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CITY OF SAN LUIS OBISPO

Plans, Specifications and Estimate (PS&E) Services for US 101 and Prado Road Interchange Project

City Specification No. 2091613-02

Caltrans Project No. 113-0000-0405

July 25, 2024

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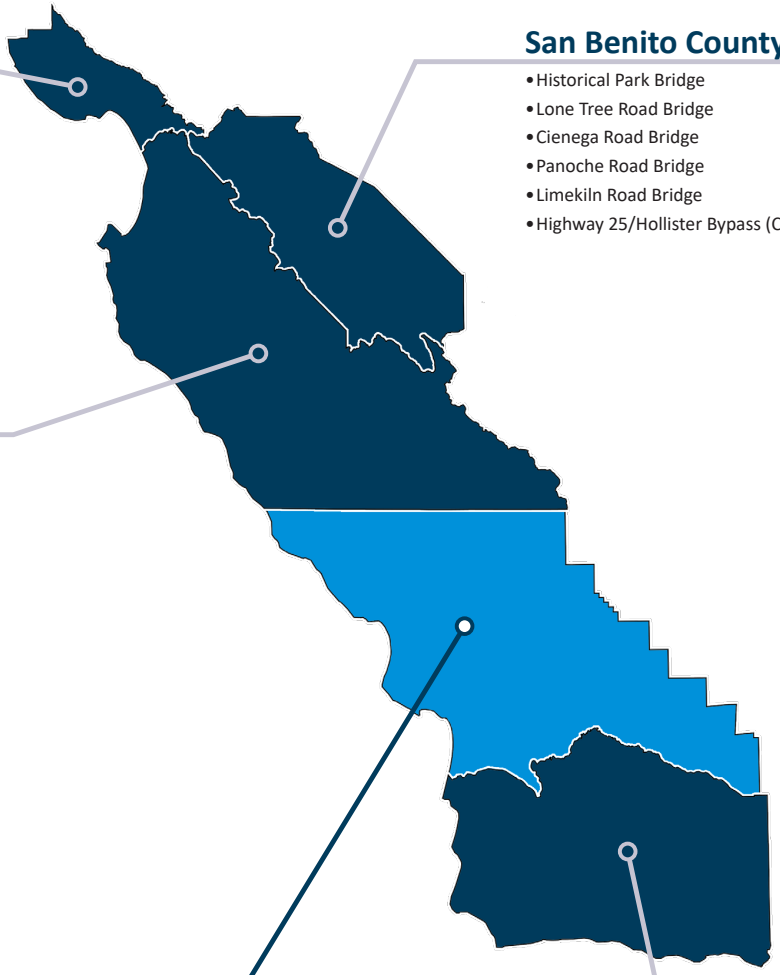
Projects in Caltrans District 5



Santa Cruz County

- On-Call Storm Damage Projects
- Sixteen Task Orders for 108 Sites
- 2017 Storm Damage Projects: PS&E for 12 Retaining Wall Sites
- San Lorenzo Bridge Replacement
- Paulsen-Whiting Road Bridge
- Retaining Walls for Schulties, Trout Gulch & Bear Creek Roads
- Harkins Slough Bridge
- Cabrillo College Pedestrian Overcrossing Retrofit
- Watsonville Slough Bridge (CM)
- Murray Secondary Force Main (W/WW)

San Benito County

- Historical Park Bridge
- Lone Tree Road Bridge
- Cienega Road Bridge
- Panoche Road Bridge
- Limekiln Road Bridge
- Highway 25/Hollister Bypass (CM)

Monterey County

- Laguna Seca Bridge Inspections, Load Ratings, and Repairs
- Laguna Seca Tower Inspection and Evaluation
- Cachagua Road Storm Damage Project
- E. Boronda Road Bridge Widening
- Bradley Road Scour Repair
- Johnson Road Bridge Replacement
- Big Sur Sidehill Viaduct
- Retaining Wall on State Route 1 (Mon-1-KP58.6)
- Caltrans District 5 Seismic Retrofits/Monterey County (CM)
- Various City of Salinas Seismic Retrofit Projects (CM)
- Various City of Seaside Seismic Retrofit Projects (CM)
- Retaining Wall on State Route 1 (Mon-1-KP93.7)
- Monte Road Bridge Seismic Retrofit (CM)
- Davis Road Bridge Replacement (CM)
- Toro Road Storm Damage Repair
- Viejo Road Storm Damage Repair
- Palo Colorado Storm Damage
- San Miguel Canyon Road/Castroville Boulevard Roundabout

San Luis Obispo County

- US 101/E SR46 Auxiliary Lane & Ramp Reconstruction
- US 101/Fair Oaks Interchange Evaluation
- Traffic Way Bridge Replacement
- Swinging Bridge Inspection & Evaluation
- Bridge Street Bridge Rehabilitation
- Traffic Way Bridge Scour POA
- Via Avenue Bridge Replacement
- Santa Lucia Bridge Replacement
- River Road Bridge
- Las Pilitas Road Bridge
- San Simeon Road with Two Bridges
- Price Canyon Road Widening with Two Bridges
- Storm Damage Evaluation - Various Structures
- Joqui Road Bridge Seismic Retrofit (CM)
- Feasibility Study Route 41, Slipout Repair
- Old Creek Road Slipout Repair
- San Miguel Road Slipout Repair
- Santa Rosa Street Bridge Replacement
- Santa Ynez River Bridge Seismic Retrofit (CM)
- Branch Mill Road Bridge Replacement
- River Grove Drive Bridge Replacement
- El Camino Real Bridge Replacement
- Bello Street Bridge Replacement
- Lopez Drive Bridge Seismic Retrofit
- Bob Jones Bike Trail
- Prado Road Bridge Replacement
- Bianchi Lane Bridge Replacement
- Del Rio Road Interchange Phase 2
- Jack Creek Bridge Replacement
- Huasna Road over Arroyo Grande Creek Bridge
- Huasna Townsite Road Bridge Emergency Repair
- Huasna Townsite Road Bridge Replacement
- Monte Road at Squire Creek Bridge Replacement
- Huer Huero Bridge Replacement

Santa Barbara County

- Tepusquet Road Bridge
- San Marcos Sidehill Viaduct
- Deck Rehabilitation - 10 Bridges
- El Encanto Debris Basin
- Franciscan Culvert Extension
- North H Street Bridge Widening
- University Drive Bridge
- Bell Street Bridge
- San Jose Creek Improvements
- Alamo Pintado Pedestrian Bridge
- Garey Bridge over the Sisquoc River
- Old Coast Highway Bridge Replacement
- Goleta Beach Park Bridge (Repair & Replacement)
- Three Flood Control Projects - Check & Drop Structures
- Montecito Creek Debris Basin
- Mission Canyon Bridge Safety Enhancements

Table of Contents

Submittal Forms

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Section E
PROPOSAL SUBMITTAL FORMS

ACKNOWLEDGEMENT

The undersigned declares that she or he:
- Has carefully examined Specification No. 2091613-02
- Is thoroughly familiar with its content.
- Is authorized to represent the proposing firm; and
- Agrees to perform the work as set forth in the specification and this proposal.

Firm Name and Address:	Consor North America, Inc.		
	364 Pacific Street, 1st Floor		
	San Luis Obispo, CA 95670		
Contact Name:	Brent Lemon		
Email: Brent.Lemon@consoreng.com		Fax: N/A	Phone: 916.368.9181

Signature of Authorized Representative: Wet signature on hardcopy submittal	Date: July 25, 2024

INSURANCE CERTIFICATE

See below Insurance Company's A.M. Best Rating

[X] Certificate of insurance attached

CONSOR'S INSURANCE CARRIERS' A.M. BEST RATINGS

The Continental Casualty Company: A XV

Great American Insurance Company: A+ XV

National Fire Insurance Co of Hartford: A XV

AXIS Surplus Insurance Company: A XV

Travelers Property Casualty Company of America: A++ XV

CERTIFICATE OF LIABILITY INSURANCE

12/31/2024

DATE (MM/DD/YYYY): 6/4/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Lockton Companies Three City Place Drive, Suite 900 St. Louis MO 63141-7081 (314) 432-0500 midwestcertificates@lockton.com	**CONTACT NAME:** **PHONE (A/C, No, Ext):** **FAX (A/C, No):** **E-MAIL ADDRESS:**
INSURED 1499687 Consor North America Inc. 155 North Wacker Dr, Ste 4150 Chicago IL 60606	**INSURER(S) AFFORDING COVERAGE** — **NAIC #** **INSURER A :** The Continental Casualty Company — 20443 **INSURER B :** Great American Insurance Company — 16691 **INSURER C :** National Fire Insurance Co of Hartford — 20478 **INSURER D :** AXIS Surplus Insurance Company — 26620 **INSURER E :** Travelers Property Casualty Company of America — 25674 **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** 20635474 **REVISION NUMBER:** XXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X **COMMERCIAL GENERAL LIABILITY** CLAIMS-MADE [X] OCCUR Deductible: $5,000 GEN'L AGGREGATE LIMIT APPLIES PER: [X] POLICY [ ] PRO-JECT [ ] LOC OTHER:	Y	Y	7036360752	12/31/2023	12/31/2024	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG $	$ 1,000,000 $ 500,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
A	**AUTOMOBILE LIABILITY** [X] ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS [ ] HIRED AUTOS ONLY [ ] NON-OWNED AUTOS ONLY	Y	Y	7036360766	12/31/2023	12/31/2024	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) $	$ 2,000,000 $ XXXXXXX $ XXXXXXX $ XXXXXXX $ XXXXXXX
B	X **UMBRELLA LIAB** [X] OCCUR **EXCESS LIAB** [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $	N	N	TUE 3274463 04	12/31/2023	12/31/2024	EACH OCCURRENCE AGGREGATE Deductible	$ 5,000,000 $ 5,000,000 $ 0
C C	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N [N] **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	N	7036465081 (AOS) 7036441749 (CA)	12/31/2023 12/31/2023	12/31/2024 12/31/2024	X PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000
D E	Professional & Environmental Liab. Excess Liab.	N	N	EBZ634816/01/2023 EX-6X767086-23-NF	12/31/2023 12/31/2023	12/31/2024 12/31/2024	$10,000,000 per Claim $10,000,000 Aggregate Deductible: $500,000 $5M occ / aggr	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: PS&E Services for US 101 & Prado Road Interchange Project No. D218721CA.00; City Specification No. 2091613-02, Caltrans Project No. 113-0000-0405. *See page 2*

CERTIFICATE HOLDER

20635474
City of San Luis Obispo
Public Works Department - Engineering Division
919 Palm Street
San Luis Obispo CA 93401-3128

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

CONTINUATION DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS (Use only if more space is required)

City of San Luis Obispo, its officers, officials, employees, agents and volunteers are included as additional insureds on a Primary and Non-contributory basis if required by written contract with respect to General Liability and Automobile Liability per the terms and conditions of the policy. A waiver of subrogation applies in favor of City of San Luis Obispo, its officers, officials, employees, agents and volunteers if required by written contract with respect to General Liability and Automobile Liability per the terms and conditions of the policy where permitted by state law. A 30-day notice of cancellation is included if required by written contract with respect to General Liability and Automobile Liability per the terms and conditions of the policy.

STATEMENT OF PAST CONTRACT DISQUALIFICATIONS

The Consultant shall state whether it or any of its officers or employees who have a proprietary interest in it, has ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of the violation of law, a safety regulation, or for any other reason, including but not limited to financial difficulties, project delays, or disputes regarding work or product quality, and if so to explain the circumstances.

Do you have any disqualification as described in the above paragraph to declare? ☐ Yes ☒ No

If yes, explain the circumstances.

Executed on July 25, 2024 at Rancho Cordova, California under penalty of perjury of the laws of the State of California, that the foregoing is true and correct.

Wet signature on hardcopy submittal

Signature of Authorized Consultant Representative

REFERENCES

Number of years engaged in providing the services included within the scope of the specifications under the present business name: 8

Describe fully the last three contracts performed by your firm that demonstrate your ability to provide the services included with the scope of the specifications. Attach additional pages if required. The City reserves the right to contact each of the references listed for additional information regarding your firm's qualifications.

Reference No. 1

Customer Name	County of El Dorado
Contact Individual	Matt Smeltzer, Deputy Director of Engineering
Telephone & Email	530.621.5912, matt.smeltzer@edcgov.us
Street Address	2850 Fairlane Court
City, State, Zip Code	Placerville, CA 95667
Date of Services	1/2007 - Ongoing
Contract Amount	$7M

Description of Services

US 50 HOV/Latrobe Road/El Dorado Hills Boulevard Interchange Improvements Phased Projects

US 50 Mainline Widening and HOV Lane (2007 - 2012) — The scope of work included rehabilitation of the existing pavement, adding an HOV lane in each direction, auxiliary lanes, truck climbing lane, reconstruction of four existing structures, construction of retaining structures, drainage improvements, reconstruction of the El Dorado Hills interchange, signals, lighting, ITS elements, and improvements to the existing El Dorado Hills Boulevard.

US 50 El Dorado Hills Interchange Pedestrian Overcrossing (2007-2010) — Our team was responsible for developing a Project Report and Environmental Document for this pedestrian OC. The project included public outreach, developing preliminary alternatives, alternative screening, environmental technical studies supporting the final selected alternative. Coordination with Caltrans to achieve NEPA approval, developing the project report, preliminary design, and environmental approval of a new pedestrian overcrossing.

WB Loop Off- and On-Ramp Improvements (2012-2016) — Delivered 100% PS&E for review by Caltrans within 2 ½ months from the notice to proceed. This unprecedented, accelerated delivery was in response to the El Dorado Transportation Commission and County DOT's desire to capture Corridor Mobility Improvement Account (Prop 1B) fund savings and further the completion of ultimate interchange improvements. The work included a new two-lane westbound loop offramp that included an overcrossing structure and a new three-lane westbound on-ramp at the El Dorado Hills Interchange.

EB Loop Off- and On-Ramp Improvements (2023-ongoing) — The County has received funding to build out the southeast quadrant of the interchange with a new eastbound loop offramp and a new two-lane eastbound onramp. Proposed improvements include drainage, signals, lighting, ramp metering, roadway rehabilitation, widening pavement, and addition of a new Class 1 mixed use path along Latrobe Road/El Dorado Hill Boulevard. Significant retaining walls are required to limit the right of way impacts. The project is expected to go to construction in Summer 2026.

Project Outcome

Converted two-lane freeway into four-lane freeway, implemented HOV lanes, replaced the El Dorado Hills Interchange, with final interchange phase now underway.

Reference No. 2

Customer Name	Contra Costa Transportation Authority
Contact Individual	Ivan Ramirez
Telephone & Email	925.256.4737, iramirez@ccta.net
Street Address	2999 Oak Road, Suite 100
City, State, Zip Code	Walnut Creek, CA 94597
Date of Services	2012 - Ongoing
Contract Amount	$6.5M

Description of Services

SR-4/Balfour Road Interchange: Consor developed the supplemental Project Report, three CEQA addendums, and PS&E package as well as provided construction support for the construction of over two miles of new freeway and a grade-separated interchange at State Route 4 and Balfour Road in the City of Brentwood. This interchange replaced a two-lane expressway/at-grade intersection with a 4-lane divided freeway/interchange and includes the construction of several bridge and retaining wall structures, utility relocations, right-of-way acquisitions, environmental permits, drainage facilities, and traffic signals. Consor also led the effort in coordination with Caltrans, Contra Costa Transportation Authority, City of Brentwood, SR4 Bypass Authority, Contra Costa County, the local regional water quality control board, East Contra Costa Habitat Conservancy, and various utility agencies. The project included significant utility relocations involving PG&E transmission towers, PG&E underground joint trench construction with AT&T, Comcast and the City participating, relocation of a 10-inch Kinder Morgan high pressure oil line and booster station, and Contra Costa Water District 90-inch Los Vaqueros Pipeline. Consor lead the utility effort and developed Caltrans utility reports of investigation, utility agreements, and staging plans to accomplish the work without disruption to service. The interchange area provides access to a high school, middle school, and regional medical center which necessitated access to these facilities throughout construction. The John Muir Regional Medical facility included a Helipad adjacent to the freeway and required the proposed improvements meet FAA clearance requirements. Consor led the efforts with the East Contra Costa Habitat Conservancy by coordinating permitting agreements and monitoring requirements during construction. Provided direction for the completion of the environmental revalidation which required three separate addendums through the life of the design phase of the project. Led the project team in concert with working with Caltrans functional units to obtain project approvals, the City of Brentwood, the SR4 Bypass Authority, Contra Costa County (performing right-of-way acquisitions), and the Contra Costa Transportation Authority.

Project Outcome

Construction completed/Open to traffic December 2019, continuing work to transfer right of way to Caltrans.

Reference No. 3

Customer Name	Merced County Department of Public Works
Contact Individual	Nathan Bray, Public Works Director
Telephone & Email	209.385.7601, nathan.bray@countyofmerced.com
Street Address	345 W. 7th Street
City, State, Zip Code	Merced, CA 95341
Date of Services	7/2019 - Ongoing
Contract Amount	$8.5M

Description of Services

Atwater-Merced Expressway Phase 1B

Consor is currently under contract to develop the Environmental Document, Report Project, and PS&E package for the construction of approximately one mile of new expressway near State Route 99 south of the City of Atwater in Merced County. The project evaluates several alternative alignments for a two-mile segment of four-lane divided expressway. The Consor team performed an alternatives validation assessment which resulted in an alignment alternative that saved more than $13 million over the previously scoped alternative. The team also demonstrated how application of AASHTO standards and contextual design would produce cost savings relating to sight distance and establishing the appropriate horizontal and vertical geometrics.

Project Outcome

This new facility expressway will provide connectivity to Merced County's Inland Port. This is a STIP funded project with an environmental clearance target date of March 2025 and begin construction in summer of 2028.

Introductory Letter

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Introductory Letter

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364 Pacific Street, 1st Floor
San Luis Obispo, CA 93401
P: 916.368.9181 | F: 415.543.6570

July 25, 2024

Wyatt Banker-Hix
Supervising Civil Engineer
919 Palm Street
San Luis Obispo, CA 93401

Re: Proposal for PS&E Services US 101 and Prado Road Interchange Project
City Specification No. 2091613-02 | Caltrans Project No. 113-0000-0405

Dear Mr. Banker-Hix:

Since the 1990s, the City of San Luis Obispo has been working to improve the US 101/Prado Road Interchange and needs a consultant that can help accelerate the delivery and bring innovative, cost-saving ideas to the table. Due to congestion on adjacent interchanges and roadways created by the recent and future development on the west side of US 101, it is critical for the City to push this project forward through construction, so the community can have a safer, more efficient traveling experience.

Having delivered transportation infrastructure projects for local agencies throughout California since 1992, Consor (formerly Quincy Engineering) offers a proactive approach, collaborative and innovative mindset, and the right experience to bring this project to fruition. We believe our team's following key attributes will provide the best value to the City:

Experience with the City, Caltrans District 5, and the Surrounding Region. Drawing on our experience working with the City over the past 17 years on projects that include the Prado Road Creek Bridge and the Mid-Higuera Bypass and Bridge Replacement, we understand the City's needs and community's concerns. In addition to our project work, we have met with you and Caltrans on several occasions to discuss the Prado Road Interchange project. Our strong history delivering projects includes work throughout the Central Coast over the past 20 years, helping us build fruitful relationships with many of the key stakeholders, utilities, and other resource agencies that will be vital to this project. We have fostered long-standing relationships with Caltrans District 5 staff as we have worked hand-in-hand as a prime consultant and team member on several on-system designs through various project development phases.

Strong Management Approach to Push the Project Forward. Brent Lemon, Consor's project manager, has a 38+ year history of success completing interchange projects, often on extremely accelerated schedules, including the El Dorado Hills Interchange which was completed in a record five months. His hands-on management approach has enabled Brent to step in where others have left off and drive projects to completion.

Creative Cost Saving Designs and Additional Funding Sources. The cost of the interchange has increased dramatically and Consor is committed to exploring all reasonable cost saving alternatives. The City has identified several funding sources but the construction phase is still in need of additional funding. We have included AECOM and their infrastructure economics practice experts on our team to help identify and secure potential grants and other funding sources. Our team, including HDR, has begun exploring design modifications to reduce the overall project costs. We have reviewed the Hybrid Value Analysis Study that was prepared and implemented precast girders with longer spans and large diameter shafts to potentially reduce foundation costs. Our proposal includes these and other potential cost-saving measures.

Our Teaming Partners. We have carefully selected a set of teaming partners who bring an unparalleled volume of proven, local experience that the City can trust to get the job done right. HDR and Yeh and Associates are exclusive members of the Consor team that are critical to delivering an excellent product with a shared goal to reduce overall project costs. HDR prepared the Location Hydraulics Study for the PA&ED phase and has already begun reviewing the hydraulics model with the Consor team to optimize project solutions. Yeh and Associates is the premier geotechnical firm on the Central Coast with strong ties to Caltrans District 5. They have been the Caltrans go-to geotechnical consultant for mitigation along Highway 1 and have a long-standing relationship with Consor. DKS, specifically Jim Damkowitch, has spent the majority of his career working with SLOCOG's traffic model and will lead the optional effort to provide validation of the previous traffic work. Lastly, Brian Ray with Sunrise Transportation will lead activities associated with

network analysis and intersection refinements. Brian is a nationally recognized expert in roundabout design, systemic safety analysis, and geometric design. He has worked directly with Caltrans developing training for Roundabouts and implementing the Highway Safety Manual. Coupled with Consor's fresh perspective and innovative solutions, our teaming partners bring proven, local, successful experience that we want to continue with the City. The table below illustrates our full team of qualified subconsultants.

Team Member Firm Name	Primary service to be provided	City of San Luis Obispo Experience	Exclusive to the Consor Team
AECOM	Grant Writing Assistance	☑	☑
Apexx Architecture	Bridge Architecture	☑	
Bennett Engineering Services + Y&C Transportation Consultants	Signals & Lighting		☑
DKS Associates	Traffic		☑
Hamner, Jewell & Associates	Right-of-Way Acquisitions	☑	
HDR	Water Resources, Floodplain, Drainage Design, Drainage Report, SWDR, Erosion Control	☑	☑
Rincon Consultants, Inc.	Environmental Permitting	☑	
Sunrise Transportation Strategies, LLC	Geometric Design QA/QC, Traffic Peer Review Lead		☑
Verdin	Public Outreach	☑	
Wallace Group	Surveying, Right-of-Way Services, Landscape Architecture	☑	
Yeh and Associates	Geotechnical Engineering	☑	☑

Superior Design Resources. As we have proven while serving as an extension of the City's staff on other projects, we take a highly proactive approach to driving projects to completion. The team we have assembled, filled with many familiar faces to the City, brings a high caliber of design talent, quality, and level of service you have come to expect from Consor. We are ready to work collaboratively with you to deliver the US 101/Prado Road Interchange project in a smooth, quick, and efficient manner.

Professional Service Contract. Consor respectfully requests that the City consider the edits to the City's Professional Service Contract included in the section titled "Exceptions to the Standard Agreement" of this proposal.

We acknowledge receipt of the RFP dated May 2, 2024, Addendum #1 dated May 29, 2024, and Addendum #2 dated June 20, 2024. We look forward to the opportunity to work alongside you and the entire City team on this project. If you have any questions related to our proposal, please do not hesitate to reach out to me via my cell at 916.799.4910, office at 916.368.9181, or email at brent.lemon@consoreng.com.

Sincerely,
Consor North America, Inc.

Wet signature on hardcopy submittal

R. Brent Lemon, PE, PMP
Executive Vice President/Project Manager

Qualifications & Experience

consor

Qualifications & Experience

Who is Consor?

Consor is a North American transportation infrastructure and water consulting firm offering planning, engineering design, structural assessment, and construction services. Our diverse team of experts live and work alongside clients, providing thoughtful solutions to create inspiring communities together. People choose Consor because they know they will get a better experience—and be better for the experience—whether they are a teammate, a client, or a partner.

Our team has worked on nearly 1,000 transportation projects, many funded through regional State Highway Account (SHA), State Transportation Improvement Program (STIP), and local funds. The public agencies in the regions we serve depend on Consor to provide cost-effective solutions to their complex engineering projects. We have a proven track record of dependability, client loyalty, consistent professionalism, and commitment to excellent responsiveness. Our clients rely on our expertise, knowing that their communities will benefit from our focus on delivery and long-term performance.

Formerly Quincy Engineering, the firm was founded in 1992 with the key mission to provide high-quality municipal engineering services to public agencies. Staying true to this mission, 99 percent of our current business is for public sector clients. In 2021, we merged with Consor and as of October 2022, we have adopted the Consor brand.

United by a shared name, vision, and core values, our collective Consor team can provide you with more capacity and capabilities while staying dedicated to serving you. We currently serve dozens of local public agencies through 600 staff in 33 offices throughout the West with a full range of civil engineering, public engagement, planning services, and construction management. This includes actively delivering transportation projects on the Central Coast since 2001. We are big enough to provide the breadth of technical experience and capabilities to expertly deliver your most important projects, yet small enough to understand and adapt to your needs.

Consor staff have extensive highway design experience throughout California, including work on the State Route 4/Balfour Interchange Improvement Project. This has resulted in innovative solutions that meet local agencies' needs while working within the project constraints, such as a complete streets approach and/or designing with construction staging and reducing traffic impacts in mind.


SR4/Balfour Road - Present


SR4/Balfour Road - April 2017

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WHO WE ARE

In 2021, Quincy Engineering merged with Consor Engineers and, as of October 2022, we have adopted the Consor brand.

99% of our work is for public agencies

FIRM SIZE

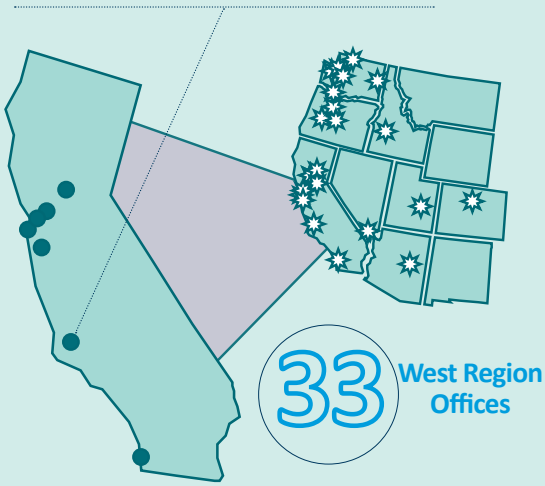
1,700+ total staff

600+ West Region staff

1992 FOUNDED in Sacramento

NEAREST OFFICE LOCATION

364 Pacific Street, 1st Floor
San Luis Obispo, CA 93401



33 West Region Offices

Relevant Experience

We have selected the following representative projects from our firm's history to highlight our experience with projects similar to the US 101/Prado Interchange Project. In some cases, our proposed team member firms and proposed key team members worked on these projects together, building a strong rapport that comes from successfully delivering challenging projects side-by-side.

Atwater-Merced Expressway - Phase 1B, *Merced County, CA*

REFERENCE: Nathan Bray, Public Works Director, Merced County
P: 209.385.7601 | E: nathan.bray@countyofmerced.com

Consor is developing the Environmental Document, Project Report, and PS&E package for the construction of approximately one mile of new expressway near State Route 99 south of the City of Atwater in Merced County. The project evaluates several alternative alignments for a two-mile segment of four-lane divided expressway. Improvements will be phased with Phase 1B constructing approximately one mile of the new expressway consisting of a two-lane interim facility, which is expected to facilitate ongoing economic development through improved freight mobility (including accessibility to the Mid-California International Trade District), and benefit surrounding communities with increased safety, air quality, and mobility to nearby schools, residences, and businesses. Coordination with Caltrans is required to achieve NEPA approval for the project. Sponsoring agencies include Merced County and Merced County Association of Governments. The project is funded through local transportation tax Measure V, State Transportation Improvement Program, and local funds.

The Consor team was brought on board 10 years after the initial environmental document was approved. Our team performed value engineering that resulted in an alignment alternative that saves more than $13 million over the previously scoped alternative. The team also showed the County how application of AASHTO standards and contextual design would produce cost savings relating to sight distance and establishing the appropriate horizontal and vertical geometrics. The new alignment alternative resulted in fewer environmental impacts, reduced the number of residential homes impacted, and avoided realigning an environmental sensitive creek channel. By avoiding the realignment of the creek, we were able to save 12-18 months on the schedule by avoiding the individual 404 permit process administered by the U.S. Army Corps of Engineers.

The project involves construction of a two-lane facility within the ultimate four-lane right-of-way, including a two-span precast grade-separated crossing (approximately 240 feet in length) of the Burlington Northern – Santa Fe (BNSF) railroad and Santa Fe Avenue. It also includes retaining wall structures, utility relocations, irrigation facility relocations, right-of-way acquisition, drainage facilities, implementation of permanent water quality treatment devices, modifications to existing public roads connecting to the new expressway, signals, and lighting.

PROJECT SIMILARITIES:

- Value Engineering
- Schedule
- Multiple Funding Sources
- Phased Project Approach
- Interchange
- Utility Relocation
- Advancing Work from Prior Consultant
- Bridge Design
- Overhead Signs
- Drainage Design
- Water Quality
- Right-of-Way Acquisition
- Stage Construction
- Signals & Lighting
- Roadway Design
- Surveying

PROJECT STAFF:

- Brent Lemon/Project Manager
- Mark Reno/Principal-in-Charge
- Scott McCauley/Bridge Project Engineer
- Mike Sanchez/Utility Coordination
- HDR/Hydraulics & Hydrology
- AECOM/Funding Assistance & Design

COST-SAVING FEATURES:

- Through value engineering, Consor developed an alternative alignment that saves over $13M over the previously scoped alternative.

SR-4/Balfour Road Interchange, *Contra Costa Transportation Authority, CA*

REFERENCE: Tim Haile, Executive Director, Contra Costa Transportation Authority
P: 925.256.4700 | E: thaile@ccta.net

Consor led the development of the supplemental Project Report, three CEQA addenda, and PS&E package, as well as provided construction support for the construction of over 1.5 miles of new freeway and a grade-separated interchange at State Route 4 and Balfour Road in the City of Brentwood. Consor led the effort in coordination with Caltrans, Contra Costa Transportation Authority, City of Brentwood, SR4 Bypass Authority, Contra Costa County, the San Francisco Bay Regional Water Quality Control Board, East Contra Costa Habitat Conservancy, and various utility agencies.

This interchange replaced a two-lane expressway/at-grade intersection with a four-lane divided freeway/ interchange and includes the construction of several bridge and retaining wall structures, utility relocations, right-of-way acquisitions, environmental permits, drainage facilities, and traffic signals. The project included significant utility relocations involving PG&E transmission towers, PG&E underground joint trench construction (with AT&T, Comcast, and the City participating), and relocation of a 10-inch Kinder Morgan high pressure oil line and booster station, and Contra Costa Water District 90-inch Los Vaqueros Pipeline. Consor led the utility effort and developed Caltrans utility reports of investigation, utility agreements, and staging plans to accomplish the work without disruption to service.

The interchange area provides access to a high school, middle school, and regional medical center, which necessitated access to these facilities throughout construction. The John Muir Regional Medical facility included a Helipad adjacent to the freeway and required the proposed improvements meet FAA clearance requirements. Consor led the efforts with the East Contra Costa Habitat Conservancy by coordinating permitting agreements and monitoring requirements during construction. Consor also provided direction for the completion of the environmental revalidation, which required three addenda through the life of the design phase of the project. The project team worked in concert with Caltrans functional units to obtain project approvals, the City of Brentwood, the SR4 Bypass Authority, Contra Costa County (performing right-of-way acquisitions), and the Contra Costa Transportation Authority.

The project received a 2019 APWA Northern California Project of the Year award.

PROJECT SIMILARITIES:

- Cost-Effective Solutions
- Sensitive Utility Protection in Place
- Drainage Design
- Water Quality BMPs
- Bridge Design
- Right-of-Way Acquisition
- Advancing Work from Prior Consultant
- Caltrans ROIs
- Stage Construction
- Signals & Lighting
- Overhead Signs
- Permitting
- Surveying
- Caltrans Oversight
- Phased Project Approach

PROJECT STAFF:

- Brent Lemon/Project Manager
- Mark Reno/Principal-in-Charge
- Scott McCauley/Bridge Design
- Mike Sanchez/Roadway Design
- Linda Scroggs/Wet Utilities Design
- HDR/Hydraulics & Hydrology, Drainage Report, Stormwater Data Report

COST-SAVING FEATURES:

- For water quality treatment, the lanes were tipped 2% toward the median instead of away from the median, allowing 100% WQT volume.
- Precast structures on mainline allowed us to reduce the amount of earthwork by 3 feet.
- The CCWD 90-inch diameter Los Vaqueros Pipeline avoided a $20M+ relocation by being protected in place with a protective outer reinforced concrete structure.

AWARD WINNER

This project received an ASCE Sacramento Transportation Project of the Year award.

US 50/El Dorado Hills Boulevard Interchange Phase 2B, *County of El Dorado, CA*

REFERENCE: Matt Smeltzer, Deputy Director of Engineering, County of El Dorado
P: 530.621.5912 | E: matt.smeltzer@edcgov.us

Consor, in cooperation with the County of El Dorado, Caltrans, and the El Dorado County Transportation Commission, provided engineering services for the development of the supplemental environmental clearance documents, geometric approval drawings, and final design for phased improvements within a 3-mile segment of US 50. This 3-mile segment included coordinating the geometrics of three interchanges. Geometric approval drawings were developed for the 3-mile-long corridor and approved by Caltrans. The implementation of improvements consisted of four separate projects as funding became available.

Mainline HOV Lane Addition (3-miles), Climbing Lane, and El Dorado Hills Interchange Reconstruction (2007-2012) – The scope of work included rehabilitation of the existing pavement, adding an HOV lane in each direction, auxiliary lanes, truck climbing lane, reconstruction of four existing structures, construction of retaining structures, drainage improvements, reconstruction of the El Dorado Hills interchange, signals, lighting, ITS elements and improvements to the existing El Dorado Hills Boulevard.

US 50 El Dorado Hills Interchange Pedestrian Overcrossing (2007-2010) – Our team was responsible for developing a Project Report and Environmental Document for this pedestrian OC. The project included public outreach, developing preliminary alternatives, alternative screening, environmental technical studies supporting the final selected alternative. Coordination with Caltrans to achieve NEPA approval, developing the project report, preliminary design and environmental approval of a new pedestrian overcrossing.

WB Loop Off- and On-Ramp Improvements (2012-2016) – Delivered 100% PS&E for review by Caltrans within 2 ½ months from the notice to proceed. This unprecedented, accelerated delivery was in response to the El Dorado Transportation Commission and County DOT's desire to capture Corridor Mobility Improvement Account (Prop 1B) fund savings and further the completion of ultimate interchange improvements. The work included a new two-lane westbound loop offramp that included an overcrossing structure and a new three-lane westbound onramp at the El Dorado Hills Interchange. The project required coordination of future interchange improvements to the east (US 50/Silva Valley Parkway) and west (Empire Ranch Road) of El Dorado Hills Blvd. The project required coordinating both CEQA re-certification and NEPA re-evaluation in record time. This area is within a highly congested corridor and traffic operational analysis needed to be performed modeling the new configuration of the ramp intersections with the adjacent local street intersections, a total of 5 intersection modifications were implemented as a result. The project also included drainage design, permanent water quality treatment BMPs, retaining walls, ramp metering, a new off-ramp UC bridge structure and complex staging of both the main line and El Dorado Hills Blvd. As a result, Consor was able to capture over $16 million in new construction funding for the County and implement project improvements in record time.

EB Loop Off- and On-Ramp Improvements (2023-ongoing) – The County has received funding to build out the southeast quadrant of the interchange with a new eastbound loop offramp and a new two-lane eastbound onramp. Proposed improvements include drainage, signals, lighting, ramp metering, roadway rehabilitation, widening pavement, addition of a new Class 1 mixed use path along Latrobe Rd/El Dorado Hill Blvd. Significant retaining walls are required to limit the right of way impacts. The project is expected to go to construction in Summer 2026.

PROJECT SIMILARITIES:

- Longitudinal Utility
- Expedited Schedule
- Phased Project Approach
- Caltrans Oversight
- Permitting
- Bridge Design
- Interchange Design
- Stage Construction
- Drainage Design
- Utility Relocations
- Protecting Utilities in Place
- Overhead Signs
- Storm Water Quality
- Surveying

PROJECT STAFF:

- Brent Lemon/Project Manager
- Mike Sanchez/Signing, Striping, Stage Construction
- Bennett + Y&C/Signals & Lighting
- HDR/Hydraulics - Drainage

Sheldon Road/Waterman Road Roundabout, *City of Elk Grove, CA*

REFERENCE: Rick Carter, Former City of Elk Grove Capital Program Manager (now Deputy Executive Director, Placer County Transportation Agency)
P: 530.823.4033 | E: rcarter@pctpa.net

Consor completed the PS&E to improve the intersection of Sheldon Road and Waterman Road with the construction of a single-lane roundabout. Throughout the design process, Consor's goal was for this to be a Good Neighbor Project and see that the design and construction process kept the local community involved and at the forefront. The intersection, located in the east part of the City of Elk Grove within the designated Rural Sheldon/Rural Residential Area, experienced heavy traffic delays especially during peak commute hours. Average daily traffic was over 17,500 in 2014. To improve traffic flow and safety, the four-way stop was converted to a roundabout.

The improved intersection includes pervious colored concrete pedestrian paths around the perimeter of the roundabout and public art themed to match the rural character of the area. The roadway approach legs include accommodations for shoulders/bike lanes. Storm drainage facilities with detention ponds will maintain pre-construction run-off conditions and historical drainage patterns. The intersection is adjacent to an overhead power transmission corridor with Sacramento Municipal Utility District (SMUD), Pacific Gas & Electric (PG&E), and Western Area Power Administration (WAPA). Considerable coordination occurred throughout the project with the various utility companies, including relocation of two underground utilities (Frontier and Comcast). In addition, Consor worked closely with SMUD and WAPA to obtain approval and support to place safety lighting, landscaping and other improvements in their easements under power lines.

One of the key factors was roadway realignment north-south on Waterman Road. Because of the utility relocation and improvements within utility easements, the realignment minimized impacts to private residences with only driveway conforms needed and no permanent takes required. The design also anticipated for expansion to accommodate a future two-lane roundabout, along with potential connections to planned multi-use trails, planned pedestrian infrastructure, and potential connections to other mobility improvements in the area.

PROJECT SIMILARITIES:

- Locally Funded
- Roundabout Design
- Local Community Involvement
- Road Design
- Drainage Design
- Water Quality
- Stage Construction
- Landscaping
- Surveying
- Right-of-Way Acquisition

PROJECT STAFF:

- Brent Lemon/Project Manager
- Mike Sanchez/Project Engineer
- Bennett + Y&C/Signals & Lighting
- HDR/Hydraulics - Drainage
- Brian Ray/Roundabout Design

COST-SAVING FEATURES:

- By doing a full intersection closure during construction, the City saved over $400,000

Construction was completed in less than two months under a full intersection closure. Had the construction occurred in phases with only a partial intersection closure, the project would have cost significantly more money, and the construction would have taken over a half year to complete. Instead, the cost savings was over $400,000 and traffic was flowing in just over one month with the intersection opening in August 2016 before the local school year began.

This project won the 2017 Public Works Project of the Year Award in Transportation from the APWA Sacramento Chapter.

Old Davis Road Roundabout, *University of California, Davis*

REFERENCE: Maryanne Ranasinghe, Project Manager, UC Davis Design & CM
P: 530.754.1062 | E: msranasinghe@ucdavis.edu

Consor was selected to deliver an expedited project for the University of California at Davis (UCD). As part of the university's long-range plan, a need was identified to improve the Old Davis Road intersection with California Avenue. This intersection is the main campus entrance for Interstate 80 traffic accessing the campus. The existing intersection was a stop controlled "T" intersection, which was operating at an unacceptable level of service. The campus has significant pedestrian and bicycle traffic which needed to be considered in the design.

This project required direct coordination with several of the university's departments, including close coordination with the university's staff landscape architect. The Consor team was able to work seamlessly with the university and provided the landscape architect with AutoCAD files for use in developing the landscaping plans for the project. The proposed improvements needed to be compatible with future facility expansion plans adjacent to the project area. This required the Consor team to utilize AutoCAD files from the University's GIS system for base mapping preparation.

