project and Cumulative Year Plus Project conditions will be quantified for weekday peak hour conditions.

Deliverable: General Plan Consistency Memorandum (Draft & Final)

4. Task 4: VMT Analysis

GHD will utilize OPR guidance and the Town's guidelines and policies to deliver a CEQA transportation analysis consistent with the provisions of SB 743 to determine potential impacts associated with the Project land use (per the site plan provided to GHD), as well as to identify mitigations to potential impacts associated with increases in VMT.

GHD will collaborate with the environmental consultant preparing the overall CEQA document to ensure that VMT estimates for the project are prepared consistently with other document sections, such as GHG and air quality. If these estimates must diverge, GHD will work with the environmental consultant to defensibly explain the methodological reasons for variance between CEQA section VMT estimates.

Task 4.1 Mitigation Measures

Capital projects, contributions towards capital projects, and contributions towards Town and regional travel demand management program improvements will be identified with the goal of reducing any identified CEQA project impacts relative to the guidelines utilized by the Town. These mitigation measures will be reviewed with environmental consultant preparing the overall CEQA document to ensure compatibility with other document sections and recommendations.

Deliverable: VMT Analysis Memorandum (Draft & Final)

GHD will also work with the environmental consultant to provide VMT analysis results for the environmental document.

5. Agency Reviews & Schedule

A Memorandum of Assumptions (MOA) that will contain all of the assumptions including study locations, trip generation and distribution, and analysis methodologies and parameters will be delivered to the Town of Loomis and Caltrans for review and comment. The MOA will be delivered to the Town and Caltrans five weeks following authorization to proceed. In this stage all of the assumptions will be finalized which will eliminate significant technical comments from reviewing agencies that could result in costly revisions to the traffic study.

GHD proposes a twenty (20) week schedule to complete the Draft General Plan Consistency and VMT Analysis memorandums, not including agency review times on the Memorandum of Assumptions. Following receipt of one set of Town and project team comments on the Draft memorandums, GHD will submit the Final memorandums within two (2) weeks. A detailed schedule will be prepared by GHD, once under contract, that considers the timelines of the overall CEQA document preparation, with deliverable milestones aligned with the Tasks above.

{Note: Agency comments requiring significant new analysis or technical discussion may be subject to additional charges. This additional work will be completed only with the client's prior authorization, and will be billed on a Time and Materials Basis.}

7. Budget

The total budget including traffic count data collection fees for ten (10) intersections is \$70,040.

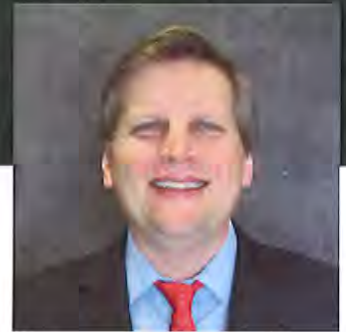
8. Resumes

The following pages include resumes for the GHD project team.



Todd Tregenza AICP

Senior Transportation Planner



Location

Sacramento, CA

Experience

15 years

Qualifications/Accreditations

- BS, Community and Regional Development, University of California, Davis, CA, 2007
- AICP Certified Planner #29678

Memberships

- American Planning Association
- Young Professionals in Transportation

Relevant experience summary

Todd Tregenza has 15 years of professional experience in various areas of transportation consulting with an emphasis on transportation planning projects. He has assisted dozens of agencies on short- and long-range planning efforts, including the development of travel demand models, general plan circulation elements, specific plans and master plans, corridor studies, capital improvement programs, nexus and fee studies, transportation operational analyses, and impact analyses. Todd's experience spans public and private sector work for a broad range of projects that require circulation, safety, and operational analysis from a transportation perspective. He also has extensive experience as an on-call transportation planner for local agencies, assisting in the preparation of transportation studies and grant applications, performing peer reviews of impact studies, and developing California Environmental Quality Act (CEQA) impact analyses for development projects of all sizes.

US 101 Broadway Multimodal Corridor Plan

Project Manager
Humboldt County Association of Governments | Eureka, CA

Managing the preparation of a multimodal corridor plan for US 101 in the City of Eureka, following the Caltrans Corridor Planning Guidelines, including implementation of the Smart Mobility Framework. The corridor suffers from congestion, a lack of multimodal accessibility, poor travel reliability caused by frequent lane blockages, and high rates of severe and fatal pedestrian and bicycle collisions. The corridor plan proposes major reconfiguration of the roadway including provision of robust Class IV bikeways, transit prioritization through dedicated lanes and queue jump pockets, shortened pedestrian crossings, and new couplets to redistribute traffic. The study includes close coordination with City and Caltrans partners, and seeks to inform competitive grant applications including Solutions for Congested Corridors Program.

West Texas Street Complete Streets

Senior Transportation Planner
City of Fairfield | Fairfield, CA

Assisted in the analysis of corridor alternatives that would implement the vision and goals of the Heart of Fairfield Specific Plan along West Texas Street. Corridor concepts included consideration of roundabouts, mid-block crossing locations for pedestrians, and parking-protected Class IV or buffered Class II bikeways. Preferred plan calls for a phased implementation of Class IV bikeways. Led and assisted preparation of Highway Safety Improvement Program (HSIP) and Active Transportation Plan (ATP) grant applications for plan components. Selected project components to maximize benefit/cost in a single HSIP application.

Carillion Boulevard Complete Streets Corridor

Senior Transportation Planner
Raney Planning & Management | Galt, CA

Oversaw completion of the Carillion Boulevard Complete Streets Corridor Plan, including assessment of intersection control options; consideration of innovative

transportation treatments, such as Class IV bikeways and protected intersections; review and oversight of forecasting effort; and presentation of plan to planning commission.

2014 Transportation Capital Improvement Program and Traffic Impact Fee (TIF) Update

Project Manager
City of Galt | Galt, CA

Managed preparation of third consecutive update to the City's AB 1600 TIF and nexus study. Led update to capacity needs assessment based on a market-based 20-year land use absorption scenario of the City's General Plan. Resulted in a prioritized transportation Capital Improvement Program (CIP), an updated travel demand model, and new TIF schedule. Assessment included consideration of trip length (Vehicle Miles Traveled (VMT)) by land use to weight trip end cost allocation proportional to impact extent. Currently managing fourth consecutive update to fee program.

Eastview Specific Plan Environmental Impact Report (EIR)

Senior Transportation Planner
Raney Planning & Management | Galt, CA

Led preparation of Transportation Impact Analysis (TIA) and associated EIR sections. The 20-year buildout scenario, based on 2014 transportation CIP, was utilized to assess long-term project impacts assuming several phases of land development. Existing, short-term, and long-term mitigations were identified to reduce project impact significance. Alternative improvement scenarios were assessed for optimal configuration of major transportation infrastructure elements in the City, including Walnut Avenue and Twin Cities Road interchanges with State Route (SR) 99.

SR 46 W/US 101 Interchange Roundabout Re-Assessment

Project Manager
San Luis Obispo Council of Governments (SLOCOG) | Paso Robles CA

Under contract with SLOCOG, and in partnership with Caltrans District 5, the City of Paso Robles, and San Luis Obispo County Public Works, managed the delivery of a roundabout reassessment in an Intersection Control Evaluation (ICE) format. Prepared operational analysis for existing and future scenarios, under signalized and roundabout intersection control configurations. Prepared concept design for an implementable roundabout alternative with a reduced footprint and prepared a sensitivity analysis to establish approximately how many years the design concept would continue to provide acceptable operations. Prepared cost estimates for the roundabout alternative and prepared benefit-cost

analysis on signalized and roundabout configurations, including life-cycle cost analysis, to aid in the decision-making process in selecting a preferred improvement method.

Imola Corridor Complete Streets Improvement Plan

Project Manager
Napa Valley Transportation Authority | Napa, CA

Managed the development of a 3.5-mile multimodal complete streets plan for Imola Avenue in the City and County of Napa. The plan primarily addressed safety improvements for all road users and improved pedestrian and bicyclist mobility. Coordinated plan development with agency and community stakeholders to ensure a community-driven process. Improvements were prioritized and programmed according to various measures of effectiveness, including benefit-cost, constructability, and environmental stewardship.

San Andreas SR 49 Southern Gateway Commercial Corridor Study

Project Manager
Calaveras Council of Governments | San Andreas, CA

Assisted with the corridor study including bicycle and pedestrian facilities to close network gaps and provide safe crossings, intersection signalizations and potential roundabout locations, and a new multimodal network to connect growth areas to existing neighborhoods and amenities. Stakeholder outreach included property ownership groups at the southern gateway area, where market-based future land use alternatives were developed using allowable use and realist absorption rates.

Pajaro to Prunedale Corridor Study (G12 Corridor)

Transportation Planner
Transportation Agency for Monterey County | Monterey County, CA

Assisted in delivery of existing conditions including capacity analysis, socio-economic data, collision data and mapping. Assisted and oversaw corridor travel analysis, utilizing the Association of Monterey Bay Area Governments (AMBAG) regional travel demand model and comparing constrained and unconstrained analysis of G12 and SR 1. Oversaw development of final report, including evaluation of alternatives, selection of preferred improvements, and analysis breakdown of corridor improvements by segment, consolidating performance measures, illustrating improvement concepts, and developing lifecycle benefit-cost comparisons. Led and facilitated community outreach meetings, and oversaw the preparation of supporting

Todd Tregenza | Senior Transportation Planner

public information, including interactive content, flyers, and posters for community outreach, meetings, and website.

Valley Springs Town Center Connectivity Plan

Project Manager

Calaveras Council of Governments | Valley Springs, CA

Managed the development of a community-driven multimodal complete streets plan for the "Town Center" area within Calaveras County, with a focus on multimodal and school safety. Coordinated plan development with community stakeholders to ensure community "buy-in" on recommendations and ensured support from all public agency partners, including Caltrans, Calaveras County, and Calaveras Council of Governments. Assessed existing conditions for bicycle, pedestrian, transit, and auto users, including intersection operations, multimodal traffic stress and safety, and accessibility and connectivity. Developed implementable, cost-effective grant-eligible, prioritized infrastructure recommendations for plan.

US 101 Corridor Study / South County Travel Demand Model

Transportation Planner

County of San Luis Obispo | San Luis Obispo County, CA

Prepared the base year model update, year 2035 projections, and alternatives analysis. Multiple scenarios were assessed for impacts to adjacent properties, potential environmental impacts, financial cost, and operational effects. Limited access facilities, full interchanges, collector-distributor systems, and at-grade intersections along the corridor were all evaluated with the goal of improving safety, reducing conflict points, relieving congestion, and providing access to future growth areas.

Coloma Sustainable Community Mobility Plan

Senior Transportation Planner

El Dorado County Transportation Commission | El Dorado County, CA

Assisted in public outreach process as well as internal development and review of performance measures for existing and proposed improvement conditions for all travel modes. Performed bicycle Level of Traffic Stress (LTS) analysis and created bicycle LTS maps in Geographic Information Systems (GIS) for the selected study area. Worked to establish and maintain consensus with the El Dorado County Transportation Commission, El Dorado County, Caltrans, and State Department of Parks and Recreation staff.

Ukiah Traffic Analysis for Schools and Surrounding Area

Project Manager

City of Ukiah | Ukiah, CA

Managed preparation of transportation operational and safety study in vicinity of Ukiah public schools. This project identified school-related transportation deficiencies and implementable multimodal transportation improvements to improve school traffic and mobility, including consideration of modern roundabouts.

City of Elk Grove Systemic Safety Analysis Report (SSAR)

Project Manager

City of Elk Grove | Elk Grove, CA

Oversaw development of the safety analysis and report, including development of a GIS tool to automate the identification of collision trends and systemic risk factors using updated infrastructure, traffic, and crash data inputs, and collection of Light Detection and Ranging (LiDAR) data on high-risk corridors. Also oversaw the development of prioritized safety improvement projects, selection of five candidate project packages for HSIP grant application, and development of 10% design concepts.

SSAR for the Franklin Street, Del Monte Avenue, Munras Avenue and Pacific Street, Lighthouse Avenue, and Fremont Way Corridors

Transportation Planner

City of Monterey | Monterey, CA

Responsible for systemic safety approach application, crash database development, and assurance of data fidelity in analysis. Reviewed proposed countermeasures for applicability.

Placer County Local Road Safety Plan

Assistant Project Manager

Placer County | Placer County, CA

Assisted in development of the County's local roadway safety plan that establishes the procedure and framework for systematic safety analysis and countermeasures. As part of this work effort, a robust virtual public outreach program was developed during COVID-19, which also assisted in outreach to a large volume of key municipality and public agency stakeholder throughout the County. The plan is primarily focused on County wide systemic patterns rather than location specific issues.

SR 174 / 20 Intersection Analysis

Senior Transportation Planner
Nevada County Transportation Commission | Grass Valley, CA

Oversaw overall analysis and study development, including quantification of benefit-to-cost ratios, development of forecasts, safety analysis, queuing and operational analysis, and preparation of microsimulation. Assisted in the preparation of subsequent grant application for Active Transportation Program.

City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan

Senior Transportation Planner
City of Elk Grove | Elk Grove, CA

As part of the GHD team, leading development of an Active Transportation impact fee to serve as a companion program to the City's Roadway impact fee. Applying use of an asset-based methodology to generate a nexus between future development and active transportation improvement needs without using Level of Service (LOS).

Vehicle Miles Traveled (VMT) / Threshold

CEQA VMT Transportation Impact Thresholds

Project Manager
County of San Luis Obispo | San Luis Obispo County, CA

Managed the preparation of Senate Bill (SB) 743 VMT procedures, including establishing VMT baseline and threshold values, screening procedures, impact study guidelines, and the development of a map-based sketch planning tool. Developed approach to establish unincorporated average baseline VMT values, using the SLOCOG Regional Travel Demand Model for home-based VMT and Longitudinal Employer-Household Dynamics (LEHD) data for work-based VMT. Developed procedures to maintain County analysis requirements for LOS and safety.

County of San Joaquin VMT Thresholds Study & Mitigation Implementation

Project Manager
County of San Joaquin | San Joaquin County, CA

Managing the preparation of SB 743 VMT procedures for the County, including establishing VMT baseline and threshold values, screening procedures, mitigation measures, impact study guidelines, and development of a sketch planning tool. Developed approach to establish unincorporated average baseline VMT values, using the SJCOG model with LEHD data for "external" trips.

Avila Beach Drive Capacity Metric and Threshold Study

Project Manager
County of San Luis Obispo | Avila Beach, CA

Managed the Avila Circulation Study, CIP, and TIF Update. The County of San Luis Obispo re-requested an evaluation of the adopted roadway capacity metric and service thresholds on Avila Beach Drive. Assessed the prior policy and made recommendations to the County how to capture more effectively the unique travel characteristics of Avila Beach Drive. The assessment considered three years of annual directional traffic data collected in 15-minute intervals, evacuation capacity, event traffic and seasonal fluctuations, various methodologies for assessing capacity, and policies adopted in other communities subject to similar recreational traffic.

Active Transportation

City of Turlock Active Transportation Plan

Transportation Planner
City of Turlock | Turlock, CA

Prepared the City's first ATP as part of the Alta Design + Planning Team. The project team identified gap closure projects and reassessed the City's planned multimodal infrastructure in the context of improving connectivity and ensuring strong multimodal connections between critical destinations, such as schools, residential neighborhoods, and parks. For each identified project, a sheet was developed that highlighted destinations served, existing conditions, relation to existing plans, and possible funding sources, such as grant programs. Project included a citywide collision analysis and GIS mapping through every stage.

City of Santa Maria Active Transportation Plan

Senior Transportation Planner
City of Santa Maria | Santa Maria, CA

Assisted in the assembly and preparation of background transportation conditions. Assisted in the mapping of points of interest and bicycle connectivity relative to route comfort level. Reviewed proposals for bicycle route enhancements and new bicycle facility recommendations and assisted team in ensuring proposals were prioritized against establish performance metrics.

Transportation Planning

Sutter Creek Circulation Element Update

Project Manager
City of Sutter Creek | Sutter Creek, CA

This update includes active transportation and safety improvements, new policies, including VMT policies for SB 743 compliance, and updated forecasts. Also, included was a robust virtual engagement strategy to manage public outreach during the ongoing COVID-19 pandemic. In coordination with Amador County Transportation Commission (ACTC), "big data" was acquired to establish baseline travel demand.

2009 Transportation Capital Improvement Program and TIF Update

**Senior Transportation Planner
City of Galt | Galt, CA**

Responsible for updating nexus study to support TIF and transportation CIP update. Efforts included updating of base and future year conditions in City's travel demand model, preparation of cost estimates for identified improvement needs, calculation of impact fees by land use category, and consideration of credits to special fee areas including the northeast area.

2011 Transportation CIP TIF Update and Travel Demand Model

**Transportation Planner
City of Oroville | Oroville, CA**

Reviewed existing GIS data sets; developed GIS base mapping, graphics, and GIS data set exports; and performed GIS spatial analysis. Responsible for base and future year traffic modeling and capacity analysis, preliminary cost estimates, nexus calculations, and report preparation.

