STAFF REPORT
TOWN COUNCIL MEETING OF MARCH 9, 2010
CONSENT AGENDA

TO: **HONORABLE MAYOR AND MEMBERS OF THE TOWN COUNCIL**

FROM: **BRIAN FRAGIAO, DIRECTOR OF PUBLIC WORKS /TOWN ENGINEER**

DATE: **FEBRUARY 26, 2010**

SUBJECT: **TRAFFIC SIGNAL DESIGN SERVICES FOR THE KING ROAD & SWETZER ROAD INTERSECTION**

RECOMMENDATION:

Accept the traffic signal design services proposal of Kimley-Horn & Associates and adopt the attached resolution approving the proposal and authorizing the Town Manager to execute an agreement acceptable to the Town Attorney for the preparation of improvement plans, specifications and estimates for the new traffic signal at the intersection of King Road & Swetzer Road for a not-to exceed amount of $20,000.

ISSUE STATEMENT AND DISCUSSION:

Included in the Town's Capital Improvement Program (CIP) is the construction of a new traffic signal at the intersection of King Road and Swetzer Road. The project is on the scheduled improvement list for the fiscal year of 2011-2012. The project will consist of installing a new traffic signal at the intersection, minor asphalt and concrete work, striping, traffic control and interconnecting the new controller with the King/Taylor signal to allow smooth traffic movement between signals and the railroad tracks. The project is estimated at $250,000. The Town will be receiving $122,345 of Congestion Mitigation and Air Quality (CMAQ) federal funding to pay for design and construction. These funds will not be available until 2011. Therefore, design of the traffic signal will need to begin in the summer of 2010 to allow for bid advertising and award in the fall of 2010.

On January 4, 2010, staff sent out "Request for Proposals" to eight competent traffic signal design firms in the Sacramento area. On February 19, 2010, staff received proposals from four consultants. After evaluating the proposals, staff selected Kimley-Horn and Associates on the following considerations:

- Quality of their proposal
- Experience with signal design
- Caltrans design experience
- Record of any signal design performance in Loomis
- Knowledge of local transportation issues in Loomis
- Quality of personnel
- Delivery schedule
- Cost

Kimley-Horn & Associates ranked higher or equally in many of these categories with the other proposals, but had the edge by providing design services at the nearby King and Taylor intersection that will have to be synchronized with the proposed new signal. Their design cost was also the lowest which is beneficial to the Town's budget. Staff worked with Kimley-Horn & Associates on the King Road & Taylor Road traffic signal design and feel there workmanship, on-time delivery and minimal construction to design issues will only benefit the Town.

KING ROAD & SWETZER ROAD TRAFFIC SIGNAL DESIGN SERVICES PROPOSAL RANKING

February 19, 2010

Prelim. Bid Rank	Contractor	Bid/ Design Schedule	Comments
1	Kimley-Horn & Associates, Inc. Rancho Cordova, Ca	$17,000.00 20 weeks	Provided Signal Design Services for King & Taylor Intersection
2	Omni-Means Roseville, Ca	$24,245.00 27 weeks	Prepared the Loomis Bike & Trails Master Plan and Roadway designs for Sierra College Blvd. between Granite Dr. and Taylor Rd.
	ENGINEERS ESTIMATE	**$30,000.00**	
3	DKS Associates Sacramento, Ca	$40,310.00 15 weeks	Under contract with Loomis for modeling and transportation development review
4	TJKM Consultants Sacramento, Ca	$44,800.00 17 weeks	

Note: Staff has increased the contract total by $3,000 to cover any unforeseen additional costs attributed to working with Union Pacific Railroad, California Public Utilities Commission and the adjacent businesses near the intersection.

ENVIRONMENTAL PROCESS

This project is exempt under the California Environmental Quality Act (CEQA) Section 15301 Class 1 (c, d &f), "Existing Highways and Street Facilities" and Class 2, "Replacement or Reconstruction" of the guidelines.

FINANCING CONSIDERATION

Design Services ($20,000) and Construction ($250,000) costs will be funded by $122,345 of CMAQ funds and Transportation Development Act Funds ($147,655).

TOWN OF LOOMIS

RESOLUTION NO. 10-___

RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF LOOMIS ACCEPTING THE PROPOSAL FROM THE FIRM OF KIMLEY-HORN & ASSOCIATES AND AUTHORIZING THE TOWN MANAGER TO EXECUTE AN AGREEMENT ACCEPTABLE TO THE TOWN ATTORNEY FOR THE PREPARATION OF IMPROVEMENT PLANS, SPECIFICATIONS AND ESTIMATES FOR THE NEW TRAFFIC SIGNAL AT THE INTERSECTION OF KING ROAD & SWETZER ROAD FOR A NOT-TO EXCEED AMOUNT OF $20,000.

WHEREAS, the Town has scheduled under the 2011/2012 Capital Improvement Program a new traffic signal at the intersection of King Road and Swetzer Road; and

WHEREAS, the Town will be receiving Congestion Mitigation and Air Quality Funds of $122,345 for the project in 2011; and

WHEREAS, the Town has received proposals to provide traffic signal design services for the new traffic signal; and

WHEREAS, Kimley-Horn & Associates provided the best proposal and most cost effective.

NOW, THEREFORE, IT IS HEREBY RESOLVED that the Town of Loomis accepts the proposal of Kimley-Horn & Associates (Exhibit A) in the amount not-to-exceed $20,000, and hereby authorizing the Town Manager to execute an agreement acceptable to the Town Attorney for the preparation of improvement plans, specifications and estimates for the new traffic signal at the intersection of King Road and Swetzer Road.

PASSED AND ADOPTED by the Town Council of the Town of Loomis this 9th day of March, 2010 by the following vote:

AYES:

NOES:

ABSENT:

_____
Mayor

ATTEST:

APPROVED AS TO FORM:

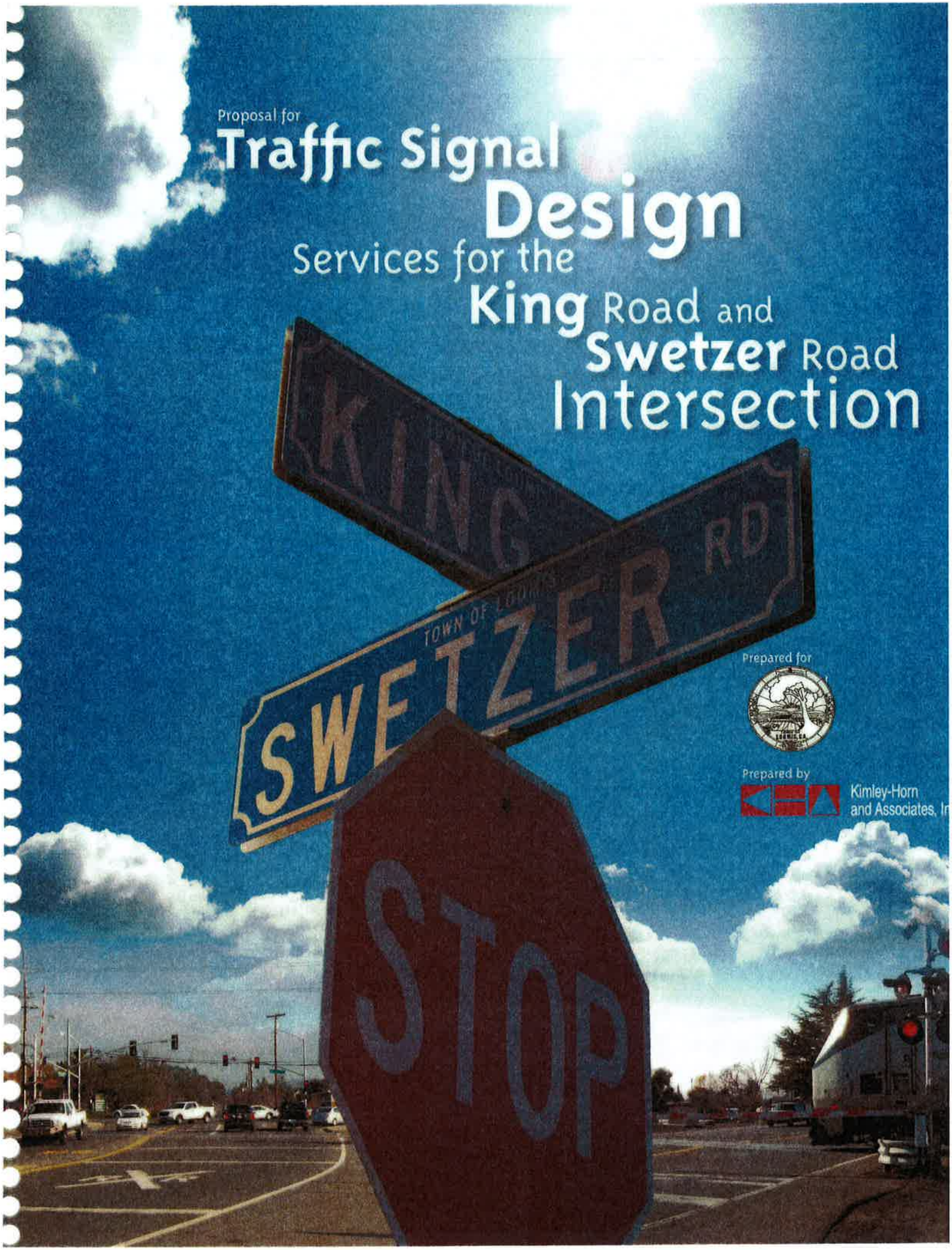
_____
Town Clerk

_____
Town Attorney

2/25/10 9:32 AM

Proposal for

Traffic Signal Design Services for the King Road and Swetzer Road Intersection



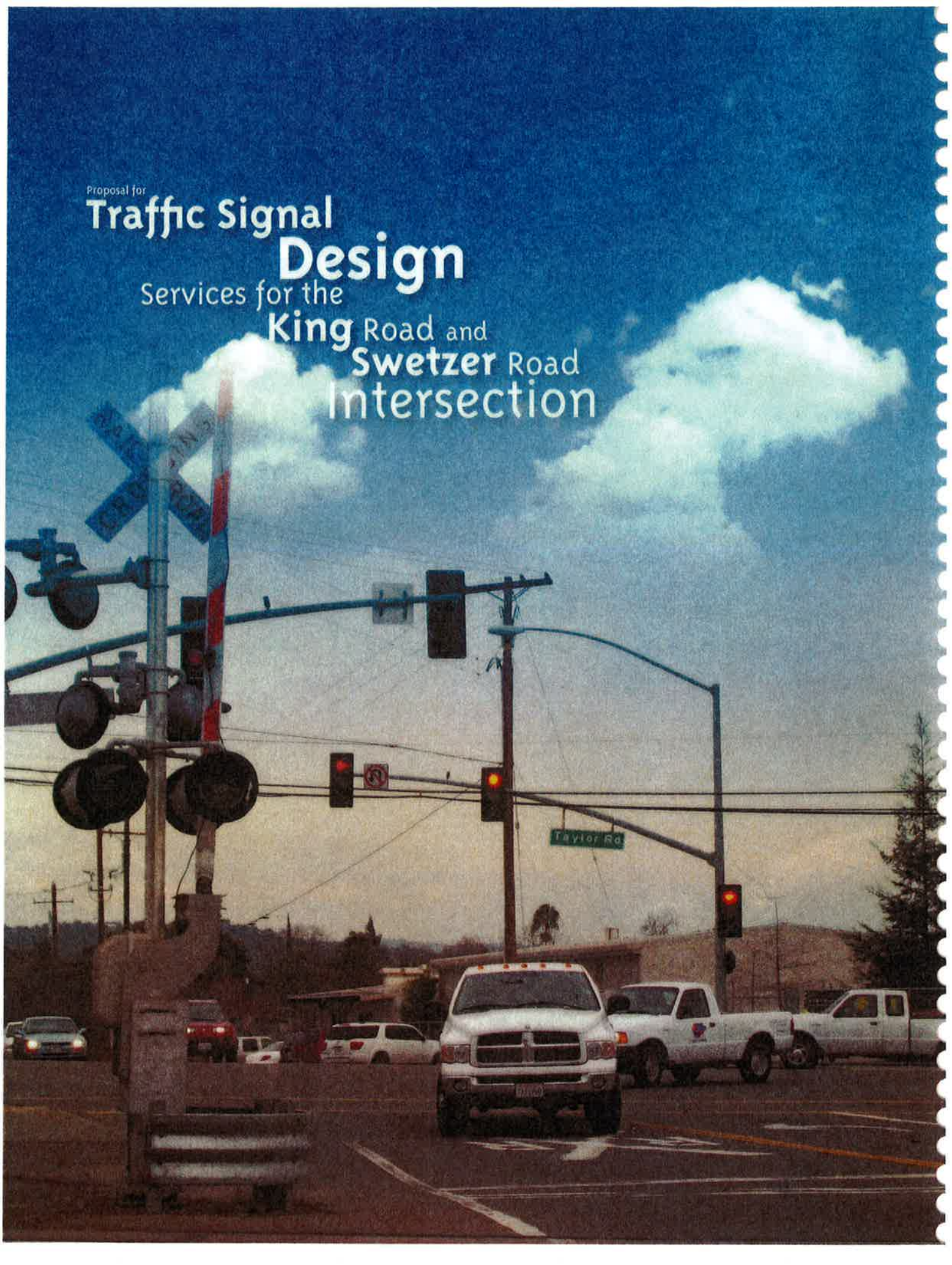
Prepared for

Prepared by

Kimley-Horn and Associates, In

Proposal for

Traffic Signal Design Services for the King Road and Swetzer Road Intersection



February 18, 2010

Sacramento Office
11060 White Rock Road
Suite 150
Rancho Cordova, California
95670
TEL 916 858 5800
FAX 916 858 5805

Mr. Brian Fragiao, P.E.
Director of Public Works/Town Engineer
Town of Loomis
6140 Horseshoe Bar Road, Suite K
Loomis, California 95650

Re: Proposal for Traffic Signal Design Services for the King Road and Swetzer Road Intersection

Dear Brian:

We appreciate the opportunity to provide the Town with our qualifications for signal design services. We understand that the intent of this traffic signal installation is to add traffic signal control to the King Road and Swetzer Road intersection. This portion of the Town experiences a mix of both industrial and residential traffic, complicating the operations at this location. In addition, the intersection's proximity to two school facilities further emphasizes the need for controlled right-of-way and enhancements to pedestrian access and circulation. **The Town should consider Kimley-Horn and Associates, Inc. (Kimley-Horn) for this endeavor based on the following key separators.**

Kimley-Horn has prepared a thorough and proactive project understanding of the complex issues at the project intersection. **In preparation for this proposal, we met with the Town at the site to discuss issues and potential solutions;** we conducted peak-hour traffic counts in January 2010 to better understand the traffic patterns; we prepared a Syncho/SimTraffic model to explore potential signal phasing and to determine the resulting signal equipment requirements; and we met a key utility (AT&T) on site to discuss the potential overhead conflict along the west side of the intersection. **We have done our homework and are prepared to bring this knowledge to the project.**

This project, although relatively simple on the surface, has a complex component due to the involvement of the California Public Utilities Commission (CPUC) and Union Pacific Railroad (UPRR). We have recent, relevant experience on projects requiring this knowledge. Most recently, we have worked with the CPUC and UPRR on a similar project in Sutter County in which we have learned the required processes, developed relationships with staff, and developed a thorough understanding of the various approval requirements. **Our knowledge of these processes will greatly benefit you and this project by minimizing iterations and likely compressing the project schedule.**

Our core project team is all located in Sacramento and considering I, the proposed project manager, reside in Roseville, **the accessibility of our project team should be of great interest and importance to you.** We pride ourselves in our rapid attention to client requests and we will respond within 24 hours or less. After all, the Town already knows Kimley-Horn and has undoubtedly experienced our high attention to client service.

Finally, we offer you a full service consultant on this project. **The required right-of-way, civil, signing/striping, signal, and signal timing components can all be performed by our core project team.**

Kimley-Horn at a Glance

Founded in 1967

Nearly 1,600 personnel in 56 offices nationwide

Nearly 200 California staff in nine offices

Vital experience working with CPUC and UPRR on signal design projects for a variety of clients over the last five years

Extensive design resources firmwide to meet the demands of a variety of project needs

Consistently named one of the top 100 companies to work for in the U.S. by *Fortune* magazine

Ranked in the Top 20 in Transportation by *Engineering News-Record* year after year

There is efficiency inherent to this team configuration—an efficiency that reduces project costs and is anticipated to compress the project schedule.

As evident by your pre-qualification of Kimley-Horn for this endeavor, **we have extensive experience preparing similar plans for numerous jurisdictions throughout California and across the nation, including the Town of Loomis.** Our exploration of as-built signal plans for the King Road intersection with Taylor Road confirmed our knowledge of the project area especially considering our 2006 signal modification efforts for that location. This and other recent work with you demonstrates our knowledge of the Town's standards and procedures.

You certainly know our core project team. **As your day-to-day project manager and primary point of contact, I will oversee and coordinate all work products.** Bob Blume, P.E., will serve as principal-in-charge, ensuring overall project quality and execution. Finally, Brian Sowers, P.E., will use his signal design and timing development expertise to oversee quality and the development of signal timings (including railroad preemption).

As requested we have prepared a detailed project schedule. It is our intention that this schedule demonstrates our knowledge of the general project process, likely challenges, and the required sequence of tasks to effectively complete the required Scope of Services. **Based on our recent, relevant experience with the Town, CPUC, and UPRR, we have prepared a detailed scope which is consistent with the requirements and intent of this Request for Proposals.** Also as requested, we have prepared a detailed estimate of professional fees.

We trust that you will find this proposal to be comprehensive and representative of the professional services requested for these services. Although Kimley-Horn is one of the firms you have short-listed, **we are confident you will find our thorough project understanding and preparation, recent/relevant experience, accessibility, and full service nature to be the four reasons for being the firm selected for providing the requested scope of services.**

Please contact me if you have any questions or require additional information during the Town's review and selection process.

Kind regards,

KIMLEY-HORN AND ASSOCIATES, INC.

Matthew D. Weir, P.E., T.E.
Associate

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1. Understanding and Scope of Services

UNDERSTANDING & APPROACH

The Town of Loomis desires to add traffic signal control to the intersection of King Road and Swetzer Road. This portion of the Town experiences a mix of both industrial and residential traffic, complicating the operations at this location. Furthermore, the intersection's proximity to two school facilities further emphasizes the need for a controlled right-of-way, and enhancements to pedestrian access and circulation. The following is a summary of the key project issues and our proposed approach to addressing each project component. ***Issues below correspond to numbered items shown on Figure 1 located on following page.***

1. UPRR Proximity and Preemption Requirements

Union Pacific Railroad (UPRR) owns and operates a single track facility, which crosses King Road approximately 175 feet east of the Swetzer Road centerline. Furthermore, this at-grade crossing is also close to the existing King Road intersection with Taylor Road (approximately 150 feet east of UPRR). The Taylor Road traffic signal is presumed to be interconnected with the UPRR crossing and preemption is presumed to be utilized.

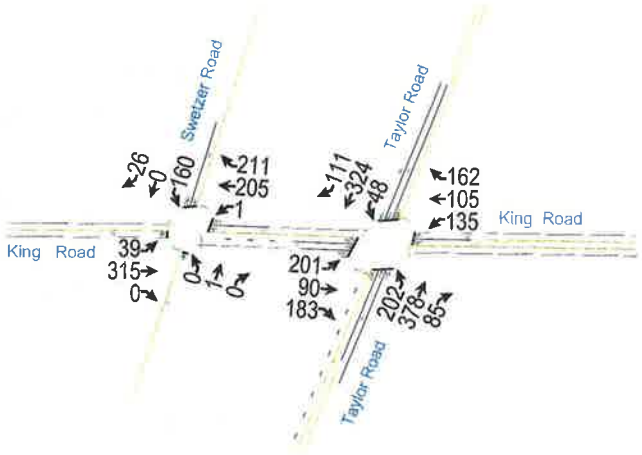
Approach: *The addition of traffic signal control at Swetzer Road will require interconnection with UPRR, and the use of preemption to safely clear the grade crossing (consistent with CMUTCD requirements). This project will further complicate the preemption required as the outcome will result in having traffic signals on each side of a railroad grade crossing. Kimley-Horn will initiate the California Public Utilities Commission (CPUC) GO 88-b process for coordination with CPUC and UPRR.*

2. Taylor Road Proximity and Interconnection/Coordination

The King Road intersection with Taylor Road is an existing signalized intersection located approximately 325 feet east of the project location. The installation of traffic signal control at Swetzer Road will likely require the two traffic signals be interconnected, and the railroad preemption expanded/enhanced to accommodate both signals. Further enhancements may be realized by coordinating the two signals.