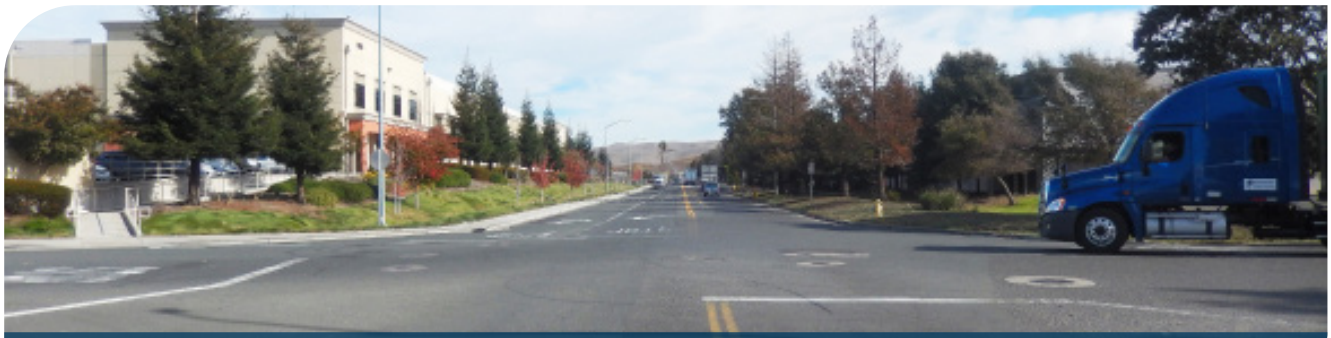
The project had an expedited delivery time—Consor met the accelerated schedule by delivering the final PS&E package within a four-month time frame.

PROJECT SIMILARITIES:

- Roundabout Design
- Expedited Delivery
- Road Design
- Drainage Design
- Water Quality
- Stage Construction
- Landscaping
- Surveying
- Utility Relocation

PROJECT STAFF:

- Brent Lemon/Project Manager/ Engineer
- Brian Ray/Roundabout Design
- Bennett + Y&C/Lighting



Green Island Road Rehabilitation, *City of American Canyon, CA*

REFERENCE: Ron Ranada, Senior Civil Engineer, City of American Canyon
P: 707.647.4559 | E: rranada@cityofamericancanyon.org

Green Island Road, a two-lane collector, serves as the only access to the Green Island Industrial District, the major economic industrial service center located along the City's northern border. Truck traffic is significant, and the roadway experienced severe cracking and failed pavement sections in the 28 years since the last major pavement improvement effort. The City of American Canyon submitted a grant application to the Economic Development Agency (EDA) for the widening and rehabilitation of the roadway network within the Green Island Industrial District. Key to the grant application was the inclusion of Cold Central Plant Recycled (CCPR), an environmentally friendly and sustainable method for pavement rehabilitation. The City was successful in receiving $2.4 million of grant funds. Recognizing overhead utilities along Green Island Road would conflict with the widening, Consor began the utility relocation process early pursuing the Rule 20A/B undergrounding district process. Consor led the utility undergrounding process and delivered a completed Joint Trench Composite and Estimate. Consor also performed right-of-way engineering on approximately 12 parcels and worked with the appraisal and acquisition agents to secure right-of-way. The project also includes complete streets elements, such as a pedestrian/bike trail and drainage/storm water treatment with a biofiltration planter. The project team has delivered 100% PS&E, and Rule 20A/20B construction was completed in December 2023. The roadway widening construction is expected to begin in Fall 2024.

PROJECT SIMILARITIES:

- Caltrans Coordination
- Drainage Design
- Water Quality BMPs
- Right-of-Way Acquisition
- Utility Relocations
- Undergrounding District Formation
- Rule 20A/20B Process
- Utility Design
- Stage Construction
- Lighting
- Permitting
- Surveying
- Developer Coordination

PROJECT STAFF:

- Jason Jurrens- Project Manager
- Andrew Mitchell- Roadway Project Engineer

COST-SAVING FEATURES:

- Full-Depth Reclamation for Structural Section
- Coordination with Utility owners for Undergrounding
- Coordination with Developers for planned improvements

SR 99/Sheldon Road Interchange, *City of Elk Grove, CA*

REFERENCE: Rick Carter, Former City of Elk Grove Capital Program Manager (now Deputy Executive Director, Placer County Transportation Agency)
P: 530.823.4033 | E: rcarter@pctpa.net

Consor, in cooperation with the City of Elk Grove, Caltrans, and the City of Sacramento, provided preliminary engineering for the development of a project report and support of the environmental document preparation, right-of-way engineering, and final design services. The scope of work included the replacement and realignment of the Sheldon Road/State Route (SR) 99 Overcrossing and associated ramps, realignment of frontage roads, widening of Sheldon Road from two lanes to six lanes, and the upgrade of ramp intersections, including replacing signals and lighting. Stage construction was a key issue as construction had to minimize impacts to traffic on both SR 99 and Sheldon Road, as well as to pedestrians and bicyclists. Utility relocation, signal interconnection, drainage, retaining walls, and the replacement of a pumping plant were additional design challenges on this expedited design project. The Sheldon Road Interchange Bridge is a two-span, cast-in-place, prestressed concrete box girder overcrossing approximately 145 feet wide and 272 feet long. It was built in stages so that traffic on Sheldon Road could be maintained throughout construction. A free-standing soldier pile wall with a free height of up to 16 feet was placed along the edge of the SR 99 shoulder in the vicinity of the historic San Joaquin Cemetery.

PROJECT SIMILARITIES:

- Expedited Schedule
- Caltrans Oversight
- Hydraulics/Drainage Design
- Water Quality BMPs
- Bridge Design
- Right-of-Way Acquisition
- Utility Relocations
- Utility Agreements
- Utility Design
- Stage Construction
- Signals & Lighting
- Overhead Signs
- Permitting
- Surveying
- Developer Coordination

PROJECT STAFF:

- Brent Lemon/Project Manager-Engineer
- Mark Reno/Bridge Project Engineer

AECOM - *GRANT WRITING ASSISTANCE (EXCLUSIVE TO THE CONSOR TEAM)*

National Infrastructure Economics Practice Profile

AECOM's National Infrastructure Economics Practice specializes in the development of funding strategies, grant applications, and economic justification for transportation focused discretionary grant programs. AECOM has supported a successful application in every round of the USDOT's marquee discretionary programs (TIGER/BUILD/RAISE, FASTLANE/INFRA, MEGA, Rural, PROTECT) grant programs since their inception and has also helped clients secure funding under various USDOT, MARAD, FRA, EDA, and EPA grant programs.

The AECOM team has deep experience in the delivery of full turnkey applications for clients in which AECOM acts as project coordinator, authors the application, and undertakes the required analytics and economic evaluation. The output delivered to the client is a designed application tailored to the aligned with the sought-after outcomes of the specific discretionary grant program. Successful federal and state discretionary grant applications written and/or supported by the AECOM team have been awarded over $3.5 billion, including nearly $1 billion in discretionary awards in 2024 to date.

Funding Strategies

AECOM has carried out the delivery of funding strategies for several clients over the past two years, though the scope of each funding strategy has been quite different. Some funding strategies have been carried out for a single project while others have looked at a client's entire portfolio of projects identified in their capital improvement plan. Certain funding strategies have focused solely on transportation infrastructure; others have addressed energy, water, and sustainability planning. Clients AECOM has successfully developed funding strategies for include:

- New Mexico Department of Transportation
- Colorado Department of Transportation
- Maricopa County Department of Transportation
- Orange County Department of Public Works
- Hawaii Department of Transportation
- LA Metro
- City of Long Beach
- Port of Houston Authority
- Port of Los Angeles
- Port of Corpus Christi
- Private sector port operators
- Class I Railroads

AECOM and Consor are currently working together on the Atwater-Merced Expressway Phase 1B and the US 101/E SR46 Auxiliary Lane & Ramp Reconstruction projects.

US 64 Corridor Improvements, Improving Tribal Highway Mobility and Safety, NMDOT, RAISE Grant (2021) | New Mexico Department of Transportation (NMDOT)

AECOM developed a turnkey application for NMDOT and partner Navajo Nation DOT for their submission for the 2021 Rebuilding American Infrastructure with Sustainability and Equity discretionary grant program. The candidate project involved multifaceted improvements including bridge replacements, drainage improvements, and the pavement rehabilitation of an approximately 21 mile stretch of rural highway in northwest New Mexico. The project had been shelved for some time due to lacking of funding and the client advised that they had difficulty with attracting discretionary funding due to relatively low traffic levels along the corridor. AECOM worked with the client to add relatively inexpensive components to the project which would significantly increase its benefit generation, and which would reposition the project from reconstructing a highway corridor to a project which would deliver digital, increased opportunity, and enhance cultural sovereignty to one of the most historically disadvantaged populations in the country.

The delivery of the $80 million ITHMAS Corridor project will enhance the mobility for the local Navajo communities through which it passes and for which it serves as the central conduit of accessibility. Several bridges along the corridor past their useful life will be replaced, and safety improvements (turn lanes, lighting) around tribal activity centers will be installed. Furthermore, the installation of fiber optic conduit along the US 64 corridor will enable future ITS infrastructure addressing traffic management and enabling connected/automated vehicle applications which will contribute to safer, more efficient travel along the corridor. This fiber installation will also bring high speed telecommunications in the Navajo Nation's land, providing digital equity and greater accessibility to employment, education, health care, and other essential services. AECOM coordinated the development of the application, wrote the application narrative, undertook various streams of modeling (safety, BCA) and deliver a designed product to the client for submission to the USDOT. The ITHMAS Project grant application was noted by the USDOT as best practice example of a transportation project addressing the provision of equity and was awarded $25 million in November 2021. AECOM supported NMDOT in seeking further funding for the Project under the USDOT's MPDG (Rural Transportation Category) Program. It was awarded an additional $59 million in MPDG funding in January 2024.

Apexx Architecture - *BRIDGE ARCHITECTURE*

Apexx Architecture is a full-service architectural firm specializing in bridges all over North America since 2016. With offices in Arizona and Florida, it is one of only a few firms that is dedicated to this specialty and is uniquely qualified to work on bridges of this type. Although the firm is a small sole proprietor, it has managed projects all across the USA from Ohio to California with municipalities ranging in size and complexity. With a specialization in bridge architecture, design excellence is integrated from the start into all projects. Whether it is full scale bridge design project, a lighting enhancement, or a new railing design, Apexx understands the unique challenges that bridges have within our urban fabric. Having worked on a number of recognized bridges and design competitions, as well as the Prado Bridge, Apexx is uniquely qualified for this project.

PROVIDING BRIDGE ARCHITECTURE & AESTHETICS, VISUALIZATIONS, AND AESTHETIC LIGHTING DESIGN

Apexx will be available to assist with the various projects from the City that incorporate bridge architecture/aesthetics, visualizations, and aesthetic lighting. They will use their expertise to develop the best solutions whether they involve lighting, railings, or even full bridge designs. Apexx offers a range of services that can be implemented from the smallest of crossings to major projects. Their attention to detail and high quality is consistent no matter the size or scope. There is no greater success to a project than collaboration. They will work diligently to create a collaborative environment with all stakeholders and consultants. Since Apexx is a bridge architecture specialty firm, the team is familiar with the bridge engineering and construction industry. It has its unique qualities that require familiarity and experience. Their Lead Bridge Architect has extensive experience working with various engineering firms and cities to deliver unique and beautiful projects.

Apexx and Consor are currently working together on the Prado Creek Bridge aesthetics for the City of San Luis Obispo.

Prado Bridge & Interchange Aesthetics | City of San Luis Obispo, CA

The City of San Luis Obispo is growing and in order to accommodate growth, the City and their consultants are working on the widening of an existing bridge leading to the future interchange. The new interchange includes a overcrossing over US 101 and the widening of Prado Road up to the new Prado Bridge. Staff and the public were concerned about the aesthetics of this project, and desired structural, aesthetics, and lighting details to help make the project feel more inviting and integrated with the rest of the City. The first phase of the project includes a Prado Bridge which spans San Luis Obispo Creek, and will be visible to cyclists on the Bob Jones Trail multi-use path.

Rendering of the new Prado Bridge

Apexx is currently the bridge architect working with the City's engineer, including Consor, to develop aesthetic solutions. During this phase, Apexx developed multiple options for the City varying in cost, style, and material. This method of showcasing the project has led to immense success. Apexx continues to work with the city to ensure the best and most appropriate design is completed based on budget and schedule.

Great Northern Bridge Overpass | City of North Olmsted, OH

The City of North Olmsted was in need of repairing an aging overpass, crossing I-480. The city wanted to take this opportunity to create a signature gateway. Since the existing bridge could not be modified, the City sought to create a unique railing design to welcome visitors to the city. Apexx Architecture was selected to be the prime consultant for this new gateway project. Apexx created a unique railing design that avoids decoration while emphasizing direction through a dynamic form. Users are encouraged to exit towards the sloping railing directing them towards North Olmsted. This project is a testament of how design can change the appearance of what would normally be considered a basic interchange bridge. Now the bridge will become the gateway to the City using a simple but elegant design of angled louvers and asymmetry. Apexx team member Maxim Nasab is the lead bridge architect on this project responsible for the design and aesthetics of the railing.

Bennett Engineering Services + Y&C Transportation Consultants - *SIGNALS & LIGHTING (EXCLUSIVE TO THE CONSOR TEAM)*

Bennett Engineering Services + Y&C Transportation Consultants (Bennett+Y&C) merged in 2023. The firm provides enduring and award-winning civil engineering services to cities, counties, special districts, universities, private companies, and other professionals. Bennett+Y&C takes pride in finding innovative and cost-effective engineering solutions for traffic/electrical engineering, transportation, water, wastewater, hydraulic and hydrologic, site development, parks and recreation, and other important infrastructure projects.

Bennett+Y&C's traffic team specializes in traffic signals, lighting, and transportation electrical systems and has completed traffic/electrical engineering plans, specifications, and cost estimates (PS&E) for more than 1,000 transportation projects in over 100 jurisdictions.

What sets Bennett+Y&C apart is their ability to partner with clients early in project development and retain that partnership through construction. The firm is led by talented and highly experienced, licensed professionals and provides services throughout California. They believe offering dedicated staff and assuring a cohesive team from project inception to completion maximizes client confidence. Firm culture includes a commitment to staff retention. This provides an experienced and highly technical team of 46, including 20 licensed professional engineers, a licensed traffic engineer, a professional land surveyor, and 11 engineers-in-training.

Bennett+Y&C is a California Disadvantaged Business Enterprise (DBE #43459) and certified Small Business Enterprise (SBE #52302). Their office locations include Sacramento, Fremont, and Milpitas, with their headquarters in Roseville, California.

Relevant firm experience includes providing various combinations of traffic signal, lighting, ramp metering, and extinguishable sign design; utility coordination; draft and final utility reports; hydraulic analysis; and drainage design services and plans, specifications, and cost estimates for the following projects:

- US 50/El Dorado Hills Boulevard Interchange in the County of El Dorado (all previous phases)
- US 50/Hazel Avenue Interchange, Sacramento County, CA
- US 50/Watt Avenue Interchange, Sacramento County, CA
- SR 99/Elkhorn Boulevard Interchange, City of Sacramento, CA
- SR 99/Elk Grove Boulevard Interchange, Elk Grove, CA
- SR 99/Whitelock Parkway/SR 99 Interchange, Elk Grove, CA

Bennett + Y&C and Consor are currently working together on the US 101/SR 152/10th Street Interchange with the Santa Clara VTA. Past projects include US 50/Phase 1 HOV Lane, US 50/El Dorado Hills Boulevard Interchange Pedestrian/Bicycle Overcrossing, US 50/El Dorado Hills/Latrobe Road Interchange Phase 2B, Sheldon/Waterman Roundabout, Old Davis Road Roundabout for UC Davis, SR 20/Western Parkway Intersection, and SR 99/120 Interchange.

SR 217/Hollister Avenue Interchange Improvements | City of Goleta, CA

This project is to convert the existing diamond interchange at SR 217/Hollister Avenue to a roundabout interchange. This project also included improvement on Hollister Avenue between SR 217 and Kellogg Avenue. Bennett Engineering Services (formerly Y&C) served as the electrical design subconsultant on the design team and prepared plans, specifications, and cost estimates (PS&E) for traffic signals and lighting.

US 50/Latrobe Road/ El Dorado Hills Blvd Interchange Improvements, Ph 2B | El Dorado County DOT

As a subconsultant to Consor, the team provided a drainage report, stormwater data report, and prepared electrical systems plans, specifications, and estimate (PS&E) for traffic signals and lighting along the interchange. Hydrology and hydraulic calculations and simulations were conducted to determine peak design flows from the contributing watersheds. The firm oversaw the hydraulic analysis of the existing system and proposed improvements to mitigate the changed hydrologic and hydraulic conditions.

DKS – *TRAFFIC (EXCLUSIVE TO THE CONSOR TEAM)*

Founded in 1979, DKS provides specialized transportation planning, design, and engineering services to public agencies nationwide. Their staff includes 155 professionals with offices in Sacramento, Oakland, Anaheim, and Pasadena, CA; Portland (Headquarters) and Salem, OR; Seattle, WA; and Austin, TX.

DKS specializes in performance-based transportation planning and engineering that blends traffic engineering, transportation planning, and traffic analysis at multiple scales of analysis. DKS' wide breadth of experience provides their clients with a unique blend of planning, operations, and design expertise. DKS staff members have worked with multi-jurisdictional agencies' staff, traffic and planning commissions, city and county councils, and other groups to develop sound transportation solutions. The firm focuses on the continuous changes to the profession through its representation with professional societies and technical and academic committees.

DKS and Consor are currently working together on the City of South San Francisco On-Call (various projects) and I-80/West Texas Interchange Improvements. Past projects led by Jim Damkowitch include US 50/Phase 1 HOV Lane, US 50/El Dorado Hills Boulevard Interchange Pedestrian/Bicycle Overcrossing, US 50/El Dorado Hills/Latrobe Road Interchange Phase 2B, SR 99/Whitelock Parkway Interchange, and Sheldon/Waterman Roundabout.

US 101 Corridor Mobility Master Plan and 2020 Addendum | San Luis Obispo Council of Governments

Under contract with SLOCOG, Jim Damkowitch managed and completed a comprehensive multimodal analysis of the US 101 corridor within San Luis Obispo County. The study initially analyzed both existing and future conditions along approximately 70 miles of the corridor (County line to County line) which identified four area Focus Segments for further analysis. This identification process was informed by technical analyses performed as part of the study, existing plans and studies and public and stakeholder input. Once the four Focus Segment areas were identified, more refined technical analyses and public outreach was performed to evaluate packages of multimodal improvement strategies specific to each Focus Segments. Performance metrics from the Smart Mobility Framework were used including travel time reliability (collected using BlueMAC readers to connect anonymously to BluetoothTM devices to calculate speeds, travel time and travel time reliability) to evaluate and prioritize the multimodal improvements within each Focus Segment. Stakeholder consensus (local agencies, SLOCOG, Caltrans, air district) for the prioritization of improvements for inclusion in SLOCOG Regional Transportation Plan update was achieved. The final report and its findings and recommendations were adopted by SLOCOG in December 2014. With DKS, Jim managed the 2020 Addendum of US 101 Corridor Mobility Master Plan to update and refresh the performance analysis for Focus Area 2. This included new analysis and performance metrics consistent with new state guidance from the California Transportation Commission and Caltrans (e.g., Corridor Planning Guidebook (Caltrans, 2019), Comprehensive Multimodal Corridor Plan Guidelines (CTC, 2019), and SB-1 Accountability and Transparency Guidelines (CTC, 2019)). The Addendum was specifically developed to inform a Solutions for Congested Corridor grant application which was submitted by SLOCOG to the CTC. The Addendum was adopted by the SLOCOG Board August 2020.

El Campo Road/South County Highway Access Modifications: Traffic Diversion Assessment | San Luis Obispo Council of Governments

Prior to joining DKS, Jim Damkowitch managed the El Campo Road/South Highway Access Modification: Traffic Diversion Assessment Project. Based on public safety concerns, the SLOCOG Governing Board commissioned a study to analyze the safety, emergency response time, operational, travel time, vehicle miles traveled (VMT) and air quality implications of implementing turn movement restrictions (right-in and right-out only) at four at-grade intersections with US 101 between the Traffic Way and Los Berros Road interchanges south of Arroyo Grande (El Campo Road, Un-named Road, Tower Grove Drive/Laetitia Winery, and Hemi Road). The traffic diversion study provided technical information pertinent to the understanding of potential detour routes, and 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. The study was approved by the SLOCOG Board in April 2019 with resulted in a request by the SLOCOG Board to Caltrans to implement the access restrictions. Caltrans implemented the restrictions with concrete median barriers along the inside shoulders of US 101 in May 2019.

HAMNER, JEWELL & ASSOCIATES – *RIGHT-OF-WAY ACQUISITIONS*

Hamner, Jewell & Associates is a specialized real estate consulting firm that provides right of way and governmental real estate acquisition and relocation services. For over forty-five years, Hamner, Jewell & Associates has provided these services to public agencies throughout the state of California, specializing primarily in acquiring real property rights, including easements and other partial interests, and providing mandated relocation assistance to property occupants on behalf of public agencies with the authority to acquire property by eminent domain.

Hamner, Jewell & Associates' services are designed with the specific intent of complying with all State and Federal funding requirements while successfully acquiring property by agreement, minimizing the instances in which eminent domain action might otherwise be required, but preserving the acquiring agency's right to initiate such action should it become a viable necessity. Hamner, Jewell & Associates has acquired temporary and permanent easements or fee interests for freeway interchanges, overpasses, roadways, sewer lines, waterlines, well sites, tank sites, utilities, greenbelts, and construction areas. Specifically, they have acquired rights for interchanges on US 101 throughout San Luis Obispo, Santa Barbara and Ventura Counties, having provided services on nearly every single interchange in Ventura County.

Other rights that Hamner, Jewell & Associates have acquired include access rights, air rights, slope easements, drainage easements, and properties for redevelopment projects and capital improvement projects such as parks, public parking lots, and sewer expansion projects.

Hamner, Jewell & Associates and Consor have worked together on the US 101 & Fair Oaks project in San Luis Obispo County and on the relocation services for two businesses displaced by a road project in Merced County.

Prado Road Interchange Project | City of San Luis Obispo

Multiple engineering and design firms that were initially working on this project in 2021 needed Right of Way data sheets for alternatives to design safety improvement changes for City's Prado Road Interchange project. Hamner, Jewell & Associates was successful in obtaining the needed right of way data sheets and cost estimates. This project was completed on time and on budget.

US 101 & Fair Oaks Project | County of San Luis Obispo

This project sought to address commuting and traffic congestion issues at the US 101/Fair Oaks/Orchard Avenue Interchange by seeking alternatives from an engineering firm. The Hamner, Jewell & Associates team provided estimates for the parcels required for acquisition and the number of easements needed. Using the conceptual mapping of the Consor team, they provided a right-of-way summary and provided right-of-way data sheets for two alternatives in coordination with the engineering team.

Los Osos Valley Road Interchange Project | City of San Luis Obispo

Prior to the Los Osos Valley Road (LOVR) Traffic Relief Project, the original LOVR interchange at US 101 was built at the southern end of San Luis Obispo in 1962 and then widened in 1987. As the city and population have grown, the interchange had become outdated and in need of additional capacity to provide more efficient driving conditions for its users. Hamner, Jewell & Associates worked on this interchange project for the City of San Luis Obispo. This project involved acquisitions from 2 ownerships under Caltrans and federal funding guidelines and regulations. The project improved pedestrian and bicycle access along both sides of LOVR, added drainage improvements, and reconstructed on and off ramps.

HDR - *WATER RESOURCES, FLOODPLAIN, DRAINAGE DESIGN, DRAINAGE REPORT, SWDR, EROSION CONTROL (EXCLUSIVE TO THE CONSOR TEAM)*

For over a century, HDR has partnered with clients to shape communities and push the boundaries of what's possible. HDR's expertise spans more than 12,000 employees in over 200 locations around the world. Their engineering, architecture, environmental, and construction services bring an impressive breadth of knowledge to every project. HDR's optimistic approach to finding innovative solutions defined their past and drives their future.

HDR has been a part of the California business community since 1973 and have seven Northern California offices in Santa Clara, Walnut Creek, Oakland, San Francisco, Berkeley, Sacramento, and Folsom. As a firm, they are organized into engineering and architecture divisions. Their engineering division includes business groups that focus on transportation, water, building engineering, construction management, and resources. From planning to design, permitting, funding, and construction – HDR provides wide-ranging expertise and services that span the entire life cycle of transportation projects for agency clients.

Furthermore, HDR has extensive experience working with the City of San Luis Obispo on projects including the Prado Road Overcrossing Project, Bob Jones Trail Bridge, Los Osos Valley Road Interchange, and Program Management for Water Reclamation Facility Upgrades. Their proposed staff members are available and committed to this project, providing their deliverables on time and within budget.

HDR and Consor are currently working together on Atwater-Merced Expressway, Cottonwood Road over Outside Canal, Atwater-Jordan over Atwater Canal, Merced Avenue over Lateral #6, Quinley Road over Black Rascal, and Arroya over West Delta Canal.Past projects include La Grange over Dry Creek, Dickenson Road over Bear Creek, Baxter Road over Deadman Creek, Santa Fe Road over Deadman Creek, Jorgensen Road over Outside Canal, Burchell Avenue over Duck Slough, Los Cerritos over Dry Creek, Hills Ferry Scour POA, and Turlock Road over Dry Creek.

US 101/SR 25 Interchange Improvement Project, Phase I | Santa Clara Valley Transportation Authority

The proposed US 101/State Route (SR) 25 Interchange Improvement Project, Phase I, is located in Santa Clara County, California. The project consists of reconstructing the interchange at US 101 and SR 25 with a primary focus of improving the traffic operations from southbound US 101 to southbound SR 25. The project also consists of roadway improvements along SR 25 and US 101.

HDR prepared a Location Hydraulic Study (LHS) addendum in May 2022 that updates and augments previous findings summarized in the September 2010 location hydraulic study report that correspond to limits of the project. HDR conducted an Initial Site Assessment (ISA) in 2019, which included a site reconnaissance, research and historical review of the project area, and identification of potential recognized environmental conditions (REC) within and adjoining the project footprint. HDR prepared a Preliminary Site Investigation (PSI) – ADL Study in September 2022 for shallow soil along the areas of planned excavation and soil disturbance during construction. The subsurface investigation included collecting shallow soil samples to verify the presence/absence of RECs and constituents of concern (COC) identified in the ISA, evaluate options for soil disposal and/or reuse, and provide guidance for waste management and worker safety during project construction. HDR prepared Well Replacement Report in May 2022 that documents the hydraulic characteristics of the existing well pump impacted by the project. The report studied the water quality of the groundwater drawn by the existing well, and provided a suitable envelope for the placement of a new well within the resulting Property parcel after right-of-way acquisition. HDR prepared a Hydromodification Report, a Drainage Report, and a Stormwater Data Report in February 2024 that documented the drainage and water quality design for the project.

Prado Road Overcrossing Project | City of San Luis Obispo

As part of the design for the City of San Luis Obispo's Water Resource Recovery Facility, HDR produced a 1D/2D coupled HEC-RAS model (2D Hydraulic Model Update Draft Report [2019]). The model consisted of 1D cross sections to define the channels connected with lateral structures to a 2D floodplain. The model was used to compare existing conditions to the project's Alternative A3 with Fill Embankments and Alternative A3 with Piers.

HDR prepared the Floodplain Evaluation Report for the project. As part of this effort, the models were updated and transitioned to fully 2D. Development of the design of the project should consider improvements to mitigate any increase in water surface elevation (WSE) resulting from the project.

Rincon Consultants, Inc. - *ENVIRONMENTAL PERMITTING*

Rincon Consultants, Inc. is a multi-disciplinary environmental science, planning, and engineering consulting firm that provides quality professional services to government and industry. Rincon's principal service is to provide environmental support and scientific research to create and sustain innovative solutions to natural resource, sustainability, and environmental impacts. Rincon prides itself on the considerable depth of its staff, which includes certified urban planners, environmental scientists and engineers, accredited LEED professionals, noise and air quality experts, geologists, biologists, and cultural and historical resource specialists. Their approach to every project is centered upon the design and development of innovative solutions that respond to their clients' specific needs in a cost-effective manner.

Rincon's corporate culture focuses on providing environmental consulting services in a manner that is beneficial to both the environment and the client's needs. By managing each project with a focus on three primary objectives—economic efficiency, technical excellence, and sustainable approach—they provide superior service that efficiently and effectively meets their needs.

Rincon biologists have conducted biological impact assessments in support of CEQA for several projects for the City, such as the Water Resource Recovery Facility Project, the Mid-Higuera Bypass Project, and the San Luis Drive Emergency Project. In addition, they have supported projects throughout San Luis Obispo and Santa Barbra Counties, including the Arroyo Grande Bridge Street Bridge project, the Cypress Mountain Drive at Klau Creek Highway Bridge Replacement project, the Santa Maria Union Valley Parkway Extension project, and the Santa Barbara County State Route 166/Black Road Intersection Improvements projects.

Rincon and Consor recently worked together on the Bay Area Rapid Transit District (BART) Communication-Based Train Control Project.

Prado Road-US 101 Interchange Project; Caltrans PEAR, CEQA/NEPA Environmental Technical Studies, and IS-MND/EA | City of San Luis Obispo

Rincon prepared the Preliminary Environmental Analysis Report (PEAR) for the for Prado Road-US 101 Interchange Project, and then worked with the City of San Luis Obispo and Caltrans staff to prepare environmental technical studies in conformance with Caltrans' Standard Environmental Reference (SER), including a Natural Environment Study (NES), Archaeological Survey Report (ASR), Historic Resources Evaluation Reports (HRER), Historic Property Survey Reports (HPSR), Noise Study Report (NSR), Air Quality and GHG technical analyses, Community Impact Analyses (CIA), Visual Impact Analyses (VIA) and Water Quality Report. Following approval of the environmental technical studies in October 2021, Rincon prepared the necessary CEQA documentation for the project, which was adopted by Caltrans in September 2023. When complete, the improved interchange and overcrossing will provide better community connectivity between the existing and planned neighborhoods east and west of US 101 and resolve operational deficiencies on State and City facilities for all transportation modes.

San Luis Obispo Creek Bank Stabilization Project near Johnson Avenue | City of San Luis Obispo

Rincon prepared technical environmental evaluation, CEQA compliance, and permitting assistance to the City of San Luis Obispo in coordination with Cannon Engineering Consultants for the for the San Luis Obispo Creek Bank Stabilization Project near Johnson Avenue. Rincon completed an Archaeological Survey Report and Biological Resource Assessment supporting the project's Initial Study-Mitigated Negative Declaration. Following City approval of the project in February 2023, Rincon assisted the City with project implementation by conducting pre-construction surveys, aquatic species relocation, worker environmental awareness program (WEAP) trainings, archaeological monitoring, biological monitoring, resource agency notifications, and a project completion report for the emergency repair activities that were conducted for the project in November 2022. In 2023, Rincon repeated this scope of work for the second phase of this project, which was completed in November 2023.

Union Valley Parkway Extension/Interchange Project | City of Santa Maria

Rincon prepared an EIR/EA to satisfy CEQA and NEPA requirements for the Union Valley Parkway Extension/Interchange Project in the City of Santa Maria. The City's purpose for the Union Valley Parkway extension/interchange was to provide a 4-lane major arterial for the movement of people and goods through the Santa Maria-Orcutt area. Rincon supported the EIR/EA and project design and construction by providing environmental compliance services in the form of clearance surveys for sensitive species including the California tiger salamander, California red-legged frog, western spadefoot, legless lizard, and American badger. Throughout the environmental review process, Rincon acted as a facilitator to resolve the occasionally competing goals of the City of Santa Maria, County of Santa Barbara, Caltrans, FHWA, and other reviewing agencies.

Sunrise Transportation Strategies, LLC -

GEOMETRIC DESIGN QA/QC, TRAFFIC PEER REVIEW LEAD (EXCLUSIVE TO CONSOR)

Sunrise Transportation Strategies, LLC (Sunrise) was founded by Brian L. Ray in 2021 as a sole proprietorship. Sunrise provides transportation project development support to advance projects from systems planning to project implementation. This includes supporting transportation project initialization and development, project approval, and project documentation and environmental clearance and permitting. Sunrise supports transportation agencies of all sizes to develop performance-driven, multimodal solutions for all types of roadways, users, and contexts. Sunrise brings clients practical solutions for long-range transportation and safety plans, corridor evaluations, complete streets, interchange assessments, roundabout design, and intersection control evaluations. Sunrise works with communities of all sizes and recognizes the intrinsic value of continuous and meaningful stakeholder engagement.

Brian, Sunrise's manager, is a nationally recognized leader in interchange planning and design and has been:

- A roundabout and Highway Safety Manual trainer to Caltrans District and Headquarters staff
- An advisor to Caltrans in developing Traffic Operations Policy Directive 13-02 Intersection Control Evaluation (ICE)
- A reviewer/contributor to the roundabout elements of the Highway Design Manual (HDM)

Sunrise and Consor are currently working together on several projects, including Merced County's Campus Parkway Segment 4, Fair Oaks PID in Arroyo Grande, Bello Street Intersection Improvements for the City of Pismo Beach, and US 101/SR 152/10th Street Interchange with the Santa Clara VTA.

US 101 - Fair Oaks Avenue Low Build Analysis | San Luis Obispo Council of Governments

Consor worked in collaboration with a client group made up of San Luis Obispo Council of Governments, City of Arroyo Grande, and Caltrans District 5 to assess US 101 from Grand Avenue to El Campo Road. The initial scope for a Feasibility Study was undertaken to determine if low-cost US 101 treatments could enhance the existing southbound weaving section between the Grand Ave on-ramp and the Fair Oaks Ave off-ramp. Consor led the effort to develop preliminary signalized and roundabout alternatives for the US 101 ramp terminal intersection at Fair Oaks Ave and Orchard St. Additionally, the Consor team reviewed design strategies relevant to the Grand Ave on-ramp and Fair Oaks off-ramp segment of the US 101 mainline. The team evaluated strategies that might mitigate or minimize weaving along this section.

Sunrise (Brian Ray), the team's roundabout geometric and operational specialist, supported the efforts to prepare a low-build operational analysis of the existing Fair Oaks Avenue off-ramp and ramp terminal intersection. Preliminary alternatives were displayed in an aerial overlay format with layouts showing conceptual geometrics, cross sections, pavement delineation and conceptual roadside sign layout, and identify potential right-of-way impacts.

Campus Parkway Segment 4 | Merced County Public Works

This project requires a phased project delivery approach to maximize the available funding allocated through 2028 under an earmark (California Senate Bill 132). This project requires multi-jurisdictional coordination with the City of Merced (future annexation), UC Merced, developer interests, and County Community Development. Campus Parkway Segment 4 (CPS- 4) will complete another link in the planned Merced Loop System beginning at East Yosemite Avenue and continuing north to Bellevue Road. The project is located just outside the city limits of Merced; however, annexation plans are underway. Caltrans coordination is necessary since the project is funded through an earmark allocation within SB-132. The proposed facility is a four-lane arterial roadway on new alignment consisting of two traveled lanes, median, Class IV bikeways, Class I path, and utility PUEs. The facility will include safety lighting for the roadway, bikeway, and pedestrian facilities. The initial phase of construction is an interim two-lane facility that will connect back to the existing Lake Road alignment approximately 1,700 feet south of the UC Campus main entrance at Bellevue Road.

Sunrise's role on the project was to develop preliminary geometrics for the ultimate roundabout intersections proposed at Yosemite, Cardella Road, Virgina Smith Parkway, Meyers Gate Road, and Bellevue Road. Sunrise worked in support of Consor to develop stakeholder presentations on roundabout design and presented fatal flaw analysis points for discussion with the County and City.

Verdin - *PUBLIC OUTREACH*

Established in 2003 in San Luis Obispo, CA, Verdin is a full-service marketing agency that has grown to a national award-winning firm of 12 employees with clients throughout the state of California. Verdin is 100% women-owned and certified by the DOT (DBE Firm No. 42625) and recognized as a preferred vendor by both the City of San Luis Obispo and SLOCOG. They take a transparent and proactive approach to public outreach and marketing to help build communities through strategy, consensus and storytelling. Their services include communications strategy, public outreach programs, branding, content creation, design and campaign implementation through owned, earned, and paid channels.

Over the past 21 years, Verdin has worked extensively with public agencies. On the Central Coast, they have worked with the City and County of San Luis Obispo as well as the Cities of Paso Robles, Atascadero, Pismo Beach and Arroyo Grande. Other public clients include the San Luis Obispo County Sheriff's Office, the Solano County Sheriff's Office, the City of Walnut Creek, the Greater Vallejo Recreation District and the City of Roseville.

These projects have included communications support on several construction projects, as well as awareness campaigns for government departments and programs (recreation, census, public safety).

Verdin and Consor will partner for the first time on the US 101 and Prado Interchange Project. Both firms bring their strong commitment to partnership and to serving the San Luis Obispo community.

Prado Bridge Replacement Project | City of San Luis Obispo, CA

Working with Wallace Group, Verdin developed collateral materials, including visuals and messaging for the projects and organized the community meetings, including logistical arrangements, public noticing mailers, public and media relations and coordination, and also facilitated the meetings, and produced display materials.

Prado Interchange Environmental Phase Public Outreach | City of San Luis Obispo, CA

Short-term project supporting the City in coordinating and facilitating a public meeting for public input on the Prado Interchange environmental review and to present design options. In addition to the public meeting, Verdin provided media relations services, direct mail, website updates, and ongoing website updates.

LOVR Interchange Project | City of San Luis Obispo, CA

This project included interfacing with the City, SLOCOG and Caltrans. This two-year effort included research, public relations activities and communications to adjacent residents and businesses, as well as cyclists, commuters and general cross-town traffic.

Orcutt-Tank Farm Roundabout | City of San Luis Obispo, CA

Communications services to notify residents, businesses and commuters of the construction for the Orcutt Roundabout. Verdin utilized press releases, emails, direct mail and website updates to keep community apprised of detours and progress of the Roundabout construction, through to completion. Participated in the ribbon cutting ceremony and public art unveiling upon opening of the roundabout.

Marsh Street Bridge Project | City of San Luis Obispo, CA/Filippin Engineering

Verdin provided communications support to announce the project and inconveniences to drivers, educating the community why the bridge needed to be replaced and documenting the process through City channels and through the media. We also coordinated with affected businesses as to the schedule for the project and created messaging and visuals to alert residents, employees of downtown businesses and property owners of coming construction, lane closures and detours throughout the project. Used the communications as an opportunity to educate residents about the need for the bridge replacement, and all of the moving parts to such a project, including safety, environmental concerns and traffic mitigation.

Cultural Arts District Parking Structure | City of San Luis Obispo, CA

Communications support for the City of San Luis Obispo Cultural Arts District parking structure, as part of the Downtown Concept Plan. The structure will support downtown residents and visitors and include the Downtown Residential Overnight Parking program. Verdin is providing public relations and media relations, direct mail, website updates, design and social media services.

Wallace Group - *SURVEYING, DOCUMENT, AND MAPPING SERVICES; RIGHT-OF-WAY SERVICES, LANDSCAPE ARCHITECTURE*

Almost four decades ago, Wallace Group began as a one-person, home-based engineering business. Headquartered in San Luis Obispo, Wallace Group has steadily grown into a multi-disciplinary engineering and planning firm with additional Salinas and Santa Barbara offices. Today, the company is a dedicated team of 70 professionals specializing in civil and transportation engineering, water resources, surveying and GIS solutions, construction management, landscape architecture, mechanical engineering, and planning and public works administration. Wallace Group has extensive experience with San Luis Obispo County public agencies, specifically with the City of San Luis Obispo. Their involvement with the US 101 and Prado Road Interchange Project will utilize their brilliant minds and decades of experience.

Creating landscape environments that are aesthetically pleasing and contextually fitting is both an art and a science. This is where the Landscape Architecture team excels; providing effective and responsive solutions to align with client's goals while keeping budgets and sustainability top of mind. The team has extensive knowledge of streetscapes; community planning; park and recreation master planning; and natural resource preservation, mitigation, restoration, and management. With experience across diverse projects, from transportation facilities like streets and roundabouts to large-scale planned residential communities and mixed-use developments, they seamlessly bridge the natural and built environments with site-sensitive designs and culturally enriching experiences.

Wallace Group's Surveying professionals specialize in collecting essential topographic, right of way data to support the project needs. The accuracy and integrity of the information generated by the team of surveyors is a critical component and supports a wide range of planning, engineering, construction management, GIS, and landscape architecture services. Wallace Group utilizes the latest surveying technology and software to provide decidedly accurate and valuable data, ensuring that projects are based on sound information.