2014 Avila Circulation Study and TIF Update

**Transportation Planner
County of San Luis Obispo | San Luis Obispo, CA**

Prepared the circulation study, including a CIP, nexus, and fee study. Created a new area-wide travel demand model for the Avila Beach community. Baseline socio-economic data was aggregated at the parcel level using GIS data obtained from the County in addition to field surveys and observations. Due to seasonal variability in travel demand, the model was calibrated using a permanent count station to the 30th Highest Hour for the year, or "K30" conditions. Utilized the model to forecast General Plan buildout conditions, establish nexus and regional share, develop a CIP, and propose a fee schedule.

2016-2017 Transit Asset Management (TAM) System Monitoring and Congestion Management Plan Update

**Transportation Planner
County of Marin | Marin County, CA**

Developed 2016 roadway segment volume summaries for Congestion Management Plan (CMP) and non-CMP facilities throughout the County of Marin. Raw traffic volume data was collected over a seven-day period and distilled into weekday (Tuesday through Thursday), weekend, daily, and peak-hour averages and delivered in system-wide database format, as well as individual segment summary format. Individual segment summaries included 24-hour graphs displaying peaking characteristics during critical analysis time periods. Speed and travel time data was also aggregated by segment for roadway facilities, and bicycle and pedestrian volumes were inventoried and entered into the database. Work performed while with another firm.

Arroyo Grande Circulation Element, CIP, and TIF Update

**Project Manager
City of Arroyo Grande | Arroyo Grande, CA**

Managing preparation of Arroyo Grande Circulation Element Update. Project includes update of City's Capital Improvement Program and TIF program, using a local area model developed and maintained by GHD that has been updated to be consistent with the most recent version of the SLOCOG regional model. Project also includes update of the City's Transportation Impact Analysis Guidelines to include VMT policies and guidelines in compliance with SB 743.

Phase I and II, Circulation Element and Traffic Impact Study Guidelines Update

**Lead Transportation Planner
City of Arroyo Grande | Arroyo Grande, CA**

Responsible for base and future year modeling and capacity analysis; circulation improvement identification; objectives, goals, and policies preparation; and preparation of exhibits and circulation element document.

Chandler Ranch Specific Plan Transportation Analysis

**Transportation Planner
City of Paso Robles | Paso Robles, CA**

Prepared the report and traffic analysis.

Citywide CIP, Citywide Traffic Circulation Study, and TIF Update

**Transportation Planner
City of Galt | Galt, CA**

Responsible for base and future year capacity analysis, nexus and fee zone calculations, and report preparation.

Loomis Community Plan Update

Transportation Planner
City of Loomis | Loomis, CA

Prepared base and future year transportation modeling and operational analysis. Collected, mapped, and analyzed GIS infrastructure data and developed transportation model. Identified improvement needs and updated CIP.

City of Turlock General Plan Update

Transportation Planner
City of Turlock | Turlock, CA

As part of the Dyett & Bhatia team, assisted in the update to the City's General Plan. Responsible for preparation of the circulation element update, including the policy document and planned improvements. Assisted in the preparation of the CEQA document for the update, including all technical analyses for the transportation and alternatives sections of the EIR. As part of the general plan update, responsible for development of new travel demand model, updated to current conditions, used to evaluate proposed land use and circulation alternatives. Technical analyses included various traditional and new performance metrics such as VMT, Vehicle Hours Traveled (VHT), Vehicle Control (V/C), and delay.

City of American Canyon Travel Demand Model and Circulation Element (with TDM Policies), and Citywide Traffic Circulation Study, Traffic Calming Program

Transportation Planner
City of American Canyon | American Canyon, CA

Responsible for base and future year modeling and capacity analysis; circulation improvement identification, objectives, goals, and policies preparation; and preparation of exhibits and circulation element document. Reviewed existing GIS data sets; developed GIS base mapping, graphics, and GIS data set exports; and performed GIS spatial analysis.

City of American Canyon Circulation Element Update

b
Responsible for base and future year modeling and capacity analysis, circulation improvement identification, preparation of exhibits and circulation element document, and preparation of EIR transportation section.

Travel Demand Models

Templeton Travel Demand Model

Transportation Planner
San Luis Obispo, CA

Comprehensively updated Templeton Community Travel Demand Model to current baseline conditions. Baseline socio-economic data was aggregated at the parcel level using GIS. Transportation Analysis Zone (TAZ) structure was comprehensively overhauled to increase the resolution of the model and to be consistent with the boundaries of the community's three distinct fee areas. Utilized the model to forecast general plan buildout conditions, establish nexus and regional share develop a CIP, and propose a fee schedule.

Los Osos Travel Demand Model

Transportation Planner
County of San Luis Obispo | San Luis Obispo County, CA

Prepared the base year model update and year 2035 projections. Assessed future infrastructure needs and identified necessary nexus and CIP to inform TIF update.

South County / Nipomo Travel Demand Model

Transportation Planner
County of San Luis Obispo | San Luis Obispo County, CA

The 2010 effort was a partnership with Caltrans to develop a US 101 South County Corridor Study. The model was expanded into the City of Arroyo Grande and into the Santa Barbara County community of Santa Maria. This required consistency with the regional SLOCOG travel demand model, the local City of Arroyo Grande model, and the Santa Barbara County Association of Governments model. In each case, the model was updated to reflect current baseline demographic and travel conditions. Socio-economic data was aggregated at the parcel level using GIS data from the Census and the County. The TAZ structure was modified to be consistent with the boundaries of the community's two distinct fee areas.

Ukiah Citywide Traffic Model (TransCAD)

Transportation Planner
City of Ukiah | Ukiah, CA

Prepared the base year and year 225 model projections.

Avila Travel Demand Model

Project Manager
County of San Luis Obispo | San Luis Obispo County, CA

Project consisted of the creation of a new area-wide travel demand model for the Avila Beach community. Baseline socio-economic data was aggregated at the parcel level using GIS data obtained from the County in addition to field surveys and observations. Due to seasonal variability in travel demand, the model was calibrated using a permanent count station to the 30th Highest Hour for the year, or "K30" conditions. Utilized the model to forecast General Plan buildout conditions, develop a Capital Improvement Program, and propose a TIF schedule for County Board of Supervisor adoption.

City of Galt Travel Demand Model

**Project Manager, Transportation Planner
City of Galt | Galt, CA**

Oversaw the first and second modeling efforts, respectively. Model updates were completed with the assistance of Goodwin Consulting Group to ensure highly accurate socio-economic baseline data for calibration purposes. Following update of the model with new socio-economic data and TAZ structure, utilized it to develop a Transportation CIP and Citywide Fee Program. In 2015, led an effort to update the fee program based on a partial buildout of the City's General Plan. A new land use forecast was developed that took into consideration absorption rates since the prior model and was based on current market conditions. This revised forecast formed the basis of a new prioritized Transportation CIP and fee program based on trip length (VMT).

Amador County Transportation Commission Travel Demand Model, Capital Improvement Program and Impact Fee Study

**Project Manager, Transportation Planner
Amador County Transportation Commission |
Jackson, CA**

This project was funded through a Caltrans Community Based Transportation Planning grant. ACTC sought to develop a local City of Jackson subarea model within the regional model. Led an intensive review of underlying data in the regional model and identified issues with the distribution of socioeconomic data within the City's boundaries. The local area land uses data was recompiled at the parcel level and distributed within a refined TAZ structure that increased the modeling detail of the City. Future socio-economic data was obtained from the ACTC Plan model and processed into inputs compatible with the model structure to determine whether alternative improvements such as road diets and complete streets would be sufficient to support 20-year traffic forecasts. Developed a CIP and proposed a TIF schedule for ACTC Board adoption.

City of Turlock Travel Demand Model

**Lead Transportation Planner
City of Turlock | Turlock, CA**

Led the effort to update the City's Travel Demand Model for the purpose of evaluating General Plan land use and circulation alternatives against each other and providing performance metrics for decision makers to utilize in selecting a preferred alternative. The City's model was comprehensively updated to reflect current baseline conditions and future proposed General Plan land use alternatives. Baseline socio-economic data was aggregated at the parcel level using GIS data obtained from the City in addition to field surveys and observations. Land use alternatives, and eventually the proposed land use scenario, were obtained from Dyett and Bhatia in GIS format and were converted into socio-economic inputs compatible with the model structure for further analysis against various performance metrics including VMT, VHT, V/C, and delay.

Traffic Impact Fees (TIF's)

City of Benicia Comprehensive Development Impact Fee Update

**Project Manager
Economic & Planning Systems | Benicia, CA**

Managed the preparation of a comprehensive impact fee update for the City, as part of the Economic & Planning Systems team. Led evaluation of various transportation impact fee structures that would address VMT, per requirements of Metropolitan Transportation Commission for certification of the City's priority development area, and defensible methodologies for incorporating bicycle and pedestrian projects, without using LOS, from the State Transit Assistance ATP. Oversaw revisions to the Solano Napa Activity-Based Model travel demand model to better reflect anticipated land use growth.

City of Galt 2014 TIF Update

**Transportation Planner
City of Galt | Galt, CA**

Responsible for base and future year capacity analysis, nexus and fee zone calculations, and report preparation. Reviewed existing GIS data sets; developed GIS base mapping, graphics, and GIS data set exports; and performed GIS spatial analysis.

City of Modesto Capital Facilities Fee Update

**Transportation Planner
City of Modesto | Modesto, CA**

Responsible for base and future year modeling, nexus calculations, and report preparation.

City of Benecia TIF Update

Transportation Planner
City of Benecia | Benecia, CA

Assisted with the TIF update. Reviewed existing GIS data sets; developed GIS base mapping, graphics, and GIS data set exports; and performed GIS spatial analysis.

South County Circulation Study and TIF Update

Project Manager
County of San Luis Obispo | San Luis Obispo County, CA

Responsible for preparing a circulation study, including a CIP, nexus, and fee study. The South County / Nipomo area Travel Demand Model was comprehensively updated to reflect current baseline conditions and future adopted general plan land uses. Baseline socio-economic data was aggregated at the parcel level using GIS data obtained from the County in addition to field surveys and observations. The TAZ structure was also modified to be consistent with the boundaries of the community's two distinct fee areas. Utilized the model to forecast general plan buildout conditions, establish nexus and regional share, develop a CIP, and propose a fee schedule.

Templeton Circulation Study and TIF Update

Project Manager
County of San Luis Obispo | San Luis Obispo County, CA

Prepared a Circulation Study, including a CIP, Nexus, and Fee Study. Comprehensively updated Templeton Community Travel Demand Model to current baseline conditions. Baseline socio-economic data was aggregated at the parcel level using GIS. TAZ structure was comprehensively overhauled to increase the resolution of the model and to be consistent with the boundaries of the community's three distinct fee areas. Utilized the model to forecast general plan buildout conditions, establish nexus and regional share, develop a CIP, and propose a fee schedule.

Roadway / Corridor / Complete Streets

Cherokee Road Improvement Project

Transportation Planner
County of San Joaquin | San Joaquin County, CA

Prepared the SimTraffic and Synchro models for the study to help determine whether there are improvements that will enhance corridor safety within the existing right of way.

Grand Avenue Center Median and Intersection Bulb Out Study and Master Plan Traffic Analysis

Transportation Planner
City of Grover Beach | Grover Beach, CA

Prepared the report and traffic analysis, and traffic analysis of conceptual alternatives for incorporation into the master plan. Responsible for alternatives testing, modeling and capacity analysis, and report preparation.

Halcyon Road Corridor Study Technical Memorandum

Transportation Planner
City of Arroyo Grande | Arroyo Grande, CA

Prepared operational analysis, traffic forecasting, and multi-modal corridor concept design.

South Halcyon Road Corridor Study

Transportation Planner
City of Arroyo Grande | Arroyo Grande, CA

Prepared operational analysis, traffic forecasting, and multi-modal corridor concept design.

SR 29 South Corridor Engineered Feasibility Study and Middletown Community Action Plan

Transportation Planner
Lake County | Lake County, CA

Assisted project team with development of GIS base mapping and GIS Atlas layout for proposed improvements along SR 29 in Southern Lake County and through the Middletown Community. Also assisted in the preparation of corridor traffic volume forecasts.

Short Street Closure Study

Transportation Planner
City of Arroyo Grande | Arroyo Grande, CA

Assessed a variety of configurations for Short Street, including full closure, partial closure (one-way traffic), and no change. Assessed ability of parallel streets to support diverted traffic, including circulation of parking lot behind the Arroyo Grande village area. Prepared the report and traffic analysis.

US 101 South County Corridor Transportation Study

Transportation Planner
County of San Luis Obispo | San Luis Obispo County, CA

For this multi-jurisdiction transportation planning and operational analysis effort, the study was initiated as a partnership between the County of San Luis Obispo and Caltrans in order to evaluate and assess the potential for

modifications, restriction, and expansion of freeway access along the US 101 corridor in South San Luis Obispo County. Led the effort to expand the sub-regional model into northern Santa Barbara County in order to model and assess corridor implications south of the County limit. Multiple scenarios were assessed for impacts to adjacent properties, potential environmental impacts, financial cost, and operational effects. Limited access facilities, full interchanges, collector-distributor systems, and at-grade intersections along the corridor were all evaluated with the goal of improving safety, reducing conflict points, relieving congestion, and providing access to future growth areas.

SR 49 Corridor System Management Plan

Transportation Planner
Nevada County | Nevada City, CA

Oversaw overall Corridor System Management Plan development, including analysis of performance criteria. Developed active transportation performance metrics, analyzed safety and accessibility, evaluated safety countermeasures, and developed and prioritized system-wide improvements to enable safer bicycle/pedestrian mobility along the corridor.

Master Plans

West Grand Avenue Master Plan

Transportation Planner
City of Grover Beach | Grover Beach, CA

Prepared the transportation analysis and assisted in the development of policies, standards, and streetscape improvements along the West Grand Avenue Master Plan, including consideration of parking strategies.

City of Grover Beach Bicycle Master Plan

Transportation Planner
City of Grover Beach | Grover Beach, CA

Assisted in the preparation of existing and proposed bicycle facility mapping, policy development, identification of funding opportunities, and improvement prioritization.

Interchanges

SR 99 / SR 165 Interchange Modification Project Study Report (PDS)

Transportation Planner
City of Turlock | Turlock, CA

Prepared the modeling for the alternatives modeling for the potential SR 165 realignment in/around the Hilmar area in Merced County that would connect to a new interchange location on SR 99 adjacent to the City of Turlock in Stanislaus County.

Traffic Studies / Reports

Robles Transportation Impact Analysis

Project Manager
County of Tierra | Tierra County, CA

Prepared LOS and VMT transportation impact analysis for proposed single-family residential development in unincorporated Shasta County. Developed baseline VMT estimate using the Shasta Regional Transportation Authority activity-based travel demand model (ShastaSIM).

Piper Way Transportation Impact Analysis

Project Manager
City of Redding | Redding, CA

Preparing VMT transportation impact analysis for proposed affordable senior housing development in unincorporated Shasta County. Developing baseline VMT estimate using the Shasta Regional Transportation Authority activity-based travel demand model (ShastaSIM).

City of Grover Beach Special Traffic Studies

Transportation Planner
City of Grover Beach | Grover Beach, CA

Prepared analysis and report for three special traffic studies for consideration of angled parking on West Grand Avenue between 6th and 12th Streets, consideration of traffic calming on Margarita Avenue, and evaluation of a pedestrian crossing at the Brighton Avenue / Oak Park Boulevard intersection.

Home Depot Traffic Impact Study (TIS)

Transportation Planner
City of Clearlake | Clearlake, CA

Assisted the City of Clearlake in determining if they will allow the construction of a Home Depot in the City. Prepared the TIS supporting the EIR for the project at the corner of SR 53 / Warner Street / Airport Road.

City of Grover Beach Lodge TIS EIR

Transportation Planner
City of Grover Beach | Grover Beach, CA

Prepared the support Transportation Impact Analysis Report (TIAR) for the CEQA document prepared by SWCA Environmental Consultants. Developed mitigations for identified impacts and analyzed parking conditions, demand, and lot design for proposed site plans.

Value Place Commercial TIS

Transportation Planner
City of Turlock | Turlock, CA

The proximity of the proposed 4.5-acre commercial development on the southeast corner SR 99 / Fulkerth Road interchange was a significant concern for future traffic operations, thus multiple ingress/egress scenarios were analyzed on how to best handle mid-block access between closely spaced signalized intersections on a major arterial.

Roundabouts

17 Mile Drive / Holman Highway 68 / Highway 1 Roundabout

**Transportation Planner
City of Monterey | Monterey, CA**

Assisted with the TIS for a hybrid-multi-lane roundabout at the 17 Mile Drive entrance (Pebble Beach) at a construction cost of \$6 million.

Napa Streets West of Downtown

**Transportation Planner
City of Napa Napa, CA**

Responsible for alternatives testing, modeling, and capacity analysis of the traffic operational conditions using BluFax for the streets west of the downtown area to assess potential changes to travel patterns including a reversal of the one-way couplet and allowing two-way traffic on streets west of downtown, which are currently one-way streets.