Approach: *Kimley-Horn performed AM peak-hour counts in January 2010 to better understand the peak-hour traffic volumes, patterns, and the interaction between the two signals. As shown below in* ***Figure 2****, peak-hour volumes and simulation efforts have confirmed the predominant movements, and, at a minimum, emphasize the need for railroad preemption to help ensure the grade crossing is clear in advance of train presence. As such, we are positioned to propose appropriate signal phasing and, more importantly, the appropriate signal equipment to achieve the desired phasing and operational conditions.*

FIGURE 2 – AM Peak-Hour Traffic Volumes



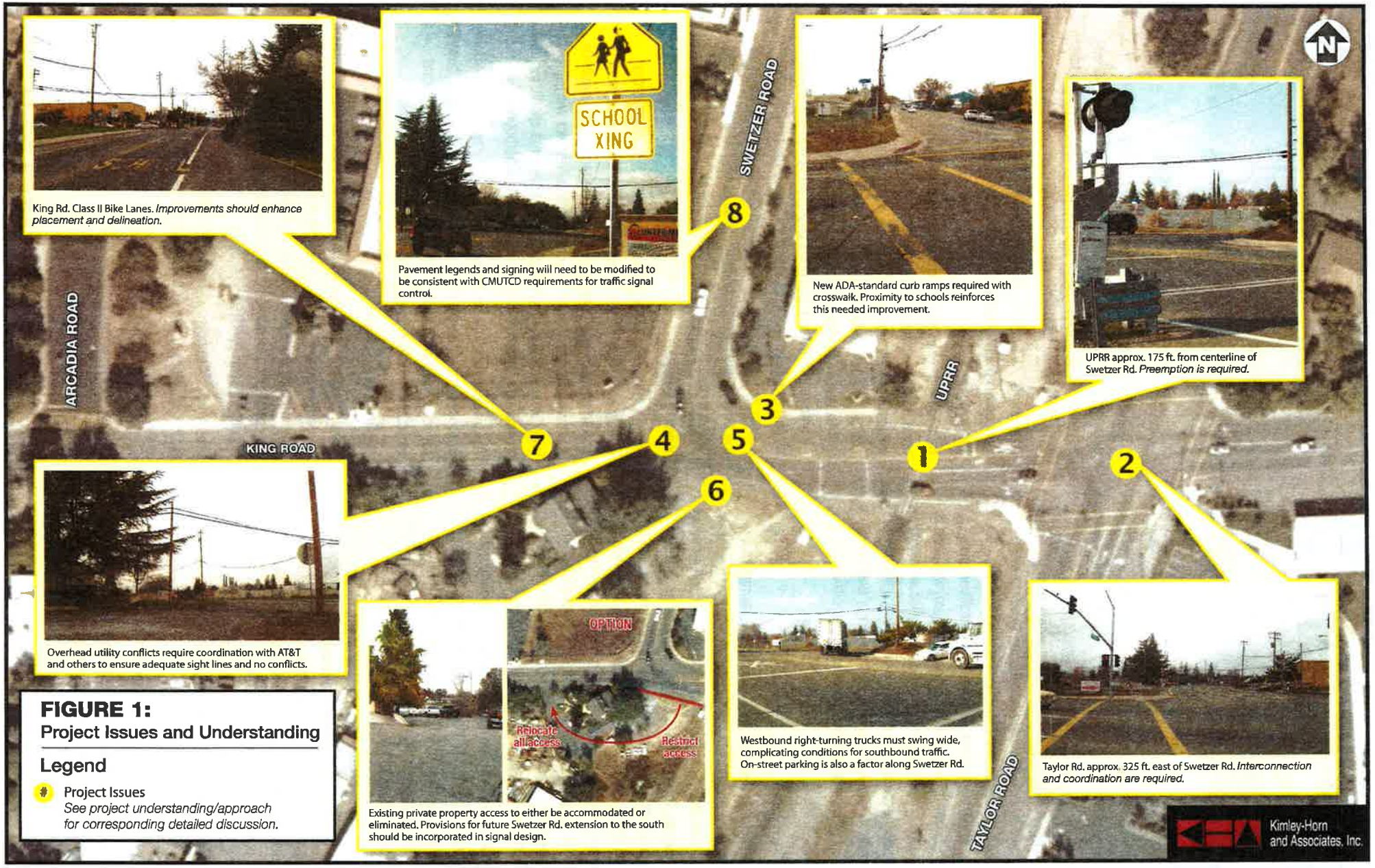
3. ADA Requirements

King Road provides access from the west to two Town public school facilities. As such, improvements at the Swetzer Road intersection should incorporate an upgrade of the existing curb ramps to be consistent with current ADA standards, and to properly align them with the desired cross-walk locations.

Approach: *Improve the intersection by replacing the two existing curb ramps with new ADA standard configurations. The curb ramp in the northeast corner should be relocated to the south to appropriately align with the crosswalk location.*

4. Overhead Utilities

As with most urban intersections, the King Road intersection with Swetzer Road has numerous utilities, including overhead, adjacent to, and running through the intersection. In particular, AT&T has a thick bundle of cables crossing through the western edge of the subject intersection. These cables are anticipated to


ARCADIA ROAD
KING ROAD
SWETZER ROAD
UPRR
TAYLOR ROAD
SCHOOL XING
OPTION
Relocate all access
Restrict access
1
2
3
4
5
6
7
8
King Rd. Class II Bike Lanes. Improvements should enhance placement and delineation.
Pavement legends and signing will need to be modified to be consistent with CMUTCD requirements for traffic signal control.
New ADA-standard curb ramps required with crosswalk. Proximity to schools reinforces this needed improvement.
UPRR approx. 175 ft. from centerline of Swetzer Rd. Preemption is required.
Overhead utility conflicts require coordination with AT&T and others to ensure adequate sight lines and no conflicts.
Existing private property access to either be accommodated or eliminated. Provisions for future Swetzer Rd. extension to the south should be incorporated in signal design.
Westbound right-turning trucks must swing wide, complicating conditions for southbound traffic. On-street parking is also a factor along Swetzer Rd.
Taylor Rd. approx. 325 ft. east of Swetzer Rd. Interconnection and coordination are required.
FIGURE 1:
Project Issues and Understanding
Legend
Project Issues
See project understanding/approach for corresponding detailed discussion.
Kimley-Horn and Associates, Inc.

visually conflict with the westbound King Road traffic's view of the proposed signal equipment.

Approach: *Kimley-Horn met with Mr. Greg Ellis (AT&T) at the subject intersection in February 2010. As an outcome of this meeting, it appears as if AT&T would be required to adjust their facilities to avoid physical and/or visual obstructions with the proposed traffic signal equipment. Because these facilities are within the Town's right-of-way and the proposed improvements are for the public good, it is presumed that the cost to relocate would be born by the utility according to a national franchise agreement. It will be important to, early on, quantify the amount of lead time required for AT&T (and/or others) to relocated their facilities (typically 45 days).*

5. Design Vehicle

The subject intersection experiences a predictable, routine mix of users ranging from traditional passenger cars to large, tractor-trailer industrial vehicles. As noted by the Town and observed in the field, southbound Swetzer Road traffic waiting to enter King Road routinely has difficulty assessing the intended movement of westbound King Road traffic. Due to the skew of the intersection, large industrial trucks are required to make a wide, sweeping turn, which results in positioning similar to westbound through traffic. As such, southbound traffic cannot initially differentiate between approaching right-turn and through vehicles.

Furthermore, in addition to accommodating the westbound right-turn design vehicle, the effect of this movement must also be accounted for along Swetzer Road north of King Road. On-street parking is currently prohibited along the west side, and for a short distance along the east side.

Approach: *As shown in **Figure 3** (following page), Kimley-Horn proposes to improve upon the existing pavement striping and lane designations to reduce southbound driver uncertainty, and to achieve desirable signal phasing. This configuration is consistent with the mix of users, peak-hour traffic patterns, and other desirable improvements. It should be noted that the proposed configuration will accommodate an AASHTO WB-40 design vehicle for the westbound right-turn movement.*

6. Private Driveway/Swetzer Road Extension

The south leg, or northbound approach, to the subject intersection is understood to currently provide private property access only.

It is also understood that the Town's General Plan includes an extension of Swetzer Road south of King Road to Sierra College Boulevard. This intersection improvement project should address both of these factors.

Approach: *All traffic signal equipment should be placed in locations that will not conflict with the future roadway improvements.*

Regarding the existing private property access, additional access control will be required along the south side of King Road to facilitate orderly, controlled vehicles access and circulation in the critical area between signals and UPRR facilities. Access control will be required regardless of the Swetzer Road extension status. As shown in **Figure 1** (previous page), an option to consider as part of this project could be to eliminate the private property access at this location, and enhance the on-site circulation for the private business to concentrate all access at their existing driveway located west of Swetzer Road along King Road.

7. Bike Facilities

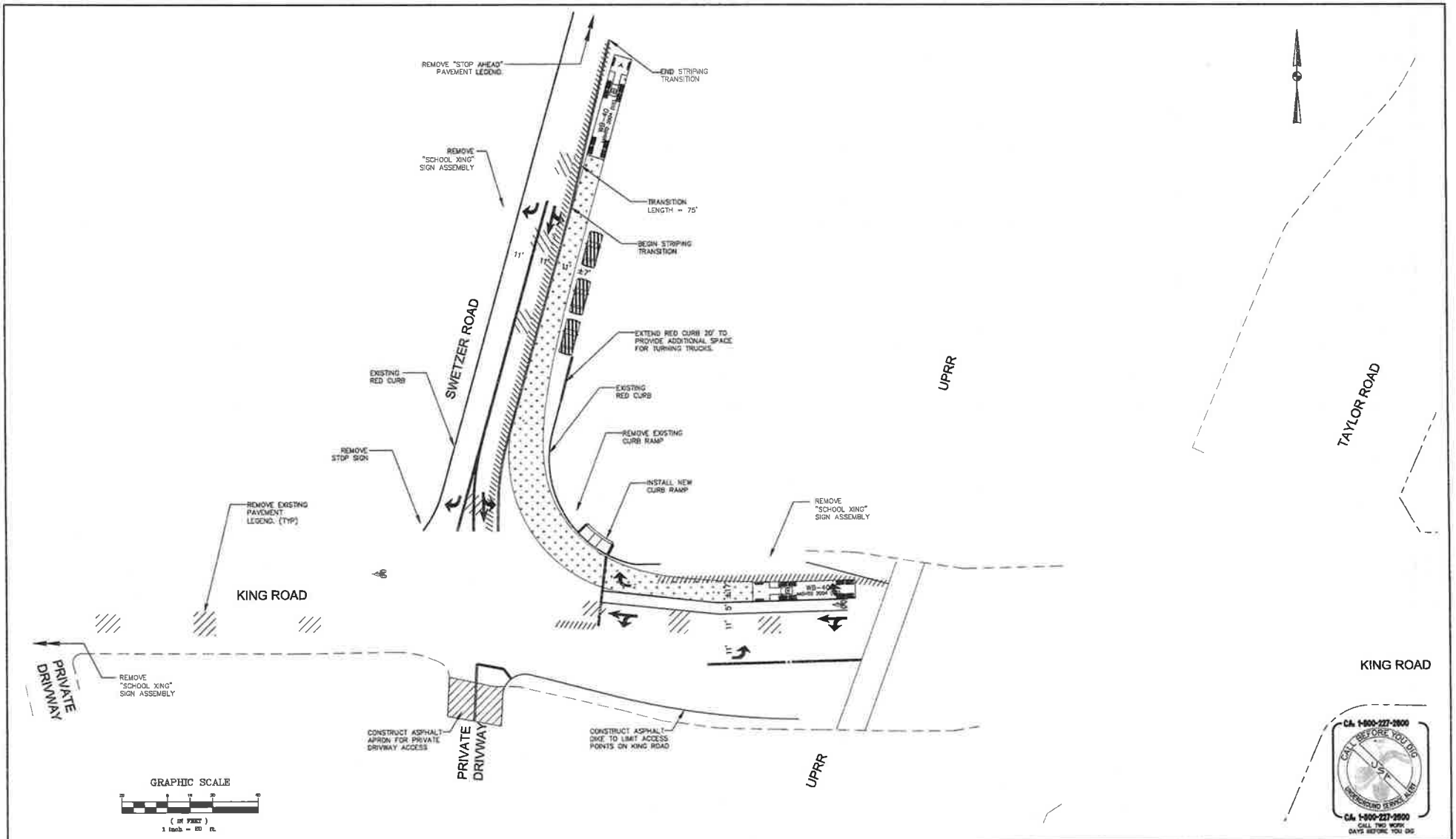
There are existing Class II bike lanes along King Road in the vicinity of Swetzer Road. Improvements to this intersection should accommodate and, as feasible, enhance their presence. Furthermore, westbound bicycles currently conflict with westbound right-turning vehicles. Enhancements should include, at a minimum, appropriate placement of the westbound bike lane.