At Wallace Group, client satisfaction is not just a goal, but a deeply ingrained value. Survey and Landscape Architecture teams, operating out of the same headquarters just miles from the project site, always ready to respond to clients' needs. This proximity and solid working relationship enable Wallace Group to offer innovative solutions that only develop with close collaboration. Their dedication to service and client satisfaction has been a hallmark of the firm for decades, and it continues to be the primary focus today.

Wallace Group and Consor are currently working together on many notable Central Coast projects including the Prundeale Roundabout, Bello Street & Price Canyon Traffic Signal, Jack Creek at Paso Robles Creek Bridge, and Prado Road Bridge Widening. Past projects include Bradley Road at Sierra Madre Avenue and the Lower Eastside Pedestrian Bridge.

Prado Road Bridge Widening | City of San Luis Obispo

Wallace Group was selected by the City of San Luis Obispo to prepare the PS&E for the Prado Road Bridge Widening Project. The existing bridge is a constriction point for vehicles traveling along Prado Road between South Higuera and US 101 and needs widening for current and future traffic volumes. The project also includes non-motorized features, such as a bike path connection under the bridge and a cutting-edge protected intersection design.

During the first phase of the project, the Wallace Group team prepared a Feasibility Study/Technical Memo to determine the ultimate lane configuration for the Prado Road/South Higuera intersection, review of the hydraulics of San Luis Creek at the existing bridge including the effects of widening the existing three span bridge or replacing it with a single span structure, and the consideration of an existing 24-inch gravity sewer line suspended from the existing bridge structure that impinges on the creek's hydraulic capacity. Wallace Group recommended that the City replace the existing three span bridge structure with a single span bridge that will offer protection to the existing 24-inch diameter gravity sewer line in times of high flow. Based on the Phase 1 work and continuous coordination with Caltrans Local Assistance, the replacement of the existing bridge was approved. Wallace Group completed the PA&ED phase and has secured bridge type selection concurrence from Caltrans and is now in final design.

As part of final design, the team prepared the survey mapping, utility coordination and design, landscape architecture/streetscape design, and PS&E for the Project. Wallace Group provided large scale ground-survey mapping and roadway design for approximately 2,500 feet of City arterial with Right-of-Way research of adjacent frontages and approximately 1,000 feet of creek corridor. The mapping specific to the bridge structure included a detailed survey of the bridge columns and utilities attached to the bridge structure. The design includes utilities, hardscape, bridge features, sewer and storm structure inverts, striping and found survey monuments. The mapping specific to the bridge structure included a detailed survey of the bridge columns and utilities attached to the bridge structure. They also provided public outreach and multi-disciplinary project management for the large team.

Yeh and Associates, Inc. - *GEOTECHNICAL SERVICES (EXCLUSIVE TO THE CONSOR TEAM)*

Yeh and Associates, Inc.
Geotechnical • Geological • Construction Services

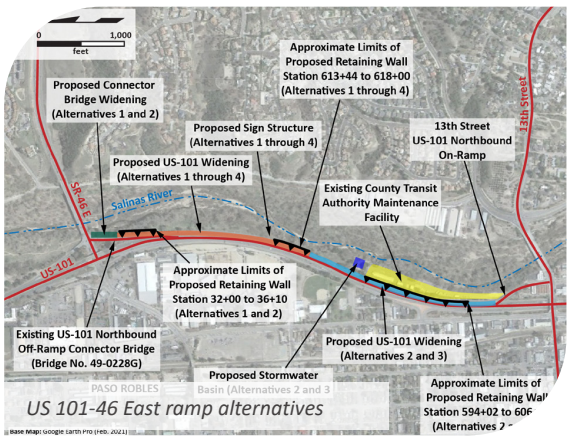
Yeh and Associates, Inc. is a full-service geotechnical firm first established in Denver, Colorado in 1999. The building block of Yeh is providing specialized expertise in engineering geology and geotechnical services for transportation, infrastructure and public works projects. Yeh's offices in Grover Beach and Ventura, California are led by a team of senior professionals with a strong background in public works projects for local, state, and federal agencies. These staff have been working on projects throughout California for up to 25 years. The firm employs a total of about 160 professionals with vast experience in the fields of geotechnical engineering, engineering geology, and construction management. Yeh has specialized expertise in providing geotechnical services for transportation projects in San Luis Obispo County, California, and throughout the western United States. Yeh is currently working on the US 101/SR 46E Ramp Improvements in Paso Robles with SLOCOG, US 101/Avila Beach Drive Interchange Improvements, and other major corridor projects. Yeh's staff have also been working on the Prado Road Bride Project over San Luis Obispo Creek which is located at the western edge of the Prado Road Interchange Project. Yeh is familiar and well versed in design methods and requirements with AASHTO and Caltrans.

Yeh's State of California Department of Industrial Relations contractor registration number is 1000030005. Yeh also carries insurance at the levels required in the RFP.

Yeh and Consor are currently working together on several projects, including SLOCOG's US 101/46 East Interchange Improvement Project and City of Arroyo Grande's Traffic Way Bridge Replacement Project.

US 101/46 East Interchange Improvement Project | San Luis Obispo County Association of Governments

Yeh and Associates provided geotechnical services for the preliminary design phase of an improvement project to increase storage capacity and improve traffic flow at the existing US 101 northbound and 46 East interchange in Paso Robles, California. The project will likely include adding an auxiliary lane to the northbound portion of US 101 from 13th street to the 46 East ramp. Retaining walls and bridge widening are likely to be incorporated into the project. Yeh's scope included preparing a Preliminary Geotechnical Design Report in accordance with Caltrans guidelines. Yeh addressed preliminary foundation considerations for structures, embankments and pavements. Future phases of design will likely include subsurface exploration, laboratory testing, and preparation of foundation reports and geotechnical design report for the project. All deliverables were prepared according to Caltrans and AASHTO standards.



Prado Road Bridge | City of San Luis Obispo, CA

Prado Road currently crosses San Luis creek on a two-lane, 123-foot long, 27-foot wide existing bridge. The bridge is insufficient for the traffic loading and a new bridge is being designed. Yeh' scope for the project included gathering existing data and performing seismic refraction along the creek bottom as well as two exploratory borings to supplement existing data. A Preliminary Geotechnical Report and Geotechnical Report for the project was prepared in accordance with Caltrans Guidelines and using AASHTO Design methods. The project includes anew 130-feet long single-span bridge with CIDH pile supported abutments. The bridge will be approximately 105 feet wide. Soldier pile tieback walls will be designed at the abutments to support the creek bank and reduce the potential for scour and erosion. Rock slope protection is planned upstream and downstream of the abutments to reduce flanking and potential for erosion along the abutments and creek bank. New pavement along South Higuera Street including turn pockets and acceleration lanes.

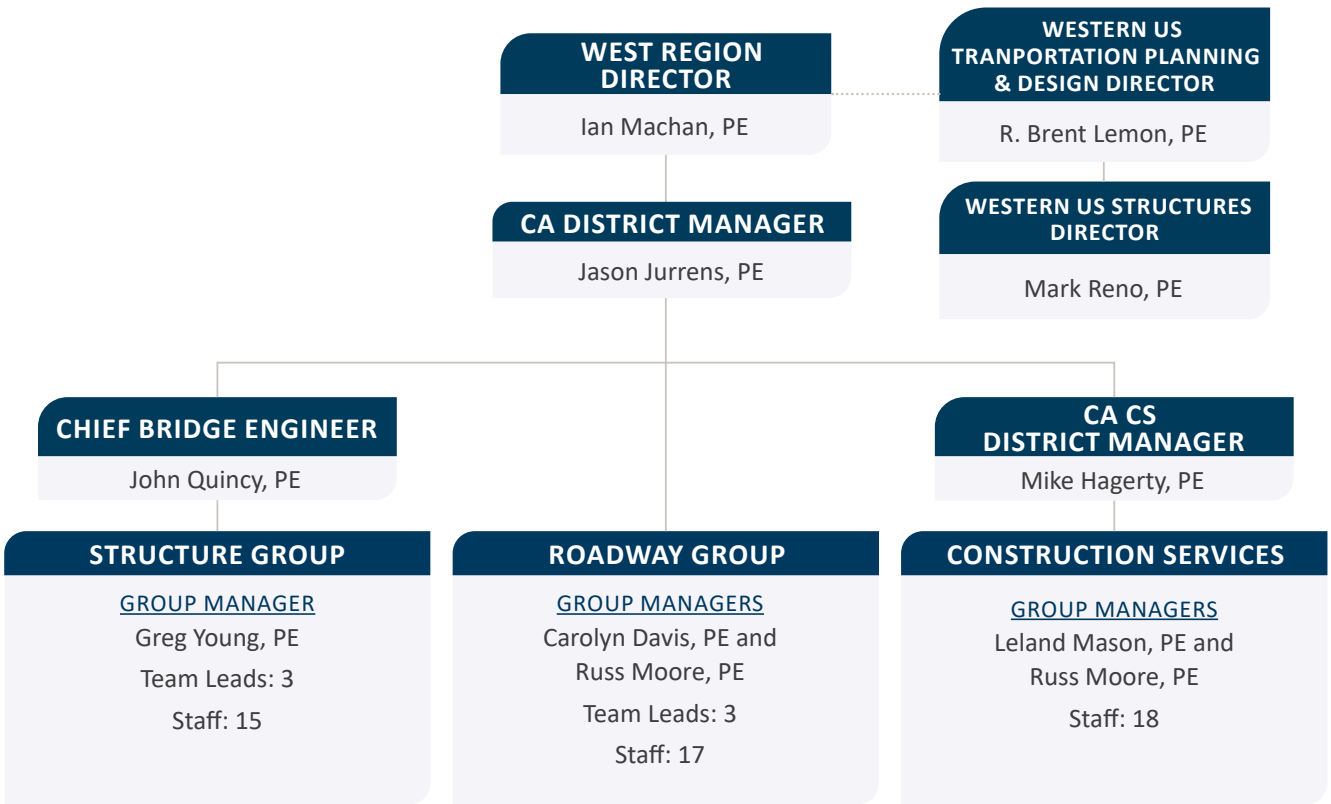
Redundancy in the Project Team

Brent, on all of his projects, has a designated deputy project manager who is in all of the communication loops associated with the project and project team. Sometimes there is an urgent need for communication and a backup for the PM provides valuable redundancy for the City. The deputy project manager for this project will be Dace Morgan. In addition to Dace, our Bridge Lead Engineer, Scott McCauley will be available to address concerns with the City on behalf of the Consor Team. While not listed on the organization chart, our bridge, roadway, utility design and coordination teams have multiple team members supporting the individuals listed. Each of our subconsultants have a task lead and at least one additional team member listed on the organizational chart and several others committed to the delivery of the US 101/Prado Road Interchange Project.

Consor is a nationwide company and can pull resources from other west coast offices and regions across the country as necessary to complete this project. However, Brent, Dace, and Scott will continue to provide the City with the excellent quality of services you are used to receiving from the Consor team..

Redundancy of Company Staff

To illustrate Consor's regional depth of resources, a corporate organizational chart highlighting our California team is included below.



Quality Control & Assurance Process

Quality Control (QC) is not just a review of the final work product prior to its delivery to a client. Rather, true quality control is a commitment to a process of ongoing "critical eye" review and oversight throughout the project.

The Consor team will be responsible for quality control including making sure our subconsultants meet our standards. Quality Assurance (QA) will be provided by Greg Young and Brian Ray, who will audit the project intermittently to confirm that QC procedures are being followed by the team. The goal of the QC plan will be to attempt to prevent errors, to quickly detect and correct those that do occur, and to eliminate their cause in the future.

Catching errors during design is key to minimizing construction contract change orders. At Consor, effective quality control is promoted through the use of our QA/QC plan. This plan documents procedures and provides checklists to be employed in the review of various work products throughout project delivery. This includes not only the review of products related to design and construction, but also includes processes for contracts, invoices, and correspondence.

Design Document

(Owner=Designer)

- Designer provides Deliverable & Quality Control Form (QCF) to QC Reviewer for checking

Quality Control Review

(Owner=Subject Matter Expert)

- QC Reviewer performs review & provides comments to Designer
- Designer resolves comments & prepares updates
- QC Reviewer backchecks updates & signs QCF

Design Milestone Submittal

(Owner=PM)

- PM prepares submittal package, signs QA Cert & transmits package to City and Caltrans for review

Independent Quality Review

(Owner=Quality Manager (QM))

- Independent Reviewer performs IQC review of entire design package
- QM confirms IQC is complete & package meets contract requirements, all QCFs are complete & prepares QA Cert

Client Review

- ✓ City and Caltrans completes review, provides comments
- ✓ Comments are resolved & incorporated prior to next milestone

Resumes

Resumes of individuals assigned to our project team are located in the Appendix.

Detailed List of Services Available Directly from our Firms

CONSOR

- Freeways and Interchanges
  - Project Scoping
  - Design Approval Documents
  - Feasibility Studies
  - Project Funding
  - Public Outreach
  - Utility Coordination
  - Right-of-Way Needs Determination
  - Design-Build and Alternative Delivery Methods
  - Caltrans Coordination
- Highways and Local Roadways
  - Project Study Reports and Project Reports/PAED
  - Feasibility Studies/Final Design (PS&E)
  - Erosion Control and Site Remediation
  - Storm Water Management
  - Utility conflict analysis and resolution
  - Value analysis/engineering
  - Quality assurance
  - Constructability reviews
  - Caltrans coordination
  - Storm damage repair
- Structural Services
  - Structural Engineering (bridges, retaining walls & culverts)
  - Bridge Inspections (NBI certified) and BPMP Programing
  - Bridge Capacity & Rating Analysis for Vehicle Loads
  - Construction Plan/Specification Preparation & Review
  - Retaining Walls and Landslide Repairs
- Traffic Engineering
  - Operational Analysis
  - Traffic Signal Design
  - ITS Planning and Design
  - Parking Studies
  - Traffic Control Plans
  - Multimodal Design
- Miscellaneous Services
  - Federal, State, and Local funding Assistance

AECOM

- Assessment of Potential Grant Options
- Develop Grant Strategies
- Grant Writing Assitance

APEXX ARCHITECTURE

- Bridge Architecture
- Corridor Theme Development
- Renderings

BENNETT + Y&C

- Signals & Lighting
- Signal Design
- Illumination Analysis
- Lighting Design
- Fixture Aesthetics

DKS ASSOCIATES

- Traffic Validation
- Traffic Data Collection
- Traffic Analysis
- Safety Analysis
- Highway Safety Manual Integration
- Traffic Level of Stress Analysis

HAMNER, JEWELL & ASSOCIATES

- Right-of-Way Acquisitions and Appraisals
- Property Owner Meetings
- Rights of Entry Coordination

HDR

- Water Resources
- Floodplain
- Drainage Design
- Drainage Report
- SWDR
- Erosion Control

RINCON CONSULTANTS, INC.

- Environmental Permitting
- Hazardous Materials Analysis
- Habitat Mitigation and Monitoring Plans
- Cultural Resources and Biological Resources
- Construction Environmental Monitoring
- Environmental Document Preparation

SUNRISE TRANSPORTATION STRATEGIES

- Geometric Design QA/QC
- Traffic Peer Review Lead

VERDIN

- Public Involvement Strategy
- Public Communication Collateral
- Coordination of Public Engagement
- Documentation of Public Input

WALLACE GROUP

- Topographic Surveys
- Boundary Surveys
- Caltrans Appraisal Maps
- Plats and Legals
- Planting Palettes
- Irrigation Design
- Drought Tolerant Plantings
- Landscape Architecture

YEH & ASSOCIATES

- Geotechnical
- Soils Testing, Drilling, and Boring Logs
- Slope Stability Analysis
- Geologic Services
- Pavement Design
- Life Cycle Cost Analysis
- Retaining Wall Design

Public Agency Experience and Familiarity with Federal, State, and Local Procedures

Consor specializes in the delivery of transportation projects for local agencies, and we have a team of in-house experts recognized for their knowledge and capabilities in bridge, roadway, and transportation engineering design, construction management, and surveying. For over 32 years, we have delivered on-system projects that are local agency funded with Caltrans oversight within 57 of the 58 counties in California and for over 40 cities.

Our staff's knowledge and experience include projects utilizing Caltrans, local agency, and AASHTO design standards while conforming to a variety of funding sources, such as FHWA Grant Programs, STIP programs, HBP, FEMA, Cal OES, and other local funding programs. Additional specialized experience and knowledge that Consor staff possess includes:

- **Project Management** – Our team can take projects from inception through construction. Brent Lemon, Consor's project manager, has 38+ years of proven experience driving projects forward, many on an accelerated schedule. Many of our design staff have spent time in the field performing construction management and inspection services, so we design with constructability in mind.
- **Knowledge of Industry Standards & Processes** – Many of Consor's team members used to work at Caltrans—including Brent Lemon, who served as a Design Office Chief and HQ Geometric Reviewer—and have an intimate understanding how to efficiently navigate approval processes, along with knowledge of Caltrans and local agency standards.
- **Funding Expertise** – Consor has assisted over 13 different agencies in obtaining over $100 million in federal funding. We understand the various state and federal programs managed by Caltrans Local Assistance.
- **Over Two Decades Working in San Luis Obispo County** – Not only does the Consor team work alongside City staff, but we have built strong relationships with staff from Caltrans District 5, Caltrans Local Assistance, County of San Luis Obispo, and other key stakeholders on the Central Coast.
- **Vast Experience on Transportation Projects** – The combined past transportation experience of Consor's staff consists of nearly 1,000 transportation projects that include local roads, roundabouts, interchanges, and bridges (preliminary design through construction); project study reports; project reports; feasibility studies; complete highway plans, specifications, and estimates (PS&E); and construction management services.

FINANCIAL RESPONSIBILITY

Federally, state, and locally funded design and construction projects typically require that the City meet a specific standard of care for project documentation. We understand that the PS&E phase of the project will move forward as locally funded only; however, due to the construction phase being federalized, Consor staff will see that the US 101/Prado Road Interchange project meets the funding processes and paperwork, including requests for authorization and allocation, cost/scope/schedule changes, project close-outs, finance letters, and detail estimates. Our financial management and accounting system fully satisfies 49 CFR Part 18, 48 CFR Part 31, and 2 CFR Part 200. Consor is also familiar with the federal requirements outlined in the LAPM manual. Consor already has an audited indirect cost rate, which has been approved by Audits and Investigations.

We have never been disqualified by any public entity from proposing on public contracts. The City can be assured that your project is being serviced by a financially strong, stable, and accountable professional engineering firm. The projects our team has worked on range from $50 million seismic retrofit and interchange design PS&E to feasibility studies and type selection to project programming documents and construction management for projects of all sizes.

Organization & Approach

consor

Organization & Approach

Project History and Background

The US 101/Prado Road Interchange is a project that has been discussed, studied, and developed since the early 1990's. Over time, the project plan has progressed from an overcrossing to a full interchange and from a full interchange to the current overcrossing with northbound ramps. One of the reasons for the overcrossing/interchange was the potential development of the Dalidio property on the west side of US 101 between Madonna Road and Los Osos Valley Road (LOVR). Throughout the years, the Dalidio development took on many forms and land uses with many starts and stops as is common for development. The earliest planning document for the full interchange was a Project Study Report (PSR) prepared by Nolte and Associates for the City of San Luis Obispo and Caltrans in 1996. The PSR studied three alternatives for a full interchange:

- Tight diamond
- Spread diamond
- Spread diamond with a cloverleaf southbound off ramp

Because of interchange spacing issues with Madonna, a southbound collector-distributor roadway on the west side of US 101 to link Madonna and Prado was proposed to address the limited weaving distance on southbound US 101. Unfortunately, at the time of the 1996 PSR, one of the primary drivers of the project, the Dalidio development to the west of the project, did not move forward and there was no support from Caltrans HQ to approve a design exception for the interchange spacing between Madonna and Prado. Without developer funds to help offset construction costs and the Caltrans design exception hurdle, the Prado Interchange project lay dormant until the mid 2010's.

In 2014, Coastal Community Builders (CCB) known as MI San Luis Ranch, LLC, initiated an application to develop the Dalidio property. The San Luis Ranch development would include housing, affordable housing, recreation, retail, and commercial spaces with an emphasis on Farm to Table to honor the agricultural history of the property. With the development moving forward, the need for an overcrossing at Prado Road became necessary once again.

A 2018 Project Study Report/Project Development Support (PSR/PDS) noted that because of interchange spacing and forecast traffic needs, the 1996 solution of a full interchange with a collector-distributor was deemed invalid. Alternatives were advanced in the PSR/PDS for the overcrossing and northbound ramps only. Subsequent traffic evaluations and the 2023 Traffic Operations Assessment Report (TOAR) amendment completed as part of the Project Approval and Environmental Document (PA&ED) supported designs for a refined overcrossing, northbound ramps, and a ramp terminal intersection. These recommendations are being advanced for final design and implementation.

Page from the 1996 Caltrans Project Study Report

Our Approach to Resolving Project Constraints & Challenges

Below are several key constraints and challenges that we have taken into consideration in the project design and our approach to resolving them. Drawing on ou
Exhibits 1 and 2 on the following pages highlight these on the project map.

Constraints

Constraint: Floodplain

Map

1

Consor Approach

- Elevate roadway only where necessary
- Utilize retaining walls with culverts where possible
- Add vegetated detention basins to capture flows

Constraint: Clear Span US 101

Map

2

Consor Approach

- Maximize bridge span lengths to 150 feet
- Utilize precast girders to eliminate falsework
- Place supports on either side of US 101

Constraint: Connection with Existing Dalidio Drive/Froom Ranch Way Roundabout

Map

3

Consor Approach

- Our team includes Brian Ray, who led the design effort for the existing roundabout
- Obtain detailed topographic mapping of the roundabout
- Consor has obtained the improvement plans for the original design, which differs from the PA&ED layout

Constraint: Historic Resources at Sunset Drive-In

Map

4

Consor Approach

- Work closely with Rincon to positively locate the historic resources
- Wallace Group (Survey) will include the resources in the topographic mapping
- Design new Elks Lane connection to avoid the resources

Challenge

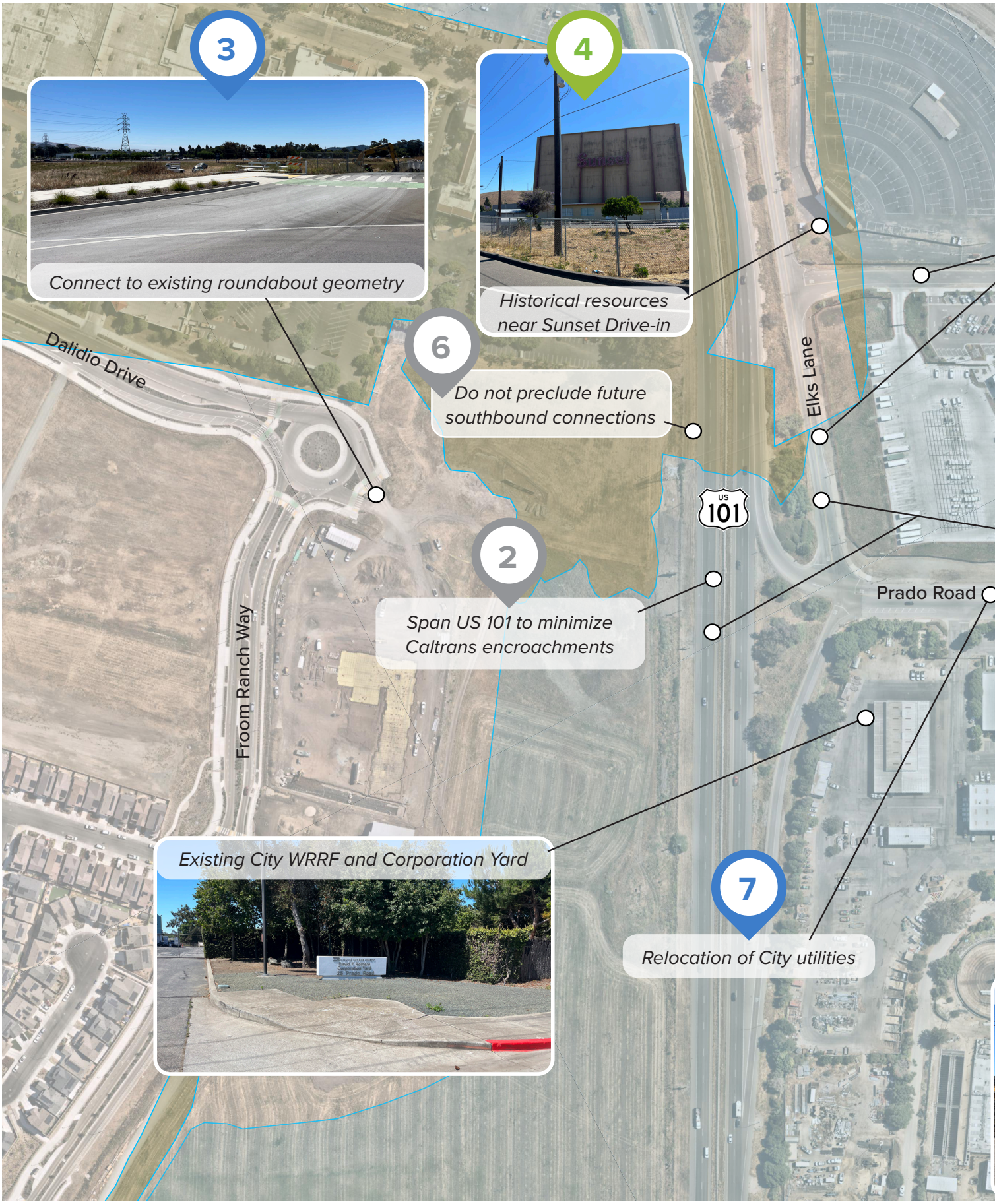
Map

5

Challenge

Map

6


3
Connect to existing roundabout geometry
4
Historical resources near Sunset Drive-in
6
Do not preclude future southbound connections
Dalidio Drive
Elks Lane
US 101
2
Span US 101 to minimize Caltrans encroachments
Froom Ranch Way
Prado Road
Existing City WRRF and Corporation Yard
7
Relocation of City utilities

Project Understanding

PROJECT METHODOLOGY & DELIVERY APPROACH

The US 101/Prado Road Interchange project has been split into two design phases that allows the project team to first validate the current project approach, make any goal-oriented changes, and then present a refined approach. With the refined project approach, the project team will deliver the right solution in Phase II.

Many decisions have been made with long-standing presumptions and the shared desire to progress the project through the PA&ED phase. With a fresh set of leaders, Consor brings the ability to reestablish the City's project goals and understand what benefits project changes may bring.

Prior to the completion of the PA&ED phase, the City and Caltrans completed a hybrid Value Analysis (VA). Six project improvements and cost saving measures were proposed and five of them were recommended through this analysis. Our team has reviewed the VA and incorporated many of the elements discussed into our "Alternative 3A". In our discussions with the City and Caltrans about this project, there is a desire for validation of the previously completed work, as there could be additional design refinements incorporated. Through our development of this proposal, we worked with HDR to refine the hydraulics modeling to determine if the length of structures could be reduced by incorporating culverts in fill with retaining walls to minimize the project footprint. The concept has determined to be feasible with the possibility of additional flood water storage areas on the east side of US 101.

As part of the Alternative Validation phase (Phase I) Consor will review the recommendations previously given—coordinating with the City, Caltrans, and other project partners to gain a further understand the long-standing project history—on what can be adapted to account for current conditions, and what needs to stay the same due to external factors. To expedite this process, Consor will do a qualitative analysis for each project alternative to gain concurrence on what the City and Caltrans want to include as part of the interchange project. Regardless of which project alternative is selected, there are several sub-components that will be considered (i.e. retaining wall or fill slope). Once a project direction has been agreed upon, these sub alternatives will be identified and discussed to gain concurrence on project direction.

Validation of VA Recommendations

- From City staff interview
  - ✓ Confirm project goals
  - ✓ Explore ideas for alternative solutions
- Assess VA alternative recommendations
- Explore value add options
- Compare value of options to recommendations
- Present implementation recommendations to City & Caltrans
- Obtain agreement on VA implementation actions
- Implement in 50% submittal

The Consor team will evaluate several items such as:

- Structure type and layout
- Floodplain/hydraulic impacts
- Intersection control
- Lane configuration
- Drainage needs/requirements
- Roadside treatments
- Network traffic impacts/considerations

With regards to intersection control and network traffic impacts, we recommend that the City consider updating traffic counts, since the original ones for this project were done prior to the pandemic. We have all seen traffic patterns change since that time. By using these updated traffic counts, the Consor team, supported by DKS and Sunrise Transportation Strategies (both exclusive to our team), we would validate the current project will provide the desire outcome for opening day and the design year.

Roundabouts are the preferred intersection control for the City. While the current traffic analysis of future traffic and turning movements may not support a roundabout at the northbound ramp termini, we

Intersection of US 101 and SR 46 E

The Consor team recently completed the Value Analysis Study for the US 101/SR 46 E project being led by SLOCOG in partnership with Caltrans. Our team was able to effectively engage Caltrans staff and create ownership of the recommendations proposed in the study as well as gain concurrence on proposed implementation actions to be incorporated into the project. This process effectively narrowed the number of alternatives and introduced over $7M in potential cost savings for the project, representing over a 20% cost reduction for the project.

recommend validating this conclusion with updated traffic counts and analysis. While the roundabout presents structural challenges, our team has discussed placing just the roundabout on fill with retaining walls to minimize the impact to the floodplain and simplify construction.

One component of the US 101/Prado Road Interchange that may be evaluated in this qualitative analysis is the need to not preclude southbound ramps. Initially identified in the 1996 Project Study Report, the southbound ramps were documented to provide benefits such as traffic congestion relief on the existing interchanges, local roadways, and intersections along S. Higuera Street, Madonna Road, and Los Osos Valley Road (LOVR). Though the alternative was not progressed due to interchange spacing and traffic demand, the City may consider not precluding it from a future project. Preserving the opportunity for and being sure the planned Prado overcrossing could support potential future southbound ramp system to Prado Road integrates forward compatible flexibility in the current design and implementation. Considering and allowing a Prado overcrossing that does not preclude a potential future southbound ramp maximizes system connectivity benefits on Caltrans and City streets. A future southbound ramp system could relieve traffic demand on the LOVR and Madonna Road corridors. In addition to providing increased network resiliency and redundancy maximizing the benefits of the proposed Prado interchange, reducing traffic volumes on critical City roadway segments and intersections reduces vulnerable user crash risk and improves multimodal quality of service.

1. STRUCTURE TYPE & LAYOUT

At its core, the US 101/Prado Road Interchange project is a bridge project. It is the primary component in the design and the largest cost. The Consor team will bring our more than 30 years of bridge design expertise to developing a creative solution for the structure that balances costs, hydraulics, constructability, and aesthetics. As just one example, in 2019, project team members Brent Lemon and Scott McCauley successfully completed the SR-4/Balfour Road Interchange project in the City of Brentwood. The award-winning project design implemented two significant cost saving measures: utilizing precast concrete superstructure to reduce the profile grade approximately 3 feet, saving a significant amount of earthwork on the project, and protecting an existing 90-inch water line with a protective reinforced concrete cover avoiding a costly utility relocation.

The selection of the type and length of the bridge for this project hinges upon several critical factors:

- Hydraulic Floodplain Impacts: Ensuring minimal disruption to the floodplain and its hydraulic dynamics is paramount to maintain environmental equilibrium.
- Constructability: The chosen bridge design must facilitate efficient construction methods while minimizing disruptions to ongoing traffic flow on US 101.

KEY PROJECT CONSIDERATIONS

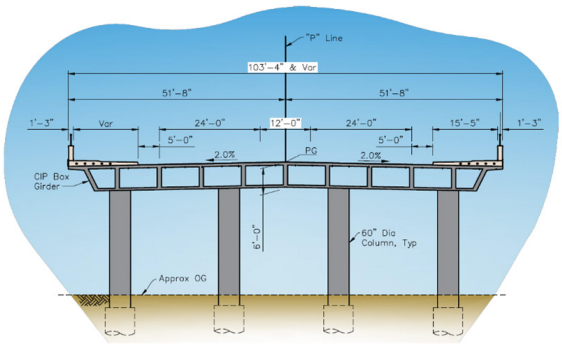
1. Structure Type & Layout
2. Floodplain/ Hydraulic Impacts
3. Funding/ Cost Savings
4. Caltrans Process
5. Utilities
6. Project Aesthetics
7. Drainage/Stormwater Treatment
8. Right-of-Way Impacts
9. Geotechnical
10. Landscaping
11. Environmental Permits/Sustainability
12. Stakeholder Engagement

Project Understanding

- Vertical Clearance Impacts: It's imperative to maintain adequate vertical clearance over US 101 to accommodate vehicular traffic and ensure safety.
- Connectivity: The bridge design must facilitate seamless connectivity for both northbound on and off-ramp traffic from US 101 and Prado Road.
- Cost: Cost-effectiveness is a crucial consideration to ensure the project remains within budget constraints.

Current Recommended Alternative 3

The current recommended alternative (Alternative 3) consists of three separate bridges: the mainline Prado Road bridge, a northbound off-ramp bridge, and a northbound on-ramp bridge. As shown in the previously developed Advanced Planning Study (APS) drawings, the mainline Prado Road bridge is a 14-span 1,538-foot-long cast-in-place (CIP) post-tensioned (PT) concrete box girder bridge with varying width between 101'-9" and 114'-9". Individual span lengths vary between 70-feet and 118-feet long and the structure depth is 5-feet. The intermediate supports consist of three column bents founded on a pile cap supported by several driven piles. The on and off ramp structures are also shown as CIP PT box girder structures with similar structure depth, span lengths, and columns supports.



TYPICAL SECTION
No Scale

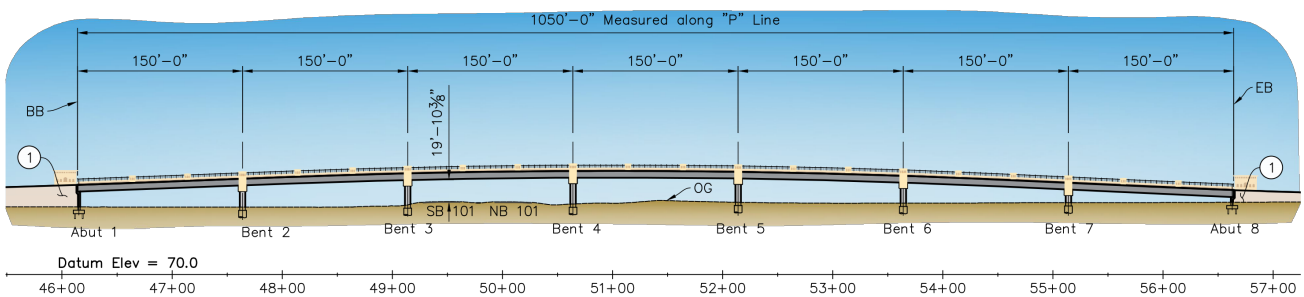
CAST-IN-PLACE POST-TENSIONED CONCRETE BOX GIRDER BRIDGE

PROS	CONS
• Standardized superstructure design • Typically lower cost than precast girder bridge • Easily adapts to changes in structure width or curves	• Requires falsework over US 101 • Raises profile

A CIP PT Concrete Box Girder Bridge is a practical structure type for all three structures at the span lengths proposed. This is a traditional construction type method which has elements cast in formwork built at the project site. The use of post-tensioning helps minimize the required structure depth and reduce overall impacts. This method is also beneficial with curved horizontal alignments or steeper profile grades, such as those required for the on and off ramps. The main disadvantage of this structure type is the need to include falsework for construction. Section 204.8 of the Caltrans Highway Design Manual requires a minimum vertical falsework clearance of 15-feet over freeways. The depth of falsework requires the ultimate profile grade to be raised in order to achieve minimum required vertical clearance of US 101. It is not clear if the depth of the falsework was accounted for in the previously prepared Advance Planning Studies. Additionally, CIP construction takes longer to construct than a precast girder alternative.

Proposed Alternative 3A

The VA study recommended evaluating an alternative concept utilizing precast I-girders in lieu of cast-in-place (CIP) girders to allow for longer structural spans and, therefore, require fewer bents and columns to support the structures. Our team has developed a preliminary alternative that not only uses precast girders on the bridge, but also results in a much shorter bridge length.



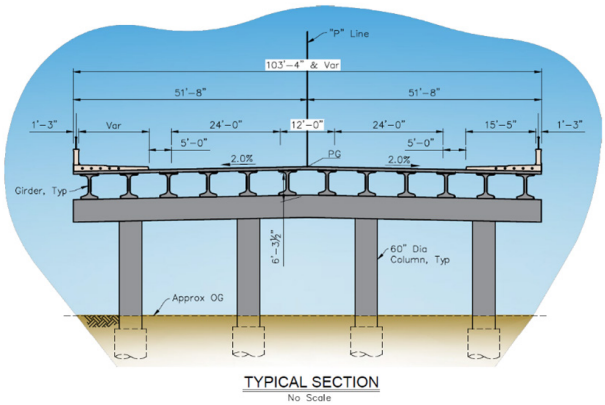
ELEVATION
Scale: 1" = 60'

Bridge Alternative 3A

Project Understanding

Similar to Alternative 3, Alternative 3A consists of three separate bridges: the mainline Prado Road bridge, a northbound off-ramp bridge, and a northbound on-ramp bridge. Unlike Alternative 3, the proposed mainline Prado Road bridge is significantly shorter and consists of a 7-span, 1,050 foot-long Precast Prestressed Concrete (PC/PS) Wide Flange Girder bridge. Span lengths are equal for each span at 150-feet and the structure depth is 6'-3 ½". In addition to the cost savings discussed in the VA study, the use of precast members for the mainline Prado Bridge in Alternative 3A presents benefits to the project with shorter construction duration and a more optimized profile grade. A PC/PS Wide Flange Girder bridge consists of the girder elements built off-site, trucked in, and assembled in place using cranes. This method reduces the overall construction timeline. There would be a final top slab of CIP Concrete poured over the concrete elements, but there is no need for falsework, which optimizes the ultimate profile grade required to achieve the proper vertical clearance over US 101.

In Alternative 3A, the northbound on- and off-ramp bridge structures would be CIP PT box girder bridges similar to Alternative 3. These structures are more complex than the mainline Prado bridge with varying widths, higher profile gradients, and complex connections to the mainline structure. Falsework clearance is not a concern because they are located in the existing shoulder area of US 101. For these reasons, the CIP construction method is more practical over using precast elements.



TYPICAL SECTION
No Scale

PRECAST PRESTRESSED CONCRETE WIDE FLANGE GIRDER BRIDGE

PROS	CONS
• No falsework over US 101 • Reduced construction duration compared to CIP methods • Minimized profile increase	• Requires large cranes for erection • Large sections can be difficult to truck to site • Typically more expensive than CIP • Difficult to adapt to changing structure width or curves

Retaining Walls

To minimize impact to the floodplain, we propose using retaining walls at the bridge approaches to decrease the footprint of fill slopes. Additionally, we plan to use culverts to extend through the retaining walls to help convey floodplain flows. This will mitigate potential localized water surface elevation increases that might trigger a Conditional Letter of Map Revision (CLOMR) and save costs associated with longer bridges.

The appropriate wall type will be dictated by the underlying soil conditions, backfill requirements,

proximity to adjacent properties, ease of construction and other right-of-way boundaries, live load surcharge, and collision protection considerations. In general, wall types are also dependent on whether they are placed in a fill condition or cut condition. Based on the preliminary layout of the bridges, the proposed walls will all likely be placed in a fill condition. Two of the most conventional wall types for fill type walls include the Caltrans Type 1 retaining wall and the Caltrans Mechanically Stabilized Embankment (MSE) wall. Both wall types have standardized details prepared by Caltrans that are available for use. Additionally, both wall types can be designed and detailed to accommodate multiple culverts. Our project team will evaluate appropriate retaining wall alternatives to compare all the advantages and disadvantages during Phase I of the project.

Caltrans Structure Type Selection

The new bridges and retaining walls will need to go through the Caltrans Structure Type Selection process, as this was not completed during the PA&ED phase of the project. Given this structure will be maintained by Caltrans, the Structure Type Selection process will receive scrutiny from Caltrans Structures HQ. The Consor team has prepared many Structure Type Selection Reports for structures maintained by Caltrans and facilitated multiple Structure Type Selection meetings with Caltrans Structures HQ. Our structures team will be based in the Sacramento area and will lead the Type Selection meetings in person at Caltrans HQ building in Sacramento.

2. FLOODPLAIN/HYDRAULIC IMPACTS

The project lies within the Federal Emergency Management Administration (FEMA) Flood Insurance Rate Map (FIRM) Number 06079C1068G, superseded by two Letters of Map Revision (LOMR) known as San Luis Ranch LOMR. Flooding sources within the project limits include San Luis Obispo Creek, Prefumo Creek, and Froom Creek. Figure 1 shows the project site is located in Special Flood Hazard Area (SFHA) Zone AE, which represents areas subject to flooding by the 100-year flood event. Portions of the project site are also within an a Zone X area, which represents areas that have a moderate to minimal flood hazard.