First Street and Second Street Roundabouts along California Boulevard

**Transportation Planner
City of Napa | Napa, CA**

Responsible for Traffic Operations Analysis including the alternatives testing, modeling, and capacity analysis and VISSIM Micro-Simulation Analysis efforts for three closely spaced roundabouts at the intersections of the SR 29 northbound ramps at First Street, First Street and Second Street at California Boulevard. Project will include two multi-lane roundabouts, one of which is in the State right of way at the SR 29 ramp intersection. Project is federally funded, and Caltrans administered the project during construction, estimated at a cost of \$12 million.

Rocklin Road Complete Street Roundabout Corridor Master Plan

**Transportation Planner
City of Rocklin | Rocklin, CA**

Responsible for alternatives testing, modeling, microsimulation, and capacity analysis of the corridor Master Plan for a complete street corridor through six intersections including two I-80 freeway ramp intersections.

San Fernando Road / Newhall Avenue Roundabout Feasibility Study

**Transportation Planner
City of Santa Clarita | Santa Clarita, CA**

Responsible for determining the alternatives and modeling for the feasibility of a roundabout at this location in Santa Clarita.

SR 99 / SR 104 (Twin Cities Road) Roundabout Interchange Project Study Report (PSR) / Project Report (PR) and PS&E

**Senior Transportation Planner
City of Galt | Galt, CA**

Oversaw preparation of traffic analysis to support roundabout installation at the intersections of West and East Stockton Roads in the vicinity of Twin Cities Road interchange with SR 99. Project analyses included microsimulation, forecasting, and freeway facility (ramp, mainline, and weave) capacity.

Sierra Community College Rocklin Campus New Driveway Improvements

**Transportation Planner
Sierra Community College | Rocklin, CA**

Assisted with the traffic, access, and circulation planning for parking evaluation.

SR 60 / Sunnymead Boulevard Intersection ICE

**Transportation Planner
City of Moreno Valley | Moreno Valley, CA**

Responsible for the opening year and design years traffic forecasts that were included in the ICE document to determine if a roundabout or a signal alternative is more feasible at the location.

On-Call

County of San Luis Obispo Various Circulation Study, Model, and Road Improvement Fee Updates

**Project Manager
County of San Luis Obispo | San Luis Obispo, CA**

As part of an ongoing on-call services agreement with the County of San Luis Obispo, managed and managing delivery of road impact fees for the communities of Avila, South County / Nipomo, Templeton, Avila, Los Osos, and San Miguel. For all efforts but one, San Miguel, a local travel demand model was developed or updated to reflect current conditions and updated to reflect adopted changes in the applicable Community Plan. The San Miguel and Los Osos fee updates are both anticipating adoption at the County Board of Supervisors in the next two months.

City of Arroyo Grande On-Call Transportation Consultant Transportation Safety and Circulation Studies

Transportation Planner
City of Arroyo Grande | Arroyo Grande, CA

Led preparation of or assisted in the preparation of several transportation safety and circulation studies for the City of Arroyo Grande that emphasized multimodal connectivity. These included the following projects, among others: Ocean View Elementary Safe Routes to School (SRTS) Plan, South Halcyon Road Complete Street Improvements and Road Diet, and Short Street Closure to Vehicular Traffic.

City of San Luis Obispo On-Call Transportation Engineer Services

Transportation Planner
City of San Luis Obispo | San Luis Obispo, CA

Review of proposed City TIA methodologies and citywide traffic models, and preparation of TIS.

City of San Luis Obispo 2017-2018 On-Call Transportation Planning Services

Project Manager
City of San Luis Obispo | San Luis Obispo, CA

Served as Project Manager to provide transportation design, engineering, and review; multi-modal planning and analysis; multi-modal operations and analysis; and travel demand modeling services on an on-call basis. Under this on-call contract, the team was assigned the preparation of a Multi-modal Traffic Impact Study for the proposed Froom Ranch Specific Plan EIR. Froom Ranch Specific Plan is the third and last major land annexation area identified in the City's General Plan, along with San Luis Ranch and Avila Ranch. The proposed project land uses include a mix of commercial, recreational, and residential uses, a large portion of which will be age-restricted and/or elder care living facilities. The purpose of this study is to conduct analysis for CEQA compliance and to evaluate consistency of the project with the City General Plan / Circulation Element. Work performed while with another firm.

City of San Luis Obispo On-Call Transportation Consultant and On-Call Multimodal Transportation Impact Analysis

Transportation Planner
City of San Luis Obispo | San Luis Obispo, CA

Led the development of in-house multimodal transportation analysis tools to quantify operations using HCM 2010 for all travel modes on a link, segment, and corridor basis. This process, as well as Highway

Capacity Manual (HCM) 2010 intersection analysis through Synchro, was utilized in the preparation of several transportation impact analyses and supporting environmental documents, from smaller projects, such as Discovery SLO to large specific plan projects, such as San Luis Ranch.

Yolo County On-Call CEQA Consultant Services

Project Manager
County of Yolo | Yolo County, CA

Provided CEQA consulting services on an on-call basis. The services consist of focused analyses to support the appropriate environmental documents required for transportation and land development proposals. As a result of this on-call contract, performed an update to the Eastern Esparto Circulation Study in the Town of Esparto in Yolo County. This project consisted of a comprehensive update to the 2006 Eastern Esparto Circulation Study. The goals of the study were two-fold; first, the near-term goal was to analyze the transportation impacts of three proposed residential subdivisions in the eastern Esparto area and identify improvements to mitigate any impacts; second, this study would evaluate the previously planned improvements from the 2006 study to determine whether it remains appropriate to support cumulative buildout of the East Esparto General Plan area. Work performed while with another firm.

School / Campus

California State University Fresno Campus Master Plan Parking, Circulation and Access

Transportation Planner
California State University | Fresno, CA

Prepared base and future year modeling and capacity analysis; campus-wide parking needs assessment and on-site circulation planning; and campus access safety and operational analysis. Assisted in the preparation of the Master Plan Parking, Circulation, and Access chapter, as well as the EIR Transportation Analysis.

California State University Stanislaus Campus Physical Master Plan Parking, Circulation and Access

Transportation Planner
California State University | Turlock, CA

Prepared base and future year modeling and capacity analysis; campus-wide parking needs assessment and on-site circulation planning; campus access safety and operational analysis; and assisted in the preparation of the Master Plan Parking, Circulation, and Access chapter, as well as the EIR Transportation Analysis.

Sierra Community College Rocklin Campus Facilities Master Plan Parking, Circulation and Access

Transportation Planner

Sierra Community College | Rocklin, CA

Prepared base and future year modeling and capacity analysis; campus-wide parking needs assessment and on-site circulation planning; campus access safety and operational analysis; and assisted in the preparation of the Facilities Master Plan and Draft TIA. Prepared operational analysis for busy Rocklin Road and Sierra College Boulevard corridors, including analysis of intersection control alternatives for existing and planned driveways to evaluate signalized and roundabout options on- and off-site.

Multimodal

City of Mountainview Citywide Multimodal Improvement Plan

Project Planner

City of Mountain View | Mountain View, CA

Assisted with project to develop an area-wide multimodal improvement plan. Elements of the plan were largely drawn from several recent studies and plans analyzing future conditions and providing potential improvement strategies and projects. More than 50 study intersections and 50 roadway segments were evaluated as part of the study to identify deficiencies and improvements to enhance operations for all modes of transportation. The plan was also intended to help reduce VMT / greenhouse gas and help meet mode shift goals. Also prepared conceptual layouts for the recommended improvements. Work performed while with another firm.

Dry Creek Valley Capacity Threshold Study

Project Manager

County of Sonoma | Sonoma County, CA

Evaluated overall capacity of the Dry Creek Valley roadway system, particularly during concurrent events, such as cycling events, industry-wide winery events, and seasonal tasting. Performed rural roadway capacity and safety analysis, including geometric design assessment, bicycle facility assessment, roadway level of service analysis, and collision analysis. Identified physical and programmatic measures to improve circulation and safety.

San Luis Ranch Specific Plan Multimodal Transportation Impact Analysis Prado Road Interchange Project Study Report

Project Manager

City of San Luis Obispo | San Luis Obispo, CA

Project required development of cutting edge in-house multimodal transportation analysis tools to quantify operations using HCM 2010 for all travel modes. Analysis was performed on an intersection, link, segment, and corridor basis. The transportation analysis report formed the basis of the San Luis Ranch Specific Plan EIR, as well as the basis for the concurrent PSR that was prepared for the Prado Road Interchange project. The multi-modal TIS analyzed several development phases of the 130+ acre site and analyzed several near- and long-term infrastructure scenarios, including the alternatives being studied in the PSR. The tools developed as part of this effort were subsequently used on several later impact studies under an on-call contract with the City of San Luis Obispo.

Froom Ranch Specific Plan Multimodal Transportation Impact Study

Project Manager

City of San Luis Obispo | San Luis Obispo, CA

Provided transportation design, engineering, and review; multimodal planning and analysis; multimodal operations and analysis; and travel demand modeling services on an on-call basis. Under this on-call contract, the team was assigned the preparation of a multi-modal TIS for the proposed Froom Ranch Specific Plan EIR. Froom Ranch Specific Plan is the third and last major land annexation area identified in the City's General Plan, along with San Luis Ranch and Avila Ranch. The proposed project land uses include a mix of commercial, recreational, and residential uses, a large portion of which will be age-restricted and/or elder care living facilities. The purpose of this study is to conduct analysis for CEQA compliance and to evaluate consistency of the project with the City General Plan / Circulation Element. Work performed while with another firm.

City of San Luis Obispo Transportation Impact Analysis

On-Call Transportation Consultant

City of San Luis Obispo | San Luis Obispo, CA

Led the development of in-house multimodal transportation analysis tools to quantify operations using HCM 2010 for all travel modes on a link, segment, and corridor basis. This process, as well as HCM 2010 intersection analysis through Synchro, was utilized in the preparation of several transportation impact analyses and supporting environmental documents, from smaller projects such as Discovery SLO to large Specific Plan projects such as San Luis Ranch.

Other Transportation Analyses

- Simmerhorn Ranch TIS
- Summerfield TIS
- Fairway Oaks TIS

Todd Tregenza | Senior Transportation Planner

- Twin Cities Road Gas Station TIS
- Veranda at River Oaks Traffic Study
- Twin Cities Arco / Starbucks Traffic Study
- Twin Cities Walmart EIR

Other Related Areas of Interest

Software Proficiency

- ArcMap
- Cube
- Highway Capacity Software
- QGIS
- Sidra
- Synchro
- SimTraffic
- Traffix
- TransCAD
- Vissim
- Vistro

Foreign Language

- French

Career history

2018 - present	GHD, Senior Transportation Project Manager
2017 - 2018	TJKM Consultants
2007 - 2016	GHD
2006 - 2007	Governor's Office of Planning & Research



Kamesh Vedula PE, TE

Principal / Project Manager



Location

Roseville, CA

Experience

21 years

Qualifications/Accreditations

- MS, Transportation, Kansas State University, Manhattan, KS, 2004
- BS, Civil Engineering, Nagarjuna University, Bapatla, India, 2000
- Civil Engineer, CA #79926
- Traffic Engineer, CA #2546

Key technical skills

- Roundabout Planning/Design
- Transportation Planning, Transportation Engineering
- Travel Demand Modeling
- Master Planning
- Traffic Operations Analysis, Traffic Circulation Studies, Traffic Impact Studies, Traffic Impact Fees

Memberships

- N / A

Relevant experience summary

Kamesh Vedula has over 21 years in the disciplines of transportation engineering, planning, and modeling. His present roles include Principal-in-Charge, Business Development, Project Manager, and Transportation Operations Leader, depending on project needs. He oversees the workload balance of the transportation planning / engineering group and coordinates with other groups and regions to level staff resources. Kamesh is an Intersection Control Evaluation (ICE) specialist, completing numerous ICE projects within a majority of Caltrans Districts and conducting ICE analyses training classes in Caltrans District 11 and Headquarters. His project management experience includes Caltrans Project Study Report-Project Development Support (PSR-PDS), Project Approval / Environmental Documents (PA/ED), ICE studies, roundabout planning / design, advanced roundabout operations analyses / design, complete streets studies, corridor studies, traffic impact studies, and traffic safety studies. Kamesh oversees daily operations including team meetings, scheduling, invoicing, and client coordination through active communication. He contributes to business development through conference attendance, positioning with clients and strategic teaming partners, preparation of qualifications and proposals, and interviews for proposed projects.

Roundabout Interchanges

I-10 / Wildwood Canyon Road Interchange Project

Project Manager
City of Yucaipa | Yucaipa, CA

Oversaw the development of the interchange concept. Prepared the data collection and traffic operations analysis and assisted in the preparation of interchange layouts and feasibility report.

I-5 / Deschutes Road Roundabout Interchange Reconstruction PA/ED, PSR, PR, PS&E, and Construction Management

Project Engineer
City of Anderson | Anderson, CA

Prepared traffic forecasts and traffic operations and report supporting the Project Study Report (PSR) for a roundabout with five legs and new northbound off-ramp. Synchro, SIDRA, Rodel, Highway Capacity Software (HCS), and VISSIM software were utilized to quantify the performance criteria for various study alternatives.

Construction was completed in 2013 at a cost of \$4 million.

I-80 / Gilman Street Interchange Improvement Project PA/ED

Traffic Engineer

Parsons Transportation Group | Amador County, CA

Responsible for traffic modeling, operations, and design of multimodal elements, including two roundabouts on Gilman Street - one located at each Interstate 80 (I-80) ramp intersection. The purpose of the project was to simplify and improve traffic operations, improve local and regional bicycle connections and pedestrian facilities, and safety. Current conditions, along with an overall increase in vehicle traffic, have created poor, confusing, and unsafe operations in the interchange area for vehicles, pedestrians, and bicyclists.

State Route (SR) 99 / SR 104 (Twin Cities Road) Roundabout Interchange PSR / PR and PS&E

Project Engineer

City of Galt | Galt, CA

Prepared traffic forecasts and traffic operations report supporting the PSR for the design of roundabouts on both sides of the freeway overcrossing and a new freeway on-ramp. Synchro, Sidra, Rodel, HCS, and VISSIM software were utilized to quantify the criteria for study alternatives.

I-505 / Vaca Valley Roundabouts Improvements for OBAG2 Grant Funding Application Support

Traffic Engineer

City of Vacaville | Vacaville, CA

Assisted with the roundabout operations and the preliminary ultimate configuration for I-505 / Vaca Valley Parkway.

Westfield Galleria at Roseville Regional Mall Expansion Traffic and Circulation Study, Roundabout, Signals, and Off-Site Improvements

Traffic Engineer

Westfield Corporation | Roseville, CA

Prepared the traffic operations report and traffic modeling in support of the PSR. Performed roundabout planning and simulation, Traffic Impact Study (TIS), circulation study, and corridor study. Utilized Synchro, Sidra, Rodel, HCS, and VISSIM software to quantify the performance criteria for alternatives and roundabout.

Roundabout Roadway / Corridors

Streets West of Downtown Traffic Analysis

Project Engineer

City of Napa | Napa, CA

Project included an analysis of the traffic operational conditions using BluFax for the streets west of downtown to assess potential changes to travel patterns, including a reversal of the one-way couplet and allowing two-way traffic on streets west of downtown, which are currently one-way streets.

Old Redwood Highway Complete Street Improvement and Design

Traffic Engineer

City of Cotati | Cotati, CA

Responsible for traffic study to address the transportation impacts associated with the proposed Village Main Street roadway improvement project that proposes to improve Old Redwood Highway Corridor to a pedestrian-oriented two-lane facility for use in completing the project's California Environmental Quality Act (CEQA) environmental documents.

Rohnert Park Citywide Roundabout Circulation Study

Traffic Engineer

City of Rohnert Park | Rohnert Park, CA

Responsible for travel time runs, preparation of calibrated operations model to match field conditions, and proposing mitigations to improve traffic operations.

Rocklin Road Complete Street Corridor Improvement Master Plan and PS&E

Project Engineer

C&C Construction, Incorporated, City of Rocklin | Rocklin, CA

Preparation of Roundabout Feasibility Report (RFR). Synchro, SIDRA, Rodel, and VISSIM software were utilized to quantify the performance criteria for various study alternatives for this project entailing a complete street corridor through six intersections, including two I-80 freeway ramp intersections. The Meyers Street and Grove Street roundabout was constructed.

Rohnert Park Expressway Corridor Study TIS and Roadway Rehabilitation

Traffic Engineer

City of Rohnert Park | Rohnert Park, CA

Oversaw travel time runs and responsible for preparation of calibrated operations model to match field conditions and propose mitigations to improve traffic operations.

SR 49 Corridor System Management Plan (CSMP)

Project Manager
Nevada County Transportation Commission |
Nevada City, CA

Oversaw the effort to update the 2009 SR 49 Corridor System CSMP. The Purpose of the CSMP was to establish the existing performance metrics along the SR 49 corridor and the status of the improvements that were proposed in the original CSMP and the 2012 State of the Corridor Report.

Eastside Transportation Corridor Improvement Study

Principal-in-Charge
Fresno County, CA

Served as Principal-in-Charge overseeing a diverse, five-firm project team to develop comprehensive report on existing transportation conditions, future needs, and network recommendations to improve multimodal transportation in rural, eastern Fresno County. Provided QA/QC on traffic modeling and recommendations development.