Approach: *As shown in **Figure 3** (following page), Kimley-Horn proposes to delineate a Class II bike lane along King Road between Swetzer Road and UPRR. These enhancements will enhance bicycle connectivity through this heavily traveled corridor.*

8. Signing and Striping

Existing signing and striping at the subject intersection will not be consistent with CMUTCD requirements for signalized intersections. Pavement legends and warning signs pertaining to (unsignalized) crosswalk locations should be removed or replaced to be compliant with CMUTCD standards.

Approach: *As shown in **Figure 3** (following page), advance pavement legends are to be removed and conflicting signing is to either be relocated or removed.*



NO.	REVISIONS	BY	DATE	APP'D

TOWN of LOOMIS / DEPARTMENT OF PUBLIC WORKS

DESIGNED	DATE	WORK ORDER	
DRAWN	DATE	LEVEL BOOK	
CHECKED	DATE	TARGET BOOK	

SUBMITTED:
Kimley-Horn and Associates, Inc.
11060 White Rock Road, Suite 150
Rancho Cordova, California, 95670 © 2010
(916) 858-5800 FAX (925) 543-0839

PREPARED UNDER THE DIRECTION OF:

MATTHEW D. WEIR DATE:
RCE No. 70218, EXP. 06/30/10

KING ROAD @ SWETZER ROAD
30% SIGNING AND STRIPING PLAN

PROJECT NO.	CONTRACT NO.	FILE NO.

DRAWING NO. SM-01
SCALE: 1" = 20'
SHT NO. 01

Figure 3

SCOPE OF SERVICES

Task 1: Project Initiation & Administration

1a - Kick-Off Meeting

Kimley-Horn will attend a project initiation/kick-off meeting with the Town. The primary purpose of this meeting will be to confirm the specific requirements of the project, and to obtain clarification of the Town's expectations. Meeting notes will be prepared and distributed electronically to the meeting attendees.

1b - Concept Review

The conceptual improvements, essentially 30% plans, submitted as part of the response to the project's RFP, are anticipated to be reviewed at the project kick-off meeting. The purpose of this review will be to obtain feedback from the Town on any modifications and/or comments, and to obtain direction on the improvement scheme to be pursued for final design.

1c - CPUC and UPRR Initiation/Coordination

As a result of the project's proximity to the King Road UPRR grade crossing, the project will be required to be coordinated through the California Public Utilities Commission (CPUC) and UPRR. This initial contact with CPUC will inform them of the project, and will enable us to quantify the various requirements from them on this particular project. The required process with both of these agencies is discussed further in subsequent tasks of this Scope of Services.

1d - Project Administration

This task includes general project administration activities, including management of project staff, quality control, and project accounting. This scope of services is anticipated to be completed over a five-month period (excluding construction phase services).

1e - Meetings

A number of meetings are anticipated to be required to complete this scope of services. Up to five meetings, or a total of 15 hours, are included in this Scope of Services for meeting participation. Meeting participation includes preparation, coordination, attendance, and documentation for both in-person meetings and teleconferences.

Task 2: Utility Coordination & Right-of-Way Research

Kimley-Horn will prepare up to three utility coordination correspondences consistent with standard "A, B, and C Letter" procedures. For the purposes of this scope of services, a list of potentially effected utilities is assumed to be provided by the Town.

We will research readily available record deeds, maps, and other drawings within the project limits, extending not more than 100 feet in each direction of the intersection. Kimley-Horn will establish the right-of-way from this record information and prepare a digital CAD file overlaid with the existing improvements as established through other tasks. This task is not to be considered an independent establishment of the right-of-way nor a boundary survey. Limited field review will be conducted in an effort to tie the record right-of-way to the physical improvements.

Task 3: Base Mapping

Kimley-Horn will request roadway and traffic signal record drawings from the Town and/or County. We will conduct one field visit of the project area. The purpose of this field visit will be to observe existing conditions and other features determined by Kimley-Horn to be relevant to the scope of services.

Our team will utilize the record drawings provided by the Town and a site visit to develop a base map for project plan development. The base plan will include existing roadways, traffic signs, pavement markings, curbs, gutters, sidewalks, medians, planter areas, and apparent existing utilities.

If deemed necessary by the Town, we can perform a topographic survey of the project intersection. If requested, the specific scope of services for the survey will be developed, and fee negotiated, prior to initiating these efforts.

Task 4: Concept Development

The conceptual signing and striping layout and traffic signal details presented as part of the response to this project's Request for Proposals includes several key initial assumptions regarding the ultimate improvements to be pursued in final design. More specifically, the submitted concept assumes the following:

- Restriping of westbound King Road approaching Swetzer Road to delineate a right-turn lane and bike lane.
- Signal phasing based on recently collected traffic count data that best accommodates existing travel patterns and maximizes the operation of the new signal (e.g., westbound right-turn overlap signal phase). (See **Figure 4** on the following page)
- Providing interconnect between the UPRR controller and the existing King Road/Taylor Road intersection. This interconnection will allow for signal coordination both for operations and for UPRR preemption.

This concept has been previously developed, was submitted with the response to the RFP, and will provide a solid starting point for discussions of ultimate improvements desired at the study intersection. The concept is anticipated to be discussed at the project kick-off meeting as discussed in Task 1b.

Design changes (i.e., controller location, detection technology, etc.) that occur following receipt of comments on the concept review (Task 1b) will be considered a change to this scope of services. Such revisions will be performed for additional fees to be negotiated prior to authorization.

Task 5: Traffic Signal & Interconnect Design

We will prepare contract documents (plans, specifications, and opinion of probable construction costs) for the design of the following traffic signal improvements:

1. Signal design for King Road at Swetzer Road
2. Signal interconnect design – King Road from Swetzer Road to Taylor Road

The traffic signal and interconnect will be designed in accordance with applicable published Town and Caltrans policies, procedures, manuals, and standards at the onset of this project.

5a - 1st Submittal (60% Plans)

Kimley-Horn will prepare 60% plans for the proposed signal improvements. The 60% plans will include proposed signal phasing, proposed pavement markings, pole and signal head placement, pull boxes, service and controller cabinet locations, and detector placement. The signal plan will be prepared at a scale of 1 inch = 20 feet, and the signing/striping plan will be prepared at a scale of 1 inch = 40 feet.

The following plan sheets are anticipated to be included in this submittal:

1	Cover Sheet	1 sheet
2	General Notes	1 sheet
3	Civil Improvements	1 sheet
4	Signing and Striping Details	1 sheet
5	Traffic Signal Details	2 sheets
6	Interconnect Details	1 sheet
	Estimated Total Sheets:	7 sheets

Kimley-Horn will participate in one meeting with the Town to discuss review comments on the 1st submittal. Comments provided on the 1st submittal will be addressed as part of the 2nd submittal.

In conjunction with this task, We will also initiate the CPUC's GO 88-b process in which the following steps are required to be completed to obtain approval to "modify" or gain preemption with a railroad grade crossing:

1. Contact CPUC and request a Field Diagnostic Review Meeting at the project site
2. Kimley-Horn to calculate required advance preemption timing required with addition of new traffic signal at Swetzer Road
3. Kimley-Horn to circulate draft GO 88-b for UPRR, Town, and PUC concurrence
4. PUC issues executed GO 88-b
5. Town issues Preliminary Engineering (PE) letter to UPRR authorizing them to incur costs up to a predetermined max in order to approximate and design the required improvements
6. UPRR provides Town with construction estimate for required improvements
7. Town authorizes UPRR to proceed and enters into an agreement with UPRR for the required improvements

5b - 2nd Submittal (95% Plans, Specifications, and Opinion of Probable Construction Costs)

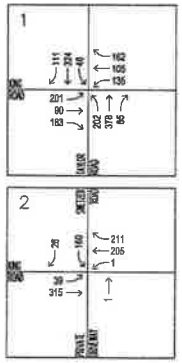
Our will prepare 95% plans, specifications, and estimate (PS&E) for the proposed signal improvements. The 95% PS&E will include proposed signal phasing, proposed pavement markings and signing, pole and signal head placement, conduits, pull boxes, service and controller cabinet locations, and detector placement based on

CONDUCTOR SCHEDULE

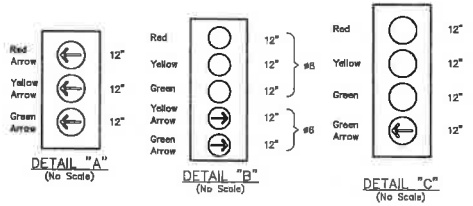
AWG OR CABLE	CONDUCTOR DESIGNATION	NUMBER OF CONDUCTORS / RUN NUMBERS 1	2	3	4	5	6	7	8	9
NO. 14	#1									
	#2									
	#3									
	#4									
	#5									
	#6									
	#7									
	#8									
	#8P									
	#8S									
	#9									
	PPB1(#2P)									
	PPB1(#4P)									
	PPB1(#6P)									
	PPB1(#8P)									
	PPB COMMON									
	SPARE									
	TOTAL NO. 14									
NO. 8	SIGNAL COMMON									
	LIGHTING									
	TOTAL NO. 8									
DETECTOR LOOP CABLE (DLC)	1(1U)									
	2(2U), 2(2A), 2(4U), 2(4L)									
	3(3U)									
	4(4L), 4(4L)									
	5(5U)									
	6(4A), 6(4U), 6(4L)									
	7(7U)									
	8(4L)									
	TOTAL DLC									
EMERGENCY VEHICLE PREEMPTION	CHANNEL A									
	CHANNEL B									
	CHANNEL C									
	CHANNEL D									
	TOTAL EVP CABLE									
No. 12 RxR PRE-EMPT										
PULL ROPE										
	CONDUIT FILL (%)									
	CONDUIT SIZE									