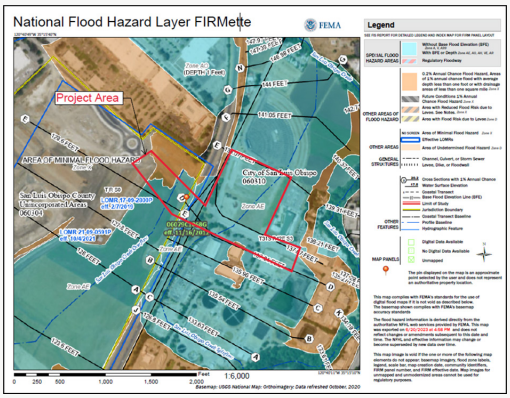


Figure 1 - The project site is located within Special Flood Hazard Area Zone AE

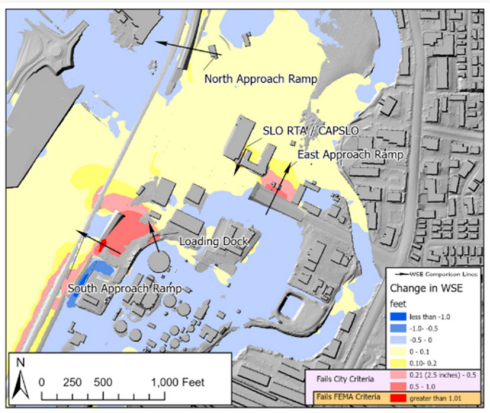


Figure 2 - Water surface elevations across the project area

Floodplain Management Standards

The project will be designed to meet both the FEMA National Flood Insurance Program (NFIP) regulations and the San Luis Obispo Creek Waterway Management Plan Drainage Design Manual (DDM). To meet FEMA National Flood Insurance Program (NFIP) regulations, the project must not increase base flood water surface elevation by more than one foot. If exceeding this threshold, approval requires a Conditional Letter of Map Revision (CLOMR). To meet the San Luis Obispo Creek Waterway Management Plan DDM criteria, the project must not increase the floodwater elevations by more than 2.5 inches or increase floodwater velocities by more than 0.3 ft/s. Additionally, there shall be no significant net decrease in floodplain storage volume as a result of a new development or redevelopment projects, which can be achieved by a zero-net fill grading plan, balancing all cut and fill placed on the 100-year floodplain, or with cut exported off site.

The extents of the floodplain and the required floodplain design criteria play a crucial role in driving this project design. Effectively right-sizing the bridge length with the amount of approach fill hinges on a comprehensive understanding of how the chosen structure will affect the surrounding floodplain.

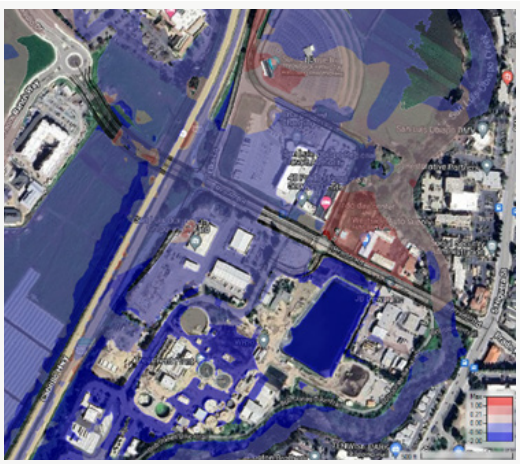


Figure 3 - The blue areas indicate a net decrease in WSE; the lightest red areas indicate that the WSE increase is 2.5 inches or less per the DDM; the medium red areas indicate that the WSE increase is 1.0 foot or less per FEMA guidelines; and the dark red areas indicate a more than 1-foot increase.

Project Understanding

Consor has strategically partnered with HDR for their expertise, particularly showcased in their recent Local Hydraulic Study relevant to this project. This collaboration ensures an in-depth grasp of the floodplain dynamics and their implications. Leveraging our longstanding partnership with HDR's hydraulic engineers, Consor has already initiated preliminary analyses for our proposed Alternative 3A solution. This proactive approach underscores our commitment to delivering a solution that optimally balances engineering requirements with environmental considerations.

Preliminary Analysis Results

Our team has conducted a preliminary analysis of the current proposed alternative (Alternative 3). The results indicate there would be generalized increases in the water surface elevation up to 2.5 inches including adjacent to existing structures in the floodplain. Results also showed localized increases in WSE up to 1 foot, most notably around the buildings on the north side of the east approach ramp for the overcrossings, the area surrounding the northbound off-ramp, and an in-ground loading dock on City property. See Figure 2 for water surface elevations across the project area.

In preparation for the proposal our team modeled our Alternative 3A in HEC-RAS. Our preliminary analysis of this alternative shows some localized increases at the approaches of the Prado overcrossing and northbound on and offramp bridges as well as buildings on the northeast corner of the intersection of Prado Road the new Elks Lane Road. Our approach will be to survey the finished floor elevations to more accurately model the impacts. See Figure 3 of the flood plain based on our team's Alternative 3A.

Existing basins will be evaluated for storage capacity and further development of the project's design alternatives will consider additional improvements to mitigate any increase in WSE resulting from the project. Such improvements may include adding detention basins between the on- and off-ramps and US 101 and adding culverts at the approach retaining walls on Prado Road.

View of Possible Prado Interchange Off-Ramp Retaining Wall

3. FUNDING/COST SAVINGS

Due to the size and complexity of the US 101/Prado Road Interchange, it is known that the project has seen a significant increase in costs over the years. The 2024 Draft Project Report estimates that the project will cost the City approximately $72.8 Million in 2025. At the September 2023 City Council Meeting, City representatives stated that costs could reach $119 Million by the 2028 construction year due to factors such as variable inflation and alternatives selected. To reduce the project costs, the City explored cost-savings project alternatives in the May 2023 Value Analysis Report which mentioned six separate strategies and found that five could reasonably be implemented.

The Consor team agrees with these recommendations and is committed to exploring cost-savings strategies beyond those mentioned in the 2023 Value Analysis report. While there may be many cost-saving measures, Consor believes that the current project costs may be understated. The APS studies prepared in July 2022 used square footage costs for the structures ranging from $184/sf to $280/sf. Our experience has shown that structures of these type at the planning phase currently range from $450/sf to $550/sf. In the January 2023 edition of Caltrans' Comparative Bridge Costs, the cost per square foot for a CIP/PS Box Girder of $150/sf to $400/sf. This range does not include mobilization, contingencies, retaining walls or aesthetic treatments. Given that the bulk of the project cost is for construction of the structures, it will be important to provide the City with a more realistic structures cost early in Phase I of the project. This will allow the team and the City to begin to look for additional funding sources and provide a consistent message to elected officials and stakeholders.

Project Understanding

ALTERNATIVES		ASSOCIATED COST SAVINGS		ACCEPTABLE?
No.	Name	Alternative A1R (Roundabout)	Alternative A3 (Signal)	
1.0	Reduce maximum speed on structure to 35 mph	$1.1M	$1.0M	Yes
2.0	Reduce lane and shoulder widths where practical	$0.6M	$0.5M	Yes
3.0	Use CIDH columns in lieu of driven piles and pile caps	$5.0M	$4.6M	Yes
4.0	Use longer spans and fewer columns with precast I-girders in lieu of CIP girders	$16.0M	$15.1M	Yes
5.0	Leave existing sewer main on current Elks Lane alignment in lieu of relocation	$0.7M	$0.7M	No
6.0	Utilize recycled and/or reclaimed materials in project	$0.3M	$0.3M	Yes
C.7	Bridge length	$23.9M	$23.9M	
C.8	Bob Jones Trail extension along Prado Road	$5.4M	$5.4M	
C.9	Reduce Prado Road to two-lane facility	$4.9M	-	

The "C" demarcates a Consor, value added, potential alternative to the current design.

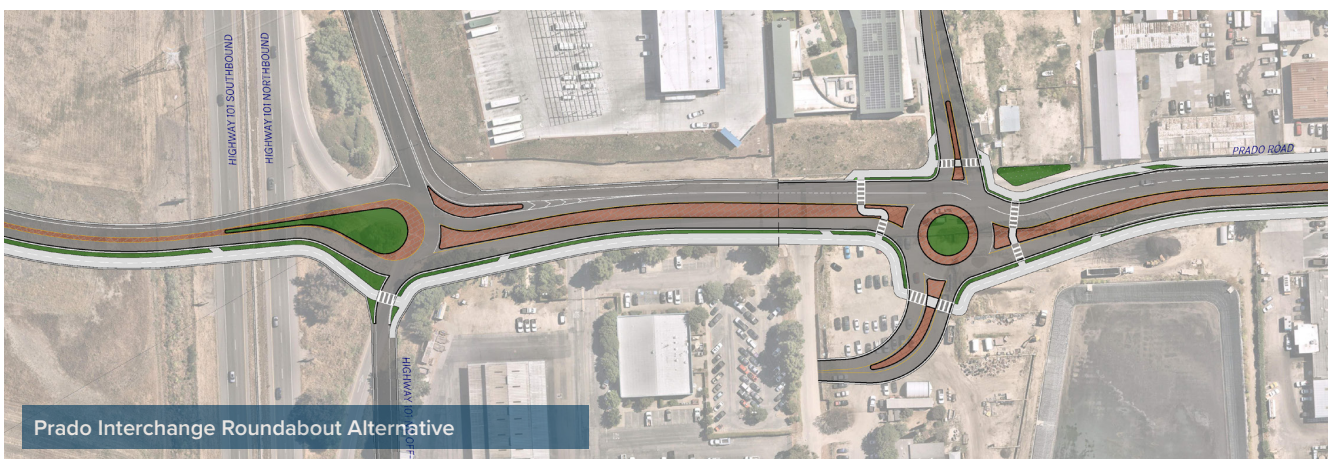
The associated cost savings values are based on an assumed bridge unit cost of $475 per square foot for Prado Road Bridge and $375 per square foot for the on and off ramp structures

Bridge Length

Our alternative 3A is approximately 30% shorter and has approximately 30% fewer column supports compared to the original alternative 3. This change could ultimately lead to a significant cost savings to the project. The shorter bridge length is offset by additional fill and retaining walls required on the east and west approaches and will create an increased obstruction in the floodplain. Reducing the bridge lengths for the Overcrossing and on/off ramp structures has potential cost savings of $23.9 Million.

Roundabout Corridor

Since the 1996 PSR, several alternatives have been explored for the Prado Road overcrossing with each alternative including a signal-controlled intersections at the northbound ramp termini and Elks Lane and Prado Road. Due to the proximity of intersections along Prado Road, evaluating a roundabout at these locations may reduce the number of lanes along the corridor. Reducing the Prado Road overcrossing structure from four lanes to two lanes has potential cost savings of $4.9 Million. Reducing the structure to two lanes would likely not be feasible in a signal-controlled environment.



Prado Interchange Roundabout Alternative

Project Understanding

Bob Jones Trail

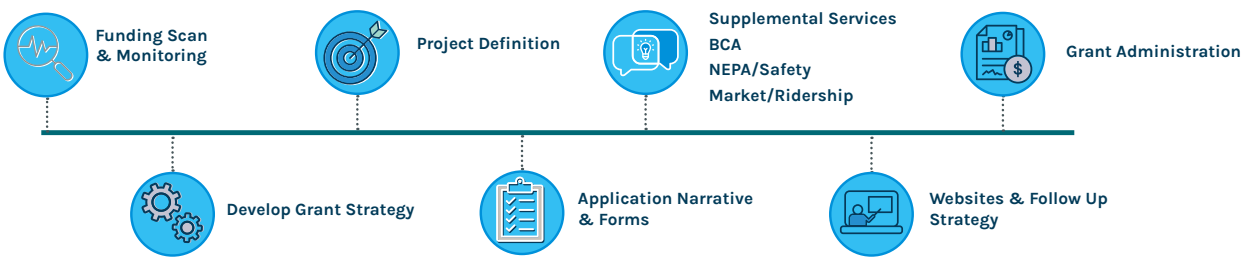
The Bob Jones Pathway has segments from Avila Beach to US 101 and from Los Osos Valley Road to Prado Road with plans to connect the two segments. A fully connected pathway would allow pedestrians and bicyclists to have a complete bidirectional trail network from Avila Beach to Prado Road. The current typical section for Prado Road corridor includes sidewalks and cycle tracks on both sides of the road. If the City and stakeholders were to consider extending the Bob Jones Pathway along the south side of the overcrossing to the west with minor pedestrian facilities along the northern edge of roadway has potential cost savings of $5.4 Million.

Even with the cost savings identified above, the City has a funding shortfull for the construction of the project. Lincoln James (AECOM) will take the lead on identifying grant funding opportunities for the project. Lincoln is exclusive to the Consor team and has been a partner on several large transportation projects throughout the State. Our team will work with the City to develop a grant funding strategy for seeking federal discretionary funding. The strategy would identify sequential steps for the project development process and would entail identifying opportunities for potentially accessing funding to address both the planning and construction phases of the project. In addition, this strategy would identify interim steps to improve the competitiveness of the candidate project, such as aligning project benefits to key scoring criteria, positioning these elements to directly align with funding program objectives, and necessary studies required in order to develop competitive grant applications.

The funding strategy begins with a funding program scan in which federal and state discretionary programs are evaluated against the project's attributes to identify suitable opportunities for seeking federal funding. This would include utilization of AECOM's propriety FundNavigator tool to run initial project information to begin to identify opportunities for federal funding for these projects. FundNavigator is an AI-enabled tool which identifies and evaluates IIJA/IRA-related grant resources and consolidates available information of a funding program information in a searchable source on an interactive dashboard including Notice of Funding Opportunity (NOFO) information.

Against project's attributes, FundNavigator compiles data from suitable discretionary programs which the City could potential access for funding. This data includes:

- Program name;
- Issuing agency;
- Summary of program objectives;
- Total pool of funding available;
- Likely average award size;
- Frequency of program offering;
- Eligibility requirements (project type, size, shovel readiness, etc.);
- Assessment criteria (primary and secondary objectives, ancillary benefits or impacts); and
- Application requirements (project size, required modeling, and/or economic justification).



The findings of the FundMatcher output is reviewed and further screened by funding advisory subject matter experts to narrow down the most applicable funding program(s) for the project. Upon the completion of the identification, documentation, and evaluation of suitable funding programs which the City may access for the project, our team would develop a high level capture strategy which would be comprised of an action plan which the City should follow which would address the following:

- Positioning of the project to directly align with the specific program's sought-after outcomes, as well as the overarching objectives of the issuing agency;
- Partnership and sponsoring (co-applicants, contributing partners, and project sponsors);

- Funding levels required (both in regard to the identified programs' likely award size as well as local match levels required to be competitive); and
- Interim processes, studies, and materials required to show project readiness (including road map to achieving environmental regulatory clearance, other local/regional permitting and approvals, any additional modeling required).

Lincoln James and his internal team members have helped clients secure over $3.5 Billion in discretionary funding offered by multiple agencies within the US Department of Transportation (USDOT), Federal Emergency Management Agency (FEMA), Economic Development Administration (EDA), and several California state-sponsored programs.

The framework of successfully delivering grant funding is shown in the graphic on the preceding page.

Once suitable discretionary programs have been identified and the City decides on which grants to pursue our team will develop grant applications for the project. While the approach to the development of a turnkey grant application differs from one funding program to another, the following is the general approach that would be undertaken and is based on programs issues by the USDOT and Caltrans (INFRA, RAISE, TCEP, etc.). The main tasks for the delivery of a turn-key application are:

1. Grant application coordination;
2. Narrative and application development;
3. Benefit cost analysis;
4. Application design;
5. Quality assurance and quality control; and
6. Project controls.

4. CALTRANS PROCESS

Navigating the Caltrans Process can be daunting and overwhelming. Fortunately, the City and Caltrans staff who worked on the Project Report have a good working relationship. The Consor team will be an extension of the City staff working with Caltrans. The key personnel from the Consor team all have established relationships with the Caltrans District 5 Project Manager, Paul Valadao. Brent Lemon and Paul have many coworkers (past and present) in common and share a vision for doing what is best for the project. Dace Morgan and Paul have known and worked together for more than 15 years on various projects throughout the Central Coast. Scott McCauley, our bridge project engineer, has completed several bridge projects in Caltrans right of way. He is well known and respected among the Caltrans Headquarters Structures team.

One of the strongest benefits of this team is that we all will do what is right for the project. This team has the experience from past projects which Brent has led including SR4/Balfour Road Interchange, US 50 HOV Lanes, and El Dorado Hills Interchange, to work together as teammates to get a project that is acceptable to all parties.

In our past experience, we have found that it is best to have one point of contact with Caltrans, which will be Paul Valadao, but have the ability to meet with the Caltrans reviewers to discuss comments and concerns. We have had the most success in resolving comments and concerns by having a conversation with the person instead of exchanging written responses to comments. Written responses to each comment from Caltrans and the City will be provided, but if something is not clear or requires more discussion, our team will work with the individual reviewer to resolve the comment or address the question. One reason we enjoy working with Paul and the City is because they share our philosophy to produce the best project for the traveling public.

We understand the City and Caltrans entered into a Cooperative Agreement (April 2018) and a Project Charter (July 2018), which covered the PA&ED phase of the project. As we initiate the PS&E phase, we will want to continue to update the Cooperative Agreement and Project Charter for the PS&E and Construction stages of the project.

Caltrans will be designing a permanent changeable message sign structure near the Prado Road Interchange location. Our team can provide peer review to the Caltrans design team's work. It is important that the design of the two projects be coordinated and resources could be shared depending on the timing and schedule of the two projects. With a local San Luis Obispo office, we can meet with Caltrans District 5 design staff as necessary. Consor often performs independent reviews for Department's of Transportation across the country. We are also very familiar with Caltrans Plans Preparation Manual, Highway Design Manual and Sign Structure design.

Project Understanding

There will be stormwater quality elements (including bioretention plantings), hardscape elements, and landscaping within Caltrans right-of-way. These elements will require a maintenance agreement as Caltrans will insist that the City be responsible for these items in perpetuity. Our team can assist the City in these negotiations with Caltrans and share our insights as we work with Paul to obtain approval. Our team recently assisted the Contra Costa Transportation Authority in crafting the Maintenance Agreement for the SR4/ Balfour Road Interchange project.

The Project Report noted that a superseding freeway agreement will be required for the project. Brent has experience with these agreements while in the private sector, including his time as a Caltrans employee when he was a Headquarters Design Reviewer assisting many districts with writing and processing agreements through California Transportation Commission (CTC) adoption. Brent will work closely with the City and Caltrans to identify the key elements, acceptable clauses and format for the agreement that will enable adoption by the CTC. Brent has worked with other Caltrans project managers statewide to assist with preparations for CTC agenda items and is very familiar with the long lead times associated with submitting material in accordance with the CTC schedule requirements.

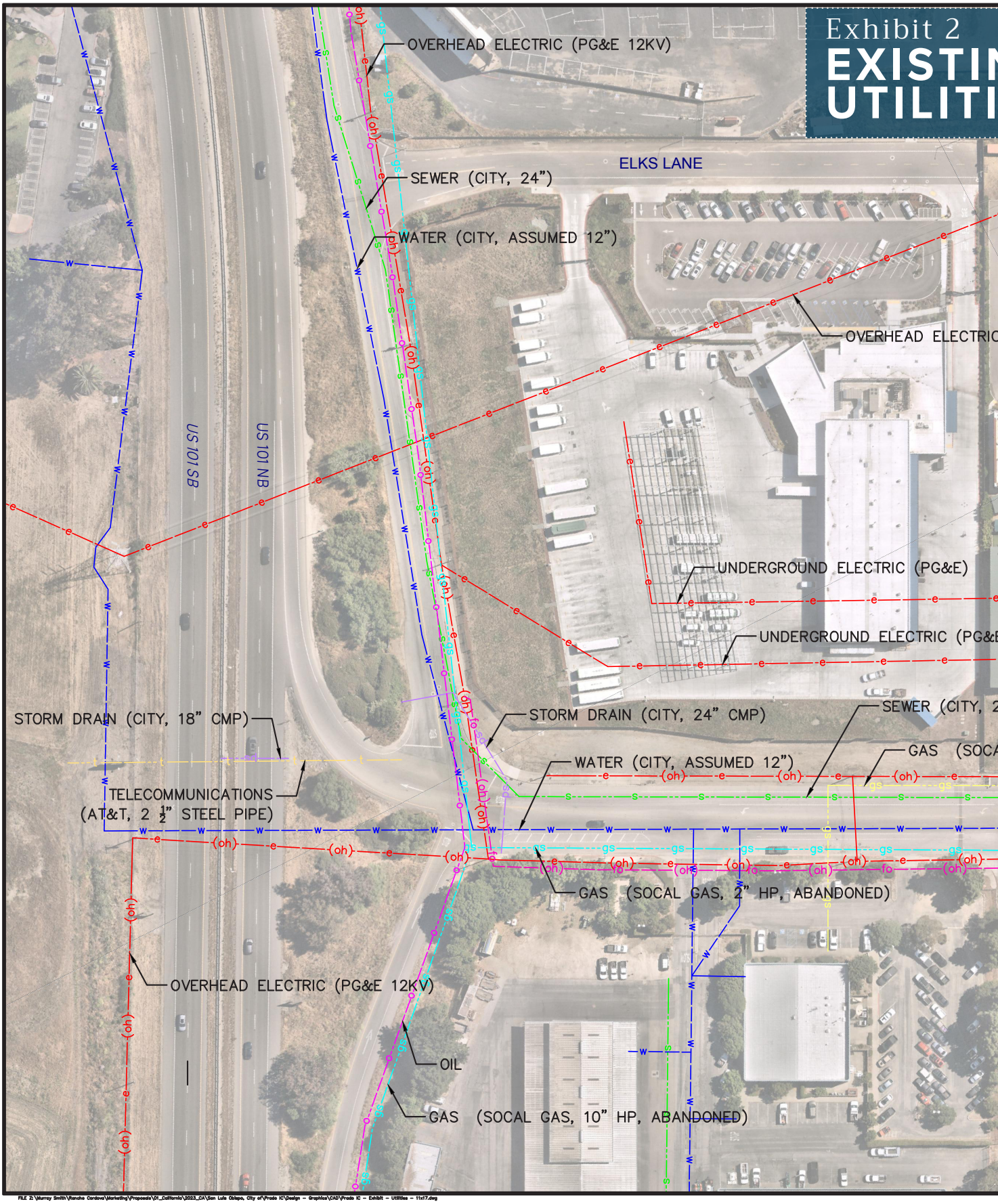
5. UTILITIES

Several utility facilities lay throughout the project vicinity and their relocation may present a significant cost risk to this project. Our team has taken a proactive approach by discussing the project with several utility providers and obtaining facility mapping to evaluate potential impacts of the interchange. Throughout the project, the Consor team will work closely with the utility providers and owners to avoid or minimize service disruptions.

Our approach to utility coordination is to have one point person for all utility coordination – both wet and dry utilities. The City's RFP lays out a robust utility coordination scope and, frankly, it will take several on site meetings with utility companies and follow up. That is why we have assigned Mike Sanchez to be the utility coordinator for this project. Mike has a tremendous amount of experience with utility relocation throughout the state on large projects with all types of utility owners and types of utilities.

The Consor team recently designed a bridge in the City of Newark located in the San Francisco Bay Area that had many underground utilities. We slightly adjusted the locations of the bridge supports to avoid utility conflicts, reduce service impacts, and reduce project costs.

The US 101/Prado Road Interchange project is a large project and will require numerous relocations and these will come with a significant cost to the utility owners, the City, and the project. That is why it is critical to stay in front of the utility owners (including the City), in order to provide them adequate time and opportunity to adjust their yearly budgets for design and relocation costs associated with the project. The scope provided in the RFP lays out a significant amount of in-person and virtual meetings with utility owners with our office in downtown San Luis Obispo, Mike can easily and seamlessly provide the level of personal interactions required for the utility coordination effort necessary to successfully complete this project.



FILE: Z:\Murray Smith\Rancho Cordova\Marketing\Proposals\01_California\2023_CA\San Luis Obispo, City of\Prado IC\Design – Graphics\CAD\Prado IC – Exhibit – Utilities – 11x17.dwg

Project Understanding

Our team's approach will be to underground all aerial lines in strategic locations accessible by utility maintenance crews and provide conduits and utility openings in the new structure for current and future utility needs. The undergrounding of utilities will require a functional underground structure to be in place before removing overhead facilities. Consor—and Mike in particular—has experience with developing undergrounding districts throughout the state. We have created them for Lake and Nevada Counties and American Canyon in northern California. We are familiar with PG&E's guidance and can provide this service to the City, if requested. The formation of an undergrounding district will add time and cost to the project and will need to be discussed with PG&E and other utility providers.

Many utilities are already underground, including the City's wet utilities—water, recycled water, and sewer. Our goal during Phase I of the project is to positively locate (horizontally and vertically) utilities. Understanding facility locations and providing an encompassing exhibit like the one illustrated on the preceding page will play a vital role in identifying if the utility will need to be relocated or if we can strategically place structure support locations to reduce utility relocation costs.

The City of San Luis Obispo has a 30-inch diameter sewer line running within the existing Elks Lane roadway and within Prado Road until it enters the City's Water Resource Recovery Facility (WRRF) near the location of the new Elks Lane and Prado Road intersection. During the VA Study, the team reviewed the option to leave the existing sewer line in its present location as a cost savings measure instead of relocating the sewer line to follow the new Elks Lane alignment. It was determined to proceed with relocating the sewer line. There were two reasons given for continuing with the relocation:

1. Potential conflict with the new bridge supports for the northbound on-ramp and overcrossing structure
2. Future maintenance of the sewer line would be difficult given the proximity of the new structure foundations to the existing sewer pipe.

The Consor team has in-house utility designers that are very familiar with designing new sewer lines for local agencies in California. The team will work with City Water Resource and Recovery staff to ensure the existing sewer pipe size is adequate to meet the City's future growth needs.

While not specifically mentioned in the VA study, there are water and recycled water lines laying within Prado Road that can be avoided through adjusting the foundation locations, however, the City Water Resources and Recovery staff may want to relocate them for ease of maintenance. Our in-house designers, along with Mike will be meeting with staff to discuss the pros and cons of relocation of these facilities.

On past projects with the City and throughout the County area, we have established long-standing working relationships with each of the utility providers within the project limits. As part of this proposal preparation, we have already begun to prepare our utility provider tracking sheet and have been communicating with the staff at each provider, as shown on the list provided:

Utility	CONTACT NAME	PHONE NUMBER	EMAIL
SoCal Gas	Scott Hale	805.503.2486	shale2@socalgas.com
PG&E Electric	Tim Pearson	805.546.3887	timothy.pearson@pge.com
AT&T	Neil Zakaria Joseph Deguzman	805.704.3813 408.807.3662	nz5698@att.com jd5368@att.com
Charter Communications	Dustin Seib	805.534.3134	dustin.seib@charter.com
Crown Castle	Nick Belinsky	742.416.2449	nicholas.belinsky@crowncastle.com
City Sewer/Water	Aaron Floyd	805.781.7205	afloyd@slocity.org
Phillips 66	Chris Young	918.977.7816	chris.a.young@p66.com
Verizon	Daniel White	972.560.1520	daniel.white@one.verizon.com
Astound	TBD	866.928.3123	-
Lumen/CenturyLink	TBD	877.453.8353	-

Project Understanding

The Utility Process

In general, the utility relocation process consists of the phases illustrated by Figure 1.

Specifically for this project, the Caltrans utility process must be followed for the project as outlined in Chapter 13 of the Right-of-Way Manual and Chapter 17 of the Project Development Procedures Manual.

The RFP discusses the utility coordination/relocation process starting in Phase II. The Consor team realizes that utility coordination and relocation can be a long process with many twists and turns. Therefore, we would recommend starting the Identification/Verification and Identification of Conflicts be done during Phase I of the project. By starting the process early, the 50% plans and estimates provided in Phase I can be that more accurate. Full utility design and relocation efforts could begin after the City's and Caltrans' approval of the 50% project plans.

This would enable the utility owners to begin design efforts in coordination with the development of the project PS&E package. And relocation efforts can be developed into separate but coordinated design packages to enable utility relocation (temporary or permanent) to occur in the first phase of construction. The utility relocation will most likely be completed by the utilities themselves or a different contractor from the prime interchange contractor.

Figure 1. Utility Relocation Process

Federal Funding Compliance for Right-of-Way and Utilities

Of note is Caltrans Oversight Information Notice #19-01 "Project Delivery Requirements: Federal Funding vs. Non- Federal Funding by Project Phase." For this project, the City has used local funding only through the development of PA&ED and PS&E; however, if any federal funds are used for any phase of the project, the project must comply with the following:

- NEPA document be prepared (this has been accomplished)
- Full compliance with the Uniform Relocation, Assistance and Real Property Acquisition Policies Act of 1970 (i.e., the Uniform Act) for all right-of-way acquisition procedures, and preparation of a Right-of- Way Certification
- FHWA Buy America compliance (for both construction and utility relocations)
- Compliance with ADA (this will be incorporated into the final design)

For federal funds used for the CON/CE phase, the following is required in addition to the above:

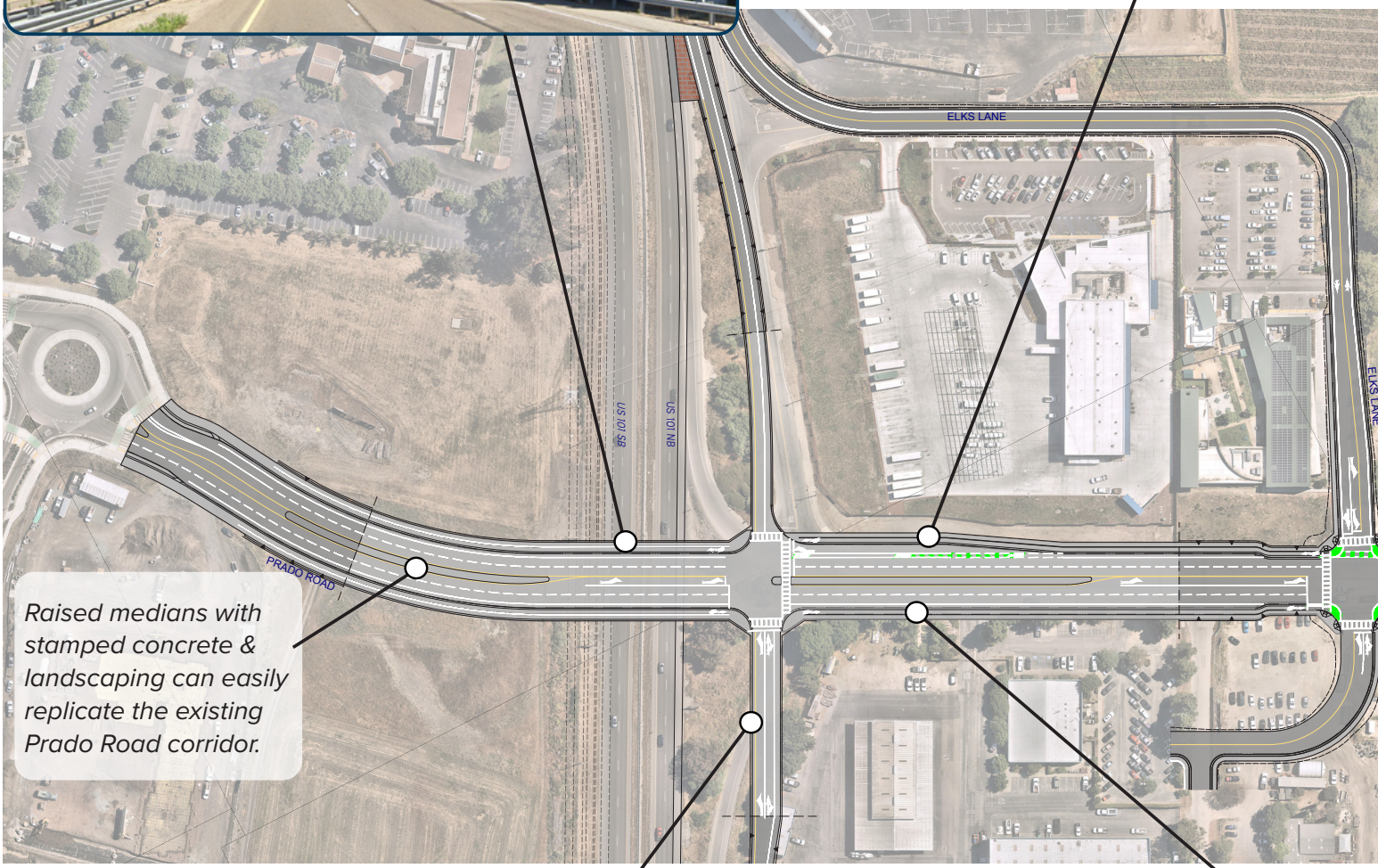
- FHWA Form 1273 included in the contract documents and the executed contract agreement
- Mandatory Federal Language included (Exhibit 12-G of the Local Assistance Procedures Manual (LAPM))
- DBE Program compliance pursuant to Chapter 9 of the LAPM
- PS&E pursuant to Chapter 12 of the LAPM
- Construction Engineering (CE) / Contract Administration in conformance with Chapter 16 of the LAPM

Once we fully understand what utilities may be required to relocate, we will need to account for schedule impacts due to compliance with Buy America requirements and additional time needed for the utility to obtain long-lead items in the overall utility relocation schedule. We are not anticipating any schedule impacts to the right-of-way acquisition process. We will see that we embark on right-of-way appraisal and acquisition activities, as well as utility relocations and development of utility agreements, so that the City maintains compliance with all federal requirements as they relate to these two critical activities.

6. PROJECT AESTHETICS

This project will provide much needed connectivity and functions as an integral component of the urban city environment and community. We also recognize the importance of a balanced aesthetic design that integrates the US 101 corridor and Prado Road. Our team will work closely with the City, Caltrans, and the public to collaborate in the development of an aesthetic solution that meets these goals. Approval on our recommended aesthetic features will be required from Caltrans and the City Architecture Review Committee (ARC).

From the US 101 driver's perspective, the bridge superstructure, railings and substructure will be the focal point. Our team will consider the importance of matching corridor aesthetics with adjacent bridges such as the nearby Los Osos Valley Road OC.



Raised medians with stamped concrete & landscaping can easily replicate the existing Prado Road corridor.

Faces of the retaining walls also create opportunity for aesthetics. For this project form liner considerations can include silhouette of Seven Sisters mountain range or silhouette of the San Luis Obispo Creek alignment.

Project Understanding

View of Prado Interchange from Northbound US 101

The interchange will complement the local environment & architecture with a unique and distinctive design. The bridges, ramps, and all the associated spaces will be considered as one design vision. It is essential that the bridge and ramps be designed in consideration of the varying perspectives and scale of the various users. Materials, railings, lighting, and proportions will play an important role for a successful solution.

Our team will evaluate the needs and wants from the area and all the various stakeholders on the project to create a successful and beautiful structure. We will also use our experience working on the Prado Bridge to continue that same philosophy into the interchange project.

Bridge Aesthetics

The interchange will be the main focus of the corridor and will guide the design language for the entire project. The main elements that will need to be developed and studied are the superstructure and substructure.

From the US 101 driver's perspective, the bridge superstructure, railings, and substructure elements will be the focal point. On the superstructure, architectural features that will be considered include concrete pedestals on the barriers, sloped exterior girders for cast-in-place concrete, and shadow lines from the deck overhang or from the precast concrete girder shapes, all of which can help break up the look of otherwise deep and bulky concrete sections.

The concrete abutment and column substructure elements will also require consideration for architectural enhancement. Depending on the size and number of columns required, they can appear to resemble trees of a concrete jungle. Conversely, enhancement to these elements can accentuate the overall bridge aesthetics. For our project, limiting the number of columns will be a key consideration. This can be accomplished by increasing the span length of the superstructure. Other architectural features that can also be considered include adding architectural flares and using form liners to offer a patterned concrete versus a smooth finish.

Retaining Wall Aesthetics

The front faces of retaining walls can also create an opportunity to provide additional architectural features. Form liners can be used on both cast-in-place concrete and precast concrete wall surfaces, and can be customized to an individual project needs. The image below illustrates a conventional hexagonal pattern, often utilized with mechanically stabilized embankment (MSE) wall types. For this project, other form liner considerations can include a silhouette replica of the 7 Sisters mountain range; a pattern which is being utilized at the barrier face of the nearby Prado Creek bridge, and a silhouette of the San Luis Creek alignment.

Railings/Barriers

Railings and barrier architectural features should also be incorporated into the design as drivers on the US 101 corridor, pedestrians, bicyclists, and drivers on Prado. Our team will evaluate the needs and requirements of the City and Caltrans to select/develop the best iterations for the project. The design will consider the nearby Los Osos Valley Road Overcrossing which incorporates decorative pilasters and ornamental railings along the barrier. Consor and Apexx are also on the project team for the nearby Prado Road Bridge over San Luis Creek, and careful consideration will be made to tie in similar aesthetics on the sidewalk and barrier.

Lighting

At night, lighting plays an integral part of the iconic look of any bridge but more importantly on the safety the users. We will consider pedestrian scale lighting to create a welcoming and secure environment for this critically important pedestrian and bicycle network connection. We will particularly focus at driveway and intersection conflict areas to reduce crash risk for these vulnerable users. We propose to keep fixture quantities to a minimum and locate lights in positions that are protected and easily accessible for maintenance.

7. DRAINAGE/STORMWATER TREATMENT

In addition to providing floodplain modeling, HDR is exclusive to our team and will be providing drainage and stormwater quality design. HDR brings a wealth of knowledge to the team in this area and working within Caltrans right-of-way. Within the City's right-of-way, the design of the storm drain system will comply with the City's Engineering Standards as well as criteria and standards included in the City's Waterway Management Design Manual. Within Caltrans' right-of-way, the design of the storm drain system must also comply with the Caltrans standards stated in the Highway Design Manual. The roadway drainage along Prado Road will be the responsibility of the City and the roadway drainage along the northbound ramps will be the responsibility of Caltrans. The two drainage systems should be kept separate; however, more importantly, historic drainage patterns should be maintained. Currently, stormwater along Prado Road is not collected in a storm drain system. The roadway drainage is either collected in gutters that flow to natural areas or free flows across the road to natural areas. Eventually, the water along Prado Road makes its way to San Luis Creek. The stormwater along US 101 is collected in ditches or depressed areas along the east and west sides of the freeway. This water is generally draining to Prefumo Creek from the southbound lanes and to San Luis Creek from the northbound lanes. With the proposed project, a storm drainage system with curb, gutters, drainage inlets, including biofiltration areas will be necessary along Prado Road within the City right-of-way.

The Consor team will design the location of drainage inlets to prevent the water flow along the curb to not encroach into the edge of travel way during a 25-year storm event. Per City standards, gutters and drainage inlets should follow Section 7.2.9 of the Waterway Management Design Manual, which states that "inlets shall be spaced such that the gutter flow does not exceed a depth of 150 mm at the face of the curb for a 10-year storm and so that the 100-year storm will not cause any damage and can be contained within the right-of-way," as well as Section 5.1.3B of the Engineering Standards, which states that the "design capacity and spacing of drainage inlets so the spread of water roadway design event does not inundate the traveled way." The proposed drainage improvements will be documented in the Drainage Report prepared for the project.

While meeting Caltrans maintenance requirements, storm drain alignment and drainage structure placement outside Caltrans' right-of-way will follow City standards outlined in Sections 5.1.2.D and 5.1.3, respectively.

Stormwater Treatment

The project drainage improvements within Caltrans' right-of-way must comply with the post-construction treatment requirements of the National Pollutant Discharge Elimination System (NPDES) Statewide Stormwater Permit and Waste Discharge Requirements (WDRs) for State of California Department of Transportation, Order No. 2022-0033-DWQ, also known as the Caltrans NPDES Permit. The Caltrans NPDES Permit requires projects that create 10,000 square feet or more of new impervious highway surface to implement stormwater treatment measures. Stormwater treatment best management practices (BMPs) within Caltrans' right-of-way will be designed according to Caltrans' Project Planning and Design Guide (2023).

Within the City of San Luis Obispo, the project drainage improvements will be subject to the National Pollutant Discharge Elimination System (NPDES) General Permit for Waste Discharge Requirements (WDRs) for Stormwater Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s), Order 2013-0001-DWQ, and Approving Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast, Resolution R3-2013-0032. The Central Coast post-construction stormwater requirements requires projects that create 5,000 square feet or more of net impervious area implement water quality treatment measures. Water quality treatment BMPs will be designed in accordance with the criteria stated in the Central Coast resolution.