Roundabout Intersections

Antelope Creek Drive / Galleria Circle Roundabout Planning and Simulation

Project Engineer
Westfield Corporation | Roseville, CA

Preparation of traffic operations report in support of the feasibility report. Synchro, Sidra, and VISSIM software were utilized to quantify the performance criteria for study alternatives for a multi-lane roundabout and two closely-spaced, coordinated traffic signals within the Westfield Galleria Mall. Constructed completed in 2007.

Fancher Creek Drive / Fowler Avenue Roundabout Evaluation

Project Engineer
Centex Homes, Lance-Kashian | Fresno, CA

Responsible for preparation of RFR. SIDRA and Rodel software were utilized to quantify the performance criteria for the roundabout alternative.

Foxboro Parkway / Vanden Road Roundabout Traffic Analysis and Design

Traffic Engineer
City of Vacaville | Vacaville, CA

Assisted with the traffic operation analysis and memorandum, preliminary 15% design, VISSIM model analysis, and the Roundabout Design Technical Memorandum.

Golden State Boulevard / Berkeley Avenue Roundabout Concept Study

Project Engineer
County of Stanislaus | Stanislaus County, CA

Prepared concept report. Sidra, Rodel, and VISSIM software utilized to quantify the criteria for the roundabout alternative.

Leisure Town Road / Vanden Road Roundabout Traffic Analysis and Design

Traffic Engineer
City of Vacaville | Vacaville, CA

Assisted with the traffic analysis and preliminary layout, 65% Plans, Specifications, and Estimates (PS&E), and the final PS&E.

Roundabout Feasibility Studies

I-10 / Cherry Valley Boulevard Roundabout Interchange Feasibility Analysis

Project Engineer
TKE Engineering | Calimesa, CA

Responsible for identification of roadway / intersection geometry, profile, preparation of feasibility study, cost estimates, and recommended the intersection control to meet 20-year design volumes.

Bay Street / High Street Intersection Feasibility Study

Project Engineer
City of Santa Cruz | Santa Cruz, CA

Prepared traffic forecasts and traffic operations report in support of the Intersection Feasibility Report. Synchro, Sidra, HCS, and VISSIM software were utilized to quantify the performance criteria for study alternatives.

Grapefruit Boulevard and 4th Street Roundabout Feasibility Study

Project Manager
Riverside County Transportation Department |
Riverside County, CA

Responsible for preparation of the roundabout feasibility study.

Shasta View Drive Roundabout Corridor Feasibility Study

Project Engineer
Jeb Allen | Redding, CA

Involved in preparation of RFR. Synchro, Sidra, Rodel, and VISSIM software were utilized to quantify criteria for various study alternatives.

San Fernando Road / Newhall Avenue Roundabout Feasibility Study

Project Engineer

City of Santa Clarita | Santa Clarita, CA

Responsible for preparation of RFR. Synchro, SIDRA, Rodel, and VISSIM software were utilized to quantify the performance criteria for various study alternatives.

I-10 / County Line Road Roundabout Interchange Feasibility Analysis

Project Manager

City of Yucaipa, City of Calimesa, TKE Engineering | Yucaipa, CA

Responsible for the preparation of the roundabout feasibility study.

SR 4 / Angel Oaks Drive Roundabout Feasibility Study

Project Engineer

Weber, Ghio and Associates, Inc. | Angels Camp, CA

Preparation of RFR. Synchro, Sidra, Rodel, and VISSIM software utilized to quantify the criteria for various study alternatives.

SR 4 / SR 49 Roundabout Feasibility Study

Project Engineer

Weber, Ghio & Associates, Incorporated | Angels Camp, CA

Preparation of RFR. Synchro, Sidra, Rodel, and VISSIM software were utilized to quantify the performance criteria for various study alternatives.

Shasta View Drive / Old Alturas Roundabout Traffic Mitigation, Feasibility Study, PS&E and Construction Inspection

Project Engineer

City of Redding, McConnell Foundation | Redding, CA

Involved in preparation of RFR. Synchro, Sidra, Rodel, and VISSIM software were utilized to quantify performance criteria for various study alternatives.

Auto Center Drive / Creekside Road Roundabout Feasibility Study

Project Engineer

City of Santa Clarita | Santa Clarita, CA

Preparation of RFR. Synchro, SIDRA, Rodel, and VISSIM software were utilized to quantify the performance criteria for various study alternatives.

Lincoln Road / Wyandotte Avenue Roundabout Feasibility Study

Project Engineer

City of Oroville | Oroville, CA

Preparation of RFR. Synchro, and Rodel were utilized to quantify the criteria for various study alternatives.

First Street and Second Street Roundabouts along California Boulevard

Traffic Engineer

City of Napa | Napa, CA

Prepared the analysis and the report in support of the ICE process for three closely spaced roundabouts.

Other Roundabout Feasibility Studies

- Discovery Street Roundabouts Feasibility Analysis | City of San Marcos | San Marcos, CA
- Old Town Roundabout Feasibility Study | City of Highland | Highland, CA
- Traffic Engineer | Rocklin Road Interchange Modification Feasibility Study | City of Rocklin | Rocklin, CA

Roundabout Peer Review

Highland Avenue Roundabout Peer Review

Traffic Engineer

City of Highland | Highland, CA

Assisted with roundabout peer review.

Caltrans District 8 On-Call Services for Roundabout and ICE Process

ICE Specialist

Member of Parsons Transportation Group | Various

Performed a variety of roundabout peer reviews, such as the Railroad Canyon Roundabout Corridor Peer Review at I-15 in Lake Elsinore.

Railroad Canyon Roundabout Corridor Peer Review

Peer Review

Parsons Transportation Group | Lake Elsinore, CA

Performed the presentation to Caltrans to discuss the roundabout design checks and geometrics findings of the peer review for the Railroad Canyon roundabout corridor in Lake Elsinore, CA. Services were performed under the Caltrans District 8 On-Call Services for Roundabout and ICE Process.

Intersection Control Evaluation (ICE)

17 Mile Drive / Holman Highway 68 / Highway 1 Intersection ICE, PS&E

Traffic Engineer
City of Monterey | Monterey, CA

Preparation of traffic operations report in support of the ICE document. Synchro, Sidra, and VISSIM software were utilized to quantify the performance criteria for study alternatives for a hybrid multi-lane roundabout at the 17 Mile Drive entrance (Pebble Beach).

Caltrans District 8 On-Call Services for Roundabout and ICE Process

ICE Specialist
Member of Parsons Transportation Group | Various

Performed a variety of roundabout peer reviews, such as the Railroad Canyon Roundabout Corridor Peer Review at I-15 in Lake Elsinore.

First Street and Second Street Roundabouts along California Boulevard

Traffic Engineer
City of Napa | Napa, CA

Prepared the analysis and the report in support of the ICE process for three closely spaced roundabouts.

Northwest Triangle Intersection Alternatives Study

Project Manager
County of Oakland | Oakland County, MI

Responsible for preparation of traffic operations report in support of the ICE document. Synchro, Sidra, and VISSIM software were utilized to quantify the performance criteria for study alternatives.

I-8 Eastbound Off-Ramp / Lake Jennings Park Road ICE Analysis

Project Manager
South Coast Development | San Diego, CA

Oversaw the preparation of ICE analysis for the I-8 and Lake Jennings Park Road interchange.

Indiana Avenue / Van Buren Roundabout ICE Project

Project Manager
ACAA, LP | Riverside, CA

Responsible for coordination, meetings, Caltrans meetings, reports, executions and data, preliminary traffic forecasts, prelim control development and

evaluations, memo ICE step 1 analysis, and recommendations.

SR 1 / SR 41 / Main Street Intersection ICE

Traffic Engineer
City of Morro Bay | Morro Bay, CA

Prepared the analysis and the report in support of the ICE process.

SR 116 / SR 121 Roundabout Intersection Improvements

ICE Specialist
Parsons Transportation Group | Sonoma County, CA

The existing four-way stop is increasingly unable to function as the junction of two state highways. The project served to relieve traffic congestion, enhance safety, and enhance pedestrian / bicycle access through the intersection. Oversaw the preparation of documentation in support of the ICE process.

Gold Flat Road Corridor Analysis Intersection Control Evaluation (ICE)

Project Manager
Nevada County Transportation Commission | Nevada City, CA

Responsible for preparation of the ICE study (2016). The study analyzed and then developed the recommendations for the Potential Corridor Improvement Plans. Oversaw the intersection observations and existing conditions, conducted traffic counts and field measurements, prepared potential corridor improvement plans, and prepared draft ICE study report.

SR 49 / McKnight Way Intersection ICE

Project Manager
City of Grass Valley | Grass Valley, CA

Responsible for the project management and preparation of the documentation in support of the ICE Step 1, Step 2, and the final study for the roundabout process and coordination with staff engineers, City, and Caltrans staff.

SR 60 / Sunnymead Boulevard Intersection ICE and Highway Safety Improvement Program (HSIP)

Project Manager
City of Moreno Valley | Moreno Valley, CA

Responsible for overseeing the preparation of the documentation in support of the ICE process, Quality Assurance / Quality Control (QA/QC), progress meetings, traffic operations, roundabout 35%, traffic

Kamesh Vedula | Principal / Project Manager

signal, 35% ICE report, and addressing Caltrans comments.

SR 99 / Eaton Road Roundabout ICE Step 1 and HSIP Grant Application

Principal-in-Charge
City of Chico Department of Public Works | Chico, CA

Oversaw the work on the Intersection Control Analysis Step 1 ICE process and data collection / base mapping.

SR 99 / Paige Avenue Interchange CMAQ Application

Traffic Engineer
City of Tulare | Tulare, CA

Prepared the analysis and the report in support of the ICE process.

US 101 / SR 166 (Main Street) Interchange ICE Step 1 Report

Traffic Engineer
County of Santa Maria | Santa Maria, CA

Oversaw intersection control analysis for the Step 1 ICE process.

Other Intersection Control Evaluation (ICE) Projects

- Project Manager | Silverado Trail (SR 121), Third Street, Coombsville Road, and East Avenue (5-Way Intersection) Intersection Improvements ICE | City of Napa, Gabrielsen & Company | Napa, CA
- Project Manager | Ashby Road / 16th Street ICE Steps 1 and 2 | County of Merced | Merced County, CA
- Project Engineer | SR 1 / Halcyon Road Roundabout Conceptual Plan ICE Study | County of San Luis Obispo | San Luis Obispo County, CA
- ICE Specialist | Caltrans District 11 On-Call Services for Roundabout and ICE Process | Member of Parsons Transportation Group | Various

Roadway / Intersection

Windsor River Road / Windsor Road Intersection Improvements

Traffic Engineer
Town of Windsor | Windsor, CA

Responsible for traffic operations, preparation of the ICE, review of preliminary stage construction and traffic handling for this federally funded intersection improvement project. This intersection is a gateway to the Town Green downtown area, the Windsor Depot (transit center), and the future SMART Windsor Station.

The main project goal was to improve safety by reducing hazards to motorists, bicyclists, and pedestrians at the rail grade crossing / intersection and to meet safety objectives outlined by the California Public Utilities Commission, prior to the future passenger rail service to Windsor. The project included preliminary design and concept preparation of two alternatives—a modified traffic signal alternative and a roundabout alternative—ICE of the alternatives, public outreach, and National Environmental Policy Act (NEPA) / CEQA services.

Ashby Road / 16th Street Intersection Improvement

Principal-in-Charge
Merced County, CA

Provided oversight on the preparation of environmental documents and project Plans, Specifications and Estimate (PS&E) for a multi-lane roundabout in Merced County. This intersection is located on the border of Merced County, City of Merced, railroad corridor, and Caltrans State Route (SR) 99 right of way. The proposed roundabout Intersection Control Evaluation (ICE) report was completed by GHD staff. The roundabout was selected as the preferred alternative and under contract to complete the environmental and bid document phases.

I-5 / South Bonnyview Road Interchange Phase 1 Improvements

Traffic Engineer
City of Redding | Redding, CA

Served as Traffic Engineer for the traffic operations analysis and preliminary designs for a “Master Plan” for the I-5 / South Bonnyview Road interchange. This resulted in a preferred alternative consisting of a double diamond interchange with the addition of two roundabouts at two adjacent intersections. This work led to an approved PSR-PDS.

Guam Army National Guard Intersection Improvement Project

Traffic Engineer
Guam Department of Public Works | Guam, US Territory

Served as Traffic Engineer for the design of intersection improvements for a new roadway entrance to the National Guard facilities in Hagåtña, Guam. Improvements included the addition of a new leg to the existing “T” intersection, widening of the existing roadway, installation of a new signal system and relocation of existing signal equipment, signal timing and phasing, striping, signing, and drainage design. The study included the collection of intersection turning movement volumes during peak hours and analysis of existing and future intersection operations to determine

the preferred signal arrangements. A lighting study was also conducted to ensure the intersection lighting met the minimum AASHTO lighting levels. Construction completed in 2010.

SR 14 Resurfacing

Traffic Engineer
Guam Department of Public Works | Guam, US Territory

Evaluated the collision history on Route 14, the Archbishop Felixberto Flores Memorial Traffic Circle, and approach portion of Pale San Vitores Road. Analyzed the existing collision patterns to develop build alternatives for the location of concrete medians to improve safety, traffic circulation, and access management. Prepared an inventory of existing driveways and minor access points to qualitatively assess the amount of traffic entering / exiting Route 14 from adjacent commercial and industrial land uses. Conducted a traffic analysis for and prepared a Safety & Access Control Study Report on safety, circulation, and access management on Route 14.

Cherokee Road Improvement Project

Project Engineer
County of San Joaquin | San Joaquin County, CA

The County is implementing roundabouts to improve safety along County Road 98. Responsible for the review of traffic operations, analysis, and preliminary design associated with the roundabout.

County Road 98 Bike and Safety Improvements Intersection Design Phase II

Project Engineer
County of Yolo | Yolo County, CA

Conducted a thorough analysis of the corridor, documenting traffic impact issues, high accident locations, sight visibility issues. Prepared a traffic and speed study to understand the underlying issues associated with the existing roadway. The findings from this study resulted in the identification of feasible roadway improvements aimed at improving the safety and mobility of the corridor.

SR 29 South Corridor Engineering Feasibility Study and Middletown Community Action Plan

Traffic Engineer
County of Lake, City Area Planning Council | Lake County, CA

Assisted with design year forecasts and assisted with the traffic operations analysis. Responsible for reviewing crash data, establishing patterns, identifying hot spots, and recommending countermeasures aimed at improving safety.

San Andreas SR 49 Commercial Gateway and Corridor Study

QA/QC
Calaveras Council of Governments | Calaveras County, CA

Performed QA/QC of the future growth scenarios and transportation alternatives analysis.

Fee Studies

I-5 / Riverside Interchange Fee Study

Traffic Engineer
Shasta County Regional Transportation Planning Agency | Shasta County, CA

Assisted with preparation of report / modeling.

City of Benicia Traffic Impact Fee Update

Traffic Engineer
City of Benicia | Benicia, CA

Oversaw the preparation of a comprehensive impact fee update for the City, as part of the EPS team. Led evaluation of various transportation impact fee structures that would address Vehicle Miles Traveled (VMT), per requirements of Metropolitan Transportation Commission (MTC) for certification of the City's Priority Development Area (PDA), and defensible methodologies for incorporating bicycle and pedestrian projects, without using Level of Service (LOS), from the State Transit Assistance (STA) Active Transportation Plan. Oversaw revisions to the Solano Napa Activity-Based Model (SNABM) Travel Demand Model (TDM) to better reflect anticipated land use growth.

Modesto Citywide Capital Facilities Fee Update, Street Projects

Traffic Engineer
City of Modesto | Modesto, CA

Oversaw traffic operations and preliminary cost estimates.

Multimodal / Complete Streets

City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan

Principal-in-Charge
City of Elk Grove | Elk Grove, CA

Provided technical oversight for a three-firm project team in the development of an update to the City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan, which will prepare the City to seek grant funding and quickly implement high-priority recommendations. The plan will include context-appropriate network recommendations for the urban, suburban, and rural areas of the City, and

will recommend strategies to leverage new development to construct a well-connected active transportation network.

***Valley Springs Town Center Connectivity Plan
(Valley Springs Complete Streets)***

**Principal-in-Charge, Advisor
Calaveras Council of Governments | Calaveras
County, CA**

Oversaw the traffic forecasting and operations, assisted with identification of improvements for consistency against the project need and purpose, and reviewed cost estimates. The plan identified near- and long-term complete streets projects for implementation along SR 49 and Mountain Ranch Road. Improvements included bicycle and pedestrian facilities to close network gaps and provide safe crossings, intersection signalizations, and potential roundabout locations as well as a new multi-modal network to connect growth areas to existing neighborhoods and amenities.

***Downtown Redding Community-Based
Transportation Study***

**Engineer
City of Redding | Redding, CA**

Assisted with the project meetings, circulation, and congestion plan. Involved in inventory of the existing private and public parking and responsible for identifying the existing conditions, peak hour traffic operations, and website public engagement.