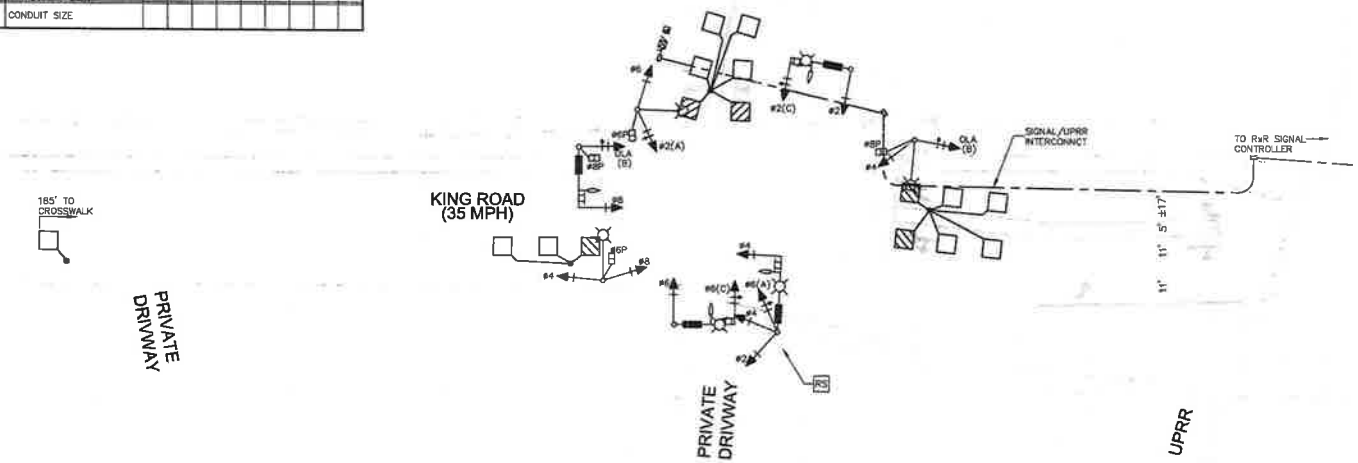
EQUIPMENT SCHEDULE

LOCATION	STANDARD TYPE	STANDARD SIGNAL MAST ARM	STANDARD LUMINAIRE MAST ARM	HPS LUMINAIRE WATTAGE	VEHICLE SIGNAL MOUNTING MAST ARM	VEHICLE SIGNAL MOUNTING POLE	PED SIGNAL MOUNTING	PED PUSH BUTTON ø	PED PUSH BUTTON ARROW	*SPECIAL REQUIREMENTS
ⓐ										
ⓑ										
ⓒ										
ⓓ										
ⓔ										
ⓕ										
ⓖ										
ⓗ										
ⓘ										
ⓙ										

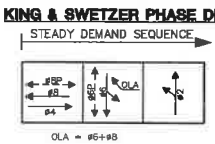


AM PEAK-HOUR TRAFFIC COUNTS
COUNTS CONDUCTED ON JAN. 7, 2010.





KING & SWETZER PHASE DIAGRAM



GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

Ca. 1-800-227-2600
CALL BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
Ca. 1-800-227-2600
CALL TWO WORK DAYS BEFORE YOU DIG

NO.	REVISIONS	BY	DATE	APP'D

TOWN of LOOMIS / DEPARTMENT OF PUBLIC WORKS

DESIGNED DATE | WORK ORDER
DRAWN DATE | LEVEL BOOK
CHECKED DATE | TRANSIT BOOK

SUBMITTED:
Kimley-Horn and Associates, Inc.
11060 White Rock Road, Suite 150
Rancho Cordova, California 95670 © 2010
(916) 858-5800 FAX (925) 543-0839

PREPARED UNDER THE DIRECTION OF:
MATTHEW D. WEIR DATE
RCE No. 70218, EXP. 09/30/10

KING ROAD @ SWETZER ROAD
30% TRAFFIC SIGNAL PLAN

DRAWING NO. E-1
SCALE: 1" = 20'
SHT NO. OF
PROJECT NO. | CONTRACT NO. | FILE NO.

Figure 4

the Town's 60% comments. Specifications will include technical specifications and shall be prepared by editing Caltrans' or the Town's Standard Specifications.

The following plan sheets are anticipated to be included in this submittal:

1	Cover Sheet	1 sheet
2	General Notes	1 sheet
3	Civil Improvements	1 sheet
4	Signing and Striping Details	1 sheet
5	Traffic Signal Details	2 sheets
6	Interconnect Details	1 sheet
	Estimated Total Sheets:	7 sheets

Our will participate in one meeting with the Town to discuss review comments on the 2nd submittal. Comments provided on the 2nd submittal will be addressed as part of the 3rd submittal.

5c – 3rd Submittal (100% Plans, Specifications, and Opinion of Probable Construction Costs)

We will prepare 100% PS&E for the proposed signal improvements. The 100% PS&E will include revisions based on the Town's 95% PS&E comments.

The following plan sheets are anticipated to be included in this submittal:

1	Cover Sheet	1 sheet
2	General Notes	1 sheet
3	Civil Improvements	1 sheet
4	Signing and Striping Details	1 sheet
5	Traffic Signal Details	2 sheets
6	Interconnect Details	1 sheet
	Estimated Total Sheets:	7 sheets

We will participate in one meeting with the Town to discuss review comments on the 3rd submittal. Comments provided on the 3rd submittal will be addressed as part of the 4th submittal.

5d – 4th Submittal (Final Plans, Specifications, and Opinion of Probable Construction Costs)

Kimley-Horn will prepare final PS&E for the proposed signal improvements. The final PS&E will include revisions based on the Town's 100% PS&E comments.

The following plan sheets are anticipated to be included in this submittal:

- Final plans in 24"x36" standard Town format on Mylar (up to seven sheets)
- Electronic design files of final plans
- Final specifications and technical provisions in standard Caltrans and/or Town format in electronic and hardcopy format
- Final Engineer's opinion of probable construction costs in electronic and hardcopy format

Task 6: Signal Timing Development

Kimley-Horn will develop up to three timing plans for the King Road intersection with Swetzer Road. These timing plans are anticipated to include weekday AM, weekday PM, and off-peak periods. The timing plans will consist of cycle length, phasing, splits, and offsets (if applicable).

Task 7: Construction Phase Services

Kimley-Horn will provide professional construction phase services as specifically stated below. We will attend one pre-construction meeting and respond to up to five Requests for Information (RFIs) submitted by the contractor.

Requests for Information. Kimley-Horn will respond to reasonable and appropriate contractor requests for information and issue necessary clarifications and interpretations of the contract documents to the Town, as appropriate, for the orderly completion of the contractor's work. Any orders authorizing variations from the contract documents will be made by the Town.

Substitutes and "or-equal." Our team will evaluate and determine the acceptability of substitute or "or-equal" materials and equipment proposed by the contractor in accordance with the contract documents, but subject to the provisions of applicable standards of state or local government entities. Construction changes and processing through governing agencies are excluded and shall be considered an additional service.

Limitation of Responsibilities. Kimley-Horn shall not be responsible for the acts or omissions of any contractor, or of any of their subcontractors, suppliers, or of any other individual or entity performing or furnishing the work. Kimley-Horn shall not have the authority or responsibility to stop the work of any contractor.

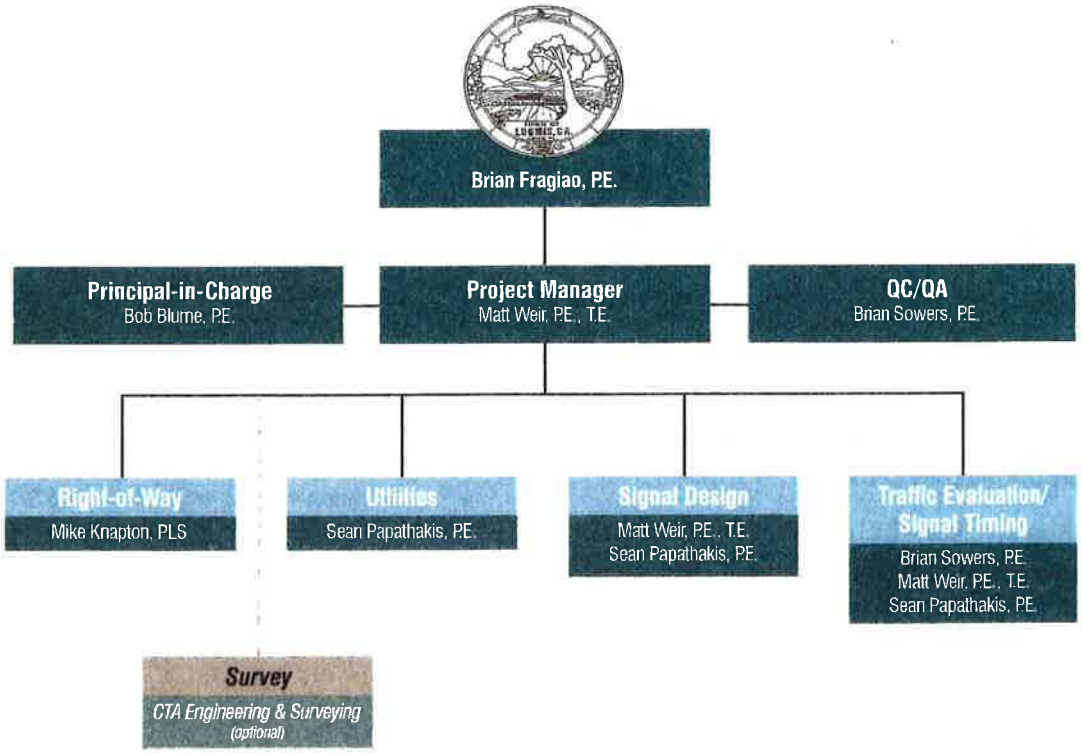
Task 8: Project Closeout

Kimley-Horn will incorporate design modifications obtained for the contractor in a drawing of record upon project completion. The following plan sheets are anticipated to be included in this submittal:

1	Cover Sheet	1 sheet
2	General Notes	1 sheet
3	Civil Improvements	1 sheet
4	Signing and Striping Details	1 sheet
5	Traffic Signal Details	2 sheets
6	Interconnect Details	1 sheet
	Estimated Total Sheets:	7 sheets

Kimley-Horn will also compile all applicable, relevant project documentation to submit to the Town upon project completion.

2. Project Team



BOB BLUME, P.E.,

Principal-in-Charge

Bob has more than 27 years experience in the study, design, and construction of transportation facilities within the Western United States. He has experience in a wide range of public works projects including roadways, bridges, signals, lighting, light rail facilities, airports, and buildings. He has completed civil site design including grading, paving, utilities, drainage, water pollution control and treatment, ADA compliance, and environmental mitigation. Bob has managed multi-discipline teams preparing studies, reports, and preliminary and final plans, specifications, and cost estimates (PS&E) for a variety of projects ranging in size and complexity.