The stormwater and water quality permit requirements applicable to the project and the measures to be considered to comply with these permits, including permanent post-construction treatment BMPs, will be discussed in the Stormwater Data Report prepared for the project. The feasibility, selection, and design of the proposed treatment measures to be implemented within the City will be presented in the Stormwater Control Plan included as an attachment to the Stormwater Data Report prepared for the project. The permanent post construction treatments may also need to be separate systems, unless the City is willing to take the maintenance responsibility for these features.

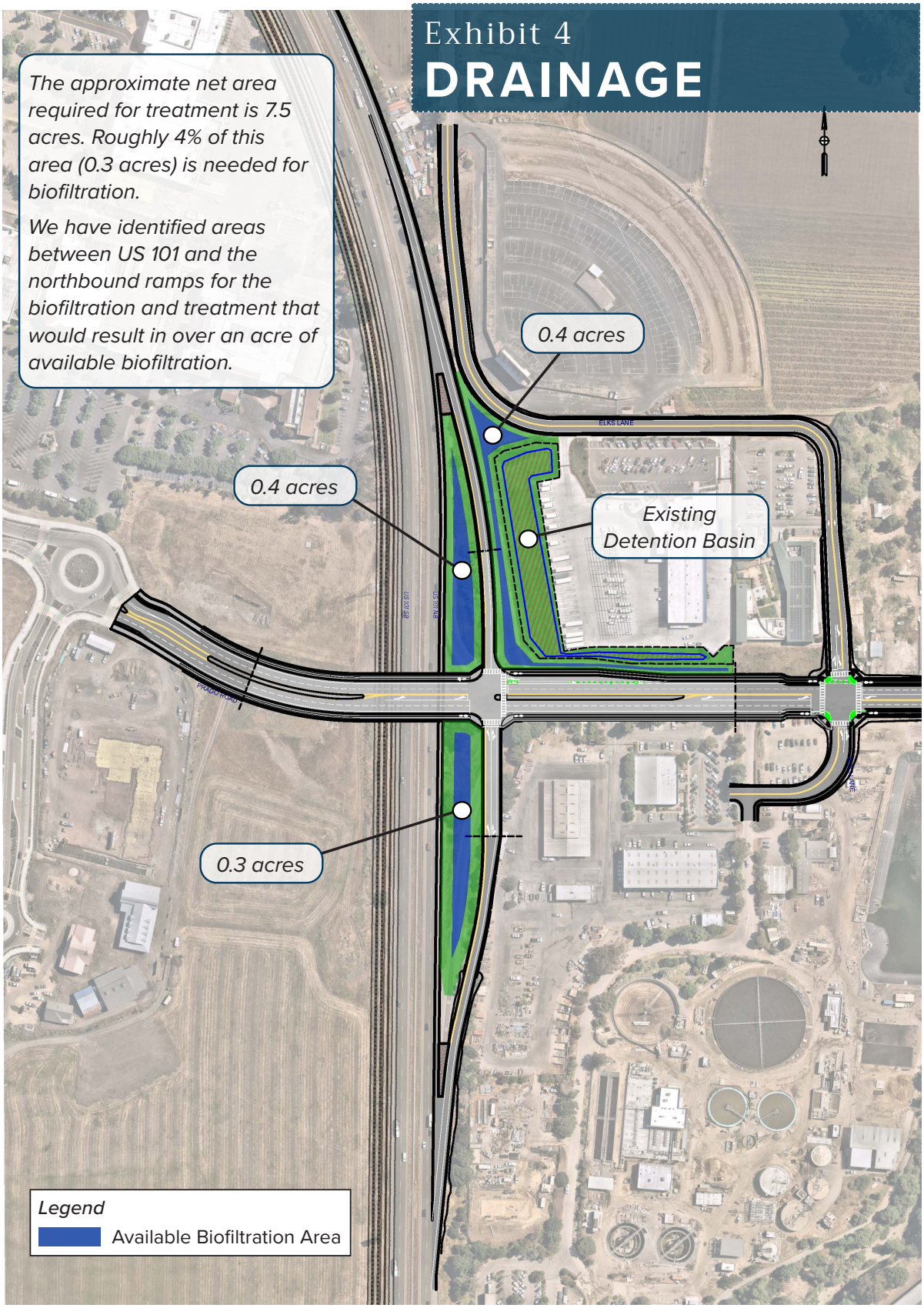


Exhibit 4
DRAINAGE
The approximate net area required for treatment is 7.5 acres. Roughly 4% of this area (0.3 acres) is needed for biofiltration.
We have identified areas between US 101 and the northbound ramps for the biofiltration and treatment that would result in over an acre of available biofiltration.
0.4 acres
0.4 acres
Existing Detention Basin
0.3 acres
ELKS LANE
PRADO ROAD
Legend
Available Biofiltration Area

Project Understanding

The project team will determine the extent and the location of the BMPs early in the design process. Often the drainage and stormwater quality elements are not incorporated early enough in the design process and become stumbling blocks later in the design process, especially with the potential for a maintenance agreement between Caltrans and the City.

HDR and Consor have taken a preliminary review of the Impervious Areas added, impacted, and removed based on Consor's Alternative 3A. The approximate net area required for treatment is 7.5 acres and the estimated area needed is 0.3 acres for biofiltration and 0.6 acres for hydromodification. We have identified areas between US 101 and the northbound ramps for the biofiltration and treatment. It appears there is adequate space in this area.

Hydromodification

The Caltrans NPDES Permit requires that a rapid stability assessment (RSA) be conducted for projects that add 10,000 square feet or more of net new impervious area to the threshold drainage area of a stream crossing. While this project will add more than 10,000 square feet of impervious surface, San Luis Obispo Creek does not cross US 101 or a Caltrans facility within the project limits, so an RSA is not required for this project. Therefore, because an RSA is not required, the project will not be required to implement hydromodification management measures for the project within Caltrans' right-of-way.

The Central Coast post-construction stormwater requirements require projects that create and/or replace 22,500 square feet or more of impervious surface to implement runoff retention and peak management measures. Runoff retention measures must retain the 95th percentile rainfall event, and peak management measures must be designed so that post-project peak flows do not exceed pre-project peak flows for the 2- through 10-year storm events. Our team is recommending that the impervious areas of the existing northbound ramps, Elks Lane, and Prado Road be utilized for permanent BMPs to help offset the increase in impervious area.

The applicable hydromodification requirements and the measures to meet these requirements will be documented in the Stormwater Data Report prepared for the project.

Construction General Permit

This project will disturb one or more acre(s) of soil and is thereby subject to the State Water Resources Control Board's National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit), Order No. 2022-0057-DWQ, or Construction General Permit (CGP). A Stormwater Pollution Prevention Plan (SWPPP) will be required for the project. The SWPPP will be developed prior to the start of construction, and it will detail the temporary BMPs to be utilized during construction and include the development of a Construction Site Monitoring Program detailing the monitoring and sampling to be completed during construction.

The Stormwater Data Report prepared for the project will document the design phase measures proposed to comply with the CGP, including a risk level determination and a description of the minimum BMPs that should be considered for the project.

8. RIGHT-OF-WAY IMPACTS

Hamner Jewell & Associates (HJA) will provide right-of-way appraisal and acquisition services for the Consor team. HJA is a local firm and has provided right-of-way services to the City on other projects. Consor enjoys working with HJA because they are local and therefore have good relationships with many business owners and City officials. The limits of the US 101/Prado Road interchange extend from a rural agriculture area under development to a developed commercial area. These developments provide a dynamic setting for right-of-way considerations as the region plans for this needed infrastructure connection. Based on the current project plans, eight properties (with six ownerships) are anticipated for road widening and structures:

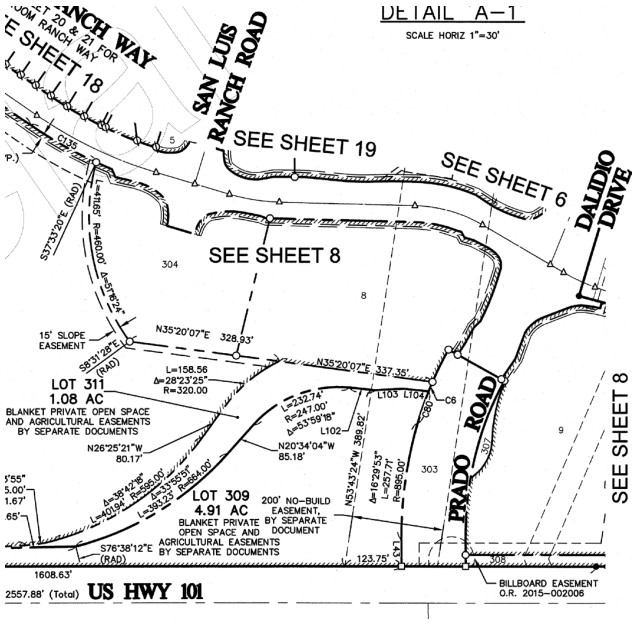
- Duong Hong (APN 053-041-031)
- Prado PM LLC (APN 053-041-032)
- Community Action Partnership of San Luis Obispo (APN 053-041-036)
- SLO Regional Transit Authority (APN 053-041-071)
- Community Action Partnership of San Luis Obispo (APN 053-041-072)
- City of San Luis Obispo (APN 053-041-076)
- Erb Rody E (APN 053-041-077)
- Community Action Partnership of San Luis Obispo (APN 053-041-078)

Some facilities such as the Homeless Services Center and RTA facilities have been developed with substantial setbacks to minimize the impacts of the interchange to their infrastructure. We have reviewed the proposed right-of-way take on the westerly side of US

Project Understanding

101, within the San Luis Ranch development (Tract Map 3096), specifically within Lots 9, 303, 307, 308 and Lot 309. Based on what is shown on the PA/ED Estimate of Right-of-Way and Slope Easements exhibit, the exhibit was created prior to the completion of the Tract 3096 map filing and property subdivision. What is shown as APN 067-121-022, is now several APNs, with many of these properties being encumbered blanket private open space and agricultural easements. These types easements can contain very restrictive language that will not allow for any improvements, let alone major roadway improvements, and modifications to these documents will likely need to occur before any property takes can benefit the project.

Along Prado Road to the east, we recognize that there may be significant frontage and possible building impacts to the City of SLO Corporation Yard. We assume that the City will handle any damages and coordination associated with the project impacts to this site internally, however our team is available to assist with any documentation needed to value or transfer any property rights that may need to be conveyed to the State as part of the US 101 corridor.



Tract Map 3096 - Lots encumbered with blanket private open space easements

During Phase I of the project, the project team will develop a preliminary right-of-way exhibit showing the areas of proposed acquisition needed for the interchange geometry and underground of utilities. In Phase II of the project, we will progress the exhibit and develop a final ROW map showing proposed takes.

HJA will be available to provide property owner outreach during the preliminary design phases. We recommend having two introduction meetings with each property owner to discuss the project. Our team's approach is to communicate the importance, benefits, need of the project. Appraisal work for each property impacted by the project will begin as soon as Preliminary Title Reports, legal descriptions and plat map exhibits have been reviewed and approved by the City and Caltrans. Due to the general value of commercial land in the area and the proposed impacts, the team will need to obtain appraisals and appraisal reviews for each property requiring purchase of right-of-way. If any of the required areas fall under the expected value of $10,000, then HJA can certainly conduct a waiver valuation to value those non-complex acquisitions to save on project time. Either valuation approach will include in-person introductory meetings with property owners.

Once the appraisal process is complete, appraisals are reviewed and pre-approved by the City, and review appraisals done per federal guidelines, HJA would then prepare offer packages for each owner that will include an offer letter, Appraisal Summary Statement, proposed Right of Way Agreement, and Deed. These documents would be reviewed by the Consor team and City staff prior to presenting them to City Council for pre-approval prior to presenting offers to property owners. Our team believes in personal communication with property owners and will present the offer to the property owner and meeting with them in person to discuss the offer. HJA would process all documents for necessary approvals and coordinate escrows, title insurance, and closings. It is always our goal to reach cooperative agreements in lieu of eminent domain litigation on the City's behalf. HJA has a great track record of successfully reaching agreements on the agency's behalf, minimizing or eliminating the need for eminent domain action.

All of our work is conducted in accordance with State and Federal Standards and in conformance with Caltrans requirements. HJA, Wallace Group (survey) and Consor have worked together on several projects on the Central Coast and are familiar with each other's process and team members, so the City and Caltrans can expect the team to get it right the first time!

9. GEOTECHNICAL

The Consor team has engaged Yeh and Associates (Yeh) as an exclusive member of the team to conduct geotechnical explorations and provide recommendations for the new bridge and retaining wall foundations, pavement structural sections, and slope stability. Yeh's extensive knowledge of Central Coast geological formations and experience managing landslide projects for Caltrans District 5 makes them a valuable asset recognized by the District 5 geotechnical unit, benefiting the Prado Interchange project.

Project Understanding

Yeh has already initiated research into the project's geological conditions, reviewing available studies and existing boring information from the project site and nearby projects, including the Prado Creek Bridge Replacement, where they collaborate with Consor. Based on their review, key geotechnical considerations for the design include:

- **Subsurface Soil Conditions:** Published geologic mapping suggests the project site consists of alluvium overlying Franciscan mélange bedrock. Detailed subsurface conditions are provided in Table 1 with groundwater encountered between 7 to 19 feet during previous borings

Table 1

Depth below ground surface (feet)	Material Description	Geologic Unit
0 to 42	Stiff CLAY	Alluvium
42 to 59	Loose to dense SAND with varying amounts of fines	Alluvium
59 and below	Franciscan mélange: claystone and graywacke	Franciscan mélange
*Data limited to depth of previous study explorations		

- **Poor Soil Support Conditions:** The project area's soil is unsuitable for supporting structures, embankments, or pavement due to its composition of clayey alluvium and low R-values. Effective support for proposed overcrossing structures may require deep foundations within the Franciscan mélange bedrock and consideration of subgrade improvement techniques including chemical additives or lean concrete bases.
- **Potential for Static Settlement:** The clay alluvium in the project area is prone to static settlement, as indicated by previous studies and adjacent projects like the Los Osos Valley Road overcrossing and construction of the nearby Target building. To support the proposed overcrossing structures, retaining walls, and embankments effectively, measures such as settlement waiting periods, ground improvement methods like wick drains, and possibly deep foundations designed to mitigate static settlement induced downdrag should be evaluated.
- **Potential for Soil and Groundwater Contamination:** Studies have identified soil and groundwater contamination near Elks Lane at San Luis Obispo Creek and Prado Road's US 101 corridor, including a Tetrachloroethylene (PCE) plume near the project site with concentrations exceeding 1 part per million. Project design must address potential contamination risks.
- **Foundation Type:** Considering geotechnical and constructability factors, shallow foundations may not suffice for the anticipated loading conditions of the overcrossing structures. Deep foundations, particularly Cast-in-Drilled-Hole (CIDH) piles, are recommended based on initial data (see Table 2).

Table 2

Pile Type	Pros	Cons
Driven piles with pile cap (steel H-pile, pipe pile, or concrete	• Less equipment needed for installation • Standard plan pile types available	• Noise impacts from driving piles • Group efficiency of pile groups • Excavation of pile caps below groundwater
Cast-in-Drilled Hole (CIDH)	• Potential for higher load capacity per pile • Less noise impact	• Impacts to group efficiency as pile size increases • Additional equipment needed for construction (cranes, drill rig, oscillator, mud tanks, inspection tubes, etc. • Disposal of drill cuttings and potential for contaminated soil and water (PCE)

10. LANDSCAPING

Caltrans District 5 Landscape Architects will be involved in the aesthetics for this corridor. A Visual Impacts Assessment was conducted during the PA&ED phase. However, as the project moves into the detailed design phase of the project, it will be important to establish a theme for the Prado Road corridor. Consor, along with Apexx and Wallace Group will work closely with the City and Caltrans to develop an aesthetics plan that includes both landscaping and hardscaping. This same team has established the theme for the Prado Road Creek bridge and therefore, has an idea of what statement the City is wanting to create.

Project Understanding

Designing to Caltrans Requirements

The primary landscaping and hardscaping concerns for the City and Caltrans will be related to water conservation, sustainability, and suitability to the regional context, with safety for motorists, bicyclists and pedestrians being the priority. The landscape will be designed to meet longstanding, standard requirements including maintenance of sight lines, tree setbacks, and the like. Caltrans has voiced consideration for the reduction in greenhouse gases, creation of urban forest, and introduction of plants that serve as habitat and forage for pollinators can be achieved through careful and deliberate selection of plant material, particularly trees. Caltrans does not require planting a quantity of trees derived from a mitigation formula as their emphasis is on site suitability rather than a formula driven design.

The replacement areas for the trees will be determined based on the Tree Protection and Replacement Plan, however, we believe a portion of these trees could be placed around the supporting columns for the bridge and allow for screening of the columns. We assume that irrigation for these replacement trees would be temporary and devices such as Gator Bags or other temporary irrigation strategies (i.e., watering trucks with cam couplers, temporary irrigation tanks, etc.) could be explored in lieu of permanent irrigation.

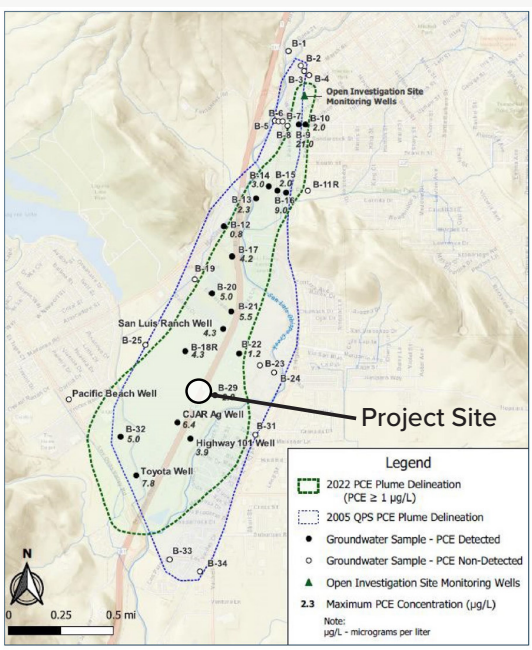
Maintenance Considerations

For public agencies such as the City and Caltrans, a landscape design is only considered truly successful if it is sustainable over the long run. Maintenance staff are a limited resource, and the planting design must be able to meet high aesthetic standards with little to no maintenance inputs. Our team will do this by selecting plant palettes with species that are native to the region and well suited to the local climate to ensure the establishment and longevity of plant material. Using colorful plantings with denser spacing at limited, key locations like intersections or pedestrian crossings combined with non-irrigated hydroseed and/or informal planting elsewhere maximizes the aesthetic benefits where it can be most impactful, while minimizing maintenance. Plant material that requires minimal pruning can be installed in medians where access can be difficult, or replaced altogether with decorative pavement. The team will design a robust irrigation system that avoids constant maintenance while still meeting MWELO requirements.

11. ENVIRONMENTAL PERMITS/SUSTAINABILITY

The City as the lead agency for CEQA and Caltrans as the lead agency for NEPA approved an Initial Study with Mitigated Negative Declaration (IS-MND) for the proposed project. The preferred alternative was determined to be Alternative 3. The IS-MND described several mitigation measures to reduce the project impacts to less than significant. The Consor team has reviewed the mitigation measures and discussed them in detail with our teaming partner, Rincon. We understand the importance of avoiding the historically significant features surrounding the Sunset Drive-In, including the size of the radius of the curves on Elks Lane realignment. The IS-MND indicates that there could be impacts to important farmland that may require mitigation with respect to the Elks Lane realignment. It is our understanding that this mitigation measure was included because the IS-MND included the Elks Lane realignment alternative around the northside of the Sunset Drive-In, which since then has been eliminated from the preferred project. The Consor team's proposed Alternative 3A does not increase the previously studied Area of Potential Impacts. Therefore, it would not require an update or recirculation of the IS-MND.

We have been made aware of the existence of a PCE Plume within our project limits. There is also a high likelihood of Aerial Deposit Lead is present within the project limits. Yeh and Rincon will be working closely and utilizing the same driller to gather samples related to the PCE Plume and conducting the Phase II Site Assessment. This is one of the many advantages of working with local firms that have intimate knowledge of the area and are comfortable working together. The IS-MND included mitigation measures HAZ-1 and HAZ-3, as a result our team will be preparing a Soil and Groundwater Management Plan (SGMP) that will address how to properly handle and dispose of any impacted soil or groundwater that contains PCE. Another consideration will be to review if there are areas of dewatering that overlap with the PCE Plume, as this water will need to be treated prior to discharge or disposal if PCE is present.



Comparison of 2005 and 2022 PCE Plume Boundary Delineations

Project Understanding

The remaining mitigation measures are typical for transportation improvement projects and the Consor team is well versed in preparing Tree Protection and Replacement Plans, Habitat Mitigation and Monitoring Plans, and including technical project specifications for dust control, and minimizing the potential impacts to sensitive species and their habitats, including southwest pond turtles, steelhead, red-legged frogs, and coast range newts.

The US 101 Prado Interchange Project will be constructed within the habitats of multiple sensitive species, including those pictured here.

The project will require a Waste Discharge Requirement from the Regional Water Quality Control Board (RWQCB) and notification for a Lake and Streambed Alteration Agreement with the California Department of Fish and Wildlife (CDFW).

Given that Rincon prepared the Natural Environment Study (NES) and Initial Study – Mitigated Negative Declaration (IS-MND) for the project, they have a solid understanding of the biological resources present within the project footprint and vicinity as well as the impacts to such resources. Therefore, our team will engage with the CDFW and RWQCB to secure the aforementioned permits and prepare a Habitat Mitigation and Monitoring Plan (HMMP) to address the minor impacts to riparian vegetation. Depending on the final project design, other possible permits necessary may include a Nationwide Permit (NWP) from the United States Army Corps of Engineers and filing notification of the project with the RWQCB or submittal of an application for Water Quality Certification if the applicable NWP is not pre-certified. This may also trigger the need for federal Endangered Species Act consultation(s) with the United States Fish and Wildlife Service and/or National Marine Fisheries Service. At this time, however, we assume that all work would occur outside federal jurisdiction.

The City prides itself on being at the forefront of sustainability including with their transportation projects. The Consor team is also dedicated to developing transportation projects that include sustainable elements. One item that we will be working with the City and Caltrans is the use of "green" concrete. Green concrete is a sustainable alternative to traditional concrete made by incorporating waste materials, such as fly ash or ground glass in the production process, reducing the need for raw materials and decreasing carbon emissions. Additionally, green concrete can trap and store carbon dioxide and break down pollutants from exhaust fumes. As part of the design, the team will look for appropriate areas of the project to incorporate green concrete. Consor has experts with LEED and Envision certifications. These experts will work closely with our designers to maximize the project's sustainable rating. LEED certification is well established in the building industry, Envision is the more typical standard for transportation projects.

See the two Verification Pathways shown below for the Envision verification.

Verification Pathways

There are two verification pathways: Pathway A allows you to pursue Envision verification during a project's design phase. Pathway B allows you to pursue verification after construction is complete.

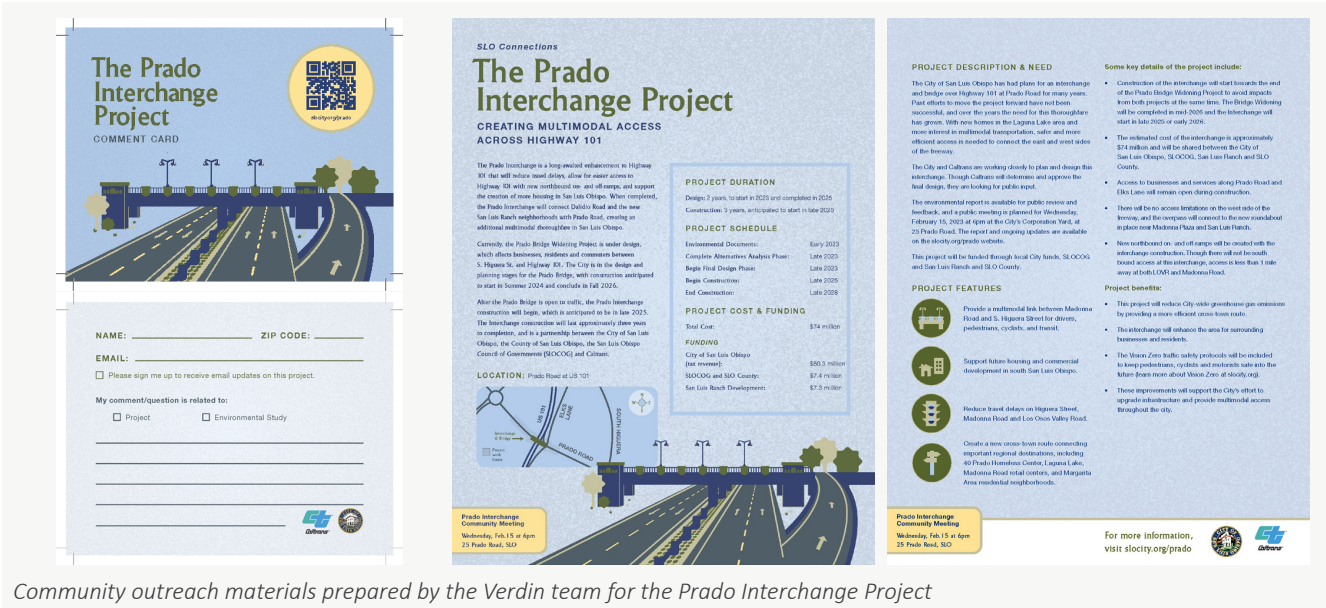
Pathway A: Design + Post-Construction

Pathway B: Post-Construction

Project Understanding

12. STAKEHOLDER ENGAGEMENT

The Consor team's approach for the Prado Interchange Project communications emphasizes comprehensive communication strategies to ensure public awareness and engagement throughout its various phases. We are pleased to have Mary Verdin and her company Verdin Marketing on our team to provide local communication expertise to the project. During the PID and PA&ED phases of the project, public meetings and hearings were held. They were well attended, but the focus was on the scope, schedule and cost of the proposed project. The public is generally in favor of the project with little to no controversy. Verdin Marketing provided the City with public outreach services during the previous phases of the project and the Consor team feels it is important to continue the good work the City and Verdin accomplished in previous phases.



Community outreach materials prepared by the Verdin team for the Prado Interchange Project

Prado Interchange Communications Goals

- Keep affected businesses, organizations, residents and commuters informed, especially RTA, San Luis Ranch residents, Bike SLO County
- Minimize complaints and prepare community for construction
- Give those affected the ability to be able to give input to diffuse negative emotions

The key to minimizing the impact of the Prado Interchange Project lies in transparent, proactive and responsive communication. A communications plan will be developed to engage all affected businesses, organizations and residents, establishing regular communications channels to address their concerns and welcome feedback and questions.

Based on Verdin's experience with construction projects, success will be achieved by gathering inclusive input, designing targeted messaging for key audiences to communicate benefits and address concerns, and educating the general community about the upcoming improvements.

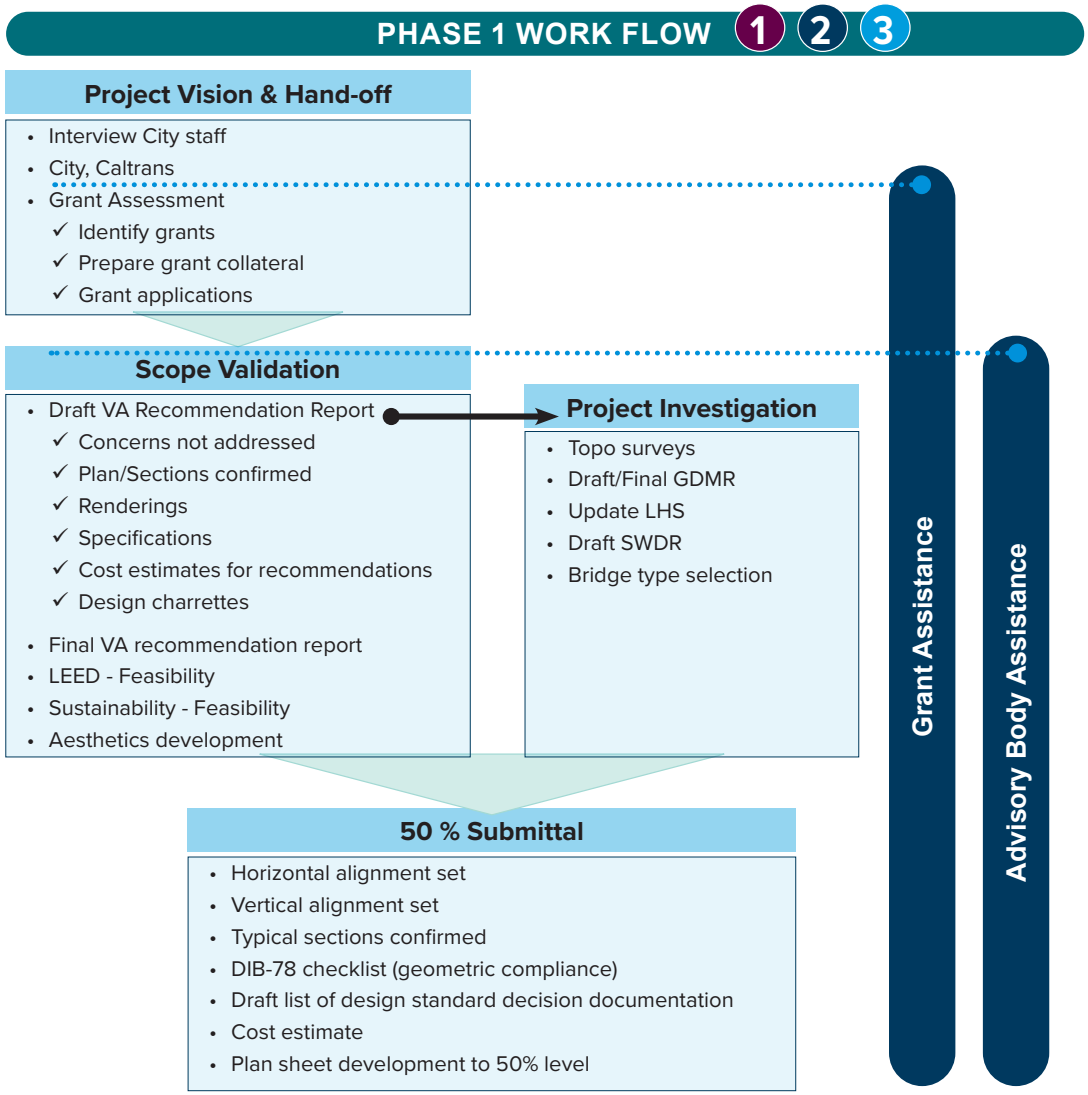
Phase I focuses on value analysis, surveys, and studies, with activities including updating existing project materials, developing media talking points, and ongoing Prado Road webpage updates. A public meeting will be coordinated with outreach efforts to invite the community to attend, including press releases; city-branded emails; and mailers to nearby businesses, organizations, and residents. Additional support involves media training, collaboration with local organizations, and regular updates to keep the general public informed and involved.

Phase II continues these efforts with ongoing community updates, media outreach, and a second public meeting. A future scope for Phase III would focus on ensuring the continuity of information the actual construction.

Approach to Working with City Staff

The success of any project is dependent on the team leader. Brent's experience is diverse; he brings with him a vast knowledge of Caltrans policies, practices, and procedures, having been a Caltrans employee for over 18 years. He recently delivered the SR 4/Balfour Interchange project in the City of Brentwood for Contra Costa Transportation Authority and is currently wrapping up right-of-way transfers to Caltrans. Brent has the added unique experience of being a former Headquarters Geometric Design Reviewer for District 4. In short, he can lead his technical team efficiently, navigate the Caltrans District 5 functional unit reviews/approvals, and accomplish this through team building and consensus. Our team understands the complexities associated with the project location and context, our approach is simple and distilled down into:

1. **ALTERNATIVE VALIDATION:** Are we building the right project?
2. **COMPLETE DESIGN REPORTS:** Hydraulics, geotechnical, structures type selection
3. **DEVELOP BRIDGE/CORRIDOR AESTHETICS:** Conduct public outreach and present concepts to Advisory Boards for input and concurrence
4. **DEVELOP PS&E:** Working in partnership with the City to facilitate Caltrans functional units input with meetings to drive project delivery leading to a PS&E package that has support prior to submission for review and comment.



Roles and Organization of Proposed Team

The required services anticipated under this contract require individuals with an experienced background that align with the project goals, a commitment to the City's desire for responsive service and quality products, and a mutual goal of putting the project first and serving City of San Luis Obispo residents efficiently. Our familiarity with the City staff and preferences will help to expedite the project.

Key Team Member

Principal-in-Charge
Mark Reno, PE

Project Manager
R. Brent Lemon, PE, PMP

Deputy Project Manager
Dace Morgan, PE

QA/QC
Bridge Design
Greg Young, PE

QA/QC
Geometric Design
Sunrise Transportation Strategies
Brian Ray

CONSOR ENGINEERING TEAM

BRIDGE LEAD ENGINEER
Scott McCauley, PE

ROADWAY PROJECT ENGINEER
Dace Morgan, PE

BRIDGE DESIGN ENGINEER
Ashley Hanson, PE

ROADWAY DESIGN ENGINEER
Brent Harrison, PE

UTILITY COORDINATION
Michael Sanchez, PE

UTILITIES DESIGN - WET
John Thayer, PE
Linda Scroggs, PE

LEED/ENVISION
Nick McMurtrey, LEED, ENV SP
Erin Krug, LEED, ENV SP

SUBCONSULTANTS

Environmental Permitting
Rincon Consultants, Inc.
Chris Bersbach
Colby J. Boggs
Michael Tom

Geotechnical
Yeh and Associates
Judd King, PE, GE
Jamie Ross, PE
Michael Finegan, PE

Water Resources, Floodplain, Drainage Design, Drainage Report
HDR
Chris Sewell, PE, QSD/P
Jeanette Newmiller

Stormwater Treatment, SWDR, Erosion Control
HDR
Analette Ochoa, PE
Andrew P. Chin, EIT

Traffic
DKS Associates
Jim Damkowitch
Daniel Block, TE
Sean Carney, EIT

Signals & Lighting
Bennett + Y&C
DBE Firm
Daniel Yau, PE, TE, PTOE
Kin Chan, PE

Right-of-Way Acquisitions
Hamner, Jewell & Associates
Lillian D. Jewell
J.T. Katavich
Stephen Myrick

Landscape Architecture
Wallace Group
Matt Wilkins, PLA

Survey & Right-of-Way Engineering
Wallace Group
Clayton Bradshaw, PE, PLS
Luz Garcia, PLS

Traffic Peer Review Lead
Sunrise Transportation Strategies
Brian Ray

Public Outreach
Verdin
DBE Firm
Mary Verdin
Ashlee Akers

Grant Writing Assistance
AECOM
Lincoln James
Nathan Brierley
Kendall Myers

Bridge Architect
Apexx Architecture
Maxim D. Nasab, AIA, NCARB

The key individuals shown in the Organization Chart bring over 300 collective years of engineering experience in California to this important interchange project. The Consor team's approach to a successful project is to ensure an environment that fosters open communication and promotes a team atmosphere of mutual respect and participation between the design team members, City staff, consultants, and the reviewing agencies.

This team also includes AECOM; Apexx Architecture; Bennett + Y&C; DKS Associates; Hamner, Jewell & Associates; HDR; Rincon; Sunrise Transportation Strategies, LLC; Verdin; Wallace Group; and Yeh & Associates. Through our recent work together, we have developed a collaborative, successful work approach. We understand your process and expectations. We are currently working with each of the team members on current projects. It is from this experience that we can provide you with the most efficient team delivery capabilities for the US 101/Prado Road Interchange Project. There is no learning curve involved with our understanding and expectations of each other or of the City.

The City will receive the most current engineering technology from some of the best engineers and specialists in the state, and a team with a history of working on exactly this type of project with a true understanding of your expectations for project delivery.

Project Management Approach

How the Team & Scope of Work Will Be Managed

Brent Lemon has a proven history of performance with Caltrans District 5 and surrounding local agencies. As the single point of contact for the City, Brent will be directly responsible for project management and coordination of all technical work to make sure that project issues and action items do not slip through the cracks. To do so, Brent will use the tools listed below.

Tools Used by Our Project Manager to Meet the City's Objectives

Project Initiation Checklist

To see that critical success factors are identified, needed expertise and resources are available, key milestones have been set, and scope and fees have undergone peer/senior review.

Project Management Plan

Clearly define communication lines, scope, schedule, budget, Earned/Planned Value analysis, and general expectations of the team. The Project Management Plan (PMP) provides definitive directions to the project team and includes specific instructions regarding means, methods, and assumptions included in the scope of work.

Risk Management Plan

All projects involve some degree of risk and a management plan based on experience and careful planning is essential to mitigating this risk. A thorough risk register document can maximize rewards and minimize potential consequences.

Communication Plan

Defined steps to document and proactively communicate internally and with the City. Facilitate communication between the City and Consor, including face-to-face meetings, phone calls, emails, and web meetings to meet project needs.

Team Meetings & Workshops

Conduct project team meetings to facilitate informed discussions and decisions, and obtain team consensus on solutions. Develop meeting summaries with action items defined. Schedule, including milestones and deliverables, is discussed at every team meeting.

PM Software

Consor's Deltek Vision software is used to track project progress and report budget status in real-time, allowing project managers to confirm work progress relative to budgets and make adjustments as necessary.

Earned Value Management (EVM)

The EVM process blends the project schedule with the planned project budget to forecast the anticipated financial path of the project, and track deliverables and remaining budget per task.

QA/QC Plan

Define roles, identify milestones, and utilize tracking forms to cross-check plans prior to any deliverables. Schedule QC activities in the project schedule, including both internal design team and external QC reviews so it is clear when designs need to be completed.

Added Value to Services Provided

The team will utilize procedural techniques to maximize the project development efficiency, minimize delays and re-do work, which will result in cost savings.

- **Project Development Process** – The Consor project team has had extensive experience developing projects conforming to the Local Assistance Procedures Manual (LAPM) and know this process very well. Additionally, the Consor Team understands the Caltrans Project Development Procedures Manual (PDPM) and internal Caltrans processes. For large complex projects, some elements of the PDPM can assist in the efficiency of project development. An example of this is to develop a Draft Project Report summarizing the Preliminary Engineering Phase decisions, report findings, and defining the project for Environmental Approval. Once the environmental documents are approved a Final Project Report is developed that reflects additional terms and conditions placed on the project per the Environmental Approval Process. The Final Project Report then clearly defines the project for the final design phase. The Caltrans PDPM contains the outline and content requirements for the Draft and Final Project reports and is well suited for high profile large projects like this. It also meets the standards the State uses when developing their projects. Meeting this standard will ultimately save time and money due to the comprehensive nature of the Project Report.
- **Local Knowledge** – The Consor Team knows the area having developed and delivered several projects for the City of San Luis Obispo and other projects within Caltrans District 5. Consor is currently under contract with SLOCOG to develop the PA&ED for the US 101/E 46 project and recently completed the Value Analysis Study.

  The Consor Team is comprised of subconsultants that have extensive experience in District 5 including AECOM, Apexx Architecture, Bennett+Y&C, AECOM, DKS Associates, Hamner, Jewell & Associates, HDR, Rincon, Sunrise Transportation Strategies, LLC, Wallace Group, and Yeh & Associates. Consor and Sunrise Transportation Strategies delivered the SLOCOG US 101/Fair Oaks Interchange "low build" study in 2023 and understand the Caltrans process and how to deliver projects in District 5. The core team of Consor, AECOM, Sunrise Transportation Strategies, Wallace Group, Bennett+Y&C, and HDR are currently working together on a half-dozen projects in District 5 and understand how to deliver projects together.
- **Public Meetings** – Consor's state of the art visual graphics capabilities provide tremendous value during public meetings. Project alternative renderings will be developed for display at the public meeting. Additionally, the presentation will include 3D flyover and drive through videos. This has proven very effective at providing the public a vision of the project within the actual topography and landscape which facilitates project acceptance. Below are screen shots of two of the alignments.
- **Quality Assurance/Quality Control** – Consor instills QA/QC processes during all stages of the project development process. During the preliminary phase, all project alternatives, quantity calculations, cost estimates, and reports are developed and checked by a design engineer and the project engineer. The products are reviewed by the project manager before they are delivered to the City Team. During the final phase, all designs and pay item quantity calculations are checked with independent calculations. Additionally, checklists for independent checks of designs and plans are utilized. During the independent check and PS&E QA/QC review process, comments are listed in a comment summary review form. Once the comments have been resolved, the Project Manager certifies comment resolution and the task and product milestone is considered complete. During construction phase submittal review, the design engineer/project engineer develop the submittal review and response and the project manager checks the response before returning it to the City/RE. All these processes will be followed concurrently with both projects and many elements of the QA/QC process will overlap between the projects. This will result in efficiencies of the review staff, save time, and thus result in cost savings.