***La Quinta Village Complete Street, a Road Diet
Project***

**Traffic Engineer
City of La Quinta | La Quinta, CA**

Assisted in the scoping and field review for the City of La Quinta Active Transportation Program grant application, which was processed successfully.

***North State Street Complete Streets Corridor
Study***

**Principal-in-Charge, Advisor
Mendocino County | Ukiah, CA**

Provided guidance on the traffic operational / capacity improvements for alternative improvements that included traffic signal modifications / installations, raised medians, roundabouts, and a combination of these measures. The complete street study focused on identifying cost effective solutions to improve pedestrian / bike safety, calm traffic speeds, accommodate commercial traffic, and beautify the corridor.

Santa Maria Active Transportation Plan

**Project Director
City of Santa Maria | Santa Maria, CA**

Oversaw the development and provided QA/QC and engineering advice for the Santa Maria Active Transportation Plan, an actionable, financially constrained plan which provides a foundation for future grant applications to improve bicycle and pedestrian connectivity in Santa Maria. Plan development included significant outreach to diverse local constituencies, data-driven analysis of existing conditions, and development of context-appropriate facility and program recommendations.

Engineering, Traffic, and Speed Survey

***Mono County Speed Zone Engineering and
Traffic Surveys***

**Project Engineer
Mono County Department of Public Works | Mono
County, CA**

Responsible for radar surveys on 21 roadway sections along 90 miles of the county's rural roadways.

***City of American Canyon Engineering and
Traffic Surveys***

**Project Manager
City of American Canyon | American Canyon, CA**

As part of on-call contract, managed Speed Zone Engineering & Traffic Survey (E&TS) for various segments.

City of Concord Speed Studies

**Project Manager
City of Concord | Concord, CA**

Prepared the Speed Zone E&TS and oversaw data collection effort for 78 roadway sections and preparation of vehicle speed data sheets, charts displaying vehicle speeds vs. percent of cars, and illustrations maps.

City of Shasta Lake Speed Surveys

**Project Manager
City of Shasta Lake | Shasta Lake, CA**

Prepared the Speed Zone E&TS and oversaw data collection effort for 20 roadway sections and preparation of E&TS reports.

***City of Ukiah Citywide Speed Zone Engineering
and Traffic Surveys 2017***

**Project Manager
City of Ukiah | Ukiah, CA**

Kamesh Vedula | Principal / Project Manager

Oversaw the data gathering of appropriate speed limits including collision records, roadway characteristics, adjacent land uses, side street traffic, on-street parking, and sight distances for updates of 53 roadway segments.

Radar speed measurements were conducted by a trained observer using a handheld radar unit along each of these roadway segments. The E&TS were completed in 2017.

City of Ukiah Citywide Speed Zone Engineering and Traffic Surveys 2012

Traffic Engineer
City of Ukiah | Ukiah, CA

Assisted with the data gathering of appropriate speed limits including collision records, roadway characteristics, adjacent land uses, side street traffic, on-street parking, and sight distances for updates of 51 roadway segments. The E&TS were completed in 2012.

City of Concord Speed Zone Survey Updates

Project Manager
City of Concord | Concord, CA

Prepared the survey updates in 2010 for 85 street segments using two-way radar speed measurements. The City subsequently adopted the recommended speed zones.

Vehicle Miles Traveled (VMT) Studies

County of San Joaquin VMT Thresholds Study & Mitigation Program

Principal-in-Charge
San Joaquin County | San Joaquin County, CA

Oversaw the preparation of SB 743 VMT procedures for the County, including establishing VMT baseline and threshold values, screening procedures, mitigation measures, impact study guidelines, and development of a sketch planning tool. Developed approach to establish unincorporated average baseline VMT values, using the SJCOG model with Longitudinal Employer-Household Dynamics (LEHD) data for "external" trips.

Safety Projects

City of Elk Grove Systemic Safety Analysis Report

Principal-in-Charge
City of Elk Grove | Elk Grove, CA

Provided oversight on the development of the safety analysis and report, including development of a GIS tool to automate the identification of collision trends and systemic risk factors using updated infrastructure, traffic,

and crash data inputs, and collection of Light Detection and Ranging (LiDAR) data on high-risk corridors.

City of Dublin Citywide Traffic Safety

Advisor
City of Dublin | Dublin, CA

Provided advice to the project engineer for the City of Dublin's ongoing safety improvement program, which identifies improvements at intersections and street segments with accident rates higher than statewide average rates for similar locations.

Systemic Safety Analysis Report (SSAR) for the Franklin Street, Del Monte Avenue, Munras Avenue and Pacific Street, Lighthouse Avenue, and Fremont Way Corridors

Project Engineer
City of Monterey | Monterey, CA

Responsible for the review of the crash data, establishing patterns, identifying hot spots, and recommending countermeasures aimed at improving safety. The goal was to identify and create the delivery of a series of improvements that would yield cost-effective safety projects that are able to successfully compete for HSIP grants or other safety funding.

Union Road Speed Survey and Engineering and Traffic Survey

Project Engineer
City of Paso Robles | Paso Robles, CA

Oversaw the completion of the E&TS for the initial speed survey that included radar speed measurements along each of the streets within the detour route: Montebello Oaks Drive, Skyview Drive, and Riverglen Drive. Oversaw the post construction radar speed study between River Road and Kleck Road that was conducted at three separate locations along the newly improved road.

City of Arroyo Grande SSAR and Local Road Safety Plan (LRSP)

Principal-in-Charge
City of Arroyo Grande | Arroyo Grande, CA

Overseeing the development of the SSAR and LRSP. This included direction on safety countermeasures and public outreach. A draft SSAR was delivered and the LRSP needs more outreach.

City of Shasta Lake LRSP

Principal-in-Charge
City of Shasta Lake | Shasta Lake, CA

Overseeing the development of the LRSP. Comprehensive collision data is compiled and first stakeholder working group was held in June 2020.

City of Waterford LRSP

Principal-in-Charge
City of Waterford | Waterford, CA

Overseeing the development of the LRSP. Collision data is complete and stakeholder meeting schedule in August 2020.

County of Monterey SSAR

Principal-in-Charge
County of Monterey | Monterey County, CA

Oversaw the successful development and approval of a SSAR focused on rural roadways and intersections. Low-cost countermeasures were provided per location and systemically.

City of Pismo Beach SSAR and LRSP

Principal-in-Charge
City of Pismo Beach | Pismo Beach, CA

Oversaw the development of the LRSP. As part of this work effort, location-specific analysis was conducted for the highest incident locations, and documentation was prepared to best position the City to compete for funding from California's HSIP.

Placer County LRSP

Principal-in-Charge
Placer County | Placer County, CA

Oversaw the development of the LRSP. As part of this work effort, a robust virtual public outreach program was developed during COVID-19, which also assisted in outreach to a large volume of key municipality and public agency stakeholder throughout the County. The plan is primarily focused on County wide systemic patterns rather than location specific issues.

City of Paso Robles LRSP-SSAR

Principal-in-Charge
City of Paso Robles | Paso Robles, CA

Oversaw the development of the LRSP. As part of this work effort, location-specific analysis was conducted for the highest incident locations, and documentation was prepared to best position the City of Paso Robles to compete for funding from California's HSIP.

Circulation Study / General Plan / Traffic Models

Lake County Traffic Model, Capital Improvement Program, and Traffic Impact Fees

Traffic Engineer
County of Lake | Lake County, CA

Preparation of the base year and year 2025 model projections.

Healdsburg Avenue Bridge over Russian River Citywide Travel Demand Model (TDM)

Traffic Engineer
City of Healdsburg | Healdsburg, CA

Performed work on the TDM for the traffic analysis that evaluated various traffic control solutions on the west side of the Healdsburg Avenue Bridge at the Healdsburg Avenue / Front Street intersection. The TDM was not a stand-alone TDM, but rather a nested City-level refinement to the Sonoma County Transportation Authority. The TDM was created to simulate existing and future travel demand essential to establish the capacity requirements for the Healdsburg Avenue Bridge structure. Five signalized traffic control options were analyzed under future conditions turning movement volumes.

2011 Transportation Capital Improvement Program and Traffic Impact Fee Update and TDM

Traffic Engineer
City of Oroville | Oroville, CA

Prepared the design year forecasts and assisted with the traffic operations analysis.

2014 Avila Circulation Study and Traffic Impact Fee Update

Traffic Engineer
County of San Luis Obispo | San Luis Obispo County, CA

Responsible for building the base year and future year models consistent with the XX and IX trip information from the regional TDM.

City of American Canyon Circulation Element Update and Citywide Traffic Circulation Study

Traffic Engineer
City of American Canyon | American Canyon, CA

Responsible for year 2025 model projections, roadway improvements, and cost estimates.

City of Arroyo Grande Circulation Element Update Phase I

Traffic Engineer

City of Arroyo Grande | Arroyo Grande, CA

Responsible for base year and initial year 2025 model projections utilizing TransCAD software.

Franklin Beachwood Transportation Circulation Study and Traffic Impact Fee Update

Lead Transportation Modeler

County of Merced | Merced County, CA

Responsible for creating the Franklin-Beachwood model that is nested within the MCAG regional model. Specific responsibility was to guide the final calibration of the sub-area model.

City of Galt Citywide Capital Improvement Program, Citywide Traffic Circulation Study, and Traffic Impact Fee Update

Traffic Engineer

City of Galt | Galt, CA

Prepared base year and initial year 2030 model projections, assisted with the design year forecasts, and assisted with the traffic operations analysis.

Ukiah Citywide Preliminary Impact Fee Estimates

Traffic Engineer

City of Ukiah | Ukiah, CA

Prepared the Impact Fee estimates for the Capital Improvement Program (CIP) by creating the Ukiah Valley Area Plan (UVAP) 300 Transportation Analysis Zone (TAZ) TDM using TransCAD software to accurately forecast both daily and peak hour travel demands. A \$31 million CIP was prepared for use in a preparing a transportation fee program update.

City of Galt General Plan Update, Citywide Traffic Model, Citywide CIP, Traffic Impact Fee Update, Citywide Traffic Circulation Study

Traffic Engineer

City of Galt | Galt, CA

Prepared base year and initial year 2035 model projections and assisted with design year forecasts and traffic operations analysis.

City of Jackson Capital Improvement Project, Traffic Model and Transportation Impact Fee Update

Traffic Engineer

Amador County Transportation Commission | Jackson, CA

Prepared the base year and initial year 2035 model projections, assisted with the design year forecasts, and assisted with the traffic operations analysis.

2014 South County Circulation Study and Traffic Impact Fee Update

Traffic Engineer

County of San Luis Obispo | South County, CA

Responsible for extracting the XX and IX trips from the regional TDM and overseeing calibration of the base year model.

South County Nipomo Area Traffic Model and Impact Fee Update

Traffic Engineer

County of San Luis Obispo | San Luis Obispo County, CA

Responsible for extracting the XX and IX trips from the regional TDM and calibration of the base year model.

Templeton On-Call Transportation Planning Services

Traffic Engineer

County of San Luis Obispo | San Luis Obispo County, CA

Responsible for preparation of transportation operations report in support of the PSR.

City of San Luis Obispo County On-Call Transportation Planning Services and Templeton Area Model Update

Traffic Engineer

County of San Luis Obispo | San Luis Obispo County, CA

Responsible for preparation of transportation operations report in support of the PSR.

City of Turlock Citywide Traffic Circulation Study

Traffic Engineer

City of Turlock | Turlock, CA

Responsible for year 2025 model projections, roadway improvements, and cost estimates.

City of Ukiah Citywide Traffic Circulation Study, Circulation Element Update, and Capital Improvement

Traffic Engineer

City of Ukiah | Ukiah, CA

Performed the traffic engineering for the citywide traffic model of 235 TAZ's based on the parcel boundaries and the proposed model network. Performed a

comprehensive study of existing and future (year 2030) transportation conditions and multimodal needs to update the Circulation Element of their General Plan document.

Interchanges

I-80 / Sierra College Boulevard Interchange Modifications and Traffic Signal System

Traffic Engineer
City of Rocklin | Rocklin, CA

Services for the traffic signal timing / coordination and improvement plans. Prepared traffic forecasts and traffic operations report in support of the PSR. The project included new ramp connections to I-80, a new six-lane bridge, and a traffic signal interconnect system for the \$23 million replacement interchange. Construction was completed in 2009, ahead of schedule and within budget. Subsequent to the construction of the interchange, prepared a Synchro model to determine the most appropriate cycle lengths, offsets, and splits for various times of day.

SR 99 / Cartmill Avenue Interchange Reconstruction PSR, PA/ED and PS&E

Traffic Engineer
City of Tulare | Tulare, CA

Preparation of the traffic operations report supporting the PSR. Used Synchro, Sim-Traffic, and HCS software to quantify the performance criteria for various study alternatives. The overcrossing is now six-lanes and provides additional vertical clearance over SR 99 and sufficient horizontal clearance to accommodate future expansion of the freeway. The new structure is augmented with architectural treatments that reflect the agricultural heritage of Tulare and announce the interchange as the northern gateway to the City.

SR 99 / Central Galt Interchange Modification PSR, PA/ED, PS&E, and Construction Support Services

Traffic Engineer
City of Galt | Galt, CA

Preparation of traffic forecasts and traffic operations report supporting the PSR with 16 alternatives that were evaluated through an extensive public outreach process including state and federal resource agencies. Project included use of Synchro, Traffix, and HCS software to quantify the criteria for study alternatives. Interchange reconstruction was initiated in 2003. Construction of this \$26 million split-diamond interchange was completed in 2012, on schedule and under budget.

SR 99 / Fulkerth Road Interchange Modification PSR, PA/ED, PS&E, and Traffic Signals

Traffic Engineer
City of Turlock | Turlock, CA

Prepared operations report and coordinated signal timing plans for the modification of interchange and designed signal improvements at the off-ramps through Caltrans District 10. The traffic signal designs involved signalization of two of the SR 99 Ramp intersections and one adjacent City intersection, concurrent with the interchange widening.

SR 99 / West Main Street Interchange Modification Traffic Signal, PSR / PR, and PS&E

Traffic Engineer
City of Turlock | Turlock, CA

Responsible for traffic forecasts and operations analysis that focused on existing and future traffic operating conditions at the intersections with South Walnut Avenue, South Tully Road and the SR 99 on- and off-ramps. Project features included staggered left-turn pocket storage, extensive re-striping of West Main Street, traffic signal interconnect design, highway and bridge lighting, and advanced flashing beacons.

US 101 / North Front Street, Moranda Road Interchange PSR

Traffic Engineer
City of Soledad | Soledad, CA

Prepared traffic forecasts and operations.

SR 132 / Bird Road Interchange PSR, PA/ED, PS&E, and Construction Support |

Role

County of San Joaquin | San Joaquin County, CA

Responsible for the preparation of the traffic operations report supporting the PSR. Synchro, Traffix, and HCS software were utilized to quantify the various the criteria for various study alternatives.

SR 273 / Canyon Road / Rancheria Road Reconstruction PS&E and Construction Management

Project Manager
R. S. Bryant, Win-River Casino | Redding, CA

Analyzed improvement alternatives in Synchro and VISSIM for the Canyon / Rancheria intersection, located 150 feet west of SR 273 / Canyon. The study concluded that a system of closely-spaced signals that would work under one controller would be beneficial. The project was approved by Caltrans District 2 and was completed 2009.

Other Interchange Projects

- Traffic Engineer | SR 99 / Fulkerth Road Interchange PSR / PR / PS&E CM | City of Turlock | Turlock, CA
- Traffic Engineer | US 101 / Fortuna Interchanges | City of Fortuna | Fortuna, California | Gabrielsen & Company | Fortuna, CA

Traffic Signal

Morgan Road / Service Road Signalization

Principal-in-Charge
City of Ceres | Ceres, CA

Provided oversight on the preparation of the PS&E of a traffic signal design at Morgan Road / Service Road. The project included an interim striping project for internal City pavement rehabilitation project.

SR 65 / Galleria Boulevard Interchange Off-Ramp Widening, Traffic Signal Modification and Traffic Analysis

Project Engineer
Westfield Corporation, City of Roseville | Roseville, CA

Studied the impacts of the increased traffic activity and developed the necessary site and off-site improvements to offset the impacts of the Westfield Galleria at Roseville Mall expansion. The SR 65 southbound direct off-ramp was uncontrolled at Galleria Blvd. and presented safety concerns due to weaving movements of vehicles accessing the shopping mall. The accident data analysis indicated that actual accident rates exceeded the state average. Completed a Peer Review and PS&E for the off-ramp widening and traffic signal modification. The designed improvements included SR 65 / Galleria Boulevard Southbound off-ramp widening and traffic signal modification. Construction of the off-ramp widening and traffic signal modification improved safety and increased the intersection capacity of Galleria Boulevard / SR 65 southbound ramps intersection.