MATT WEIR, P.E., T.E.,

Project Manager, Signal Design

With more than 11 years of experience, Matt's expertise includes traffic operations, traffic signal design, intersection and roadway design, traffic simulation, corridor studies, and traffic impact studies. He specializes in traffic operations, including intersection and corridor studies, and traffic signal timing and design. He is an experienced user of Synchro, SimTraffic, Traffix, and Highway Capacity Software traffic operations computer programs.

BRIAN SOWERS, P.E.,

Quality Control/Quality Assurance, Traffic Evaluation/Signal Timing

Brian specializes in signal timing and operations and has developed signal coordination plans for over 2,500 signals. He has served as project manager on over 50 signal timing projects for over 30 agencies, including such agencies as the Cities of Oakland, Berkeley, San Jose, Concord, Walnut Creek, Pittsburg, Las Vegas, Watsonville, Daly City, South San Francisco, Hayward, Pleasanton, Menlo Park, Tiburon, Suisun City, Brentwood, Campbell, Saratoga, Mountain View, Richmond, Palo Alto, Sunnyvale, Emeryville, Santa Clara, Pinole, Milpitas, and Belmont, Caltrans, Santa Clara County, Contra Costa County, and Alameda County. Brian's operations experience includes the development of time-based coordination, traffic responsive signal timing, Light Rail Transit timing, and Transit Priority (TSP) timing.

SEAN PAPATHAKIS, P.E.,

Utilities, Signal Design, Traffic Evaluation/Signal Timing

Sean has experience in transportation planning and traffic operations and has worked on number traffic impact studies within Northern California. He is experienced in numerous software packages including Synchro, AutoCAD, AutoTURN, and Highway Capacity Software and is skilled in the application of Manual on Uniform Traffic Control Devices guidelines.

MICHAEL KNAPTON, P.E., RPLS,

Right-of-Way

Mike has more than 10 years of experience specializing in tentative mapping, subdivision mapping, condominium maps, legal descriptions, right-of-way surveys, boundary surveys, ALTA site surveys, and Geographic Information Systems projects. He also has experience in drainage design, land development grading, sewer design, major roadway and subdivision design, public improvement and grading plans, tentative map and final map preparation, construction cost estimates, and construction administration with extensive field work.

cta

KEVIN A. HEENEY, PLS, PRINCIPAL SURVEYOR, OFFICE SURVEYOR

Kevin has over 28 years of experience successfully completing a wide range of land surveying and base mapping projects. During his 13 years with CTA, Kevin has acted as project surveyor on numerous transportation and infrastructure projects including the highway 50 and East Bidwell interchange (Folsom); State Route 275 (West Sacramento); pipelines for the Placer County Water Agency; sewer interceptors and pump stations for the Lower Northwest interceptor, Upper Northwest interceptor, Bradshaw interceptor, South interceptor, and Mather interceptor for the Sacramento Regional County Sanitation District; and levee improvements along the Yuba and Feather Rivers for the Three Rivers Levee Improvement Authority.

3. Project Schedule

Task	Dates	2010 Apr	May	Jun	Jul	Aug	Sept	2011 May	Sept	Oct
Notice to Proceed	4/5/10	★								
Initial Coordination with PUC/UPRR, Initiate Utility, Coordination, Site Visit	**4/5**-4/16									
Kick-off Meeting	4/16									
(Survey if required)	4/19-4/30									
60% Plans	4/19-**5/14**									
City Review & Meeting	5/17-5/28									
95% PS&E	5/31-**6/11**									
City Review & Meeting	6/14-6/25									
100% PS&E	6/28-**7/16**									
City Review & Meeting	7/19-7/30									
Final PS&E/Signal Timing	8/2-**8/20**									
Construction Phase Services	5/20-9/20/11									
Record Drawings and Documentation	10/20/11									

REFERENCES

Satwant Takhar
City of Live Oak
9955 Live Oak Boulevard
Live Oak, CA 95935
(530) 695-2112

Justin Nartker
City of Rocklin
3970 Rocklin Road
Rocklin, CA 95677
(916) 625-5514

Mark Rackovan, P.E.
City of Folsom
50 Natoma Street
Folsom, CA 95630
(916) 355-3370

Trisha Tillotson, P.E.
City of Grass Valley
125 East Main Street
Grass Valley, CA 95945
(530) 274-4352

INSURANCE REQUIREMENTS

Kimley-Horn and Associates, Inc. will meet the liability limits outlined in Exhibit A of the RFP.

4. Statement of Qualifications

SIMILAR PROJECTS

Elm Street at SR 99 Signal Design, Live Oak, CA

Kimley-Horn performed a traffic signal design for the intersection of SR 99 (Live Oak Boulevard) at Elm Street in the City of Live Oak, California. The subject site is located approximately two tenths of a mile south of the existing traffic signal at the intersection of Live Oak Boulevard and Pennington Road. Union Pacific Railroad (UPRR) tracks are located approximately 150 feet west of the subject intersection and required supplemental coordination and design efforts. The new traffic signal will be interconnected with the Pennington Road intersection. Team members: Matt Weir, Brian Sowers

Riley Street Traffic Operations, Folsom, CA

Kimley-Horn is assisting the City in addressing the traffic conditions along Riley Street by providing traffic signal design modifications, signing and striping plans, signal system timings, and overall corridor operational improvements. Team member: Matt Weir

Pedestrian Modifications to the Intersection of Atherton Road & Sunset Boulevard, Rocklin, CA

Kimley-Horn is providing traffic signal modification design services for the intersection of Sunset Boulevard and Atherton Road. Sunset Boulevard plays a significant role in providing access and mobility throughout the City. The project area serves approximately 13,000 vehicles per day and provides one of the City's direct connections to SR 65. Team member: Matt Weir

Brunswick Road/Sutton Way Signal Modification and Traffic Study, Grass Valley, CA

Kimley-Horn provided traffic impact analysis services for a proposed Walgreens store to be located in the northwest corner of the Brunswick Road intersection with Sutton Way. This project required extensive interaction with City and Caltrans District 3 staff. Unique aspects of this project include the evaluation and simulation of a congested, closely spaced signalized corridor, multiple lane utilization characteristics, and development and fine tuning of mitigation measures. We also provided traffic signal modification design services and obtained a Caltrans Encroachment Permit for the required off-site mitigations. Team members: Matt Weir, Sean Papathakis

SR 20/Gray Road Signal Design, Yuba City, CA

Kimley-Horn provided traffic signal modification and frontage improvement design services for an Arco gas station. The project involved preparation of both Caltrans and Yuba City encroachment permits. Team members: Matt Weir, Brian Sowers

Taylor Road and King Road Signal Modification, Loomis, CA

Kimley-Horn performed a signal modification on Taylor Road and King Road in the Town of Loomis, California. We replaced 8" signal heads with new 12" light emitting diode (LED) signal modules. Also, the signal controller and service pedestal were relocated from the northwest quadrant of the intersection to the southeast quadrant. Team members: Brian Sowers

On-Call Services, West Sacramento, CA

The City of West Sacramento Redevelopment Agency select a CTA Engineering & Surveying to provide on-call land surveying services in 2008. The majority of the work has been in the "Triangle Specific Plan" area surrounding Raley Field and the Union Pacific Railroad Yard. To date, CTA's services have included topographic mapping, ALTA surveys, Record of Surveys, preparations of legal descriptions and exhibit plats, review of title documents, and the calculation of areas or the location of various encumbrances. Much of the area is encumbered with old railroad right-of-ways, easements, and various relinquishments of former SR 275, now known as the Tower Bridge Gateway. Team members: Kevin Heeney, Edgar Brown.

Matt Weir, P.E., T.E.

Project Manager, Signal Design

Education

Master of Civil Engineering, Transportation Engineering
Georgia Institute of Technology

Bachelor of Science
Civil Engineering
Clemson University

Professional Credentials

Registered Civil and Traffic Engineer in CA

Professional Affiliations

Institute of Transportation Engineers

ITE Traffic Engineering Council

Relevant Experience

Elm Street at SR 99 Signal Design, Live Oak, CA — Project Manager. Kimley-Horn completed a traffic signal design for the intersection of SR 99 (Live Oak Boulevard) at Elm Street in the City of Live Oak. The subject site is located approximately two tenths of a mile south of the existing traffic signal at the intersection of Live Oak Boulevard and Pennington Road. Union Pacific Railroad (UPRR) tracks are located approximately 150 feet west of the subject intersection and required supplemental coordination and design efforts to accommodate railroad preemption.

Brunswick Road/Sutton Way Signal Modification and Traffic Study, Grass Valley, CA — Project Manager. Kimley-Horn provided traffic impact analysis services for a proposed Walgreens store to be located in the northwest corner of the Brunswick Road intersection with Sutton Way. This project required extensive interaction with City and Caltrans District 3 staff. Unique aspects of this project include the evaluation and simulation of a congested, closely spaced signalized corridor, multiple lane utilization characteristics, and development and fine tuning of mitigation measures. Kimley-Horn also provided traffic signal modification design services and obtained a Caltrans Encroachment Permit for the required off-site mitigations.

SR 267 Signal Modification at Northstar Drive, Placer County, CA — Project Manager. Kimley-Horn prepared design plans for a traffic signal modification in Placer County. The existing three-leg ("T") intersection was upgraded to include a fourth leg providing access to a new residential development. Due to the intersection being within Caltrans right-of-way, the design of the new traffic signal was coordinated with and governed by Caltrans policies, procedures, and standards.

SR 65 Lincoln Signal Coordination Analysis, Lincoln, CA — Project Manager. Kimley-Horn worked with the City of Lincoln and Caltrans to conduct a study to review various corridor improvement options for SR 65 to help relieve corridor congestion through downtown. The project included seven traffic signals between 7th Street and Ferrari Ranch Road, which are all owned and operated by Caltrans, have Type 170 controllers with Caltrans local software, and are connected to the CT-NET system. The project included a review of the existing traffic responsive signal timing and development of improved corridor signal timing. In addition, Kimley-Horn reviewed capacity alternatives such as signal phasing changes, lane configuration changes, variable lane control, and adding capacity through time-of-day parking restrictions. The project ultimately resulted in the field implementation of new signal timing plans to improve both peak- and non-peak traffic operating conditions.

Diamond Springs Parkway Traffic Study, El Dorado County, CA — Project Manager. Kimley-Horn is providing traffic impact analysis services for the proposed Diamond Springs Parkway project in Diamond Springs. The project includes evaluation of traffic impacts at 17 intersections and eight roadway segments. Consideration for vehicle queuing and traffic signal warrants are also included as part of the traffic study efforts. This traffic study effort includes coordination with El Dorado County and Caltrans District 3 for review and project approvals. Ultimately, traffic signal designs will be provided to support the implementation of this new roadway facility.