Management Experience

Brent Lemon, Consor's Project Manager has successfully completed numerous roadway and bridge projects over his 38-year career. The scope of projects has included simple storm damage projects, local and urban roadway rehabilitations, HBP bridge replacement projects, and complex urban interchanges. He understands how to develop and deliver both simple and complex projects on both the roadway and bridge sides. Brent's experience includes 18 years at Caltrans, where he served as a Design Chief and Geometric Reviewer, among other roles. Brent is known for his proactive approach to advancing projects from concept through construction, which can be attributed to his strong connections at Caltrans, utilities, and other stakeholders and his ability to gain buy-in on projects. Brent's management technique is tailored to the Local Agency depending on the Local Agency needs. Some want turnkey with little involvement (just tell me when it is done), while some are highly collaborative and want to be involved in the process. Brent prefers the collaborative style of delivery and believes that ownership of project by the entire team is key to project success. Bi-monthly coordination meetings with the PDT to remain on task and drive delivery are key to project success.

Communication Channels

Communication is the single most contributing factor to a project's success or failure. The importance of effective communication between the Consor team and the City cannot be overstated. Currently, many methods of communication are available:

- **Teams/Telephone** – First and foremost is Microsoft Teams and the telephone. There will be no hesitancy in getting on Teams to discuss any topic that arises on the project.
- **E-mail** – E-mail is also a very effective communication tool. Many times, writing an e-mail requires clear descriptions of the topic and serves and a reference source for tracking and follow-up. It is a great way of communicating to the team and keeping everyone in the loop.
- **In-Person Meetings** – The most effective form of communication is in-person meetings. Many in-person meetings at the site and in the City offices will be held. Brent, Dace, and Scott will be in our San Luis Obispo office and other District 5 locations on a regular basis, this will yield an excellent exchange of information, understanding of needs and expectations, and assure satisfaction.
- **Problem Resolution** – Our team structure lists a Principal-in-Charge, Mark Reno. This individual can be contacted at any time by the City to express concerns or describe issues needing resolution. The City can contact him via phone, e-mail or request an in-person meeting. If a meeting is appropriate, reviewing the issue in person with Wyatt Banker-Hix and Brian Nelson from the City and Mark and Brent if desired is recommended.
- **Mistakes** – Mistakes happen. Although we all strive to not make mistakes, we are all human and they happen. If mistakes happen, the most important part is to reflect, understand, learn from them, and don't let them happen again. Then the next step is to define the best course of action needed to get back on track.

Roles of Key Individuals on the Team

MEET YOUR PROJECT TEAM

Consor has structured our team to best align our expertise with the City's need to deliver transportation projects. Brent Lemon, PE is an excellent project manager and team lead and will be responsible and accountable for the delivery of this project from start to finish. Brent will be complemented by our Principal-In-Charge, Mark Reno, PE, who brings over 36 years of project delivery expertise. The qualifications of our key personnel are summarized here.

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Brent's Role

Brent is the City's point of contact and will be responsible for the project management (scope, schedule, and budget control), team coordination, and technical oversight.

Brent Lemon, PE, PMP | Project Manager

Years of Experience: 38 | Education: MS, Civil Engineering, California State University, Fresno; BS, Civil Engineering, California State University, Fresno | Registrations: Professional Engineer- CA #46715 and three other states; Project Management Professional #2022265

QUALIFICATIONS: Brent has extensive experience on both the public agency and consultant side. His career includes 18 years at Caltrans where he served in many roles while delivering projects statewide. He provides a valuable perspective on transportation projects that span major interchanges, bridges, corridor studies, roundabouts, roadways, and trails. He has led numerous design teams in the development of Project Study Reports, Project Reports, and PS&Es.

SELECT PROJECT EXPERIENCE

- **Atwater-Merced Expressway Phase 1B,** Merced County, CA
- **SR 4/Balfour Road Interchange,** Brentwood, CA, Contra Costa County, CA
- **Campus Parkway Segment 4,** Merced County Department of Public Works
- **US 101/SR 152 Interchange Improvement at 10th Street,** Santa Clara VTA
- **US 50 HOV/Latrobe Road/El Dorado Hills Boulevard Interchange Improvements Phased Projects,** El Dorado County, CA
- **Bridge Street Bridge (HBP),** City of Arroyo Grande, CA
- **Bello Street Bridge (HBP),** Pismo Beach, CA
- **Bello Street/Price Canyon Road Intersection Improvements,** Pismo Beach, CA

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Mark's Role

Mark will commit the resources of the team and serve as Brent's backup point of contact.

Mark Reno, PE | Principal-in-Charge

Years of Experience: 36 | Education: BS, Civil Engineering, University of California, Davis | Registrations: Professional Engineer- CA #47756 and seven other states

QUALIFICATIONS: With 36 years of experience, Mark has been responsible for the PS&E and construction support of over 170 projects involving more than 280 bridges primarily throughout California and other western states. These projects have included new structures, widenings, upgrades, emergency repairs and retrofits. Mark is a nationally recognized bridge engineer and project manager and serves on several national committees and boards. He has been involved in delivering projects in Caltrans District 5 for nearly 30 years and has strong relationships with City, Utility, Regulatory Agencies and Caltrans District 5 personnel. He also brings a keen understanding of local, state, and federal funding programs.

SELECT PROJECT EXPERIENCE

- **Atwater-Merced Expressway Phase 1B,** Merced County, CA
- **SR 4/Balfour Road Interchange,** Brentwood, CA, Contra Costa County, CA
- **SR 99/Sheldon Road Interchange,** City of Elk Grove, CA
- **Traffic Way Bridge Replacement**, City of Arroyo Grande
- **I-680/SR4 Interchange Phase 1, 2, & 4 Independent Review,** Concord, CA
- **I-5 West End Viaduct,** Sacramento, CA

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Dace's Role

Dace will serve as a backup point of contact when Brent is unavailable and collaborate with the City and stakeholders to reach concurrence on roadway design decisions. She will oversee the roadway design team to implement those decisions.

Dace Morgan, PE |
Deputy Project Manager - Roadway Project Engineer

Years of Experience: 30 | Education: MS, Structural Engineering, University of California, Berkeley; BS, Civil Engineering, University of California, Davis | Registrations: Professional Engineer- CA #54408 and OR #100441

QUALIFICATIONS: As a former Deputy Director of Transportation for the County of Santa Barbara, Dace has experience working with citizen groups, regulatory agencies, boards and commissions, and special interest groups. She has 30 years of experience on transportation projects in both design and construction. She has over nine years with the Public Works Department of the County of Santa Barbara where she spent four years as the Deputy Director responsible for the Transportation Division. She brings a strong project management background as well as a wealth of experience in civil, transportation, and bridge design. She also has a wealth of knowledge of Federal, State, and Local Transportation Funding.

SELECT PROJECT EXPERIENCE

- **US 101/Betteravia Interchange Improvements,** City of Santa Maria, CA
- **Del Rio Road/US 101 Interchange Improvements,** City of Atascadero, CA
- **Prado Road Bridge Widening,** City of San Luis Obispo, CA
- **Pismo Preserve Parking Lot and ADA Trail Improvements,** Pismo Beach, CA
- **Buckley Road Extension,** San Luis Obispo, CA
- **Mission Canyon Bridge Studies,** City of Santa Barbara, CA

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Scott's Role

Scott will collaborate with the City and stakeholders to reach concurrence on bridge design decisions. He will then oversee the bridge design team to implement those decisions.

Scott McCauley, PE | Bridge Lead Engineer

Years of Experience: 21 | Education: MS, Civil Engineering, University of California, Davis; BS, Civil Engineering, University of California, Davis | Registrations: Professional Engineer- CA #71495 and OR #88532

QUALIFICATIONS: With over 20 years of experience, Scott has worked on a variety of transportation projects on the West Coast. Starting out in his career in bridge construction, Scott served as a Project Engineer for a heavy civil contractor on several bridge projects. After obtaining his Master's degree, Scott focused on design and successfully completed projects, including bridges, retaining walls, masonry buildings, as well as various miscellaneous structures. Now, as a Project Manager and Project Engineer, Scott is able to draw from his distinct design and construction experience to find economical and practical solutions for each new project. He has been involved in several Caltrans, local agency, and private developer projects, and his expertise extends throughout the entire project process, including planning, funding, design, environmental, utility, right of way, and construction.

SELECT PROJECT EXPERIENCE

- **Prado Road Creek Bridge,** City of San Luis Obispo, CA
- **Mid Higuera Bypass Bianchi Lane Bridge Replacement,** City of San Luis Obispo, CA
- **SR99/Whitelock Parkway Interchange PSR,** City of Elk Grove, CA
- **SR4/Balfour Road Interchange,** Brentwood, CA, Contra Costa County, CA
- **Bridge Street Bridge (HBP),** City of Arroyo Grande, CA
- **Lopez Drive Bridge Seismic Retrofit (HBP),** County of San Luis Obispo, CA
- **Ventura River Bridge at Santa Ana Boulevard,** Ventura Watershed Protection District, Ventura County, CA
- **Cathedral Oaks Bridge Replacement,** County of Santa Barbara, CA

Working Relationship

EXPERIENCE WITH PUBLIC SECTOR WORK

Established in 1992 as Quincy Engineering, our firm was founded with the key mission to provide high-quality municipal engineering services to public agencies. Staying true to this mission, 99 percent of our current business is for public sector clients like the City of San Luis Obispo. In 2021, we merged with Consor Engineers and as of October 2022, we have adopted the Consor brand. The firm is a corporation, incorporated in the state of Oregon. The California transportation group has provided services for 97 government agencies within the state of California, including counties, cities, and Caltrans/Regional Transportation agencies.

EXPERIENCE WITH STATE AND FEDERAL PROCEDURES

Consor specializes in the delivery of transportation projects that meet local agency, Caltrans, and FHWA standards, practices, and guidelines. We have a team of in-house experts recognized for their knowledge and capabilities in bridge, roadway, and transportation engineering design, water/wastewater design, construction management, and surveying. Our staff's knowledge and experience include projects utilizing Caltrans, local agency, and AASHTO design standards while conforming to a variety of funding sources, such as HBP, FEMA, Cal OES, FHWA Grant Programs, STIP programs, and other local funding programs. Consor and our subconsultants have adequate financial management and accounting systems as required by 48 CFR Part 16.301-3, 49 CFR Part 18, and 48 CFR Part 31.

Scope of Services

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Scope of Services to be Provided

A detailed scope of services has been prepared for the City to review. The scope of work is based on our understanding of the scope of services provided in the Request for Proposals. Meetings are assumed to be virtual unless otherwise noted in the below scope. We look forward to discussing the scope of work with the City. The City has laid out what appears to be concurrent reviews involving Caltrans and the City for each submittal. However, Caltrans per their quality management plan guidance will require that the City review submittals prior to delivery to Caltrans and for our team to document the review and response to comments. Our approach in the schedule shows a City review prior to submitting for Caltrans reviews, all submittals show concurrent Caltrans/City reviews after the initial submittal to the City.

PHASE I VALUE ANALYSIS, SURVEY, HYDRAULIC STUDY AND GEOTECHNICAL INVESTIGATION

Task 1 - Project Management and Meetings

TASK 1.1 - PROJECT MANAGEMENT

Consor North America, Inc. (Consor) will perform the activities necessary to plan, direct, and coordinate the work on this phase of the project. Consor will provide project management for each task for the entire duration of the agreed upon schedule. Consor assumes the duration of work for Phase I will not exceed 12 months.

Consor will submit monthly progress reports outlining all activities for which expenses are submitted. All activities will be itemized by task and will be consistent with the agreed upon Scope of Services. Progress reports will include the following:

- Status of work completed to date
- Expense allocation by task
- Work anticipated to be completed in the next reporting period
- Identification of project issues, actions to resolve those issues, and the responsible party to drive resolution.

Project Correspondence and Project Files: All correspondence by and between Consor, the City, other agencies and parties will be recorded and filed for complete record keeping. Meeting notes, telephone record logs, incoming/outgoing correspondence, and all deliverables will be logged and filed. Outside correspondence will be coordinated with and approved by the City's project manager. Project files will comply with the Caltrans uniform filing system as outlined in the Project Development Procedures Manual. This will facilitate transmitting the Project History File to the City during the future close out phase of the project.

Consor will provide weekly updates on progress to the City Project Manager. These updates will take the form of either e-mails or virtual meetings depending on the need for information.

Design Decision Log: Consor will disseminate up-to-date information to the project team at the PDT meetings. A Design Decision log will be prepared for items such as requests for information, documentation of decisions made as the project progresses in development, and deliverable status.

Caltrans Quantitative Risk Register: Throughout the project development process the Consor team will maintain a risk register that complies with Caltrans latest guidance.

TASK 1.2 - KICK OFF MEETING

A kick-off meeting will be held at the City offices and on site after the notice to proceed and will introduce the project team, establish communication channels, set the project schedule, clarify the scope of work, and define the roles and responsibilities of the various team members. Consor will coordinate the kick-off meeting with the consultant team and other project stakeholders that may be appropriate to thoroughly discuss the project background, scope, concepts, schedule, and management. This meeting will result in an understanding amongst the project stakeholders as to the project scope and schedule, and major project issues that have already been identified by project stakeholders will be shared at this meeting.

TASK 1.3 - CLIENT FOCUS MEETINGS

Consultant assumes up to twelve (12) technical coordination meetings will be needed with the City and other outside agencies. These meetings will be identified as needed to obtain resolution of issues and consensus on strategies.

TASK 1.4 - PDT/COORDINATION MEETINGS (CALTRANS)

PDT meetings will be scheduled every month and held via telephone or video conference with the goal of keeping the project on track and to keep the City and Caltrans informed of the status of the project. One of these meetings would focus on the coordination and review of the Caltrans permanent changeable message sign project. Consor assumes that monthly conference call meetings will be one-hour in duration. This scope assumes a total of twelve (12) PDT meetings.

TASK 1.5 - PROJECT SCHEDULE UPDATES

Consor will update a project schedule on a monthly basis. The schedule will be developed using MS Project. The schedule will indicate critical path activities and major milestone deliverables.

TASK 1.6 - PUBLIC MEETING

The Consor team will attend one public meeting to present the results of the Value Analysis. The Project Manager, Deputy Project

Detailed Scope

Manager, Bridge Project Engineer, Roadway Project Engineer, Landscape Architect, and Bridge Architect will attend and present the findings at the public meeting. We anticipate that the meeting will focus on the corridor aesthetics, hardscape, landscape, overall look and feel of the improvements. In addition, we will provide an update to the project timeline. We will be available to answer the public's questions and listen to their concerns about the improvements.

It is assumed that the Consor team with the City will provide a short presentation to the public and then we will break into subgroups to address specific questions and gather feedback on the improvements.

The coordination, public outreach, and documenting public feedback for this public meeting is covered in Task 9.0 Public Outreach.

ASSUMPTIONS:

- All hard costs related to room, equipment, refreshments, and insurance are not included
- Printing, postage, and production costs are not included
- Meeting will be up to two hours long
- The technical team will provide content for the PowerPoint and exhibit boards, including photographs, illustrations, and renderings.

TASK 1.7 - QUALITY MANAGEMENT PLAN

As required by the COOP Agreement between the City and Caltrans, a Quality Management Plan (QMP) must be prepared for each component phase. Consor will develop, establish, and keep updated a project specific QMP that will include procedures and timetables for conducting independent quality reviews for all reports, plans, estimates, and design documents. A big part of our team's QMP will be supplemented by Brian Ray of Sunrise Transportation Strategies. Brian will be providing his expertise to the roadway geometrics of the interchange. This will:

- Permit adherence to the QMP by both Consor and our subconsultant team throughout the course of this phase of work
- Initiate and document quality reviews and address corrective actions
- Conduct quality audits to ensure quality control procedures are strictly followed and properly documented.
- Perform a thorough review and verification of corrections by an independent reviewer

TASK 1.8 - ENCROACHMENT PERMITS — CALTRANS AND CITY

A Caltrans Encroachment Permit will be required to conduct topographic surveys, geotechnical borings, and soil sampling. Our team will prepare the permit application, including attachments depicting traffic control, boring and sampling locations for the City's signature. Consor will submit the application to Caltrans District 5 on behalf of the City. We expect two rounds of comments from Caltrans Encroachment staff before issuing the permit. Our scope assumes that a no cost permit from the City will be prepared and issued by the City.

TASK 1 DELIVERABLES

- Meeting attendance, agendas, and notes
- Design Decision Logs
- Updated Risk Register
- Monthly Progress Reports and invoices
- Project Schedule (including monthly updates) in Microsoft Project and PDF Format
- Attendance and presentation materials for one (1) public meeting
- Project correspondence
- Compliance assistance as needed
- Caltrans Encroachment Permit application and attachments

Task 2.0 - Grant Assistance

AECOM will lead this effort for the Consor team with support from Consor. The focus during Phase I will be the development of a funding scan and strategy to identify and evaluate suitable federal, state, and regional discretionary grant programs which the Project could potentially access to offset capital costs associated with its construction.

TASK 2.1 - APPLICABLE GRANT OPPORTUNITY MEMO

From the funding scan, the team will prepare both a word document with information on each suitable funding program as well how to position the Project so as to align with sought after program outcomes, as well as an excel base matrix with all the pertinent information about the funding program. These will be living documents and spreadsheets which will be updated annually as program information and objectives change, new funding programs are introduced, and others sunsetted.

As part of this task, AECOM task lead will attend one virtual meeting with the City, Caltrans, and SLOCOG to discuss funding programs and strategies.

During Phase I, we will identify and evaluate strategies to increase the Project's overall competitiveness for specific grant programs identified.

Detailed Scope

TASK 2.2 - GRANT APPLICATION ASSISTANCE

The AECOM team will develop one grant application and supporting materials during Phase I. Based on our experience, the grant application development will be comprised of:

- Application coordination
- Narrative development
- Economic justification/Benefit Cost Analysis
- QA/QC
- Graphic design

TASK 2 DELIVERABLES

- Grant Opportunity Memo (Word and Excel)
- Attendance at one virtual meeting
- One Grant Application (PDF)

Task 3.0 - Project Vision and Handoff

The City and the PA&ED design team have been working on this project for several years. It will be important that the Consor team has access to the design files and personnel from the previous phases of work. This is imperative to allow our team to hit the ground running and deliver the PS&E phase in a timely manner.

TASK 3.1 - PREVIOUS WORK INVENTORY

Consor will develop a tracking spreadsheet to serve as an inventory of the previous work completed. The tracking spreadsheet will include a description of the material received, the date received, the format of the material, and a brief description of the usefulness of the materials.

TASK 3.2 - HANDOFF MEETINGS

The Consor Project Manager, Deputy PM, and Project Engineers will attend three meetings with the City and PA&ED Design team. The purpose of these meetings will be to discuss and better understand the How and Why's of the preliminary design and layout. Our team does include HDR, who performed the hydraulic analysis for the previous phase and Rincon, who completed the IS-MND for the project. We will prepare meeting agendas and meeting notes as part of this task.

TASK 3.3 - HANDOFF MEMORANDUM

Consor will prepare a memorandum of our understanding of the previous design work done to date. The memorandum will include recommendations for process improvements, a list of challenges and how our team will overcome them, a list of the previous work inventory, tracking spreadsheet, and an updated scope of work.

TASK 3 DELIVERABLES

- Previous work tracking spreadsheet (Excel)
- Attendance, agenda, and meeting notes for three (2 in person and 1 virtual) meetings
- Project Handoff Memorandum and Updated Scope of Work (PDF)

Task 4.0 - Surveying/Topographic Mapping

To support the planning, design, and engineering effort for the proposed Prado Road Interchange Project, current and accurate survey information will be required to provide the design team with existing conditions and right of way alignment. This task includes providing a topographic, boundary, right of way, easement mapping, with specific additional mapping related to Flood Study Mapping, compiled in a survey base map to support of the design of the project. Figure 1 shows the approximate area to be surveyed.

TASK 4.1 - FIELD WORK/ TOPOGRAPHIC DATA COLLECTION

The survey mapping will be constrained horizontally to the California Coordinate System of 1983 (CCS83), Zone 5 projection and vertically to the North American Vertical Datum of 1988 (NAVD88) as established locally by constraining to the City of San Luis Obispo's horizontal and vertical control networks. Our surveyors will set semi-permanent survey control points near the expected project limits for future use as control for construction staking by others.

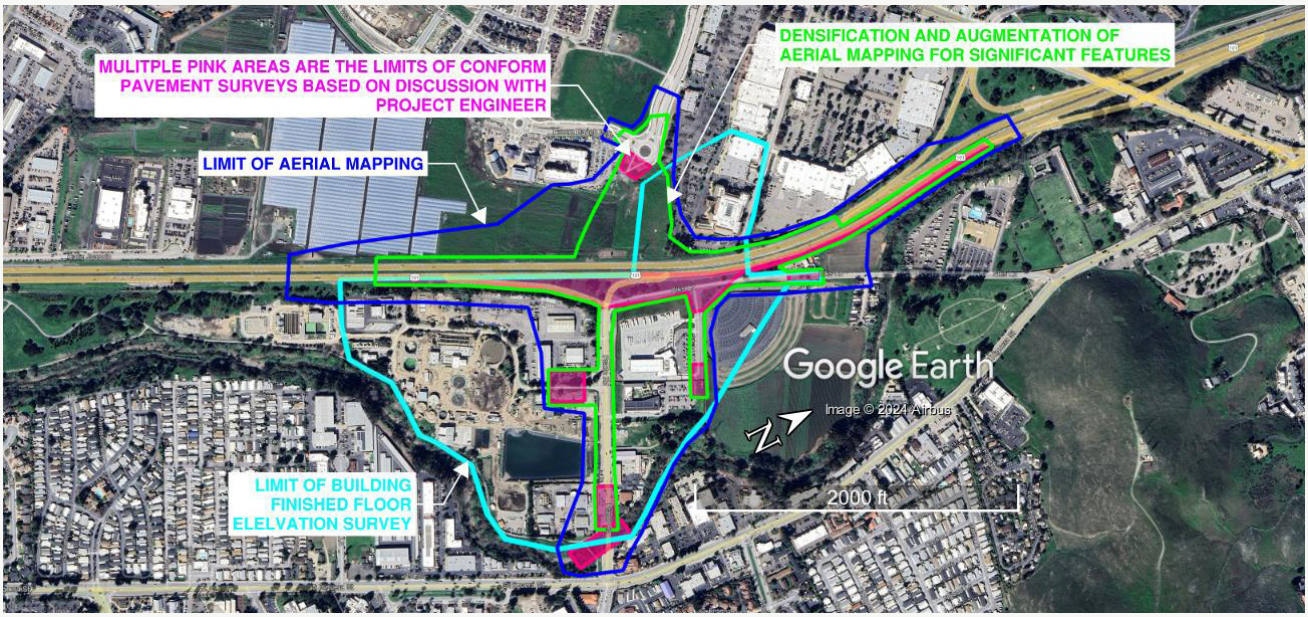
The aerial mapping will cover approximately 80 acres of land, including a variable width strip of approximately 4,700 feet of US 101 and 1,800 feet of Prado Road, along with 1,600 feet of Elks Lane. The limits of the aerial mapping is outlined in blue in Figure 1. The aerial mapping will be compiled from data collection techniques, including high altitude aerial photogrammetry and aerial LiDAR to enhance the digital elevation model in areas of dense brush. Photography will be captured at an elevation appropriate for a mapping scale of 1" = 20', with a one foot contour interval digital terrain model surface.

The aerial mapping will serve as the base mapping layer and be supplemented by field survey densification and augmentation. Just as the ultimate aerial mapping limits have and will be closely coordinated together with the design team, the extent and focus of the field survey augmentation will also be.

Working closely with the Consor team the aerial mapping will be augmented with field survey. This is depicted by the green line in Figure 1. We also anticipate providing field densification of

Detailed Scope

Figure 1 Limits of surveying and topographic mapping



the digital elevation model and in support of conform design at approximately six (6) locations, covering approximately 9.3 acres, including almost 4,000 feet of the easterly pavement of the north bound lanes of US 101. Shown in pink in Figure 1.

In support of the drainage analysis we have coordinated our efforts with the design and analysis team. Our scope of work includes providing up to 10 cross sections of the San Luis Obispo Creek upstream and downstream of the Prado Road Bridge. As part of our work for the City of San Luis Obispo's Prado Road Bridge Widening Project, we collected detailed topographic information of San Luis Obispo Creek around the existing bridge. We will review this data and incorporate survey measurements and topographic survey that remains sufficiently accurate at the time of the survey mapping for this project, including mapping of the Prado Road bridge and the Bob Jones Bike Trail Bridge and creek cross sections. For budgeting purposes, we have assumed that the topography related to the fixed works, i.e. pavement, footings, railings, etc. will be able to be used, and that measurements of the ground surface will need to be updated. We do not anticipate surveying tree locations. We will also measure the finished floor elevations of buildings located within the drainage analysis area of interest.

For budgeting purposes, we have included three field survey days to complete this work and associated office time and have assumed that the outreach to building owners will be completed by the City of San Luis Obispo, or others. The limits of the area that building finished floors will be measured is shown in cyan.

These techniques and approaches will result in mapping showing such visible features as edges of pavements, curb, gutter, sidewalk, driveways, walls, fences, street signs, road striping, utility poles and structures, overhead utility lines, manholes, inlets, subsurface drainage system flow lines, culvert diameters, utility markings, fire hydrants, buildings, trees four inches in diameter and larger measured at breast height, brush and vegetation lines, and other items typical to standard practice.

Our scope includes two (2) days of traffic control for mapping and locating monuments within the vehicular traveled way and if needed for topographic measurements. We assume no additional traffic control will be needed.

To reduce the overall need for traffic control safety and to more safely collect survey measurements in and around vehicular traffic, we will use various remote sensing technologies. Wallace Group survey crews are equipped with Trimble's SX10 scanning total station and Trimble X7 terrestrial scanner. Surveying with these devices results in information rich, high density, colorized point clouds of the areas of interest they are deployed within. This results in conform pavement level survey measurements of areas of US 101 and other busy roads without placing survey crew field staff near, around or within high speed traffic. At the same time, resulting in the needed survey measurements that are typical to pavement surveys within the proposed project areas, while also collecting additional dense geometric information of the surrounding areas. As the project develops, and possible conform locations shift, it is possible that sufficient measurements have already been collected and stored in the point cloud model. Instead of having a change in design result in a new unexpected survey field crew site visit, using these tools results in an efficient extraction of critical measurements from the already collected dense point clouds. Further, these point

cloud models can be utilized graphically in support of project rendering that clearly convey project intent to the lay public. Deploying these tools in this manner mitigates Caltrans' Survey Manual instructions and concerns regarding weighing the value and need of pavement level accuracy measurement against the safety concerns of the public.

Topographic measurements and information collected as part of this task will be compiled into a single Civil 3d, 2024 or newer, drawing file and will be referenced into and be part of our survey base map and deliverable.

TASK 4.2 - RIGHT-OF-WAY, BOUNDARY, AND EASEMENT SURVEYS

Our survey team anticipates locating sufficient monuments to establish portions record right of ways a several City of San Luis Obispo public streets, US 101 and the property sidelines of properties adjacent to these stretches within the proposed survey densification and augmentation project area. This includes re-establishment of the record location of the following right of way:

1. Prado Road: Approximately 1,600 feet of Prado Road easterly of the US 101 right of way.
2. Prado Road: That portion of the paper Prado Road right of way located easterly of US 101 being Lot 303 as shown on map of Tract 3096.
3. Dalidio Drive and Froom Ranch Way: That portion of Dalidio Drive and Froom Ranch Way located easterly of Lot 303 and within the project area.
4. US 101: Approximately 2,500 feet of US 101 right of way northerly of Prado Road and approximately 1,500 feet of US 101 right of way located southerly of Prado Road, for approximately 4,000 feet total.

We will also re-establish the approximate locations of the property sidelines that are adjacent to these right of ways. Wallace Group has surveyed several of these properties in the past, or portion thereof, or properties that are very near or adjacent to the properties that are within the survey limits for this projects. More importantly, Wallace Group has a greater level of experience surveying several of the properties that the project may impact.

Our team has included scope and budget to assist and support the City in researching and if necessary, processing revisions to the several APN's that were created as private open space and agricultural easements as a result of Tract 3096 which have encumbered the western side of US 101. This also includes the potential impact to the private "Billboard Easement".

As part of the right of way effort, our team will also review preliminary title reports for the properties adjacent to the road right of ways within the project limits and near proposed project improvements in an effort to research, discover and plot easements that may impact the project. For budgeting purposes, we have included purchasing and reviewing up to 15 preliminary title reports with an average cost of $600, and plotting up to two easements per title report.

For budgeting purposes, we have assumed that no material discrepancies will be discovered as part of this task and that this task will not require a record of survey.

The information discovered and re-established as part of this task will be compiled in a single unique Civil 3d, 2024 or newer, drawing file and will be referenced into the survey base map and deliverable.

TASK 4.3 - ROAD ALIGNMENTS

Consor and Wallace Group will work closely to plot road construction alignments for US 101 mainlines, on and off ramps, and the City of San Luis Obispo Prado Road, Elks Lane and Dalidio Drive. For US 101, the Caltrans right of way maps will be used for the alignment control and for the City of San Luis Obispo roads, we will base the alignment off provided information, or the team will create best fit alignments.

The road alignment will be compiled in a single Civil 3d, 2024 or newer, drawing file, and be part of our survey base map and deliverables.

TASK 4 DELIVERABLES

> Civil 3d, 2024 or newer, drawing files:
  - Topographic survey
  - Right-of-way/property/easement survey
  - Road alignments
> Signed and sealed 22 X 34 inch survey base map

Task 5.0 - Design Technical Reports

This task includes the preparation of geotechnical, bridge design hydraulics, stormwater data, drainage, environmental permitting and mitigation measures and right-of-way needs reports. The scope presented below is based on Consor's Alternative 3A presented in our Project Understanding and Approach section.

TASK 5.1 - GEOTECHNICAL DESIGN AND MATERIALS REPORT

Yeh will prepare a Preliminary Geotechnical Design Report (PGDR) for the design of the project. Deliverables will be prepared in accordance with the applicable Caltrans and AASHTO guidelines

and manuals. The RFP specifies a draft and final geotechnical report for the project. However, a single report will not fulfill Caltrans specific document requirements for approval. The geotechnical scope for Phases I and II is based on our knowledge of the required reports for structures, earth retaining structures and the overall project which are based on the Caltrans Geotechnical Manual. All reports will be submitted to the City of San Luis Obispo and Caltrans for review.

Assumptions for Geotechnical work:

- All work will be allowed and permitted to be performed during daylight hours between 0600 and 1800.
- City will allow staging of equipment and materials at their corporation yard located at 25 Prado Road. Materials such as drilling rod, cement, drilling fluid drums and other equipment will be allowed to be stored. An area of 20 feet wide by 40 feet long would be needed.

Draft Preliminary Geotechnical Design Report (PGDR)
Perform a preliminary geotechnical evaluation of the site using the existing information and prepare a Preliminary Geotechnical Report (PGDR) for the proposed project. The report will include:

- Project description
- Overview of existing geotechnical information including as-built data
- Geotechnical conditions including:
  - Site geology
  - Topsoil – soil survey review
  - Surface conditions
  - Subsurface conditions based on previous studies
  - Groundwater
  - Seismic hazards including fault rupture, ground motion parameters developed from ARS-online, seismic parameters for slope stability analyses, liquefaction, and liquefaction induced lateral spreading
- Geotechnical design evaluation including options for earth retaining structures, slopes, or sound walls (if needed)
- Geotechnical design considerations pertaining to project aspects including right-of-way, constructability, and construction timeline

A draft report will be submitted for the City and Caltrans review and comment. Comments will be incorporated as appropriate. It is anticipated that project alternatives will not be added between the Draft and Final reports. Up to two rounds of reviews by the City and Caltrans are anticipated.

TASK 5.1 DELIVERABLES

- Draft Preliminary and Final Geotechnical Design Report (PGDR)

TASK 5.2 - STRUCTURE PRELIMINARY GEOTECHNICAL DESIGN REPORTS (SPGR)

Alternative 3A includes both earth retaining structures and bridge structures. Caltrans will require separate SPGRs be prepared for the earth retaining structures and the bridge structures.

Task 5.2.1 Draft Structure Preliminary Geotechnical Report (SPGR) for Earth Retaining Structures
Yeh will compile and review published reports, maps, historical photos, and drawings pertinent to the proposed retaining walls. This review will specifically include reviewing Log of Test Borings prepared for the existing structures in the area of the project.

Yeh will perform a preliminary geotechnical evaluation of the site using the existing information and prepare a Structures Preliminary Geotechnical Report (SPGR) for the proposed earth retaining structures (ERS).

The report will include the following:

- Project description and proposed ERS structures;
- Overview of existing geotechnical information including as-built data;
- Geotechnical conditions based on previous studies including site geology, surface conditions, subsurface conditions, groundwater; as well as corrosion and scour data;
- Seismic information including the ground motion parameters as well as the potential for the site and design of the project to be impacted geologic hazards such as seismic shaking, fault rupture, liquefaction or seismic settlement, lateral spreading, and slope instability;
- Preliminary recommendations for earth retaining structure types and associated foundation considerations as input to type selection; and
- Recommended field work and laboratory testing for design phase services.

A draft report will be submitted for the City and Caltrans review and comment. Comments will be incorporated as appropriate. Up to two rounds of reviews by the City and Caltrans are anticipated. It is anticipated that project alternatives will not be added between the Draft and Final reports.

Task 5.2.2 Draft Structure Preliminary Geotechnical Report (SPGR) for US 101 OC/Ramps at Prado Road
Yeh will compile and review published reports, maps, historical photos, and drawings pertinent to the proposed overcrossing structure and ramps. This review will specifically include reviewing Log of Test Borings prepared for the existing structures in the area of the project.

Yeh will perform a preliminary geotechnical evaluation of the site using the existing information and prepare a Structures

Detailed Scope

Preliminary Geotechnical Report (SPGR) for the proposed overcrossing structure.

The report will include the following:

- Project description and proposed structures;
- Overview of existing geotechnical information including as-built data;
- Geotechnical conditions based on previous studies including site geology, surface conditions, subsurface conditions, groundwater; as well as corrosion and scour data;
- Seismic information including the ground motion parameters as well as the potential for the site and design of the project to be impacted geologic hazards such as seismic shaking, fault rupture, liquefaction or seismic settlement, lateral spreading, and slope instability;
- Preliminary recommendations for foundation type selection for the structures; and
- Recommended field work and laboratory testing for design phase services.

A draft report will be submitted for the City and Caltrans review and comment. Comments will be incorporated as appropriate. Up to two rounds of reviews by the City and Caltrans are anticipated. It is anticipated that project alternatives will not be added between the Draft and Final reports.

TASK 5.2 DELIVERABLES

- Draft and Final Preliminary Geotechnical Reports (SPGR)(ERS) and US 101 OC/Ramps

TASK 5.3 - UPDATED LOCATION HYDRAULIC STUDY

HDR will be supporting the Consor team in the development of the hydraulics for the project. They are very familiar with the Location Hydraulic Study (LHS) from the PA&ED phase. Using the current version of the U.S. Army Corps of Engineers' (USACE) Hydraulic Engineering Center River Analysis System (HEC-RAS) software, HDR will review, update, and implement proposed changes to the floodplain geometry identified in the value analysis recommendations, in the pseudo-steady-state 2D model previously developed for the Project. The results will be included in the updated Floodplain Evaluation Report, which will include the technical information for the Location Hydraulic Study and Floodplain Evaluation Report Summary forms, to document the investigation and determine the specific impacts on the floodplain and necessary avoidance, minimization, and/or mitigation measures.

Our scope assumes two rounds of comments from the City and Caltrans prior to finalizing the Floodplain Evaluation Report.

TASK 5.3 DELIVERABLES

- Draft and Final Updated Floodplain Evaluation Report (PDF)

TASK 5.4 - DRAINAGE IMPACT STUDY REPORT

HDR will conduct a preliminary Drainage Impact Study to identify appropriate drainage design criteria and determine existing hydrology and drainage systems within the Project area. The impact of the Project improvements will be documented, and recommendations for conceptual drainage improvements will be included in a technical report. A planning-level cost estimate for drainage improvements will also be included in the report.

Our scope assumes two rounds of comments from the City Caltrans prior to finalizing the Drainage Impact Study Report.

TASK 5.4 DELIVERABLES

- Draft and Final Drainage Impact Study Report (PDF)

TASK 5.5 - PRELIMINARY FLOODPLAIN AND BRIDGE DESIGN HYDRAULIC STUDY

Using the hydraulic modeling developed for the Project's Location Hydraulic Study, HDR will perform a hydraulic analysis to determine the design flow characteristics for the Project site, including limits and water surface profiles through the study area for the base flood and design flood. It is our understanding that as part of the Prado Creek Bridge project, San Luis Obispo Creek will likely be regraded. Our analysis will include the regrading of the creek based on the City provided grading surface. A bridge scour analysis will be completed to determine the scour potential according to the methodology specified in the Federal Highway Administration's (FHWA) HEC-18 and HEC-20 manuals. The team will work to determine what, if any, scour countermeasures as necessary for the proposed improvements per the FHWA HEC-23 and Caltrans' Highway Design Manual (HDM). HDR will model up to three (3) alternatives.

TASK 5.5 DELIVERABLES:

- Preliminary Floodplain and Bridge Design Hydraulic Study Report (PDF)

TASK 5.6 - PRELIMINARY STORMWATER DATA REPORT

A Preliminary Stormwater Data Report will be prepared summarizing the Project impacts on water quality, general Project features, and recommended best management practices (BMPs). We will utilize Caltrans' standard checklists. Our team will propose conceptual Project features or BMPs that meet the criteria set by the Regional Water Quality Control Board (RWQCB) and Caltrans National Pollutant Discharge Elimination System (NPDES) Permit. Additionally, the need for erosion-control measures will be addressed.

Detailed Scope

HDR will prepare a Stormwater Control Plan in accordance with the City's stormwater requirements, and will use the Stormwater Control Plan template available from the City's website. The Stormwater Control Plan will be included as an attachment to the Preliminary Stormwater Data Report.

TASK 5.6 DELIVERABLES:

- Preliminary Stormwater Data Report (PDF)

TASK 5.7 - WATER QUALITY ASSESSMENT REPORT

To provide the existing physical and regulatory environment information for water quality, HDR will 1) identify and describe the current and upcoming laws that relate to water quality; 2) describe the beneficial uses as detailed by the RWQCB Basin Plan for potentially affected waters; 3) discuss water quality objectives for potentially affected waters; 4) list potential sources of pollutants, existing water quality of the receiving water bodies, i.e., Total Maximum Daily Loads (TMDLs) or 303(d) impaired water bodies listed; and 5) describe the watershed, existing drainage, and hydrologic conditions. We will evaluate the water quality impacts for each proposed alternative and recommend possible BMPs or Project features to address water quality issues. HDR will document our findings in a technical report.

Our scope assumes two rounds of comments from the City and Caltrans prior to finalizing the Water Quality Assessment Report.

TASK 5.7 DELIVERABLES:

- Draft and Final Water Quality Assessment Report (PDF)

TASK 5.8 - RIGHT OF WAY NEEDS DETERMINATION

Based on the approved 50% plans for the preferred alternative, Consor will finalize the right-of-way needs determination. This document will include APNs, Ownership of Parcel, and Areas of temporary and permanent right-of- way needs for the project. This information will be presented in a graphic format with the information clearly summarized in a table (excel format).

TASK 5.8 DELIVERABLES:

- Exhibit Strip Map showing areas to be acquired
- Excel spreadsheet listing APN, Owner, and area required

TASK 5.9 - RIGHT OF WAY ESTIMATING

Hamner, Jewell & Associates (HJA) will be supporting the Consor team for right-of-way support. HJA prepared Right-of-Way Data sheets as part of the PA&ED phase for the project. During this phase HJA will update the Right-of-Way Data sheets with current property values and updated right-of-way take areas, including updated utility relocation costs for the preferred alternative.