Madera Commons Off-Site Traffic Signals Improvements

Traffic Engineer
Newman Development Group, LLC | Madera, CA

Assisted with the design of traffic signal improvements and signal timing plans associated with the development of a large commercial center. The project included preparing PS&E for three traffic signal modifications on Cleveland Avenue, a heavily traveled arterial through a commercial district at the intersections of Schnoor Avenue, the Fairgrounds entrance, and SR 99 Southbound ramps; two new traffic signal installations at the intersections of Country Club Drive / Clark Street and Country Club Drive / Ellis Street; and a traffic signal

interconnect system along Cleveland Avenue to coordinate the traffic signals at the SR 99 ramps with the Cleveland Avenue traffic signals. In addition to the design work, completed traffic signal timing plans for five interconnected traffic signals on Cleveland Avenue, including the ramp intersections at SR 99. The traffic signal timings included special timings for two intersections operated by one signal controller, various signal phasing schemes, and railroad pre-emption. Signal timing plans were coordinated and approved by the City of Madera and Caltrans.

Marin General Hospital Pedestrian Signal at Bon Air Road and North Driveway

Project Manager
Marin Healthcare District | Greenbrae, CA

Responsible for PS&E for a new pedestrian signal at the intersection of Bon Air Road / Marin Hospital North Entrance located in Marin County. Upon review of the 65% design plans, the County requested that the effects of the proposed lane drop along Bon Air on the westbound left-turn movement at the intersection of Sir Francis Drake Boulevard and Bon Air Road be analyzed.

Westfield Galleria at Roseville Regional Mall Expansion and Internal / External Signals

Project Engineer
Westfield Corporation, City of Roseville | Roseville, CA

Studied the impacts of the mall expansion and developed solutions including widening East Roseville Parkway, reconfiguring the southbound SR 65 off-ramp, a new multi-lane roundabout at Antelope Creek / Galleria Circle, and traffic signal modifications at Roseville Parkway / Reserve Drive, Galleria Boulevard / Antelope Creek Drive, and Roseville Parkway / Galleria Circle.

Fair Oaks Avenue / Halcyon Road Traffic Signal Modifications

Traffic Engineer
City of Arroyo Grande | Arroyo Grande, CA

The intersection of Fair Oaks Avenue / Halcyon Road is a heavily traveled intersection with an adjacent school and community hospital. Prepared the signal timing plans and assisted with the signal design to upgrade the traffic signal system to accommodate protected left-turn signal phasing for all approaches. The project also included an initial signal timing plan, new corner returns / ramps, pedestrian equipment to meet the standards of the American with Disabilities Act (ADA), and pavement delineation modifications.

SR 99 / Central Galt Interchange and Traffic Signal Timing

**Traffic Engineer
City of Galt | Galt, CA**

Prepared the Synchro model to determine the most appropriate cycle lengths, offsets, and splits for various times of day. Prepared the traffic operations report and coordinated signal timing plans for the reconstruction of all four interchange ramps that are closely spaced, auxiliary lanes on SR 99 to the adjacent interchanges, and two new overcrossing structures to improve the signal timings and coordinate the signal systems to minimize queues. Signal timing plans were coordinated and approved by the City of Galt and Caltrans.

On-Call

Napa Valley Transportation Authority On-Call Engineer / Architect and Project Delivery Services

**Project Manager
Napa Valley Transportation Authority | Napa, CA**

Awarded the On-Call Contract in December 2018 that led to contracts for these projects: Imola Avenue Corridor Complete Streets Improvement Plan, the SR 29 Comprehensive Multimodal Corridor Plan and Project Initiation Document, and the SR 29 / SR 221 Soscal Junction Roundabout Interchange Initial Feasibility Evaluation.

Caltrans District 8 On-Call Services for Roundabout and ICE Process

**ICE Specialist
Member of Parsons Transportation Group | Various**

Performed a variety of roundabout peer reviews, such as the Railroad Canyon Roundabout Corridor Peer Review at I-15 in Lake Elsinore.

Amador County Transportation Commission On-Call Traffic Engineering Services

**Engineer
County of Amador | Amador County, CA**

Provided all needed traffic engineering for the TIER 1 Model Update under the on-call contract.

City of Arroyo Grande On-Call Transportation Services

**Traffic Engineer
City of Arroyo Grande | Arroyo Grande, CA**

Responsible for building the base year / future year models consistent with the XX and IX trip information from the regional TDM.

City of Ceres On-Call Traffic Engineering Services

**Project Manager
City of Ceres | Ceres, CA**

Managed and oversaw the on-call work for the following projects: Mitchell Road, Hatch Road, and Whitmore Avenue Corridor Signal Timing Alternatives, Fowler Road Traffic Analysis, Sinclear Elementary & Blaker Kinser Jr. High Traffic Calming Analysis, Traffic Signal Synchronization Improvements, and Morgan / Aristocrat and Central / Pine / Industrial Roundabouts PS&E.

City of Grass Valley On-Call Transportation Engineering Services

**Project Manager
City of Grass Valley | Grass Valley, CA**

Managed and oversaw the on-call work for the Dorsey Marketplace TIS and SR 49 / McKnight Way Corridor ICE projects.

City of Paso Robles Speed Zone Study

**Project Engineer
City of Paso Robles | Paso Robles, CA**

Oversaw the completion of the speed zone surveys conducted for 52 locations along 35 roadways on key city streets to assist the City in setting appropriate and safe speed limits.

City of San Luis Obispo On-Call Transportation Engineering Services

**Traffic Engineer
County of San Luis Obispo | San Luis Obispo County, CA**

Oversaw model calibration efforts performed under the on-call contract.

Riverside County On-Call Traffic Engineering Peer Review Services

**Traffic Engineer
County of Riverside | Riverside County, CA**

Performed the roundabout design checks as part of the peer review and roundabout feasibility of the concept drawings for the roundabout.

Sonoma County On-Call Engineering Services

**Traffic Engineer
County of Sonoma | Sonoma County, CA**

Provided all needed traffic engineering for the Marketplace Traffic Study Peer Review, Charter School Peer Review, Dry Creek Valley & Sonoma Valley Circulation Study, and Lelands Fly Fishing Traffic Study Peer Review.

City of Vacaville On-Call Engineering and Planning Services

Traffic Engineer

City of Vacaville | Vacaville, CA

Assisted with the traffic engineering for the Starbucks Traffic Study at Nut Tree Parkway / Harbison Drive, the East Main District Project Traffic Study, and the roundabout feasibility for the Roberts Ranch Roundabouts at T Street and Marshall Road Geometric Design Services.

Other On-Call Projects

- Engineer | City of American Canyon On-Call Transportation Engineering | City of American Canyon | American Canyon, CA
- Traffic Engineer | City of Cotati On-Call General Civil Engineering Services | City of Cotati | Cotati, CA
- ICE Specialist | Caltrans District 11 On-Call Services for Roundabout and ICE Process | Member of Parsons Transportation Group | Various
- Traffic Engineer | City of Los Banos On-Call Traffic Modeling Services | City of Los Banos | Los Banos, CA
- Traffic Engineer | City of San Luis Obispo On-Call Transportation Engineering Services | City of San Luis Obispo | San Luis Obispo, CA

School / Campus

Barstow Avenue Complete Street at California State University

Project Manager

California State University Fresno | Fresno, CA

Served as Traffic Engineer for preparation of traffic circulation and parking studies for their Master Plan Update, TIS prepared in support of the Environmental Impact Report (EIR) that was required for CEQA clearance, and roundabout analysis and way finding.

California State University Campus Master Plan Updates

Traffic Engineer

California State University Fresno | Fresno, CA

Served as Traffic Engineer for preparation of traffic circulation and parking studies for the Master Plan Update, TIS prepared in support of the EIR that was required for CEQA clearance, and roundabout analysis and way finding.

Sierra Community College Nevada County Campus Master Plan and Expansion Traffic Study

Traffic Engineer

Sierra College | Grass Valley, CA

Assisted with the traffic analysis for the master plan.

Sierra Community College Rocklin Campus Traffic and Parking Update for the Campus Master Plan

Traffic Engineer

Sierra College | Rocklin, CA

Summarized the existing parking and circulation conditions at / in the vicinity of the Rocklin campus. The analysis was concluded within the first two weeks of a new semester, during the peak of campus activity and determined the current parking exceeds available capacity. In the short-term, additional parking should be made available for these first two weeks in order to avoid a parking shortage requiring students to park off campus. After that, the parking was also nearing capacity; permanent solutions that either increase available parking year-round or adjust scheduling for more classes during off-peak times will need to be developed.

Sinclear Elementary and Blaker Kinser Junior High School Traffic Calming Analysis

Project Manager

City of Ceres | Ceres, CA

Responsible for overseeing the evaluation and study of neighborhood traffic impacts and addressed traffic calming measures at the schools. The City implemented the improvements recommended within the study.

Tehama College Center Development TIS

Traffic Engineer

North State Resources | Red Bluff, CA

Assisted with the TIS for the proposed Tehama College Center development in support of the project's EIR.

Traffic Studies

Dorsey Marketplace TIS

Project Manager

Dudek | Grass Valley, CA

Managed the traffic analysis and traffic signal timing alternatives for the Dorsey Drive / SR 49 interchange. Due to our existing On-Call contract, received a task order from the City and worked with Dudek and the City on the Dorsey Marketplace transportation analysis. Prepared the results as a Transportation Impact Analysis Report for the proposed Marketplace. The

Kamesh Vedula | Principal / Project Manager

project is located in the southwest quadrant of the intersection of SR 49 / 20 northbound ramps and Dorsey Drive. The proposed project includes approximately 181,900 square feet of retail and commercial development and a 90-unit multi-family development.

Bethel Church Collyer Drive Campus Traffic Impact Study

Traffic Engineer
Bethel Church | Redding, CA

Served as Traffic Engineer for preparation of traffic impact analysis for CEQA EIR for 2,600-seat main auditorium and 3,000-student ministry school.

Chandler Ranch Area Specific Plan and Transportation Analysis for EIR

Traffic Engineer
City of Paso Robles | Paso Robles, CA

Responsible for operations analysis and preparation of traffic study.

Clearlake Home Depot TIS

Traffic Engineer
KK Raphael Properties | Clearlake, CA

For a TIS in support of the EIR for the project on 15 acres of vacant land at the corner of SR 53 / Warner Street / Airport Road.

San Luis Ranch Multimodal TIS and Prado Road PSR

City of San Luis Obispo | San Luis Obispo, CA

The proposed mixed-use project is on a 131.3-acre site in unincorporated San Luis Obispo County. The analysis involved LOS computations for vehicular, pedestrian, bike, and transit through the study area that included 20 intersections and 17 roadway segments and the potential impacts of a new Prado Road interchange to the circulation system.

Olsen Ranch Beechwood Specific Plan and EIR TIS

Traffic Engineer
City of Paso Robles | Paso Robles, CA

Responsible for preparation of year 2030 traffic forecasts utilized within the study.

Walmart Superstore Retail Shopping Centers TIS

Traffic Engineer
Multiple Clients | California

Oversaw traffic operation analysis and final TIS for the standard stores at a new location in Galt, the Expansion

of the Chico and Clearlake stores, and the new supercenter locations in Oroville, Willows, Red Bluff, and Tulare.

Napa Junction Project Commercial TIS

Project Engineer
City of American Canyon | American Canyon, CA

Responsible for TIS for the proposed commercial project at the northeast area of SR 29 / Napa Junction Road.

North Placer County / SR 49 Bohemia Retail Development TIS

Associate Project Manager, Traffic Engineer
Raney Planning & Management | Placer County, CA

Responsible for TIS, which involved interaction with County staff to address their needs and the EIR consultant. Addressed the County Board of Supervisors at the planning commission meeting.

City of Grover Beach Citywide Traffic Model and Circulation Element Update

Traffic Engineer
City of Grover Beach | Grover Beach, CA

Performed work using TransCAD to assist with the traffic model for the circulation element update.

Other Traffic Studies

- Chatham Ranch/Tierra Robles Subdivision EIR TIS | Shasta Red LLC | Shasta County, CA
- Seven Hills Land & Cattle Company, Anselmo Vineyards TIS | Diaz Associates, Seven Hills Land & Title Company, Anselmo Vineyards | Shasta County, CA
- Woodcreek Terrace TIS | Roseville, CA
- Lakeside Avenues Subdivision | Redding, CA
- Lincoln Gateway TIS | Lincoln, CA
- Mountain Gate at Shasta Development EIR TIS | PMC | Shasta Lake, CA
- Saranap Village Project TIA/TIS | Hall Equities Group | Walnut Creek, CA
- Shasta County Southern Region Roadway Master Plan | Shasta Regional Transportation Agency | Shasta County, CA
- Shasta Gravel TIS | Shasta County, CA
- SR 116 Commercial TIS | Cotati, CA
- Red Mountain Communication Sites | North State Resources | Del Norte and Humboldt Counties
- Redwood City Aggregate Terminal TIS | TEC | Redding, CA
- Rocklin Retail Circulation and TIS | Rocklin, CA
- Saint Bonaventure TIS | City of Concord | Concord, CA

- South Bonnyview Retail Development TIS | Vitalis Partners, LLC | Redding, CA
- Grapevine Commercial TIS | BSK Associates | Delano, CA
- Hayward Library TIS | Placemakers | Hayward, CA
- Highland Park/Valley Rock (WCA) Expansion TIS | Redding, CA
- City of Clearlake Home Depot TIS | Clearlake and Lake County, CA
- Del Webb Tehama TIS | Del Webb California Corporation | Tehama County, CA
- Dunmore Corporate Office TIS | Dunmore Homes, LLC | Rocklin, CA
- Ellis & Grange Apartment Development TIS | Redding, CA
- Rancho Road/Shasta View Drive Retail Development TIS | GLC/LP Rancho Road LLC | Redding, CA
- Fiddler Green EIR TIS | Auburn, CA
- Galt Entertainment Complex TIS | Raney Planning & Management | Galt, CA
- Tuscan Villas Subdivision TIS | Chase & Taylor, Incorporated | Redding, CA
- Twin Cities/East Stockton SE Commercial Phased TIS | City of Galt | Galt, CA
- West Ridge TIS | PMC | Redding, CA
- Fox Glove Shopping Center TIS | Michael Brandman Associates | Madera, CA
- Granite Bay Ventures Office TIS | Rocklin, CA
- Browning Crossing Townhomes TIS | Insignia Builders, Incorporated | Redding, CA
- Butte Woods TIS | Oroville, CA
- Carillion Rite Aid TIS | City of Galt | Galt, CA
- Arroyo Grande Panera at Hampton Inn TIS | City of Arroyo Grande | Arroyo Grande, CA
- Bear River Subdivision TIS | SHN Consulting Engineers & Geologists, Incorporated | Loleta, CA
- Brook Ridge Subdivision (Pine Grove) TIS | Rex Emmet | Redding, CA

Other Related Areas of Interest

Professional Skills

- Roundabout Planning/Design
- Transportation Planning
- Transportation Engineering
- Travel Demand Modeling
- Master Planning
- Traffic Operations Analysis
- Traffic Circulation Studies
- Traffic Impact Studies
- Traffic Impact Fees

Software Applications

- VISSIM
- Synchro
- SimTraffic
- Traffix
- HCS-2000
- SIDRA
- RODEL
- Cube/Voyager
- ArcMap
- TransCAD

Foreign Language

- Hindi
- Telugu

Career history

2004 - present	GHD, Business Group Leader
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Rosanna Southern EIT

Transportation Engineer



Location

Sacramento, CA

Experience

10 years

Qualifications/Accreditations

- BS, Civil, Environmental and Infrastructure Engineering, George Mason University, Fairfax, VA, 2012
- Engineer-in-Training, VA #420063509

Memberships

- Young Professionals in Transportation, Sacramento Chapter
- Women in Transportation Seminar, Sacramento Chapter

Relevant experience summary

Rosanna Southern is a transportation engineer who specializes in traffic engineering and transportation planning, assisting dozens of agencies on short- and long-range planning efforts, including the development of travel demand models, general plan circulation elements, traffic impact fee studies, corridor studies, and complete street plans. Rosanna provides multimodal operational analysis and traffic impact studies for a variety of projects aimed at analyzing traffic operations. The support she provides includes utilizing various software such as VISSIM, Synchro, SimTraffic, Sidra, HCS, TransCAD, and Cube.

Vehicle Miles Traveled (VMT) Studies

Southern Sphere of Influence Traffic Impact Study (TIS)

Transportation Planner
City of Grass Valley | Grass Valley, CA

Utilized the Nevada County Transportation Commission (NCTC) Regional Travel Demand Model to evaluate both boundary-based and trip-based Vehicle Miles Traveled (VMT) for the proposed development of the City's southern sphere of influence. Created and ran model scenarios to evaluate project-level VMT estimates. Ran select link analyses to evaluate the project's trip-based VMT and trip distributions for the different project land uses for use in the operational analysis.

County of San Joaquin VMT Thresholds Study & Mitigation Program

Assistant Project Manager, Transportation Planner
San Joaquin County | San Joaquin, CA

Oversaw development and analysis of tasks including preparation of the VMT Study and the Transportation

Analysis Guidelines under California Environmental Quality Act (CEQA). Managed the deliverable schedule and provided updates to the short-term action list bi-weekly. Supervised deliverables and technical analysis including the shortest-path Geographic Information System (GIS) analysis of journey-to-work US Census data. Utilized the San Joaquin Council of Government 2018 (VMIP-2) model outputs to establish VMT per capita and VMT per employee baseline thresholds for the unincorporated areas of the County. Managed the evaluation of different district-based geographies (planning areas, fee areas, and other areas) for establishing baseline VMT. Oversaw the preparation of the VMT screening maps for residential and work VMT. Managed and oversaw the preparation of the map-based VMT Screening Tool and coordination with County GIS staff.