Brian E. Sowers, P.E.

Quality Control/Quality Assurance, Traffic Evaluation/Signal Timing

Education

Bachelor of Science, Civil Engineering, California State Polytechnic University, San Luis Obispo

Professional Credentials

Professional Engineer in California

Instructor for UC Berkeley's Institute of Transportation Studies "Advanced Traffic Signal Operations" Course

Professional Affiliations

Institute of Transportation Engineers

Traffic Signal Timing and Coordination Experience

- RSTP Phase II Signal Timing Study (148 signals) on major arterials, San Jose, CA
- Re-timing Study on major arterials (83 signals), San Jose, CA
- SR 65 Traffic Responsive Signal Timing Study (six signals), Lincoln, CA
- 2008 Expressways Traffic Signal Timing Project (53 signals), County of Santa Clara, CA
- Citywide Traffic Signal Timing Project (36 signals), Merced, CA
- Monument Boulevard and Diamond Boulevard Traffic Signal Timing Project-2008 (15 signals), Concord, CA
- Telegraph Avenue, Ashby Avenue, Grand Avenue, Broadway Signal Timing Project (70 signals), Berkeley/ Oakland, CA
- Shoreline Boulevard, Grant Road, and Evelyn Avenue Signal Timing Study (28 signals), Mountain View, CA
- Major Arterials RSTP Phase II Signal Timing Study, Walnut Creek, CA
- 2002 Citywide Traffic Signal Timing Project (110 signals), Concord, CA
- Saratoga Road Signal Coordination Project (eight signals), Sunnyvale, CA
- Meadow Lane/Robin Lane Traffic Signal Design, Concord, CA
- Windemere Development Traffic Signal Designs (12 signals), San Ramon, CA
- RSTP Phase III Re-Timing and LRT Signal Priority Study (318 signals), San Jose, CA
- RSTP Phase I Signal Timing and Transit Signal Priority Study (242 signals), San Jose, CA
- RSTP Phase I Signal Timing and Transit Signal Priority Study (242 signals), San Jose, CA
- Proactive Signal Timing Study (223 signals), San Jose, CA
- 2009 Expressways Traffic Signal Timing Project (89 signals), County of Santa Clara, CA
- Citywide Traffic Signal Timing Project (144 signals), Vallejo, CA
- 2008 Citywide Traffic Signal Timing Project (84 signals), Concord, CA
- San Pablo Avenue Signal Re-timing RSTP Study (124 signals), Contra Costa & Alameda Counties, CA
- Saratoga Avenue and Saratoga-Sunnyvale Road Signal Timing Study (16 signals), Saratoga, CA
- Railroad Avenue/Civic Road Traffic Signal Modification, Pittsburg, CA
- Downtown Walnut Creek RSTP Phase I Signal Timing Study (40 signals), Walnut Creek, CA
- El Camino Real, Lafayette Street, Scott Boulevard, and De La Cruz Boulevard Signal Timing Project (24 signals), Sunnyvale, CA
- Crow Canyon Road Video Detection Design (seven signals), San Ramon, CA

Traffic Signal Design Experience

- Hamilton Avenue/SR 17 Off-ramp Intersection Widening, Campbell, CA
- Deer Valley Road/Country Hills Drive Signal Modification, Antioch, CA
- Galindo Street Signal Modifications (two signals), Concord, CA
- San Ramon Valley Boulevard Video Detection Design (two signals), San Ramon, CA
- Market Street/Fry Way Traffic Signal Modification, Concord, CA
- Foothill Road/Foothill High School Signal Design, Pleasanton, CA
- Mission Boulevard (SR-238) at Lafayette Street Traffic Signal Design, Hayward, CA
- Citywide Emergency Vehicle Preempt Installation (16 City and Caltrans signals), Livermore, CA

Sean C. Papathakis, P.E.

Utilities, Signal Design, Traffic Evaluation/Signal Timing

Education

Bachelor of Science, Civil Engineering, California State Polytechnic University, San Luis Obispo

Professional Credentials

Professional Engineer in California

Professional Affiliations

Institute of Transportation Engineers

Relevant Experience

The Railyards, Sacramento, CA — Analyst. Worked with the City of Sacramento to develop the appropriate intersection configurations to accommodate design vehicles. Selected the proper location of the traffic control equipment for all of the new signalized intersections. Worked with the City of Sacramento to determine the preferred signal interconnection route through the development. Kimley-Horn is responsible for the project management and coordination of all planning and design elements. Kimley-Horn's design services include designing Railyards Boulevard, 5th Street, and 6th Street which will serve as major access points into the project site. Our work includes the design of the roadway, utilities, drainage, streetscape, and stormwater quality improvements along each roadway.

Downtown Historic District Parking Implementation Plan Update, Folsom, CA — Project Engineer/Task Manager. Kimley-Horn is assisting the City of Folsom with an update to their Historic District Parking Implementation Plan. This project involves performing an evaluation of the City's current parking generation rates; developing an updated parking demand forecast to determine additional new parking structures at several sites throughout the Historic District; evaluating and recommending funding; and assessing special event parking management strategies.

Stormwater Infrastructure Management Plan (SWIMP) at Oakland International Airport, Oakland, CA — Analyst. Kimley-Horn prepared a detailed study and preliminary design for drainage improvements for the entire airport site. The 2,275-acre site is surrounded by levees and much of the site is below the high tide water surface elevation. The site includes over 40 miles of culverts, 10 miles of open channels, and four stormwater pump stations. The effort included field investigations and the evaluation of existing stormwater infrastructure, surveying and mapping, preparation of a SWMM hydrologic and hydraulic model of the site, a stormwater quality management plan with recommended BMPs for existing drainage facilities and new construction, a stormwater implementation plan with prioritized recommendations for future CIPs, preliminary designs of the recommended improvements, and cost estimates.

Diamond Springs Parkway, Placerville, CA — Project Engineer. Kimley-Horn is providing traffic impact analysis services for the proposed Diamond Springs Parkway project in Diamond Springs, California. The purpose of this impact analysis is to identify potential environmental impacts to transportation facilities as required by the California Environmental Quality Act (CEQA). The project includes evaluation of traffic impacts at 17 intersections and eight roadway segments. This traffic study effort includes coordination with El Dorado County and Caltrans District 3 for review and project approvals.

Placer Oaks TIA, El Dorado Hills, CA — Project Engineer. Performed intersection operational analysis for existing conditions and existing plus approved project conditions to evaluate the effect of the proposed project on the local roadway network. Kimley-Horn is providing traffic impact analysis services for Placer Oaks, a 20-acre, 31 single-family dwelling development with one access driveway to Forni Road in El Dorado County, California. The purpose of this analysis is to identify potential environmental impacts to transportation facilities as required by the California Environmental Quality Act (CEQA). This analysis includes the evaluation of nine intersections, vehicle queuing, signal warrants, and project driveway sight distance for four analysis scenarios.

KEVIN A. HEENEY

Vice President

Project Surveyor/Office Survey Supervisor
California Licensed Land Surveyor, P.L.S. 5914

- Over 32 years of experience in a wide range of surveying and mapping projects.
- Repeated selection by numerous clients to provide land surveying services on a variety of projects.
- Review and compilation of over 30,000 legal descriptions, State of Alabama Assessor's Mapping
- Currently utilizes AutoCAD Rel. 2009, 2008, 2006, 2004, 2000i, and 14, AutoDesk Land Development Desktop, GPSurvey Ver. 2.3 and Trimble Geomatics Office Ver. 1.63.

KEY PROJECTS EXPERIENCE

- Project Surveyor for the South Interceptor and Mather Interceptor Program Management contract for **Sacramento Regional County Sanitation District**. G.P.S. Control, Field Surveys, Office calculations and research for Right of Way Base Maps along the 11+ mile route. Preparation of plats and legal descriptions and other required right of way exhibits. Project completion expected December 2010.

- Project Surveyor for the **University of California, Merced Campus**, Merced California. GPS surveys for aerial base mapping and primary project control; Boundary survey of 10,000 + acres and filing of Project Record of Survey; ALTA surveys and various acquisition exhibits.

- Project Surveyor for **Three Rivers Levee Improvement Authority (TRLIA)** Right of Way surveys. Under contract with Bender Rosenthal, Inc., provide project Land Net, Plats and Legal Descriptions and various field staking activities for the Yuba River Levee Repairs, the Feather River Levee Repairs and the Feather River Set-back Levee projects.

- Project Surveyor for the Upper Northwest Interceptor, Section 9, NEA 1 and NEA 2, for **Sacramento Regional County Sanitation District**, subcontractor to HDR Engineering. Project involvement includes G.P.S. Control, aerial premarking and utility base mapping; Preparation of plats and legal descriptions for right of way acquisitions.

- Project Surveyor for the Lower Northwest Interceptor Program Management contract for **Sacramento Regional County Sanitation District**. G.P.S. Control, Field Surveys, Office calculations and research for Right of Way Base Maps along the 17+ mile route. Preparation of plats and legal descriptions and other required right of way exhibits. Construction Surveys and Monitoring Surveys were also a part of this contract. Project was substantially complete December 2006.

- Land Surveyor for various surveying and mapping projects for the **U.S. Army Corps of Engineers, Sacramento District** within the West Sacramento/Yolo Basin Wetlands Projects and Various Sites within the American and Sacramento River Projects. G.P.S. Control, hydrographic surveys, structure details, creek cross sections and topographic surveys of specified levee areas. Sites included the Yolo Bypass, Tisdale Weir, 5 Sites along the American River and South Sacramento Creeks and Streams.

- ALTA/ ACSM Land Title Surveys of various sizes and land use. From 10,000 acre raw land surveys to small commercial sites; Apartment buildings, downtown office buildings, gas stations, commercial shopping centers, office complexes and supermarkets.

- Professional Surveyor under contract with **County of Sacramento** for Review and Approval of Right of Way Documents for County Transportation Projects. Review, stamp, and sign Right of Way plats and legal descriptions for various County projects. Review overall base map and existing record maps.