TASK 5.9 DELIVERABLES:

- Updated Right-of-Way data sheets for preferred alternative (PDF)

TASK 5.10 - ENVIRONMENTAL PERMIT AND MONITORING MEMORANDUM

The Consor team includes Rincon as our lead for environmental permitting and monitoring. An Environmental Permitting Memorandum will be prepared that will identify the regulatory permits required for the project as well as list applicable measures to avoid and/or minimize environmental impacts, including how implementation of measures, best management practices (BMPs), and compensatory mitigation will be monitored before, during, and/or after construction. We assume that a Lake or Streambed Alteration Agreement (LSAA) from the California Department of Fish and Wildlife (CDFW) and a Waste Discharge Requirements (WDRs) Permit from the Regional Water Quality Control Board (RWQCB) will be required, based on our understanding of the project and its associated environmental documentation.

The administrative draft Environmental Permitting Memo will be submitted to the City for preliminary review and revised in response to up to two rounds of consolidated comments.

TASK 5.10 DELIVERABLES:

- Administrative Draft, Draft, and Final Environmental Permitting Memorandum (PDF)

Task 6.0 - Value Analysis

At the end of the PA&ED phase, the City conducted a hybrid Value Analysis that looked at six improvements to be considered in the next phase of work (five were determined to be viable). The focus of the previous work was to reduce the overall cost of the improvements. During this task, the Consor team will review the five viable improvements. Our team recommends we revalidate the design criteria and concepts considered in the previous phase. In addition, to the five improvements, our team suggests addressing the following elements that were not considered in the previous phase:

- Revalidate traffic analysis (Optional Task)
- Reducing the width of the overcrossing structure
- Fine tuning the limits and impacts to the floodplain by shortening the elevated portion of the project and the use of retaining walls with culvert openings
- Location of stormwater treatment facilities, including maintenance
- Roadway drainage – City drainage versus Caltrans drainage

Detailed Scope

- Relocation of wet utilities – water and recycled water lines
- Use of sustainable materials, such as "Green" concrete
- Determination of appropriate sustainable rating program to utilize
- Review best practices for area underneath the elevated structures

TASK 6.1 - DRAFT VALUE ANALYSIS REPORT

The Consor team will prepare a draft report that addresses the five design items previously discussed and the items listed above that the team, the City and Caltrans agrees should be addressed. The aesthetics for the Prado Road corridor will be developed in Task 7.0. These elements will be summarized in the Draft Value Analysis Report. The Draft report will document the process and decisions made during our Design Charrette meetings. Cost estimates will be summarized in the report. The Draft report will be prepared after the preferred alternative is chosen.

Task 6.1.1 - Design Charrettes (City and Caltrans)

The Consor Project Manager, Deputy Project Manager, Bridge and Roadway Project Engineers, Landscape Architect and Brian Ray will lead three (3) design charrettes with the City and Caltrans. The focus of the first design charrette will be to discuss and prioritize the potential improvements to be reviewed as part of the Value Analysis or revalidation process. The next two meetings will concentrate on the specific project improvements and the design team's solutions to the concerns raised during the first meeting. In addition to the design charrette meetings, our Wet Utilities team will meet twice (2) with City utility staff to discuss the needs of the Wet Utilities within the project limits.

Task 6.1.2 - Conceptual Roll Map/Bridge Advance Plans

The Consor team will prepare a Conceptual Roll Map and Bridge Advance Plans of Alternative 3A to our first design charrette meeting as a starting point for the Validation Analysis. We will prepare two (2) conceptual plans and Bridge APS for the second meeting with the goal of gathering comments from the City and Caltrans. The goal for the third meeting would be to prepare two (2) conceptual plans and bridge APS and drill down in on the preferred concept.

Task 6.1.3 - Renderings of Preferred Alternative

After the third design charrette the design team will have a preferred alternative that incorporates those elements and revisions that the design team, City and Caltrans agree should be the basis for the preparation of the 50% Plans. The design team will create a 3-D model that will be rendered and colored. The rendering will be provided to the City and Caltrans for comment. We can provide the rendering as a roll map and/or as an electronic file format.

Task 6.1.4 - Cost Estimates

Understanding the costs associated with the options being explored during this task will be vital to making informed decisions. The team will prepare planning level (11 page estimate) cost estimates for each alternative. The estimate will be broken down to provide the City and Caltrans the cost for each element. We will prepare a total of six (6) estimates – one for Alternative 3A, two for each of the conceptual plans presented at the design charrettes and a final cost estimate for the preferred alternative.

TASK 6.1 DELIVERABLES:

- Draft Value Analysis Report (PDF)
- Attendance, agenda, and meeting notes for three (3) design charrettes (in person)
- Conceptual Roll Plans (4 Alternatives) (PDF)
- Bridge Advance Planning Studies (4 Alternatives) (PDF)
- 3 dimensional model of preferred alternative (PDF or Electronic)
- Planning level cost estimates (total 6) (PDF)

TASK 6.2 - FINAL VALUE ANALYSIS REPORT

We will address two rounds of consolidated comments from the City and Caltrans on the Draft Report and incorporate, as appropriate, into the Final Value Analysis Report.. A comment form will be prepared and submitted. The comment form will document the comment, response, and any further explanation as necessary.

TASK 6.2 DELIVERABLES:

- Draft Final and Final Value Analysis Report (PDF)

TASK 6.3 - VALIDATION OF TRAFFIC ANALYSIS (OPTIONAL)

This task is optional. The Consor team would encourage the City to consider a revalidation of the traffic analysis that was completed as part of the PID and PA&ED phases. We are not proposing to reanalyze all the intersections the original traffic study included. With the age of the traffic counts and the fact that they were done pre-pandemic, our team is suggesting updated traffic counts, an updated forecast model, and a future project compatibility. It is critical that the entire team is assured that the preferred alternative geometrics are still valid. This work will be led by DKS with support from Consor.

Task 6.3.1 - Update Traffic Counts and TOAR Volume Set Comparison

This task is meant to determine the effects travel demand changes related to the COVID-19 pandemic and subsequent increase in work from home activity as well as traffic generated from recent development in the vicinity of the project (San Luis

Detailed Scope

Ranch development) since the 2019 TOAR counts were collected. As part of this task, DKS will review up to 15 intersections including locations along Prado Road, South Higuera Street, Madonna Road, Los Osos Valley Road, and Froom Ranch Way as appropriate based on recent developments and targeted local intersections of concern for the City. To the greatest extent possible, DKS will use counts from the City of San Luis Obispo's count program, but our scope and fee includes the need for new counts at all study locations. Our team will also utilize available Caltrans PeMS stations to compare volume changes on US 101 between 2019 and 2024. This analysis is focused on operations and thus daily counts have not been included in this scope.

This analysis will be focused on direct volume comparisons during the AM and PM peak hours to help determine if there are any opportunities in the Value Analysis Investigation in Phase I. A ground truth of current traffic numbers will help inform the team's decision-making process and may be potentially useful in supporting grant applications.

Our team will meet virtually with the City and Caltrans to discuss count locations and another time to discuss and review our findings.

Task 6.3.2 - Revalidation Assessment

Depending on the results of the Updated Traffic Counts and TOAR Volume Set Comparison, there may be a need to re-analyze the traffic operations previously reviewed in the TOAR. This can include intersection operations and freeway merge-diverge analysis. This analysis is not intended to reopen the environmental analysis and it is strictly meant to determine if the new base year traffic volumes would result in different needs for the interchange. This analysis will make adjustments to the 2050 design year volume set developed for the TOAR amendment based on the newly collected counts. No new forecasting will be conducted as part of this task.

Our team will reanalyze existing conditions and design year traffic operations to determine if there have been any significant changes to the facility sizing needs based on five years of traffic growth since the previous analysis was initiated. This analysis may also include some limited analysis of additional intersections which were not included in the 2023 TOAR Addendum (e.g. intersections along Froom Ranch Road which did not previously exist) based on City input and the locations collected in the previous task. This task assumes that all Synchro, HCS, Sidra, and Travel Demand model output files produced by GHD for the TOAR will be made available for use for this analysis.

Our scope includes three virtual meetings; one to discuss the revalidation needs, one to coordinate with GHD on file transfer needs, and one to review our findings.

Task 6.3.3 - Future Compatibility Assessment

This task will take the work of the previous two tasks one step further and evaluate the traffic compatibility of the proposed interchange design with the previously considered options for providing ramps to and/or from US 101 southbound. Prior planning documents identified a need for access to the southbound freeway at Prado Road to relieve traffic stress off Madonna Road and Los Osos Valley Road. This task will re-analyze the interchange with up to two southbound ramp configurations to determine if the currently proposed design is compatible with potential future needs. This analysis will be focused on ultimate roadway sizing needs, intersection spacing, traffic operations, and queueing which may result from the addition southbound US 101 access.

This work will inform the Value Analysis Investigation to ensure that the interchange as proposed does not preclude the ability to address potential future traffic needs. The southbound ramp options were not analyzed in the TOAR and this analysis is meant to determine if the additional southbound freeway access may be warranted before the project design year. This analysis assumes using the analysis files obtained as part of previous task as a starting point for analysis. New forecasts will be developed as part of this task to include the southbound ramp access as well as any additional land uses near the interchange which may not have been previously considered. This task is not meant to be used for final concept development or environmental clearance for the southbound freeway access. This analysis is specifically meant to determine if there are any modifications to the currently proposed design which would allow for this future option and how likely it is that this option will be needed by the design year. If the southbound ramps are found to not be needed, this report could also help inform which aspects of the design could be modified to save on cost for not needing to account for this additional infrastructure.

Our scope includes four virtual meetings; one to discuss alternatives for evaluation, one to discuss preliminary results, and two to discuss comments and review final results.

TASK 6.3 (OPTIONAL) DELIVERABLES:

- Updated 2024 traffic count sheets
- Draft and Final Memorandum of Findings – comparing previous 2019 counts with the 2024 counts
- Draft and Final Memorandum summarizing the revised existing conditions and design year analysis
- Draft and Final Report summarizing the findings of the FCA

Detailed Scope

TASK 6.4 - LEED/ENVISION MEMORANDUM OF FEASIBILITY

During the Public Meeting for Phase I, our team will discuss ways to incorporate sustainable elements into the project and reduce greenhouse gas emissions during construction. This collaborative effort with the City, Caltrans, and the public will help define and establish sustainability goals, priorities, preferred alternatives, and develop feasible designs for the project. A pre-assessment checklist will be used to quickly compare project alternatives before key project decisions have been finalized. Establishing goals and priorities will help determine which sustainability rating system(s) would be appropriate to select for this project, and that will be further developed in Phase II.

After the public meeting, and the development of the pre-assessment checklist, our team will prepare a Memorandum to discuss the feasibility of incorporating these elements, recommend the most applicable sustainability rating system, likelihood of obtaining certification from the program and our team's recommendation for Phase II.

TASK 6.4 DELIVERABLES:

- Administrative Draft and Draft LEED/Envision Memorandum (PDF)

TASK 6.5 - SUSTAINABILITY MEMORANDUM

The Consor team will prepare a Sustainability Memorandum that describes material types, construction techniques, traffic control, and other methods to reduce greenhouse gas (GHG) emissions and limit environmental impact during construction. The Sustainability Memo will incorporate required mitigation measures identified in the January 2023 Initial Study – Mitigated Negative Declaration (IS-MND) for the US 101/Prado Road Interchange Project, the project's adopted Mitigation Monitoring and Reporting Program and Environmental Commitments Record, BMPs from Caltrans' GHG Reduction Measures Toolbox (June 2021), and any applicable conditions of approval from the City of San Luis Obispo and Caltrans.

The Sustainability Memo will list applicable methods to limit environmental impacts, including how implementation of mitigation, conditions, and BMPs will be monitored during construction. The administrative draft Sustainability Memo will be submitted to the City for preliminary review and revised in response to one round of comments as part of Phase I. Subsequent revisions will be addressed in Phase II.

TASK 6.5 DELIVERABLES:

- Administrative Draft and Draft Sustainability Memorandum (PDF)

Task 7.0 - Schematic Aesthetic Development

Apexx will lead the development of the aesthetic features for the Prado Road corridor. Consor and Wallace Group's landscaping team will be assisting Apexx in this effort.

TASK 7.1 - DEVELOP RENDERINGS (3 CONCEPTS): BRIDGE, ROADWAY, SIGNAGE, LANDSCAPE

Prior to developing the conceptual renderings, our team will meet with the City and Caltrans (including Caltrans Landscape Architectural Functional Unit) to brainstorm ideas for possible themes and aesthetic treatments for the bridge and retaining structures and railings, roadway enhancements including bicycle, pedestrian, and median hardscape/landscape treatments, plant palettes and locations, and lighting. This meeting will help set the vision for the corridor. After meeting with the City and Caltrans, the team will create three (3) concept alternatives based on the City and Caltrans direction with input from the design team. One of the concepts will be Alternative 3A as discussed in the Project Understanding and Approach. The development of the renderings will include:

- Creating a digital 3D model of surrounding site for rendering purposes.
- Creating conceptual designs of railings, abutment, piers, lighting, superstructure type, texture, and color.
- Producing renderings showcasing each alternative for team discussion during progress meetings. Renderings will be provided in JPEG, PNG, or PDF format at a resolution equal to 24"x36" at 300 DPI. All renderings and 3D modeling will be developed in Revit.

These renderings will be presented to the public for review and comment during the Public Meeting identified in Task 1.0. The team will utilize diagrams, renderings, animations, and drawings to illustrate the concepts to the public and solicit comments and feedback for a preferred option or direction.

TASK 7.2 - MEETING - CITY AND CALTRANS

The team will meet with representatives from the City and Caltrans after the draft renderings have been developed to gather input and consensus. We assumed two virtual meetings will be required to achieve consensus.

TASK 7.3 - DRAFT AESTHETIC REPORT

The aesthetic theme for the corridor will be documented in an Aesthetic Report. The report will document the process the team followed, and the decisions made and agreed upon by the team, the City and Caltrans. Feedback received from the public will also be documented in the report. The draft renderings will be included, as well as an estimate of the construction costs associated with the aesthetic treatments.

Detailed Scope

TASK 7 DELIVERABLES:

- Attendance, Agenda, and Meeting Notes at Pre-rendering virtual meeting with City and Caltrans
- Draft 3D renderings for three (3) concepts
- Attendance, Agenda, and Meeting Notes for two virtual (2) meetings with City and Caltrans
- Draft Aesthetics Report (PDF)

Task 8.0 – Bridge Type Selection

TASK 8.1 – PRE-TYPE SELECTION SUBMITTAL TO OSFP

Four weeks prior to submitting the draft Type Selection Report, Consor will prepare a Bridge Site Data Submittal Package (BSDS) and submit along with the Foundation Boring Plan and Draft Bridge Design Hydraulics Report to Caltrans according to the Office of Special Funded Project (OSFP) Guide.

TASK 8.2 – TYPE SELECTION REPORT

Consor will prepare a Type Selection Report for the bridge and retaining wall structures associated with the new Prado Road Interchange. It is assumed one comprehensive report will be developed to include all the structures.

The Type Selection Report will contain a General Plan, a General Plan Estimate, a draft Foundation Plan for each alternative for the structure, along with a memorandum addressing geotechnical, aesthetic, environmental and cost issues as outlined in the OSFP Memo 4-2 and Caltrans Memos to Designers 1-29. A structures type recommendation will be included in the report. It is assumed no more than two alternatives will be investigated. The bridge structure types assumed to be evaluated include cast-in-place post-tensioned concrete box girder and precast prestressed concrete wide flange girder. Retaining wall structure types assumed to be evaluated include Caltrans Standard Type 1 and Mechanically Stabilized Embankment.

For each bridge alternative evaluated, consideration shall be given to structure depths, clearance over US 101, falsework requirements, slope stability (abutments), and constructability. The structure foundations shall be discussed with the geotechnical engineer to determine foundation type. The evaluation shall identify traffic handling and falsework assumptions (as required). Any required construction staging and the dimension of any required falsework openings will be shown on the General Plan. The choice of structure type shall be based on criteria outlined in Caltrans Bridge Design Aids and Memo to Designers. Estimates will be prepared for all alternatives and will be included in the Report. The following shall be indicated on the General Plan:

- Structure length, width, depth, and type
- Railing, including temporary K-rail
- Stage construction information, as required
- Type of foundation assumed
- Falsework assumptions if required
- Aesthetic requirements which affect cost of structure
- Roadway widths
- Estimated construction costs

TASK 8.3 – DRAFT TYPE SELECTION REPORT SUBMITTAL TO CITY

Consor will submit the Draft Type Selection Report including attachments to the City for review and comment.

TASK 8.4 –TYPE SELECTION REPORT SUBMITTAL TO CALTRANS & TYPE SELECTION MEETING

Upon receiving approval from the City on the Type Selection Report, Consor will submit the report to Caltrans in order to schedule a Type Selection Meeting as per the guidelines outlined in the OSFP Guidelines. Consor will present the structure at a Type selection Meeting. The Project Manager, Deputy Project Manager, Bridge Project Engineer will attend the Type Selection meeting in person. The Project Geotechnical and Hydraulics Engineers will attend virtually.

After receiving all comments from the meeting, Consor will revise the General Plans and General Plan Estimates for Structure and walls as well as the Type Selection Report.

TASK 8 DELIVERABLES:

- Pre-Type Selection Submittal to OSFP including BSDS, draft Foundation Boring Plan, & draft Hydraulics Report
- Draft Type Selection Report to City
- Final Draft Type Selection Report to City
- Draft Type Selection Report to Caltrans
- Schedule, prepare, attend Type Selection Meeting with Caltrans
- Finalize Type Selection Meeting Notes
- Finalize Type Selection Report and submit to City and Caltrans

Task 9.0 - Public Outreach - Phase I

Verdin Marketing will be leading the Consor team's Public Outreach efforts for the Prado Road Interchange project. The team will work with the City to tailor a Communications Plan to achieve the City's goals for communicating with the Public.

As part of this task, the team will hold an immersion session with the City, SLOCOG, and Caltrans to discuss the needs and deliverables, determine metrics, and gather input to inform the Communications Plan .

Detailed Scope

A project-specific Communications Plan for Phase I and II will be prepared as part of this task. The Communication Plan will be submitted to the City for their review and approval before finalizing.

Verdin will update the City's existing Prado Interchange illustration, Fact Sheet and FAQs based on the Consor design team's proposed modifications, with City and Caltrans concurrence.

Talking points for key staff to respond to questions from the media and the public will be developed as part of this task.

TASK 9.1 - PUBLIC MEETING - VA RECOMMENDATIONS

This task includes Verdin's support of the design team's Public Meeting. Attendance and preparation for the public meeting for the technical design team is included in Task 1.0 for Phase I. As part of this task, Verdin will complete the following:

Announcement, coordination and facilitation of one public meeting to present the recommendations of the Value Analysis task to the public. This effort includes:

- One press release and media outreach to get coverage before and after public meeting
- Utilizing the City's email program, send a branded email to residents and businesses
- Creation of signage, comment cards, updates to fact sheet/FAQs. Printing not included.
- Presentation and display coordination for the meeting
- Coordination and facilitation of public meeting to present the findings of the Value Analysis. Our team recommends that the public meeting be held at the City Corp Yard on Prado Rd.

TASK 9.2 - MEETING MINUTES AND COMMENT MATRIX

After the Public Meeting, Verdin and the design team will follow up with a meeting report with a summary of public engagement and comments/questions, the creation of a database for future outreach, and suggestions for project refinements based on public input.

As an option, the team can videotape the public meeting for posting on the City's Prado Interchange website to ensure information and ability to comment is inclusive of all audiences.

TASK 9.3 - LOCAL RESIDENCE OUTREACH - MASS MAILERS (2)

Our team envisions that one mailer to all residents and businesses within the immediate area (anticipated to be a .5 mi radius from US 101/Prado interchange site, to include San Luis Ranch neighborhood and Madonna Plaza on west side of US 101, and businesses/residents at So. Higuera and Prado on east side of US 101) announcing the upcoming Public Meeting. Our scope assumes the City will print and mail the mailer.

A second mass mailer could either be specific to businesses in the area with a business focused Fact Sheet. Alternatively, the second mass mailer could be a recap and a link to view meeting (if the City authorizes the videotaping of the meeting). The mailer would be sent to the same audience that received the public meeting announcement. Our scope assumes the City would print and mail the mailer.

TASK 9.4 - PRESS RELEASES (3)

One press release would be prepared to get coverage for the Public Meeting to discuss the Value Analysis findings. A second press release would be prepared as a recap of the public meeting, and a third would be prepared to announce a planned event or as story generation, as appropriate.

TASK 9.5 - MEDIA MANAGEMENT

Our team recommends providing an outreach to the media at the start of the project to inform them of the project timeline, scope and plans to ensure channels of communication remain open.

It is recommended that the media be updated regularly; Verdin is also available to develop additional press releases and media relations for unplanned eventualities where media and public information is needed. Depending on the amount and level of effort additional scope may be required.

TASK 9.6 - CITY OF SLO WEBPAGE MONTHLY UPDATES

The team will provide monthly updates to the City's Prado Road Interchange Project webpage. The existing webpage is housed on the City's website with general information on the project. We will start by updating the current illustration, Fact Sheet, and FAQ's, and noting the updated project timeline and public meeting dates and information. It is assumed that 12 updates will be completed during Phase I.

TASK 9.7 - PROJECT BOARDS FOR OUTREACH MEETINGS (3 EVENTS, 4 BOARDS EACH)

The Consor team will provide project boards showing renderings of the proposed project improvements, including aesthetic treatments, landscaping (planting palettes), and hardscape options. The boards can also include project timelines, extents of flooding, location of stormwater quality/treatment areas, and utility relocations. It is anticipated that the aesthetic content for these boards or other media will be similar to those created as part of Task 7.0.

These boards/graphics/renderings will be prepared to support the public meeting and two other events like Farmer's Market or placement at City offices.

Detailed Scope

Our scope includes the development, printing and mounting of four boards for three separate events. It also assumes that at least two of the boards will be reused at the three events for a total of eight boards.

TASK 9 DELIVERABLES:

- Final Phase I Communications Plan
- Draft Phase II Communications Plan
- Updated Prado Interchange Illustration, Fact Sheet, FAQs
- Talking points for Key Staff
- Attendance at Public Meeting (Verdin only)
- Public Meeting Report (PDF), including comment matrix
- Two mass mailers (PDF)- City to print and mail
- Three press releases
- Twelve (12) City of SLO Prado Road Interchange Project webpage updates
- Eight (8) project information boards/graphics/renderings

Task 10.0 - Advisory Body Assistance

The Prado Road Interchange is a significant project for the San Luis Obispo community. Therefore, as the design progresses it is important to check in with City advisory bodies to inform them of the progress and provide them with the opportunity to provide input. During this Task, the Consor team will attend meetings, provide preparation sessions with staff, provide technical content for staff reports, and support City staff. Our scope assumes that the team will attend four (4) Advisory Body meetings. The renderings, conceptual exhibits, and technical content will be developed in various other Tasks in Phase I.

TASK 10.1 - ATTEND FOUR (4) MEETINGS IN PERSON

The Consor Project Manager, Deputy Project Manager, Bridge Project Engineer will be in attendance at four Advisory Body meetings throughout Phase I. The Advisory Bodies could be Planning Commission (PC), Architectural Review Committee (ARC), Chamber of Commerce, Downtown SLO, or the City Council.

TASK 10.2 - LEAD PREP MEETINGS WITH STAFF (8)

Team preparation is important for presentations at committee meetings. The Consor team will lead preparation meetings with City and Caltrans staff prior to committee or council meetings. These meetings will be virtual. We will attend two preparation meetings for each of the four (4) meetings. The meetings will focus on walking through the presentation and discuss questions and issues that could be raised and our team's responses.

TASK 10.3 - PREPARE TECHNICAL CONTENT FOR STAFF REPORTS (4)

The Consor team will provide technical content for the City led staff reports for the Advisory Body meetings. The technical content will focus on project schedule, project costs, design decisions, aesthetic features, project layout, planting palettes, landscape and hardscape elements, bike and pedestrian features. Our team will provide renderings and conceptual plans prepared in previous tasks.

TASK 10.4 - COMMENT RESPONSE TO EACH MEETING (4)

Our goal in attending the Advisory Body meetings will be to answer questions from the committee members. However, there could be some comments or questions that cannot be effectively answered without additional analysis. Our team will document comments, questions and requests made during the meetings. We will prepare a memorandum documenting the comments and our team's responses to those comments. In the memorandum, our team will identify requests that can be incorporated within the scope and fee and those elements that will necessitate a scope and fee revision.

TASK 10 DELIVERABLES:

- Attendance at four (4) Advisory Body Meetings (in person)
- Preparation and Attendance at a total of eight (8) preparation meetings for Advisory Body meetings (virtual)
- Technical Content for four (4) staff reports (Word)
- Preparation of four (4) comment response memorandums (PDF)

Task 11.0 - 50% Submittal

The 50% Submittal will be based on the preferred alternative determined from the Value Analysis. For scoping purposes, we have assumed that Alternative 3A is the preferred alternative. Our team will advance the conceptual drawings to a 50% level.

TASK 11.1 - 50% ROADWAY, SIGNAL, AND LIGHTING PLANS

The 50% plans will include the following sheets:

- Horizontal Alignment
- Vertical Alignment
- Preliminary Right-of-Way
- Preliminary Drainage Design Concept
- Preliminary Storm Water Temporary/Permanent Treatment Concept
- Preliminary Traffic Handling/Stage Construction Plan
- Preliminary Landscape Concept Plan
- Preliminary Signal and Lighting

The 50% plans will be prepared in English units and will follow City and Caltrans standards. The design detailed on the plans will address horizontal and vertical alignment, ADA compliance, limits of cut and fill, right-of-way limits (existing and proposed), utilities, proposed drainage, traffic signals, and lighting, traffic handling/ stage construction.

Detailed Scope

TASK 11.2 - 50% STRUCTURE PLANS

The General Plans for the three bridges (Prado Mainline Bridge, Northbound off-ramp, and Northbound on-ramp) will be updated to include comments received through the Type Selection process. General Plans will be updated and finalized for retaining walls for the preferred wall type based on the approved Type Selection Report. Preliminary foundation sizes, locations, and depths will be determined. We anticipate the following sheets will be prepared for the 50% submittal:

Prado Road Mainline Bridge Sheets

- General Plan (1)
- Structure Plan (2)
- Foundation Plan (2)
- Abutment Layouts (2)
- Abutment Details (2)
- Retaining Wall Layout (4)
- Bent Layouts (3)
- Bent Details (2)
- Typical Section (2)
- Girder Layout (3)
- Barrier Details (1)

Prado Road/US 101 Off-Ramp Bridge Sheets

- General Plan (1)
- Foundation Plan (1)
- Abutment Layouts (1)
- Abutment Details (1)
- Retaining Wall Layout (2)
- Retaining Wall Details (1)
- Bent Layouts (2)
- Bent Details (2)
- Typical Section (1)
- Girder Layout (1)
- Barrier Details (1)

Prado Road/US 101 On-Ramp Bridge Sheets

- General Plan (1)
- Foundation Plan (1)
- Abutment Layouts (1)
- Abutment Details (1)
- Retaining Wall Layout (2)
- Retaining Wall Details (1)
- Bent Layouts (2)
- Bent Details (2)
- Typical Section (1)
- Girder Layout (1)
- Barrier Details (1)

TASK 11.3 - 50% DRAINAGE AND STORMWATER PLANS

Preliminary Stormwater Treatment Design and Water Pollution Control Design will be included. Plan sheets showing the type, size and location of the Stormwater Treatment elements will be shown as part of the 50% plans. The preliminary layout of the roadway drainage system will be shown on the 50% plans. Initial pipe locations and pipes will be delineated on the plans.

TASK 11.4 - 50% LANDSCAPE PLANS

Based on the design criteria and concept approved in during the Value Analysis and Design Charrettes, we will prepare preliminary planting and irrigation plans in general conformance to City, and Caltrans standards. Planting Plans will provide plant schedule, planting types, sizes, quantities, and locations. A draft Tree Protection and Replacement Plan will be prepared for review and approval. Preliminary erosion control hydroseed mix designs and notes will be developed for use in the erosion control plans. Irrigation plans will provide the irrigation mainline and equipment types but will not include valve layout and water demand calculations at this level of design.

TASK 11.5 - 50% WET UTILITY PLANS

The Consor team has assumed the Sewer Main will be relocated to follow the new Elks Lane and the Water Main will also be relocated. This scope may be revised depending on the outcome of the Value Analysis and Utility Meetings with City Staff. The 50% plans will include Plan and Profile sheets for the Sewer Main and Water Main relocations.

TASK 11.6 - ENGINEER'S ESTIMATE

A preliminary Engineer's Opinion of Probable Construction Cost will be prepared based on the 50% plans. Preliminary quantities will be taken. A contingency of 25% and an escalation of 5% per year will be utilized. Relevant unit bid information will be acquired from Caltrans "As-Bid" databases and adjusted as deemed appropriate to better represent anticipated project costs.

TASK 11.7 - MEETINGS WITH 3RD PARTY REVIEWER

The City will be contracting separately with a 3rd party to review the 50% submittal. Our team will meet virtually with the 3rd party reviewers and the City to review the submittal and subsequent comments. We envision the first meeting will be a walk-through of the prepared plans, including discussing assumptions and design decisions agreed on. The second meeting will focus on a review of the comments provided and our team's responses. The third meeting will be prior to our final 50% submittal to discuss the 3rd party's final comments and how our team will address those comments. At each submittal, our team will prepare a comment response form. The form will include the location of the comment, a summary of the comment, who is responsible for the response, and the response to the comment.

Detailed Scope

TASK 11.8 - RESPONSE TO COMMENTS (2)

A Draft 50% Submittal will be made to the City and Caltrans for their review. Our team has assumed we will receive consolidated comments. We will address these comments and submit a Draft Final 50% submittal, which will be reviewed. Upon receiving the second set of consolidated comments, the team will address the applicable comments and submit a Final 50% submittal. At each submittal, our team will prepare a comment response form. The form will include the location of the comment, a summary of the comment, who is responsible for the response, and the response to the comment.

TASK 11 DELIVERABLES:

- Draft, Draft Final, and Final 50% Plans (PDF)
- Engineer's Opinion of Probably Construction Cost (PDF, Excel)
- Attendance at three (3) plan review meetings (virtual)
- Two (2) Comment Tracking Matrices (PDF, Excel or Word)

Task 12.0 - Phase I Finalization

TASK 12.1 - SCOPING DOCUMENT - PHASE I

At the conclusion of Phase I, the team will prepare a technical memorandum summarizing the design criteria for the project, a list of design exceptions, not already identified previously, findings and decisions made during the Value Analysis, Geotechnical findings, Stormwater and Drainage design decisions, wet utility relocations, recap of Public Meeting and Advisory Body comments, and recommendations for LEED/Envision and Sustainability improvements to be incorporated into the project. This document will serve as the basis for the Scope of Work for Phase II.

TASK 12.2 - PHASE II SCOPE, SCHEDULE, FEE

Upon completion of the Scoping Document Memorandum, the Consor team with the City and Caltrans input, will review the Scope, Schedule and Fee for Phase II. We will work with the team to revise to our original scope, including deliverables and provide it to the City for their review and approval. Once the revised scope has been approved, the fee will be modified to match the approved scope of work. A schedule will be prepared for Phase II during this task.

TASK 12 DELIVERABLES:

- Phase I Scoping Document Memorandum (PDF)
- Draft and Final Scope of Work, Schedule and Fee (Phase II)

PHASE II - PS&E DEVELOPMENT

The following scope for Phase II is based on Consor's Alternative 3A being the preferred alternative. At the conclusion of Phase I, the scope for Phase II will be updated accordingly.

Task 13.0 - Project Management and Meetings - Phase II

TASK 13.1 - PROJECT MANAGEMENT

Consor will perform the activities necessary to plan, direct, and coordinate the work on this phase of the project. Consor will provide project management for each task for the entire duration of the agreed upon schedule. Consor assumes the duration of work for Phase II will not exceed 36 months.

Consor will submit monthly progress reports outlining all activities for which expenses are submitted. All activities will be itemized by task and will be consistent with the agreed upon Scope of Services. Progress Reports will include the following:

- Status of work completed to date
- Expense allocation by task
- Work anticipated to be completed in the next reporting period
- Identification of project issues, actions to resolve those issues, and the responsible party to drive resolution

Project Correspondence and Project Files: All correspondence by and between Consor, the City, other agencies and parties will be recorded and filed for complete record keeping. Meeting notes, telephone record logs, incoming/outgoing correspondence, and all deliverables will be logged and filed. Any outside correspondence will be coordinated with and approved by the City's project manager. Project files will comply with the Caltrans uniform filing system as outlined in the Project Development

Procedures Manual: This will facilitate transmitting the Project History File to the City during the future close out phase of the project. Consor will provide weekly updates on progress to the City Project Manager. These updates will take the form of either e-mails or virtual meetings depending on the need for information.

Design Decision Log: Consor will disseminate up-to-date information to the project team at the PDT meetings. A Design Decision log will be prepared for items such as requests for information, documentation of decisions made as the project progresses in development, and deliverable status.

Caltrans Quantitative Risk Register: Throughout the project development process the Consor team will maintain a risk register that complies with Caltrans latest guidance.

TASK 13.2 - CLIENT FOCUS MEETINGS

Consor assumes monthly technical coordination meetings will be needed with the City and other outside agencies for a total of thirty-six (36) meetings. These meetings will focus on project status updates, items requiring City input and direction. We have assumed that these meetings will be held virtually.

Detailed Scope

TASK 13.3 - PDT/COORDINATION MEETINGS (CALTRANS) (15)

PDT meetings will be scheduled every other month and held via telephone or video conference with the goal of keeping the project on track and to keep the City and Caltrans informed of the status of the project. Two of these meetings would focus on the coordination and review of the Caltrans permanent changeable message sign project. Consor assumes that PDT meetings will be one-hour in duration. This scope assumes a total of fifteen (15) PDT meetings.

TASK 13.4 - PROJECT SCHEDULE UPDATES

Consor will update a project schedule at major milestones and at least every six months. The schedule will be developed using MS Project. The schedule will indicate critical path activities and major milestone deliverables.

TASK 13.5 - CITY COUNCIL MEETING

The Consor team will attend one City Council meeting to present an update on the project. The Project Manager, Deputy Project Manager, Bridge Project Engineer, Roadway Project Engineer, and Bridge Architect will attend and present an update and project status to the Council. We anticipate that the meeting will focus on the corridor aesthetics, hardscape, landscape, overall look and feel of the improvements. In addition, we will provide an update to the project timeline and project costs. We will be available to answer the Council's and public's questions about the improvements.

It is assumed that the Consor team with the City will provide a short presentation to the City Council. Our team will take notes during the presentation and note action items and comments made.

TASK 13.6 - QA/QC

As required by the COOP Agreement between the City and Caltrans a QMP must be prepared for each component phase, Consor will develop, establish, and keep updated a project specific Quality Management Plan (QMP) that will include procedures and timetables for conducting independent quality reviews for all reports, plans, estimates, and design documents. A big part of our team's QMP will be supplemented by Brian Ray of Sunrise Transportation Strategies. Brian will be providing his expertise to the roadway geometrics of the interchange. This will:

- Permit adherence to the QMP by both Consor and our subconsultant team throughout the course of this phase of work
- Initiate and document quality reviews and address corrective actions
- Conduct quality audits to ensure quality control procedures are strictly followed and properly documented.
- Perform a thorough review and verification of corrections by an independent reviewer

TASK 13 DELIVERABLES:

- Attendance, Meeting Agendas and Notes for Client Focus Meetings (36)
- Attendance, Meeting Agendas and Notes for PDT Meetings (15)
- Design Decision Logs
- Updated Risk Register
- Monthly Progress Reports and Invoices
- Project Schedule (at milestone submittals and at least every 6 months) in Microsoft Project and PDF Format
- Attendance, presentation materials, and notes for one (1) City Council Meeting
- Project Correspondence
- Compliance Assistance as Needed

Task 14.0 - Grant Assistance (Phase II)

Grant support efforts during Phase II of the project development, assumed to be years 2 through 4, will comprise an annual update of the funding scan/funding strategy in which it will be amended to address changes to the mix of suitable programs as well as a reevaluation of the Project's alignment with the funding program's sought-after outcomes and merit criteria.

TASK 14.1 - YEARLY GRANT OPPORTUNITY/APPLICATION MEMO

Each year AECOM will update the Grant Opportunity Memo and spreadsheet to include revisions to funding programs that are suitable for the project. The team will continue to meet with City, Caltrans and SLOCOG to review the latest funding scans and strategies. We have assumed three (3) virtual meetings as part of this task.

TASK 14.2 - GRANT APPLICATION ASSISTANCE

Additional grant application support during Phase II will be analogous to that performed in Phase I and it is assumed that one grant application will be developed each year for a total of three (3). Some core material from the first grant application can be repurposed across subsequent grant applications, though the application could vary significantly from previous if seeking funding for only specific components of the Project. Project positioning and supporting analytics will need to be updated for each application.

TASK 14 DELIVERABLES:

- Three (3) Grant Opportunity Memo (Word and Excel)
- Attendance at three (3) virtual meeting
- Three (3) Grant Applications (PDF)

Detailed Scope

Task 15.0 - Utility Coordination

Consor will provide utility coordination by working with the utility agencies identified in the survey mapping completed as part of Task 4 of Phase I of the project. Consor will coordinate potential utility relocations (underground, wet and dry utilities) needed to construct the project.

Consor will follow Caltrans Local Assistance Procedures Manual (LAPM) Chapter 14 guidelines to prepare a Utility Report of Investigation (Exhibit 14-E). The ROI package shall include:

- Color-coded plan showing existing and proposed right-of-way lines and existing and proposed utility facilities
- Utility Agreement per LAPM 14-B
- Reports of Investigation for each impacted utility requiring relocation submitted to the City and Caltrans prior to requesting the utility to relocate
- A conflict map identifying impacted utilities
- Relocation plan prepared by the project engineer or Utility
- Itemized estimate of City relocation costs

Per LAPM Chapter 14 requirements, the ROI will be submitted to Caltrans for approval prior to submitting the Right-of-Way certification.

TASK 15.1 - "A" LETTERS

Consor will prepare Utility Verification Letters ("A" Letters) for each of the identified utilities. The "A" Letters will notify the utility company of the project and project limits, schedule and expectations. A color-coded plan showing existing and proposed right-of-way lines and existing and proposed utility facilities with the project improvements shown will be attached to the "A" letters. We will also include a conflict map identifying impacted utilities. The "A" Letter will request as-built or Atlas maps for the impacted utilities and determination of prior rights.

"A" Letters can be provided to the City in MS Word format for placement on City Letterhead and signed by the City Project Manager and mailed, or Consor can place the letters on our letterhead and sign them. If the City chooses to sign the letters the contact information in the letter will be Consor's Utility Task Lead.

TASK 15.2 - MEETINGS WITH AFFECTED UTILITIES (4 MEETINGS PER UTILITY, INCL CITY WET UTILITIES. 2 IN PERSON, 2 VIRTUAL)

Following the preparation and the utilities receipt of the "A" letters, Consor's Utility Task Lead will attend an in person informational meeting out on site with all of the affected utilities. This meeting will be an opportunity to walk through the project impacts, timeline, goals, and verify utility alignments. The Utility Task Lead will schedule individual meetings with each affected utility to answer specific questions and discuss relocation options.

Consor's wet utility task lead will meet in person twice and twice virtually with City staff to discuss the wet utility relocations specifically.

Our Utility Task Lead will meet with the dry utilities one more time on site and two additional times virtually to discuss the status of the relocation, answer questions regarding relocation costs and timing.

TASK 15.3 - POTHOLE EXHIBITS (2)

Consor will prepare exhibits depicting locations of potholing to be conducted by the City's contractor. The pothole exhibits will be prepared once as-built and atlas plans have been received from those utilities that are underground. The maps will be the same color coded maps used for the "A" Letters and will show locations of the requested pot holing. We will submit a draft of the exhibits to the City for review and comment. We will address the City's comments and submit a final exhibit. Our scope assumes that the City will be coordinating potholing, traffic control, and all permits necessary for the potholing activities. We recommend that the locations and depths of the utilities determined during the potholing be surveyed. Our team can provide that service if desired.

TASK 15.4 - UTILITY COORDINATION - DRY UTILITIES TO UNDERGROUND

The City desires to underground the overhead utilities along Prado Road, Elks Lane, and along the west side of US 101 in the area of the new overcrossing. Our scope assumes that the distribution electric line to the north of the project crossing US 101 will not be underground. Consor's Utility Task Lead will be coordinating with the affected utilities to discuss options for the undergrounding. Those utilities crossing US 101 (overhead along the southside of Prado Road) can be placed in conduits in either the barrier rail or deck of the new overcrossing structure. The overhead lines along the north side of Prado Road that terminate at the northbound ramp termini can be placed in a joint trench in the new roadway. The lines running overhead along the existing Elks Lane can also be placed in a joint trench. These alternatives will be discussed and coordinated with the affected utilities.