CEQA VMT Transportation Impact Thresholds

Transportation Planner
County of San Luis Obispo | San Luis Obispo, CA

Utilized the San Luis Obispo Council of Governments 2019 model outputs to establish Vehicle Miles Traveled (VMT) per capita and VMT per employee baseline thresholds for the unincorporated areas of the County.

Utilized Geographic Information System (GIS) to create graphics that show the VMT per capita and VMT per employee by model Transportation Analysis Zone (TAZ) for those areas. Created screening maps for residential and work VMT by analyzing the VMT on the TAZ level and excluding rural areas with low residential or job density.

CEQA Transportation Impact Thresholds

Transportation Planner City of Goleta | Goleta, CA

Utilized the Santa Barbara County Association of Governments (SBCAG) model outputs to establish VMT per capita and VMT per employee baseline thresholds for the unincorporated areas of the County. Utilized US Census journey-to-work data for the City of Goleta from the Longitudinal-Employer Household Dynamics (LEHD) Program and applied to a shortest-path GIS analysis to evaluate average trip lengths for employed residents in Goleta (outbound trips) and Goleta employees (inbound trips). The GIS shortest-path analysis is conducted statewide to Census Designated Places and accounts for the full trip lengths outside of the model area. The average trip length calculated from the LEHD shortest-path analysis is utilized to validate against the model's average trip lengths for internal and external trips. Calculated VMT along the State Highway System in Goleta to add to VMT published data from the Highway Performance Monitoring System (HPMS) and compared against and validated boundary-based VMT metrics output from the model. Established methodologies and resources to quantify mitigation measure reductions based on recent CARB studies and CAPCOA's 2010 Report on Quantifying Greenhouse Gas Mitigation Measures.

Countywide CEQA Transportation Impact Thresholds

Transportation Planner County of San Joaquin | San Joaquin, CA

Utilized US Census journey-to-work data for unincorporated County Planning Areas from the LEHD Program and applied to a shortest-path GIS analysis to evaluate average trip lengths for employed residents (outbound) and employees (inbound). The average trip lengths calculated from the LEHD shortest-path analysis was summarized by cardinal direction then utilized to incorporate into the model for calculating the total VMT for external trips. Utilized the San Joaquin Council of Government 2018 (VMIP-2) model outputs to establish VMT per capita and VMT per employee baseline thresholds for the unincorporated areas of the County. Evaluated different district-based geographies (Planning Areas, Fee Areas, and other areas) for establishing baseline VMT. Utilized GIS to create graphics that show the VMT per capita and VMT per employee by model

TAZ. Created screening maps for residential and work VMT by analyzing the VMT on the TAZ level and excluding rural areas with low residential or job density.

VMT Transportation Impact Study for Tierra Robles Planned Development

Transportation Planner Shasta Red, LLC | Shasta County, CA

Utilized the Shasta Regional Activity-Based Travel Demand Model (ShastaSIM) to evaluate household-based and boundary-based VMT with and without the proposed residential development. Household-generated VMT per capita was evaluated from the model's zones without the project to establish baseline VMT for the unincorporated areas of the County and countywide areas. Evaluated average trip lengths from the model, including internal and external trips, validated against US Census data for journey-to-work for Shasta County from the LEHD Program. Validated the boundary-based VMT from the model against HPMS published VMT data for Shasta County. Modified the model inputs to incorporate the project and assessed VMT in terms of residential VMT per capita from the project to compare to the baseline VMT, utilizing a 15% reduction from baseline VMT per capita as the impact criterion.

VMT Transportation Impact Study for Crystal Creek Aggregate Expansion

Transportation Planner Crystal Creek Aggregate | Shasta County, CA

Utilized the ShastaSIM to evaluate household-based and boundary-based VMT with and without the proposed industrial development. Net VMT was evaluated from the model's zones without the project to establish baseline VMT for the unincorporated areas of the County and countywide areas. Evaluated average trip lengths from the model, including internal and external trips, validated against US Census data for journey-to-work for Shasta County from the LEHD Program. Validated the boundary-based VMT from the model against HPMS published VMT data for Shasta County. Modified the model inputs to incorporate the project and assessed VMT in terms of net VMT from the project to compare to the baseline VMT, utilizing a 15% reduction from baseline VMT per capita as the impact criterion.

Active Transportation

City of Elk Grove Systemic Safety Analysis Report (SSAR)

Transportation Engineer City of Elk Grove | Elk Grove, CA

Utilized the Federal Highway Administration's (FHWA's) Systemic Safety Project Selection Tool and Caltrans'

SSAR Program Guidelines as the basis for the methodology to develop systemic countermeasures and prioritize projects to submit for Highway Safety Improvement Program (HSIP) funding. Utilized citywide collision data over a five-year period to identify focus crash types, focus facilities, and risk factors most associated with higher severity collisions. Utilized GIS and Microsoft Excel to create various maps of the collision data to provide a correlation between the collision data and the roadway/intersection characteristics. Identified and screened candidate locations for countermeasure deployment by conducting a risk assessment of the network elements utilizing GIS. Identified various countermeasures to address the safety issues for each focus crash type utilizing Caltrans' Local Roadway Safety Manual, the Crash Modification Factors (CMF) Clearinghouse, the Highway Safety Manual, and National Cooperative Highway Research Program (NCHRP) Report 500 volumes. Currently screening the list of countermeasures based on potential to reduce and address the risk for the focus crash types, including Benefit-Cost (B-C) effectiveness and agency policies and procedures. Created a short list of countermeasures for each focus crash type to use in developing safety projects.

Coloma Sustainable Community Mobility Plan

Transportation Planner

El Dorado County Transportation Commission | El Dorado County, CA

Developed a data collection plan to coordinate and obtain consensus with the El Dorado County Transportation Commission, El Dorado County, Caltrans, and State Department of Parks and Recreation staff. Performed bicycle Level of Traffic Stress (LTS) analysis and created bicycle LTS maps in GIS for the selected study area.

Halcyon Road Complete Streets Plan

Transportation Planner

City of Arroyo Grande | Arroyo Grande, CA

Prepared the draft plan document proposing buffered bike lanes along Halcyon Road, safer access for pedestrians and schoolchildren, a road diet, a roundabout, and multi-modal access throughout the central corridor through the City. Prepared the plan to document in an effective manner the existing conditions, current planning documents, the public participation process, complete street elements, the alternatives analyzed including Level of Service (LOS) and bicycle LTS, and the proposed preferred alternative along the corridor.

Halcyon Road Complete Streets Active Transportation Program Application, Cycle 4

Transportation Planner

City of Arroyo Grande | Arroyo Grande, CA

Assisted the City in preparing the Active Transportation Program (ATP) Cycle 4 application—a competitive statewide Caltrans grant—for the Halcyon Road Complete Streets project. The project is an infrastructure and non-infrastructure project based on the Halcyon Road Complete Streets Plan and teaching the community and schoolchildren how to safely navigate roundabouts via vehicle, bicycle, or as a pedestrian. Fine-tuned the cost and schedule with regard to the constraints of the ATP. Conducted extensive research and narratives regarding project details including collision data and analysis, disadvantage community and socio-economic data, the potential for increased walking and biking, and context sensitive elements. Met with Caltrans staff prior to submittal to discuss the draft version and improve the application.

Valley Springs Complete Streets / Town Center Connectivity Plan

Transportation Planner

Calaveras Council of Governments | Valley Springs, CA

Prepared a data collection plan to coordinate and obtain consensus with Calaveras Council of Governments, Calaveras County, and Caltrans staff. Oversaw work on existing conditions exhibits in GIS.

Carillion Boulevard Complete Streets Corridor

Transportation Planner

Raney Planning & Management | Galt, CA

Developed the roadway and peak hour intersection forecasts for 26 intersections for General Plan Buildout and 20-year forecasts without the road diet along Carillion Boulevard. Included trip generation, distribution, and assignments for recent proposed developments to provide an up-to-date 20-year forecast. Developed traffic forecasts for the study locations with the road diet along Carillion Boulevard, analyzing traffic patterns and diversions. Developed a traffic forecasting memorandum to analyze potential for growth in Galt for the projected 20-year development scenario compared to the full buildout of the City's General Plan and compared to the Sacramento Area Council of Governments (SACOG) population and employment projections for the region per the 2016 Metropolitan Transportation Plan and Sustainable Communities Strategy (MTP/SCS). Developed and assisted in presentations for stakeholders and public outreach meetings.

City of Pismo Beach Circulation Element

Transportation Planner

City of Pismo Beach | Pismo Beach, CA

Prepared an update to the City's General Plan Circulation Element consistent with regional, statewide, and federal legislation specifically related to multimodal transportation. Mapped existing multimodal conditions and proposed circulation improvements in GIS format. Prepared the Multimodal Circulation Plan. Assisted the City in developing active transportation goals and policies, including citywide and downtown LOS policies.

VISSIM Micro-Simulation Modeling & Analysis

Shell Beach Elementary School Access and Parking Study

Transportation Planner

Lucia Mar Unified School District | Pismo Beach, CA

Modeled school queue traffic during morning drop-off and afternoon pick-up for existing and proposed site access conditions at the school driveways and the adjacent intersection. Analyzed the traffic and queuing operations to ensure the proposed site access would accommodate the queue during the peak periods. Created "before-and-after" videos from the VISSIM model for a presentation to the school district board.

Main Street and Park Avenue VISSIM Simulation

Transportation Engineer

MTJ Engineering | Breckenridge, CO

Modeled a corridor of traffic signals, roundabouts, and a signalized pedestrian crossing for alternative improvements. Performed alternatives testing, modeling, and capacity and queuing analysis with VISSIM micro-simulation software for 12 intersections along a corridor in this ski resort town heavily traveled by pedestrians.

Dogtown / SR 49 Mitigation Evaluation

Transportation Engineer

City of Angels Camp | Angels Camp, CA

Prepared VISSIM models and videos for three alternatives, including a roundabout analysis and a large U-turn configuration for trucks.

Rhonda Road Extension

Transportation Engineer

City of Anderson | Anderson, CA

Prepared VISSIM analysis model and Sidra model for Rhonda Road extension and Deschutes second roundabout alternative as well as Synchro analysis models for various study intersections. Developed AM and PM peak-hour volumes, including trip generation

and distribution for conditions both with and without the roadway extension project.

Travel Demand Modeling / Impact Fee Studies

US 101 / State Street Project (Orchard Avenue Extension Feasibility Study)

Transportation Planner

County of Mendocino | Mendocino County, CA

Created the maps of the projected growth in land uses by TAZ in the regional Mendocino County Travel Demand Model for the project area in Ukiah. Coordinated with the client on the land use changes and projected growth within the model. Ran the model with the projected land uses within Ukiah and developed traffic forecasts based on the regional model outputs.

Napa Citywide Travel Demand Model

Transportation Planner

City of Napa | Napa, CA

Determined forecasted land use growth based on the General Plan, approved/pending projects, the Downtown Specific Plan, and the Napa Valley Unified School District Facilities Master Plan. Utilized Cube modeling software and GIS software to create figures of the land uses and growth by TAZ. Coordinated with the City to determine projected roadway improvements and configurations for the future modeling network. Performed an in-person, hands-on instruction to City staff on how to use the Cube modeling software and the Napa Citywide Model.

McSwain Community Transportation Circulation Study and Traffic Impact Fee Update

Transportation Planner

Merced County | Merced, CA

Prepared the circulation study, including a Capital Improvement Program (CIP), Nexus, and fee study. Created a nested community-level travel demand model within the regional travel demand model. Baseline socio-economic data was aggregated at the parcel level using GIS data obtained from the County in addition to field surveys and observations. Utilized the model to forecast General Plan buildout conditions, establish Nexus and regional share, develop a CIP, and propose a fee schedule. Prepared figures using GIS software. Prepared reports and memorandums including existing and forecasted intersection and roadway traffic volumes, LOS analysis using Synchro software, and documenting multi-modal facilities and plans, the traffic impact fee Nexus and CIP.

Franklin-Beachwood Transportation Circulation Study and Traffic Impact Fee Update

**Transportation Planner
Merced County | Merced, CA**

Prepared the circulation study, including a CIP, Nexus, and fee study. Created a nested community-level travel demand model within the regional travel demand model. Baseline socio-economic data was aggregated at the parcel level using GIS data obtained from the County in addition to field surveys and observations. Utilized the model to forecast General Plan buildout conditions, establish Nexus and regional share, develop a CIP, and propose a fee schedule. Prepared figures using GIS software. Prepared reports and memorandums including existing and forecasted intersection and roadway traffic volumes, LOS analysis using Synchro software, and documenting multimodal facilities and plans, the traffic impact fee Nexus, and CIP.

Templeton Area Travel Demand Model and Circulation Study Update

**Transportation Planner
County of San Luis Obispo | San Luis Obispo, CA**

Comprehensively updated Templeton community travel demand model to current baseline conditions. Baseline socio-economic data was aggregated at the parcel level using GIS. TAZ structure was comprehensively overhauled to increase the resolution of the model and to be consistent with the boundaries of the community's three distinct fee areas. Utilized the model to forecast General Plan buildout conditions, establish Nexus and regional share, develop a CIP, and propose fee schedule.

Avila Circulation Study and Traffic Impact Fee Update

**Transportation Planner
San Luis Obispo County | San Luis Obispo, CA**

Prepared the circulation study, including a CIP, Nexus, and Fee Study. Created a new area-wide travel demand model for the Avila Beach community. Baseline socio-economic data was aggregated at the parcel level using GIS data obtained from the County in addition to field surveys and observations. Utilized the regional travel demand model to calibrate the trip information for the base and forecast models. Utilized the model to forecast General Plan buildout conditions, establish Nexus and regional share, develop a CIP, and propose a fee schedule. Prepared figures using GIS software. Prepared reports and memorandums including existing and forecasted intersection and roadway traffic volumes, LOS analysis using Synchro software, and documenting multi-modal facilities and plans, the traffic impact fee Nexus, and CIP.

South County Circulation Study and Traffic Impact Fee Update

**Transportation Planner
San Luis Obispo County | San Luis Obispo, CA**

Prepared the circulation study, including a CIP, Nexus, and fee study. Updated the area-wide travel demand model for the South County area, including any roadway improvements. Baseline socio-economic data was aggregated at the parcel level using GIS data obtained from the County in addition to field surveys and observations. Utilized the regional travel demand model to calibrate the trip information for the base and forecast models. Utilized the model to forecast General Plan buildout conditions, establish Nexus and regional share, develop a CIP, and propose a fee schedule. Prepared figures using GIS software. Prepared reports and memorandums including existing and forecasted intersection and roadway traffic volumes, LOS analysis using Synchro software, and documenting multimodal facilities and plans, the traffic impact fee Nexus, and CIP.

Traffic Impact Studies

Simmerhorn Ranch TIS

**Transportation Planner
Raney Planning & Management | Galt, CA**

Provided the needed transportation planning services including oversight of project deliverables, concurrence from City staff on memorandum of assumptions for technical assumptions, methods, trip generation, internal capture rates, and trip distribution of the proposed 431-unit residential development, a proposed elementary school, a locally-serving park, and annexation of the area into the City Limits. Utilized the citywide travel demand model to fine-tune a 20-year forecast with recently approved projects. Worked with the City to identify feasible intersection improvements that the project would affect. Utilized the CalEEMod to conduct a VMT analysis of project-generated VMT and VMT per capita, and compared this to regional VMT efficiency metrics.

Summerfield TIS

**Transportation Planner
Raney Planning & Management | Galt, CA**

Provided the needed transportation planning services including oversight of project deliverables, concurrence from City staff on memorandum of assumptions for technical assumptions, methods, trip generation, internal capture rates, and trip distribution of the proposed 212-unit residential development and annexation of the area into the City Limits. Utilized the citywide travel demand model to fine-tune a 20-year forecast with recently approved projects. Utilized recent traffic studies to assist

in development of forecasts. Worked with the City to identify feasible intersection improvements that the project would affect. Utilized the CalEEMod to conduct a VMT analysis of project-generated VMT and VMT per capita, and compared this to regional VMT efficiency metrics.

Fairway Oaks TIS

Transportation Planner

Raney Planning & Management | Galt, CA

Provided the needed transportation planning services including oversight of project deliverables, concurrence from City staff on memorandum of assumptions for technical assumptions, methods, trip generation, and trip distribution of the proposed 169-unit residential development and annexation of the area into the City Limits. Utilized the citywide travel demand model to fine-tune a 20-year forecast with recently approved projects. Utilized the CalEEMod to conduct a VMT analysis of project-generated VMT and VMT per capita, and compared this to regional VMT efficiency metrics.

Twin Cities Road Gas Station TIS

Transportation Planner

Raney Planning & Management | Galt, CA

Provided the needed transportation planning services including oversight of project deliverables, concurrence from City staff on a memorandum of assumptions for technical assumptions, methods, trip generation, and trip distribution of the proposed development featuring gas station and quick-service restaurant with drive-thru and annexation of the area into the City limits. The memorandum served as a preliminary analysis of project driveway peak travel activity and potential implications to the Twin Cities Road roundabouts at SR 99.