EDUCATION

- California State University, Chico, California - Studies in Engineering, Industry and Technology - 1973-1975

PROFESSIONAL AFFILIATIONS

- Surveyors, Architects, Geologist and Engineers (SAGE) of El Dorado County
- California Land Surveyor's Association

EDGAR D. BROWN

Secretary/Treasurer

California Licensed Land Surveyor, P.L.S. 5405

Ed has over 30 years of experience successfully completing a wide range of field surveys and construction staking projects. During his 27 years with CTA, Ed has acted as head field surveyor on numerous major transportation and infrastructure projects including roadways, freeway overpasses, and pipelines throughout the greater Sacramento area. Ed has over 10 years experience directing and supervising multiple survey crews including preparing, dispatching, and verifying work. Areas of core competency include:

Aerial Control	Construction Staking	Engineering Design Surveys
Survey Computations	Topographic Surveys	Boundary Recovery & Analysis

KEY PROJECTS EXPERIENCE

Transportation Projects

- Bass Lake Road Reconstruction, El Dorado County
- Country Club Road Realignment, El Dorado County
- Creekside Drive Extension, City of Folsom
- White Rock Road Reconstruction & Traffic Signal Design, El Dorado County
- Harbor Boulevard Reconstruction, City of West Sacramento
- Folsom Municipal Center & Riley Street Reconstruction, City of Folsom
- Interstate 80 Overpass Design Surveys, City of Davis
- Davis Street Reconstruction, City of Vacaville
- Wilson Boulevard Signalization, El Dorado County
- Leisure Town Road Improvements, City of Vacaville

Public Works Projects

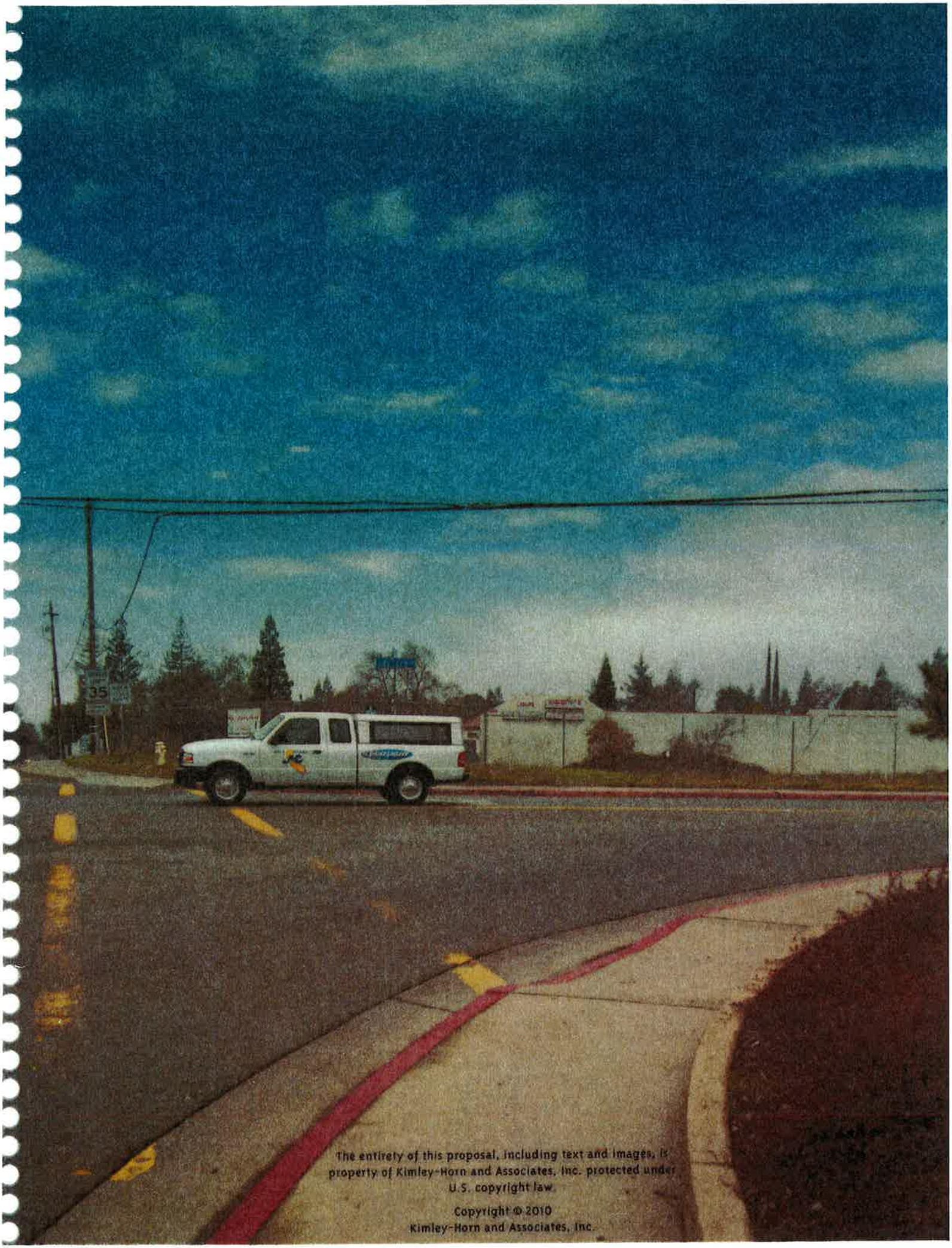
- Upper Northwest Interceptor, Section 9, Sacramento Regional County Sewer District
- Lower Northwest Interceptor Program Management, Sacramento Regional County Sewer District
- Val Verde Road & Dick Cook Road Pipeline Extension, Placer County Water Agency
- Bradshaw Interceptor, Section 8, Sacramento Regional County Sewer District
- University of California, Merced Campus

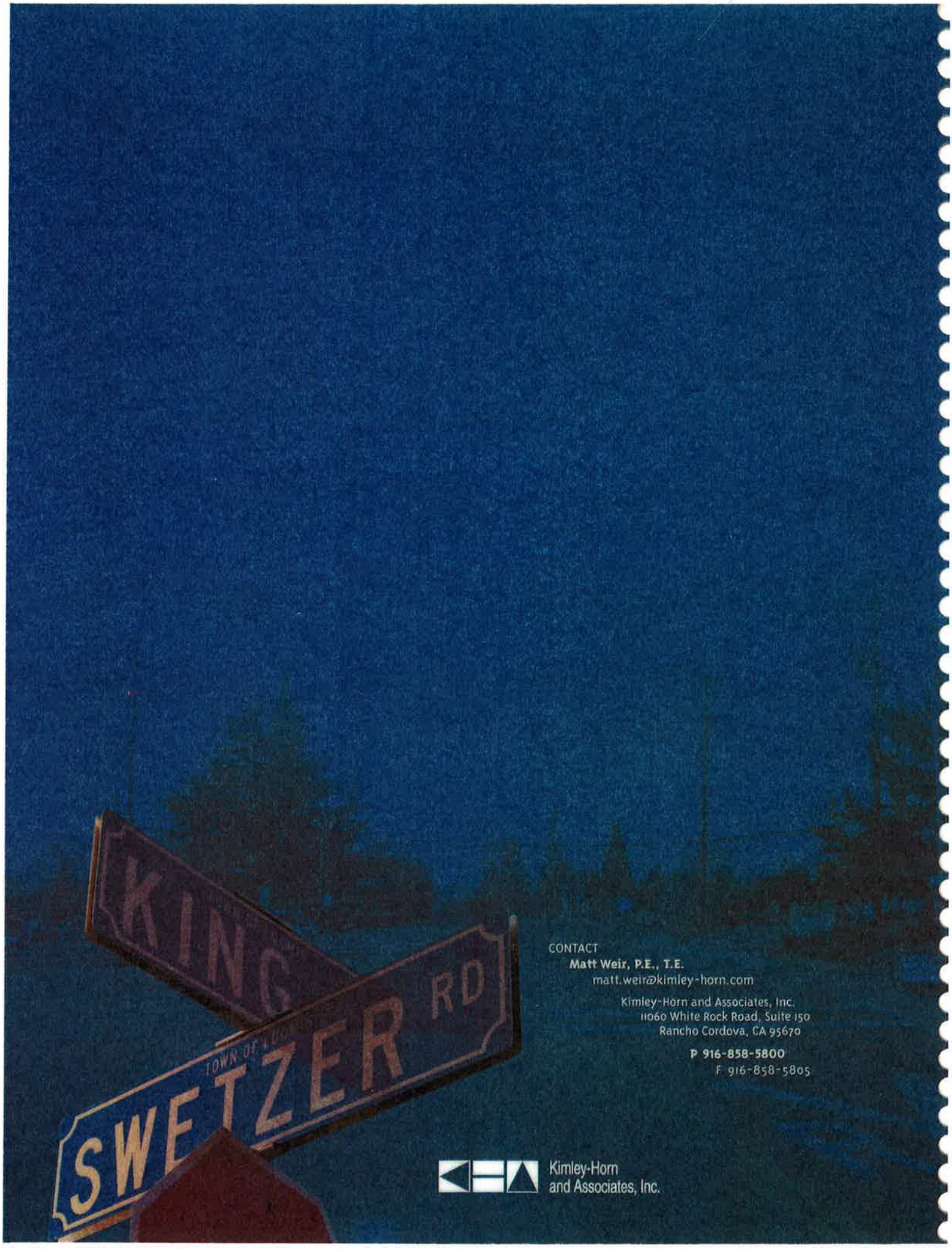
PROFESSIONAL AFFILIATIONS

- Consulting Engineers & Land Surveyors of California
- California Land Surveyor's Association
- Building Industry Association of Superior California

5. Fee Proposal

		Blume	Weir	Knapton	Papathakis	Sowers			
Task		**Man Hour Estimate**					**Total Budget**		
	Classification	PIC	Project Manager	Project Engineer	Analyst	Project Engineer	Task-Totals	Sub-Totals	Hours
	Billing Category	P_7	P_5	P_5	P_2	P_6			
Task 1	Project Initiation							$4,389	23
100	Admin						$739		0
110	Kick-Off Meeting		3				$480		3
	CPUC and UPRR Initiation/Coordination				1		$90		1
	Project Administration	1	4				$840		5
	Meetings (up to 5)		14				$2,240		14
Task 2	Utility Coordination and Right-of-Way Research							$1,540	14
	Utility Coordination				2		$180		2
	Right-of-Way Research			4	8		$1,360		12
Task 3	Base Mapping							$540	6
	As-Builts and Data Coordination				1		$90		1
	Site Visit				5		$450		5
Task 5	Traffic Signal and Interconnect Design							$5,030	43
	60% Plans		4		9		$1,450		13
	PUC/UPRR GO 88-b Paperwork and PUC Diagnostic Meeting		2		2		$500		4
	95% PS&E		4		6		$1,180		10
	100% PS&E		3		6		$1,020		9
	Final PS&E	1	2		4		$880		7
Task 6	Signal Timing Development							$1,690	13
	Preemption Timing Calculations		1		3	2	$800		6
	Signal Timing Development		1		4	2	$890		7
Task 7	Construction Phase Services							$820	6
	RFIs		4		2		$820		6
Task 8	Project Closeout							$860	8
	Project Documentation				2		$180		2
	Record Drawings		2		4		$680		6
	QC & Contingency							$654	5
	Contingency								
	5.0%	0	2	0	3	0	$654		5.2
	QC/QA								
X.0	Expenses							$1,477	
	Allocation						$590		
	Computer Time						$494		
	Direct Expenses						$394		
	Subconsultants						$0.00		
Total Budget Hours		2	46	4	62	4			118
Total Labor		$419	$7,366	$670	$5,556	$774		$15,523	
Total Expenses								$1,477	
Total Billout								**$17,000**	





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