San Luis Ranch Specific Plan Multimodal Transportation Impact Analysis and Prado Road Interchange Project Study Report (PSR)

Transportation Planner

City of San Luis Obispo, CA | San Luis Obispo, CA

Project required use of cutting edge in-house multimodal transportation analysis tools to quantify operations using Highway Capacity Manual (HCM) 2010 urban street segment analysis for all travel modes. Analysis was performed on an intersection, link, and segment basis. The transportation analysis report formed the basis of the San Luis Ranch Specific Plan Environmental Impact Report (EIR), as well as the basis for the concurrent PSR prepared for the Prado Road interchange project. The multimodal TIS analyzed several development phases of the approximate 130-acre site and analyzed several near- and long-term infrastructure scenarios,

including the alternatives being studied in the PSR. The Citywide travel demand model was also utilized to analyze various land use and circulation scenarios for near- and long-term. Developed near- and long-term forecasts for the extensive scope of the multimodal study. The tools developed as part of this effort were subsequently used on several subsequent impact studies under an On-Call contract with the City of San Luis Obispo.

Veranda at River Oaks Traffic Study

Transportation Planner

Raney Planning & Management | Galt, CA

Assisted with the project that evaluated the impacts of a general plan amendment from office land use to a proposed multi-family housing development. Assisted in project trip generation, trip distribution, and trip assignment. Developed the traffic forecasts with and without the general plan amendment.

Corridor & Capacity Studies

Pajaro to Prunedale Corridor Study (G12 Corridor)

Transportation Planner

Transportation Agency for Monterey County | Monterey County, CA

Prepared the Existing Conditions Analysis Report, including existing traffic count data and capacity analysis, socio-economic data, collision data and mapping. Conducted in-field travel time runs along the G12 corridor and recorded the runs in Global Positioning System (GPS); the data also incorporated into the report with figures via GIS format. Performed the corridor travel analysis comparing constrained and unconstrained analysis of G12 and SR 1 utilizing the Association of Monterey Bay Area Governments regional travel demand model. Coordinated the task of creating the graphics for the flyers and posters for the community outreach and website. Translated public outreach materials to Spanish including the flyers and posters for the presentations at public meetings and for posting to the website pages. Assisted at the public meetings/workshops by providing bilingual English/Spanish services for attendees. Prepared the presentations and community engagement interactive "dot" boards for the workshops.

US 101 / El Campo Road / South County Freeway Conversion

Transportation Planner

San Luis Obispo Council of Governments | San Luis Obispo, CA

Evaluated the potential detour routes, operational and safety implications to off-system roadways that may be

caused due to restrictions to US 101 access at the four at-grade intersections on US 101 between the Traffic Way and Los Berros Road interchanges south of Arroyo Grande. Estimated added travel times, distances, and VMT. Examined emergency access and response time implications. Examined the operational and safety implications of each plausible alternative route with partial closure of all four at-grade crossings (right-in and right-out turning movements remain). Examined the operational and safety implications of the most plausible quickest alternative route with full closure of the western leg of El Campo Road. Conducted a safety assessment including collision data and 95th percentile queue spillback assessments at signalized intersections.

Dry Creek Valley Capacity Threshold Study

Transportation Planner

Sonoma County | Sonoma County, CA

Evaluated overall capacity of the Dry Creek Valley roadway system, particularly during concurrent events such as cycling events, industry-wide winery events, and seasonal traffic. Performed rural roadway capacity and safety analysis, including geometric design assessment, bicycle facility assessment, roadway LOS analysis, and collision analysis. Identified physical and programmatic measures to improve circulation and safety.

Sonoma Valley Capacity Threshold Study

Transportation Planner

Sonoma County | Sonoma County, CA

Evaluated overall capacity of the Sonoma Valley roadway system, particularly during concurrent events such as industry-wide winery events, and seasonal traffic. Performed rural roadway capacity and safety analyses, including geometric design assessment, bicycle facility assessment, roadway LOS analysis, and collision analysis. Identified physical and programmatic measures, including travel demand management recommendations to improve circulation and safety.

Avila Beach Drive Capacity Study

Transportation Planner

San Luis Obispo County | Avila Beach, CA

Analyzed permanent count station data over three years to determine a capacity metric and LOS threshold for Avila Beach Drive. Analyzed various metrics for seasonal travel characteristics, and peak hour directionality thresholds specific to recreational travel characteristics throughout the year. Utilized the 100th highest annual hourly volume (K100) as the recommended alternative metric for conducting impact studies. Utilized hourly and daily volume data to analyze impact of special events (concerts and festivals) to the isolated community of Avila Beach throughout the year, including seasonal recreational travel demand

implications. Provided recommendations for travel demand management measures, including use of shuttle buses to satellite lots and changeable message signs for wayfinding and parking occupancy.

SR 46 West / US 101 Interchange Roundabout Reassessment

Transportation Planner

San Luis Obispo County | Templeton, CA; Paso Robles, CA

Utilized local area and Regional Travel Demand Model - Templeton Travel Demand Model, Paso Robles Travel Demand Model, and San Luis Obispo Council of Governments (SLOCOG)—to develop forecasted travel conditions through the interchange. Worked closely with the community of Templeton, the City of Paso Robles, the County of San Luis Obispo, SLOCOG, and Caltrans to develop roundabout traffic forecasts based on projected development adjacent to the interchange and regional growth on SR 46 West and US 101. The traffic forecasts were utilized to determine the operations of the roundabout concept.

Intersection Control Evaluation (ICE) Studies

SR 60 / Sunnymead Boulevard Intersection ICE

Transportation Engineer

City of Moreno Valley | Moreno Valley, CA

Assisted with Step 1 of the ICE process. Prepared the traffic report and conducted capacity assessment and analysis at two closely spaced intersections. Conducted freeway merge analysis for different scenario years. The analysis was done for four alternatives including stop control, a traffic signal, and a roundabout.

SR 299 / Hawley Road Interchange ICE

Transportation Engineer

Response Property Management | Redding, CA

Assisted with Step 1 of the ICE process. Prepared the traffic report and conducted capacity assessment and analysis at four closely spaced intersections. Conducted a safety analysis utilizing historical collision data. The analysis was done for three alternatives including traffic signals and roundabouts.

SR 49 / McKnight Way Intersection ICE

Transportation Engineer

City of Grass Valley | Grass Valley, CA

Assisted with the ICE Step 1 to present the results of the interchange conceptual alternatives by evaluating both the signal and roundabout for interim and design year conditions that included two roundabout alternatives—a

six-leg roundabout and a dumbbell roundabout—and two traditional signal alternatives.

On-Call

Merced County On-Call Transportation Studies

Transportation Planner
Merced County | Merced County, CA

Providing the needed transportation planning services including various circulation and traffic impact fee studies for the Franklin-Beachwood and Atwater communities. Also providing various transportation engineering services including roundabout feasibility studies. Performed a traffic forecast re-evaluation for a campus parkway project, coordinating with Caltrans and the Council of Governments to determine if traffic forecasts are still valid for the project.

City of San Luis Obispo On-Call Civil Engineering Design

Transportation Planner
City of San Luis Obispo | San Luis Obispo, CA

Providing needed transportation planning services including various multimodal transportation impact studies. Developed cutting-edge in-house multimodal transportation analysis tools to quantify urban street segment operations including vehicular, pedestrian, bicycle, and transit analysis on an intersection, link, and segment basis as outlined in the HCM. This multimodal urban street segments analysis tool was updated to reflect the most current version of the HCM 6. This process, as well as HCM intersection analysis through Synchro, was utilized in the preparation of several transportation impact analyses and supporting environmental documents, from smaller projects, such as Discovery SLO and Public Market at Bonetti Ranch to large specific plan projects, such as San Luis Ranch.

City of Arroyo Grande On-Call Transportation Services

Transportation Planner
City of Arroyo Grande | Arroyo Grande, CA

Providing needed transportation planning services.

Amador County On-Call Traffic Engineering

Transportation Planner
Amador County Transportation Commission | Amador County, CA

Assisted with the ADT table updates, Synchro analysis, and model update for On-Call work for the Regional Traffic Mitigation Fee and Regional Transportation Plan Updates project and TIER-1 Traffic Model Update project.

Sonoma County On-Call Services

Transportation Planner
Sonoma County | Sonoma County, CA

Providing needed transportation planning services, including peer review. Work included report development and threshold studies for these projects: Marketplace Traffic Study Peer Review, Charter School Peer Review, Dry Creek Valley and Sonoma Valley Circulation Study, and Lelands Fly Fishing Traffic Study Peer Review.

City of Grass Valley On-Call Transportation Engineerin

Transportation Planner
City of Grass Valley | Grass Valley, CA

Assisted with the ICE documents and TIS's for the Dorsey Marketplace TIS project and SR 49 / McKnight Way Corridor Roundabout ICE project.

City of Vacaville On-Call Engineering and Planning

Transportation Planner
City of Vacaville | Vacaville, CA

Providing all needed transportation planning services. Work included assisting with the TIS for the Vacaville Starbucks Traffic Impact Analysis at Nut Tree Parkway / Harbison Drive project and East Main District TIS project

City of San Luis Obispo On-Call Development Review

Transportation Planner
City of San Luis Obispo | San Luis Obispo, CA

Provided needed transportation planning services for the 1413 Calle Joaquin TIS, LOS tables, Synchro analysis study intersections, AM and PM peak-hour volumes, including existing and future conditions, trip distribution, and transportation growth calculations for future analysis and proposed mitigations.

Silverado Trail (SR 121) / Third Street / Coombsville Road / East Avenue (5-Way) Intersection Improvements

Transportation Planner
City of Napa | Napa, CA

Prepared Synchro models for existing conditions and two alternatives to the study intersections, one Sidra analysis model for the roundabout alternative, and trip distribution / rerouting AM/PM peak-hour existing and future volumes for alternative designs.

Sierra Community College Campus Master Plan, Traffic, and Parking Update

Transportation Planner

Sierra Community College | Rocklin, CA

Prepared Sierra College Facilities Master Plan TIS, Synchro models for adjusting volumes, Traffix models for Circular 212 Analysis, roadway LOS analysis, HCM analysis for interstate ramps at nearby interchanges and highway segments, proposed project projections for intersections, AM and PM peak-hour volumes, and Average Daily Traffic (ADT) volumes for existing and future study roadways.

Other Related Areas of Interest

Languages

- Proficient in Spanish

Software Applications

- CUBE
- TransCAD
- Synchro
- SimTraffic
- Sidra
- ArcMap
- QGIS
- HCS+
- PTV-Vissim
- AutoCAD
- Microstation
- Traffix
- Microsoft Office

Career history

2014 - present	GHD, Transportation Engineer
2011 - 2014	T3 Design Corporation,
2010	Sullivan, Donohoe, & Ingalls, P.C.



Makinzie Clark

Transportation Planner

Qualified: MS, Environment and Sustainable Development, Development Planning Unit, University College London, London, England, 2013; BA, Sociology (Minor: Environmental Systems and Society), University of California, Los Angeles, CA, 2011

Connected: Young Professionals in Transportation

Professional Summary: Makinzie Clark is a transportation planner in our Sacramento office. She has seven years of experience in traffic impact analysis, corridor improvement, and regional planning studies and analysis. She provides support on a variety of transportation and land use projects, including traffic impact analysis, complete streets/main street corridor studies, circulation planning, and development impact fee updates. Makinzie also has experience utilizing GIS, Synchro, SimTraffic, Sidra, and traffic modeling software.

Transportation Planner

Eureka Broadway Multimodal Corridor Plan | City of Eureka, CA

Developed planning-level concepts for corridor improvements along 3 miles of US 101 in Eureka, CA and evaluated benefits using a variety of analysis-driven performance measures.

Transportation Planner

Twentynine Palms Specific Plan | City of Twentynine Palms, CA

Developed planning-level concepts for corridor improvements along SR 62 and local arterials to include pedestrian enhancements.

Transportation Planner

City of Napa Citywide Travel Demand Model | City of Napa | Napa, CA

Assisted with developing land use data and prepared reports.

Transportation Planner

City of Chico Development Impact Fee Nexus Study | City of Chico | Chico, CA

Assisted with data collection and reviewed project costs.

Transportation Planner

City of Galt On-Call Transportation Planning | City of Galt | Galt, CA

Assisted with the traffic analysis for the Phase 1 Memorandum of Assumptions on a commercial project on Southeast Corner of Twin Cities Road and Stockton Boulevard, and Twin Cities Arco and Starbucks.

Transportation Planner

Clearlake Walmart Traffic Impact Study (TIS) | Amir Gholami, ESA, Price Consulting Services, Raney Planning & Management | Clearlake, CA

Assisted with project analysis and assessment of impacts

and mitigation measures.

Transportation Planner

The Point (Cottonwood) Subdivision Traffic Impact Analysis Report (TIAR) | Shasta Red, LLC | Shasta County, CA

Assisted with project analysis and assessment of impacts and mitigation measures.

Transportation Planner

SR 49 Commercial Gateway Corridor Study | Calaveras Council of Governments, Calaveras County Department of Public Works | San Andreas, CA

Assisted with analysis of existing corridor conditions, community outreach, and preferred plan recommendation and development.

Transportation Planner

Shasta Plaza Shopping Center | Successor Agency to Shasta Lake Redevelopment Agency | Shasta Lake, CA

Assisted with project analysis and report preparation.

Transportation Planner

Sonoma County On-Call Peer Review | Sonoma County | Sonoma County, CA

Assisted with the background conditions report and recommendation development.

Transportation Planner

South Bonnyview/Churn Creek Road Retail Development | City of Redding | Redding, CA

Assisted with project analysis and assessment of impacts and mitigation measures.

Transportation Planner

US 101/Trinidad Rancheria New Interchange Project Study Report-Project Development Support (PSR-PDS) | SHN Consulting Engineers



& Geologists, Incorporated; Trinidad Rancheria | Trinidad, CA

Assisted with the Step 4 Intersection Control Evaluation (ICE) for the PSR-PDS.

Professional Experience

**Transportation Planning Analyst
Kimley-Horn & Associates | Sacramento, CA |
April 2017 – June 2019**

Prepared the following documents: bicycle master plans, regional transportation plans, mobility and circulation plans, grant applications, traffic impact analysis reports, intersection control evaluation reports. Performed analysis for transportation and land use projects, including regional growth forecasts, roadway capacity and safety reports, bicycle benefit-cost and demand forecasts, and development impact fee updates. Managed nearly \$100,000 in project fees; assisted with the management of nearly \$200,000 in project fees. Highlight: Managed and completed analysis (including GIS Network Analyst Origin-Destination, and Spatial buffering for demand forecasts), documentation, and public outreach for the City of Lincoln's Bicycle Transportation Plan Update, 2018. Also conducted data driven analysis to forecast electric vehicle demand and use for the Capital Southeast Connector project.

**Transportation Planner
GHD (Formerly Omni-Means) | Roseville, CA |
October 2015 – March 2017**

Prepared the following documents: traffic impact analysis reports, corridor improvement studies, multimodal planning studies, regional planning studied. Performed analysis for a variety of transportation and land use projects, including complete streets and main street corridors studies, regional growth forecasts, roadway capacity and safety studies, and development impact fee updates.

**Staff Assistant – Program & Project Delivery
Sacramento Area Council of Governments
(SACOG) | Sacramento, CA | July 2015 –
October 2015**

Supported staff in the 2015/16 transportation funding programs, regarding \$357 million in state and federal funding requests from 28 member agencies in the six-county Sacramento region. Compiled, analyzed, and interpreted complex data, in both quantitative and qualitative formats, for the preparation of staff reports, including the Draft 2015 Regional Funding Program Recommendations and the Regional Active Transportation Program Funding Recommendations items. Programmed federal and state dollars in SACOG's official, online database for projects recommended to the Metropolitan Transportation Improvement Program.

Other Related Areas of Interest

Software Knowledge

- ArcGIS
- Synchro
- TransCAD
- CUBE
- Sidra

Previous Internships, Memberships, and Commitments

- Co-Owner, Trust Bakery, Sacramento, June 2019 - Current
- Presented on Spatial Analysis to determine Bicycle Improvement Projects at the CalGIS Conference, 2019
- Bike Valet Lead (Employee), Sacramento Area Bicycle Advocates (SABA), May 2015 - May 2016
- Culinary Arts Student, Le Cordon Bleu Sacramento, January 2015 - May 2015
- Volunteer, Sacramento Sustainability Forum 2.0, May 2014 - October 2014
- Project Assistant (Volunteer), World Wildlife Fund, Athens, Greece, February 2014 - May 2014
- External Affairs Intern, Global Footprint Network, January 2012 - May 2012
- Research Assistant (Volunteer), Audubon California, June 2011 - September 2011

Work History

2020 - Present	GHD, Sacramento, CA
2017 - 2019	Kimley-Horn & Associates, Sacramento, CA
2015 - 2017	GHD (formerly Omni-Means), Roseville, CA
2015	Sacramento Area Council of Governments (Part-Time), Sacramento, CA