Our task lead will meet with the affected utilities three (3) times (two in person and one virtually) during this task to determine right-of-way needs. Our team will work with the utility companies to provide a sketch to Wallace Group for the preparation of legal descriptions and exhibits for the utility agreements and recordation.

Detailed Scope

The utility company will complete the design of the utilities' undergrounding for temporary and permanent relocation. Consor will provide input and review to these design plans so that they are coordinated with the overall project design and wet utility relocations.

TASK 15.5 - REVIEW MEETINGS (5 MEETINGS WITH EACH AFFECTED UTILITY INCL CITY UTILITIES)

The Consor Utility Task Lead and Wet Utility Task Lead will lead five (5) virtual meetings with each affected utility. Agendas, meeting notes, including action items with due dates will be prepared for each meeting. The focus of these meetings will be to check in on the relocation plans' progress, provide comments, and discuss resolution to comments with the utility companies.

TASK 15.6 - "B" LETTERS

The "B" Letters serve as a liability determination for each utility company. These letters can be prepared on City letterhead and City signature or on Consor letterhead and signature. We will include our Reports of Investigation for each impacted utility requiring relocation.

TASK 15.7 - UTILITY AGREEMENT PREPARATION

Consor will prepare draft utility agreements for each impacted utility and coordinate issues as necessary to obtain signed agreements from each utility. The agreements will be prepared per LAPM Chapter 14 Exhibit 14-F.

TASK 15.8 - "C" LETTERS

Consor will issue Notice to Owner ("C" Letters) to all impacted utilities that will clearly define the impacted facility and the required completion date for all relocation activities. Notice to Owners shall be prepared per LAPM Chapter 14 Exhibit 14-D.

TASK 15.9 - UTILITY AGREEMENT SIGNATURES

Consor will work with the utility companies and the City and Caltrans to obtain signatures on the Utility Agreements. This task includes one (1) meeting with each impacted utility to discuss comments and requested revisions to the utility agreements. This task assumes two revisions to each of the Utility Agreements.

TASK 15 DELIVERABLES:

- Preparation of ROI package
- Preparation of "A" Letters
- Attendance, Agendas, Meeting Notes and Action Items for Three (3), two virtual and one in person meetings with Underground Utilities
- Review and Comments of Undergrounding Relocation Plans (Temporary and Permanent) – Three rounds of review
- Attendance, Agendas, Meeting Notes, and Action Items for Five (5) virtual meetings with each impacted utility, including City wet utilities.
- Preparation of "B" Letters
- Administrative Draft, Draft, Draft Final, and Final Signed Utility Agreements
- Preparation of "C" Letters

Task 16.0 - ROW Coordination

TASK 16.1 - FINAL ROW NEEDS MAP (INCL UNDERGROUND UTILITIES)

Consor will develop a map showing the areas needed for permanent and temporary rights-of-way. The map will identify visually the areas and include a table indicating property owner, APN, area of temporary and area of permanent. The map will include the needs for utility relocations including undergrounding We will prepare a draft, draft final, and final needs map for City and Caltrans review and comment.

Task 16.1.1 - Legal Descriptions and Exhibit Maps

Based on the Final ROW needs map, Wallace Group will provide legal descriptions and exhibit maps for needed the project's right of way and easement acquisitions. For budgeting purposes, we have assumed that up to 15 legal descriptions and exhibit maps will be required. This includes one (1) draft submittal, responding to one (1) set of unified comments, and delivering one signed and sealed submittal.

TASK 16.2 - SURVEY STAKING OF POTENTIAL ROW TAKES

Our team will provide field staking for the proposed right of way takes. We will coordinate with the City prior to the field staking to determine which proposed takes require staking and how the staking should appear, if any particulars are required. As this effort will take place often on private property, we will closely coordinate and schedule these activities while communication with the City. Upon completion of the field work we will provide the City with a point plot showing the locations of the stakes. For budgeting purposes, we have included three field survey days and associated office support to complete this task. We have also assumed that this task will not require staking on existing property lines and will not therefore require a possible record of survey map and setting monuments.

TASK 16.3 - PROPERTY OWNER INTRODUCTION MEETINGS (2 PER OWNER)

Hamner, Jewell & Associates (HJA) will support the Consor team with the right-of-way acquisition process. HJA will first contact property owners with an introductory letters and proactive outreach by telephone to schedule introductory meetings in person with each property owner. The first meeting will be held

early in the design process and a right of way agent will present the plans and discuss the project with the owners and gather any questions or concerns which can be communicated back to the design team. The second set of meetings with each property owner will be preceded by a Notice of Decision to Appraise letter. These meetings will include the property owner, the appraiser and a right of way agent which will give the owner an opportunity to present background information about their property to the appraiser.

TASK 16.4 - APPRAISALS

Due to the general value of commercial land in the area and the proposed impacts, we believe we will need to obtain appraisals and appraisal reviews for each property requiring purchase of right-of-way. If any of the required areas fall under the expected value of $10,000 once we receive final project plans and area calculations, then we can certainly conduct a waiver valuation to value those non-complex acquisitions to save on project time and budget. Appraisal preparation process then includes the following steps:

- Appraiser will review title information pertaining to respective ownerships and will review project plans and other pertinent information relative to the parcel.
- Appraiser will review the proposed acquisition deed to evaluate the rights being acquired, including permanent and temporary easement rights.
- Appraiser will inspect each property personally with the owner and right of way agent and document the inspection with photographs for use in the report.
- Appraiser will inventory all improvements affected by the proposed acquisition, including notes on their manner of disposition (i.e., pay-for and remove vs. restoration by project contractor).
- Appraiser will analyze any severance damages, determine whether curable or incurable, and gather data to support the conclusion. This process may involve obtaining bids from specialists for cost to cure work or using industry standard references for establishing replacement and restoration costs.
- Appraiser will perform market research to support the selected appraisal methodologies and will document and confirm comparable sales information.
- Appraiser will prepare a narrative appraisal report that conforms to the Uniform Standards of Professional Appraisal Practice (USPAP). The appraisal study and report are intended to serve as an acquisition appraisal and will be prepared in a summary format consistent with the specifications for narrative appraisal reports.
- Upon completion of the appraisal report, HJA coordinates a formal appraisal review by an independent appraiser in accordance with federal regulations.
- HJA reviews and analyzes the completed appraisal reports carefully for accuracy and logic; forward the appraisals to the client for review after this internal quality control and assessment process is completed.

TASK 16.5 - DRAFT OFFER PACKAGES

Once the appraisal process is complete, appraisals are reviewed and pre-approved by the City, and review appraisals done per federal guidelines, we would then prepare offer packages for each owner that will include an offer letter, Appraisal Summary Statement, proposed Right of Way Agreement, and Deed. These documents would be presented to the City for your review and pre-approval prior to presenting offers to property owners.

TASK 16.6 - ATTEND TWO (2) CITY COUNCIL CLOSED SESSION MEETINGS (OFFERS)

Consor's project manager and HJA project management will attend two (2) City Council closed session meetings to assist the City in presenting the offer packages for preapproval by City Council. We will be prepared to answer any questions about the appraisal, the right of way acquisition process and how we plan to address owner or Council concerns about the project's right-of-way impacts, if necessary.

TASK 16.7 - PROPERTY OWNER OFFER MEETINGS (2 PER OWNER)

Once offers are City approved and the City sets just compensation by signing the appraisal summary statements, HJA Right of Way Agents will present purchase offers in person to each property owners. If owners do not sign at offer presentation, we will set a follow up meeting in person to follow up on the owner's consideration of the offer. We will continue to coordinate with each owner in person, by phone, email or whatever method each owner prefers until we are able to reach amicable agreements and collect owner signatures on the Agreement, deed and any additional documentation that may be needed based on the specifics of the property. We will coordinate and work closely with the City and project team to ensure that all agreements and negotiations are preapproved before accommodating changes to the initial offers. For purchase efforts that do not culminate in mutually acceptable amicable agreements, we can amend our scope and fee to coordinate with the City Attorney's office with any required Necessity Hearing scheduling.

TASK 16.8 - ATTEND TWO (2) CITY COUNCIL CLOSED SESSION MEETINGS (AUTHORIZE PAYMENT)

Consor's project manager and HJA project management will attend two (2) City Council closed session meetings to assist staff in presenting final settlements for approval by City Council. We will be prepared to answer any questions about negotiations and support any settlements with data and reason.

Detailed Scope

TASK 16.9 - ROW AGREEMENTS AND CREATE ESCROW ACCOUNTS

The Consor team will work with First American Title Company in San Luis Obispo on processing all escrows. For those owners who reach final agreements, we would process all documents for necessary approvals and coordinate escrows, title insurance, and closings. It is always our goal to reach cooperative agreements in lieu of eminent domain litigation on the City's behalf. We have a great track record of successfully reaching agreements on the agency's behalf, minimizing or eliminating the need for eminent domain action.

TASK 16 DELIVERABLES:

- Draft, Draft Final and Final Right-of-way needs map (PDF)
- One draft submittal of legal descriptions and exhibit maps
- One signed and sealed submittal of legal descriptions and exhibits map
- Field staking of right of way takes
- Point plot exhibits showing the right of way take stake locations.
- Attendance and meeting notes at two (2) meetings with impacted Property Owners
- Appraisals for each permanent take of right-of-way (estimate 15 parcels)
- Draft Offer Packages (estimate 15 packages)
- Attendance at two (2) City Council closed session meetings (offers)
- Attendance and meeting notes at two (2) meetings with impacted Property Owners to present offers
- Attendance at two (2) City Council closed session meetings (authorize payment)
- Creation of Escrow accounts (estimate 15 accounts)

Task 17.0 - 65% PS&E Package

TASK 17.1 – 65% ROADWAY DESIGN AND PLANS

Consor will prepare design plans based on the approved 50% Plans developed in Phase I. The Title Sheet will include the appropriate City project identification, as well as a sheet schedule, a vicinity map, the project legend, general notes, project control points, and appropriate signature approval blocks. The roadway Typical Section Sheet will include the roadway structural section as designed, and the recommendations of the Geotechnical Report indicating the R-value. Plan, Profile, and Superelevation sheets will be produced. The plan view will delineate the general roadway improvements and pavement dimensions. Geometric information, tied to the project control points, will be shown to sufficiently describe both the horizontal and vertical alignments. Utility locations, re-grading and conforming details will be shown. Roadway design will be performed in AutoCAD Civil 3D highway design package utilizing Caltrans drafting standards. Plan sheets will be prepared in AutoCAD (DWG) file format. Details necessary to construct the roadway, including grading, drainage, pavement structural sections, etc. will be developed.

The roadway design will be prepared in accordance with City Standards and the Caltrans Highway Design Manual. All plans will be signed by the civil engineer (registered in the state of California) in responsible charge of the design. Our team estimates the project plans to consist of the following Roadway, Drainage, Stormwater Treatment, Signal/Lighting, Wet Utility Plan Sheets

- Title Sheet- 1
- Typical Cross Sections- 5
- Project Control- 5
- Layout- 12
- Profile and Superelevation Diagram- 7
- Construction Details- 14
- Contour Grading- 12
- Erosion Control Plans and Quantities- 12
- Drainage Plans- 12
- Drainage Profiles- 16
- Drainage Details- 4
- Drainage Quantities- 2
- Utility Plans- 9
- Construction Area Signs- 1
- Stage Construction Plans- 5
- Traffic Handling Plans, Details and Quantities- 28
- Pavement Delineation Plans, Details and Quantities – 12
- Slurry Seal Limits Plans- 2
- Sign Plans, Details and Quantities- 10
- Summary of Roadway Item Quantities- 2
- Lighting, Signal Modification and Electrical Plans, Details and Quantities- 28
- Landscape and Irrigation Plans, Details and Quantities- 28

TASK 17.2 - 65% DRAINAGE AND STORMWATER PLANS

The 50% drainage and stormwater plans will be updated to incorporate comments and revisions from Phase I. HDR will lead the revisions to these plans. The team will coordinate the location of the existing and relocated utilities with HDR to avoid conflicts with the roadway drainage system and the location of the stormwater treatment areas.

TASK 17.3 - 65% WET UTILITY PLANS

Our scope assumes that the existing sewer line located within existing Elks Lane will be relocated along the new Elks Lane alignment. We have also assumed that the water line in Elks Lane will be relocated as well. Plan and Profile sheets will be advanced based on comments from the City water and wastewater staff

and detail sheets will be created. Both will be included in the 65% plans submittal.

TASK 17.4 - 65% BRIDGE AND RETAINING WALL PLANS

Consor will prepare structural design calculations on the preferred bridge and adjacent walls alternative identified in the approved Bridge Type Selection Report. The design will be prepared in accordance with the Caltrans Bridge Design Manuals and Load Resistance Factor Design following AASHTO LRFD Bridge Specifications, 8th Edition with the California Amendments. For seismic design, Caltrans Seismic Design Criteria (Version 2.0) will be followed. Other references that Consor will follow are Caltrans Division of Structures "Bridge Memo to Designers", "Bridge Design Aids", "Bridge Design Details" and the "Office of Specially Funded Projects Information and Procedure Guide". Our partner Apexx will prepare detailed plans for the preferred aesthetic treatments on the bridge elements as part of this task. Our team estimates the project plans to consist of the following Structure Plan Sheets:

Prado Road Mainline Bridge Sheets

- General Plan (1)
- Deck Contour (1)
- Structure Plan (2)
- Foundation Plan (2)
- Abutment Layouts (2)
- Retaining Wall Layout (4)
- Retaining Wall Details (6)
- Abutment Details (3)
- Bent Layouts (3)
- Bent Details (3)
- Typical Section (2)
- Girder Layout (3)
- Girder Details (4)
- Barrier Details (1)
- Aesthetic Details (4)
- Log of Test Boring Details (1)

Prado Road/US 101 Off-Ramp Bridge Sheets

- General Plan (1)
- Deck Contour (1)
- Foundation Plan (1)
- Abutment Layouts (1)
- Retaining Wall Layout (2)
- Retaining Wall Details (2)
- Abutment Details (2)
- Bent Layouts (2)
- Bent Details (2)
- Typical Section (1)
- Girder Layout (1)
- Girder Details (1)
- Barrier Details (1)
- Aesthetic Details (2)
- Log of Test Boring Details (1)

Prado Road/US 101 On-Ramp Bridge Sheets

- General Plan (1)
- Deck Contour (1)
- Foundation Plan (1)
- Abutment Layouts (1)
- Retaining Wall Layout (2)
- Retaining Wall Details (2)
- Abutment Details (2)
- Bent Layouts (2)
- Bent Details (2)
- Typical Section (1)
- Girder Layout (1)
- Girder Details (1)
- Barrier Details (1)
- Aesthetic Details (2)
- Log of Test Boring Details (1)

TASK 17.5 - 65% LANDSCAPE PLANS

The 50% Landscape plans will be advanced to a 65% level based on the preferred alternative determined in Phase I. Planting and irrigation plans, details, and notes in general conformance to City, Caltrans, standards, and formatting, as applicable will be updated. Planting Plans will provide plant schedule, planting types, sizes, quantities, and locations. We will include a Tree Protection and Replacement Plan to meet the project's needs in this submittal as well. Updated erosion control hydroseed mix designs and notes for use in the erosion control plans will be provided. Irrigation plans will provide irrigation equipment types, layout, and water demand calculations as required for landscape water efficiency ordinances and Caltrans review. The irrigation plans development will assume that a point of connection is available for use.

TASK 17.6 - TECHNICAL SPECIFICATIONS LIST

Consor will use the most current version of the Standard Special Provisions available from Caltrans and will edit the Standard Special Provisions to meet the requirements for this specific project. The special provisions document will be developed using Microsoft Word and edited and complied according to Caltrans standards. Our assumption is the project would be advertised, awarded and administered by the City and as such the City would provide the front end boiler plate for the project prior to the 90% PS&E submittal.

TASK 17.7 - 65% ENGINEER'S ESTIMATE

An Engineer's Opinion of Probable Construction Cost will be prepared as part of the 65% submittal. One set of quantities for

Detailed Scope

the roadway, structures, drainage, stormwater treatment, lighting and signals, landscaping, and wet utilities will be completed. Unit prices will be assigned utilizing Caltrans bid data, recent City bid data, and our judgement. Caltrans BEES items will be used.

TASK 17.8 - DRAFT FINAL BRIDGE DESIGN HYDRAULICS REPORT

HDR will update the San Luis Obispo Creek hydraulic analysis developed for the Preliminary Floodplain and Bridge Design Hydraulic Study (BDHS) Report, using the 65% design information, including documenting Project impacts on the floodplain. HDR will update the bridge scour analysis to determine the scour potential according to the methodology specified in the FHWA HEC-18 and HEC-20 manuals. HDR will make recommendations on the need for scour countermeasures for the proposed improvements per the FHWA HEC-23 and Caltrans' HDM.

TASK 17.9 - DRAFT FINAL STORMWATER DATA REPORT

A Stormwater Data Report will be prepared and will summarize the Project impacts on water quality and recommended BMPs. We will propose the permanent stormwater treatment BMPs for the Project. The report will be based on the Phase I report and will be updated with the development of the PS&E. HDR will perform detailed calculations to prepare the design and detail usage of the treatment BMPs.

TASK 17.10 - DRAFT DRAINAGE REPORT

The team will review and research available data on the existing and proposed drainage facilities and will prepare design calculations to assess the capacity of the proposed drainage systems. A Drainage Report will be prepared to evaluate the hydrologic and hydraulic conditions of the proposed drainage systems to accommodate the proposed Project improvements. The report will document the hydrologic and hydraulic design criteria as well as the procedures used for the drainage design.

The results and design recommendations will be summarized in the Drainage Report, which is expected to include the following:

- Evaluation of the existing conditions, including:
  - Research into downstream controlling conditions for locations where the Project connects directly to off-site storm drains,
  - Evaluation of inlet interception capacities for systems impacted by the Project, and
  - Hydraulic analyses of proposed hydraulic conditions for systems impacted by the Project;
- Identification of drainage deficiencies;
- Unusual and special conditions;
- Evaluation of spread widths at proposed inlets;
- Improvements to address drainage deficiencies; and
- Drainage mapping.

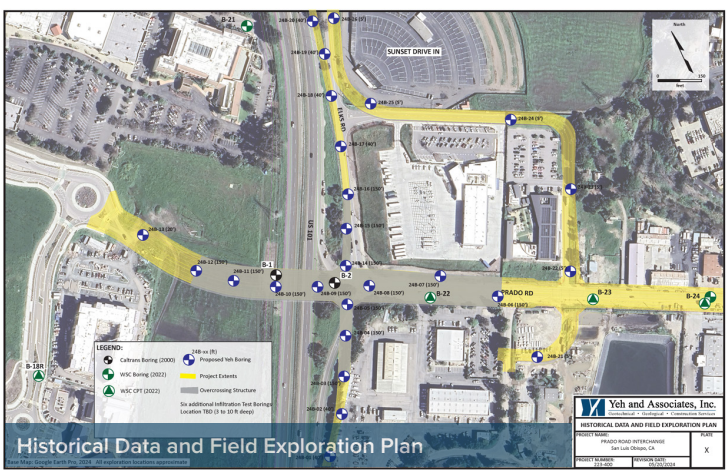
TASK 17.11 - DRAFT FINAL FOUNDATION AND GEOTECHNICAL REPORT

The geotechnical services for Phase II will include a Geotechnical Design Report (GDR), Foundation Report (FR) for both the Earth Retaining Structures and the US 101 OC/Ramp structures. This is consistent with Caltrans project requirements.

Task 17.11.1 - Draft Geotechnical Design Report (GDR)

This work will include planning, field exploration, laboratory testing, and performing geotechnical analyses for preparation of the GDR. Field exploration will also be performed under this task for the proposed earth retaining structures and overcrossing structure and ramps. The scope of the field exploration and testing programs assumes that the work will be performed under a single mobilization and effort.

- *Submit a Field Exploration Plan* showing the locations and depth of borings and describing the field work to be performed. Prepare and submit a Caltrans Encroachment Permit (Dual Permit) application for work within the Caltrans right-of-way that will address field work. An encroachment permit will also be submitted for work within the City of San Luis Obispo right-of-way. Prepare a health and safety plan (HASP) for the field work, visit the site to mark the locations of borings and contact Underground Services Alert (USA) to mark utilities prior to beginning the field exploration program. Yeh will then coordinate field exploration with the drilling and traffic control subcontractors, update the encroachment permit from Caltrans or the City if needed, obtain well permits for applicable borings from San Luis Obispo County.
- *Perform a field exploration program* for the proposed improvements. Traffic control will be provided by a subcontractor (Avila Traffic Safety of Atascadero, California)



Historical Data and Field Exploration Plan

Detailed Scope

and will follow the Caltrans and City approved traffic control plan(s). It is anticipated that lane closures on Prado Road and Elks Lane will be needed and shoulder closures along US 101 will be performed. Drilling will be subcontracted to Britton Exploration of Los Gatos, California. Britton will provide track-mounted drill rigs equipped with hollow-stem augers, mud rotary and rock coring equipment to perform the drilling depending on the location of the borings. Borings will be sampled with Standard Penetration Test, California Modified, and Shelby Tube samplers. Rock coring using HQ-size core barrels will be used once bedrock is encountered. Yeh will log the borings and recover soil and rock samples for laboratory testing. The field exploration is expected to occur over a period of 30 working days. The table below summarizes proposed borings for the project. Yeh will coordinate with Rincon for sampling of soil for ADL testing where practicable.

> The final depths and numbers of borings may be varied depending on the field conditions encountered and the proposed design layout for Alternative 3A. Borings will be backfilled with cement bentonite grout and capped with rapid setting concrete colored black or as approved by the Caltrans Permit Engineer if they are within the pavement. Borings within the City right-of-way will be backfilled with either native cuttings or cement bentonite grout per County well permit standards. Excess cuttings will be drummed and temporarily stored near the site and then hauled off for disposal.

> Perform laboratory tests for soil classification, grain size, strength, compaction, corrosivity, consolidation, and R-values on selected samples recovered from the borings.

> Yeh will review the data obtained from the field exploration and laboratory testing, perform preliminary geotechnical analyses, and prepare a draft Geotechnical Design Report (GDR) for the design of the embankments, roadway improvements, pavements, and storm water infiltration. The report will include the project understanding, work performed, and a description of the subsurface conditions encountered, boring logs, laboratory test results, and graphics showing the site and boring locations. The report will provide conclusions and recommendations regarding:

- Project description;
- Geotechnical exploration and laboratory testing;
- Geotechnical conditions including:
  - Site geology;
  - Surface conditions;
  - Subsurface conditions encountered;
  - Groundwater; and
  - Seismic hazards evaluation including site seismic and ground motion parameters developed from ARS-online, seismic parameters for slope stability analyses, as well as potential for fault rupture, liquefaction, and liquefaction induced lateral spreading.
- Geotechnical analyses and design recommendations for:
  - Soil and rock engineering properties;
  - Geotechnical model and analyses performed;
  - Suitability of the native soil materials encountered for reuse on-site;

LOCATION	NO. BORINGS/DEPTHS	PURPOSE	NOTES
Pavement borings — various locations	Up to 6 borings @ 5 and one to 20 ft.	Measure existing pavement sections, subgrade sampling	Traffic control = lane closure as needed
Earth Retaining Structures: NB Off-Ramp, West: 190 ft long NB Off-Ramp, East: 190 ft long NB On-Ramp, West: 230 ft long NB On-Ramp/Auxiliary Lane: 1,600 ft long	6 borings @ 40 ft.	Exploration for Earth Retaining Structures	Traffic Control = Lane or Shoulder Closure; Monitoring wells will be installed in two of the borings with pressure transducers to record groundwater levels during design
Overcrossing Structure/Ramps: 4 Abutments and 10 Bents	14 borings @ 150 ft.	Exploration for Overcrossing Structure	Traffic Control = Lane or Shoulder Closure
Infiltration Test Borings	6 borings up to 10 ft.	Exploration and Infiltration Testing for Storm Water Basins	No Traffic Control

Detailed Scope

- Subgrade conditions encountered in roadway areas, suitability to support pavements, and for subexcavation and stabilization of the subgrade, if needed;
- Site preparation for embankment fill and pavement areas;
- Allowable slope inclinations for cut slopes and embankments;
- Erosion and drainage requirements for cut and fill slopes;
- Earthwork factors for on-site materials used as compacted fill;
- Overhead sign foundations (if needed);
- Corrosion considerations for culverts and other concrete substructures;
- Stormwater infiltration data;
- Structural section for asphalt pavements based on R-value testing and provided traffic indices;
- Notes for Specifications or reference to standard specifications for materials discussed in the report (compacted fill, asphalt concrete, base and subbase courses, bedding, pipe zone, and trench backfill); and
- Notes for Construction and special provisions regarding temporary slopes, reuse of excavated onsite soil or rock for retaining walls, and groundwater.

Task 17.11.2 - Draft Foundation Report (FR) for Earth Retaining Structures

Yeh will prepare a draft Foundation Report (FR) for the design of earth retaining structures (ERS) for the project. The scope is based on Consor's Alternative 3A and may need to be updated as needed at the end of Phase I. Field exploration and laboratory testing for the proposed ERS will be performed under task 17.11.1. The report will provide conclusions and recommendations regarding:

- Project description including location, wall heights and types;
- Geotechnical exploration and laboratory testing;
- Geotechnical conditions including:
  - Site geology;
  - Surface conditions; and
  - Subsurface conditions encountered;
- Groundwater;
- As-built data;
- Corrosion considerations for the proposed retaining walls;
- Scour;
- Seismic hazards evaluation including ground motion parameters developed from ARS-online, seismic parameters for slope stability analyses, as well as the potential for fault rupture, liquefaction, liquefaction induced lateral spreading, and seismic slope instability;
- Geotechnical recommendations including:
  - Geotechnical design parameters;
  - Subexcavation and foundation soil stabilization for retaining wall areas, if needed;
  - Suitable foundation and design recommendations for the proposed retaining walls based on the preferred wall type. Spread footing data tables (if needed) for the proposed walls including factored bearing resistance for the Strength and Extreme limit states as well as settlement due to net bearing pressure for the Service limit state. Net allowable bearing resistance versus footing width for service state limit;
  - Notes for Specifications and Construction or reference to standard specifications for materials discussed in the report (compacted fill, foundation preparation).

Task 17.11.3 - Draft Foundation Report (FR) - US 101 OC/Ramps at Prado Road

Yeh will prepare a draft Foundation Report (FR) for the design of the US 101 overcrossing structure and ramps. Field exploration and laboratory testing for the proposed overcrossing and ramp structures will be performed under task B1. The report will provide conclusions and recommendations regarding:

- Project Description including location, bridge type, and foundation type(s);
- Geotechnical exploration and laboratory testing;
- Geotechnical conditions including:
  - Site geology;
  - Surface conditions; and
  - Subsurface conditions encountered;
- Groundwater;
- As-built data;
- Scour data;
- Corrosion test results for the bridge designer use with Caltrans design methods to select cement type, minimum cement contents, and cover, and the need for protective coatings on reinforcement bars;
- Seismic information including ground motion parameters developed from ARS-online, seismic parameters for slope stability analyses and abutment design, as well as the potential for fault rupture, liquefaction, liquefaction induced lateral spreading, and seismic slope instability;
- Design recommendations for the selected bridge foundation type such as spread footings, driven piles, rock-socketed and/or cast-in-drilled hole piles, as needed;
  - Shallow foundation design plots of bearing resistance versus footing width, and tabulated foundation data and bearing elevations (if needed;

- Deep foundation design plots of bearing resistance versus pile depth for requested pile diameters, pile data table, minimum pile embedment and diameter, pile spacing and group effects, and specified pile tip elevation for load demands provided by others (if needed);
- Recommended input parameters and p-y curve models for use with deep foundation analyses by the bridge designer (if needed);

> Notes for Specifications and Construction including anticipated pile driving and/or CIDH drilling conditions as well as temporary shoring.

TASK 17.12 - SOIL AND GROUNDWATER MANAGEMENT PLAN

This task includes developing a soil sampling plan, conducting sampling and analysis of the soil and preparing a soil and groundwater management plan. These scope items are necessary to comply with Hazard Mitigation Measures HAZ-1 and HAZ-2 of the approved IS-MND. This task will be led by Rincon with Yeh providing the drilling for the soil sampling.

A Soil Sampling Work Plan (Work Plan) for evaluating shallow soil (i.e., 3 feet below ground surface [bgs] or less) for aerially deposited lead, organochlorine pesticides (OCPs), herbicides, and arsenic in accordance with Hazard Mitigation Measures HAZ-1 and HAZ-2 in the IS-MND will be developed and submitted to the City and Caltrans for review and approval. The Work Plan will detail the proposed sampling locations, depths, and laboratory analytical testing. The Work Plan will also include a health and safety plan (HASP), which will outline the procedures that Ricon field personnel will follow to minimize the potential for health and safety hazards during the course of work to be performed. The need for this plan is mandated by federal law.

Soil sampling and analysis will be done in accordance with an approved Soil Sampling Work Plan. Rincon will provide qualified personnel to collect soil samples for environmental analysis from the 32 proposed geotechnical borings and to advance and collect soil samples from one additional hand auger boring to a depth of 3 feet bgs.

It is assumed that soil sampling and analysis required in the Work Plan will include the following:

> Advancing one boring to 3 feet bgs using a stainless-steel hand auger.
> Collection of soil samples at 0.5, 1.0, and 3.0 feet bgs from up to 32 soil borings that will be advanced at the project by others as part of a geotechnical investigation.
> Analysis of up to 66 soil samples for total lead by United States Environmental Protection Agency (USEPA) test method 6020; 33 soil samples for OCPs by USEPA test method 8081A and herbicides by USEPA test method 8151A; and eight soil samples for total arsenic by USEPA test method 6020 on a standard 10 business day turnaround time.
> Additional analysis of up to 15 soil samples for soluble lead by the Waste Extraction Text for the Soluble Threshold Limit Concentration or by the Toxicity Characteristic Leaching Procedure on a standard 10 business day turnaround time.
> Environmental sampling activities will not exceed 13 field days.
> Samples collected at 3.0 feet bgs will be held at the laboratory and analyzed, if needed based upon the results of the shallower soil samples. Costs for analysis of these samples is not included in this estimate.

A Soil Sampling and Analysis Report summarizing the results of the field activities performed and including tabulated data, figures, and recommendations for additional assessment or remediation of impacted soil identified during the investigation, if applicable will be prepared. The Soil Sampling and Analysis Report will be submitted to the City and Caltrans for preliminary review and revised in response to up to two rounds of consolidated comments.

In accordance with Hazard Mitigation Measure HAZ-1 and HAZ-2 and based on the location of the project within a known tetrachloroethylene (PCE) groundwater plume, the team will prepare a Soil and Groundwater Management Plan (SGMP) for the project that will include measures for the on-site handling and management of impacted soils, groundwater, or other impacted wastes, if encountered, and for reducing hazards to construction workers and off-site receptors during construction. The SGMP will establish remedial measures and/or soil and groundwater management practices to ensure construction worker safety, the health of future workers and visitors, and prevent the off-site migration of contaminants from the site. These measures and practices may include, but are not limited to:

> Stockpile management, including stormwater pollution prevention and the installation of best management practices;
> Collection of and analyzing groundwater samples during dewatering;
> Proper transportation and disposal procedures of impacted soil, groundwater, or other impacted materials in accordance with applicable regulations, including California Code of Regulations (CCR) Title 22;
> Monitoring and reporting; and
> A health and safety plan for contractors working at the site that addresses the safety and health hazards of each phase of site construction activities with the requirements and procedures for employee protection and outlines proper soil and groundwater handling procedures and health and safety requirements to minimize worker and public exposure to hazardous materials during construction.

Detailed Scope

The SGMP will also serve as a contingency plan to address potential impacts related to known petroleum pipelines present on the project in accordance with Hazard Mitigation Measure HAZ-3.

The SGMP will be submitted to the City and Caltrans for preliminary review and revised in response to up to two rounds of consolidated comments,. Subsequent to the approval of the City and Caltrans, the SGMP will be submitted to the California Department of Toxic Substances Control (DTSC) for their review and approval prior and revised in response to up to one round of comments from the DTSC.

TASK 17.13 - RESPONSE TO COMMENTS (2)

A Draft 65% Submittal will be made to the City and Caltrans for their review. Our team has assumed we will receive consolidated comments. We will address these comments and submit a Draft Final 65% submittal, which will be reviewed. Upon receiving the second set of consolidated comments, the team will address the applicable comments and submit a Final 65% submittal. At each submittal, our team will prepare a comment response form. The form will include the location of the comment, a summary of the comment, who is responsible for the response, and the response to the comment.

TASK 17.14 – CALTRANS 65% CONSTRUCTABILITY REVIEW

We will coordinate with Caltrans design oversight staff to schedule and conduct the Caltrans 65% Constructability Review. This task includes meeting coordination, attendance, presenting the project at the meeting, producing meeting notes and developing a response to comments.

TASK 17.15 - 65% SUBMITTAL TO OSFP

Consor will assemble and submit the 65% plans to Caltrans OSFP for review. Submittals and review duration is expected to be in accordance with the OSFP Information and Procedures Guide.

TASK 17.16 - REGULATORY PERMITTING

Consor and Rincon will take the lead in assisting the City to obtain necessary permits for the project. We will prepare draft permit applications/notifications including supporting graphics and technical write-ups, attend agency meetings, as required, prepare meeting materials, and provide general regulatory and technical advice.

Based on our understanding of the project, we assume that the following permits will be required for this project: LSAA from CDFW and WDRs Permit from RWQCB. We also assume, based on review of the Natural Environment Study and IS- MND, that a Habitat Mitigation and Monitoring Plan (HMMP) will be required to address minor impacts to riparian vegetation. Other possible permits necessary may include a Nationwide Permit (NWP) from the United States Army Corps of Engineers and filing notification of the project with the RWQCB or submittal of an application for Water Quality Certification if the applicable NWP is not pre-certified. This may also trigger the need for federal Endangered Species Act consultation(s) with the United States Fish and Wildlife Service and/or National Marine Fisheries Service. At this time, however, we assume that all work would occur outside federal jurisdiction.

TASK 17 DELIVERABLES

- Draft, Draft Final and Final 65% Plans (Roadway, Structures, Drainage, Stormwater treatment, Signals/Lighting, Landscape, Wet Utilities, Aesthetic Details) (PDF)
- Comment Response Matrix (2)
- Engineers Opinion of Probable Cost
- List of Caltrans Technical Special Provisions Draft Final Bridge Design Hydraulics Report (PDF)
- Draft Final Stormwater Data Report (PDF)
- Draft Drainage Report (PDF)
- Draft Geotechnical Design Report (GDR) (PDF)
- Draft Foundation Reports (FR) for ERS and US 101 OC/Ramps (PDF)
- Draft and Final Soil Sampling Work Plan (PDF)
- Draft and Final Soil Sampling Analysis Report (PDF)
- Draft and Final SGMP (PDF)
- 65% Caltrans Constructability Review Submittal
- 65% Submittal to Caltrans OSFP
- Completed permit application forms and exhibits as noted above (i.e., LSAA notification and WDRs Permit application).
- Draft and final HMMP.
- Meeting(s) minutes with regulatory agencies and the City

Task 18.0 - Final Aesthetic Development

This task includes finalizing the Aesthetic vision for the Prado Road corridor and gaining consensus for that vision from City staff, Caltrans, and the City Advisory Boards, such as the Architecture Review Committee, City Planning Commission, Downtown SLO, and the Chamber of Commerce.

TASK 18.1 - FINAL RENDERINGS OF AESTHETIC TREATMENTS

During Phase I, the vision for the corridor will have been determined through input from City staff, Caltrans and the Public. Items such as Aesthetic Lighting, Decorative treatments for Bridge Supports and railings, Hardscape and Landscape for the roadway medians and buffer areas, and decorative and contrasting elements applied to the sidewalks and bicycle paths will have been incorporated into renderings. During this task,

the renderings will be finalized. We will produce a Draft Final Rendering of the preferred alternative to present to City Staff, Caltrans, and City Advisory Bodies. Our scope assumes that the preferred option determined in Phase I will not require significant revisions as part of this task. The construction plans and details for the treatments will be developed as part of the various PS&E packages as part of Phase II.

TASK 18.2 - CITY/CALTRANS REVIEW MEETING (1)

The team will meet with City and Caltrans staff to review the Draft Final renderings of the preferred alternative. It is assumed that Caltrans Landscape Architects will be in attendance at this meeting.

TASK 18.3 - ADVISORY BODY PRESENTATION AND RENDERINGS

Our team will prepare a presentation to be shown to a maximum of four (4) Advisory Board Meetings. The presentation would be similar to the one given at the public meeting and Advisory Body meetings in Phase I. Although the graphics would be updated to the preferred alternative. It is anticipated that Apexx would present the Vision for the corridor and the technical team would be there as support. We have assumed that the aesthetic treatments would be presented at the Advisory Body meetings discussed in Task 22.

TASK 18.4 - FINAL AESTHETIC REPORT

Upon receiving comments from City and Caltrans staff and City Advisory Board members, we will address the feedback and update the Aesthetics Report prepared in Phase I. Renderings and cost estimates will be updated as well as documenting the feedback received. Our scope assumes two rounds of consolidated comments on the Final Aesthetics Report.

TASK 18 DELIVERABLES

- Final Renderings for Preferred Alternative
- Attendance, Agenda and Meeting Notes for one meeting with City Staff and Caltrans Staff
- Presentation development for City Advisory Body meetings
- Draft Final and Final Aesthetic Report (PDF)

Task 19.0 - 90% PS&E Submittal

TASK 19.1 - INDEPENDENT STRUCTURES CHECK

Consor will address comments from the 65% submittal and update the PS&E accordingly. Once comments have been incorporated, Consor will perform an independent design check of the structure plans in conformance with usual Caltrans bridge design procedures. The check will involve a completely independent analysis of the project using the unchecked bridge detailed plans and 65% roadway plans by a licensed engineer that has not been intimately involved in the design.

The independent check engineer will prepare an independent set of calculations. A plan set will be marked up following Consor's QA/QC Manual. Based upon the independent check and agreement to revisions by the checker and designer, the plans will be revised. Independent check comments are summarized, and resolutions are documented.

TASK 19.2 - 90% ROADWAY, SIGNAL/LIGHTING DESIGN & PLANS

After the 65% review is completed and all comments have been compiled, Consor will make necessary revisions to the roadway plans in accordance with those comments and prepare a response to all comments following the required format used in Caltrans review processes.

Once comments from the 65% submittal have been incorporated, Consor will perform an independent check of the roadway plans. An engineer that has not been involved in the design will perform a completely independent analysis of the project details using the 65% plans. This is an important part of the team's QA/QC Plan. Based upon the independent check and agreement to revisions by the checker and designer, the plans will be revised. The Project Manager will ensure that all comments are adequately addressed and resolved.

TASK 19.3 - 90% DRAINAGE AND STORMWATER PLANS

Drainage and Stormwater treatment plans will be updated to incorporate comments from the 65% review. A review of the plan sheets will be completed to verify conflicts with underground utilities have been minimized or avoided.

TASK 19.4 - 90% WET UTILITY PLANS

The Consor Wet Utility Team will advance the plans forward to 90% completion. Modifications will be incorporated into the plans. A Senior level engineer will review the wet utility plans to look for conflicts with other project elements and perform an independent check of the design details.

TASK 19.5 - 90% STRUCTURES PLANS

After the 65% review is completed, comments from the City and Caltrans have been compiled and the independent structures check comments have been reconciled Consor will make necessary revisions to the structure plans in accordance with those comments and prepare a response to all comments.

Detailed Scope

TASK 19.6 - 90% LANDSCAPE PLANS

Following the conclusion of the 65% review meeting Wallace Group will work with the project team to produce a Comment Resolution form which will assemble the written/reconciled 65% PS&E comments received. Designers will record responses to comments as well as record final dispositions that verify final dispositions have been implemented.

The 65% plans will be updated to a 90% submittal level based on appropriate written comments received in the prior submittal. Comments are expected to be refinements of prior work/ concepts and new or significant concept revisions are not expected or included in this scope of work.

An internal QA/QC review will be completed for the submittal and these records will be made available. Following the incorporation of applicable revisions and final design edits the bid documents will be stamped draft 90% and presented.

TASK 19.7 - 90% AESTHETIC FEATURE PLANS

The aesthetic features plans that were prepared during the 65% plan tasks will be updated based on comments received from the City and Caltrans. A review of the aesthetics plans will be completed as part of this phase to assess the constructability of the aesthetic features.

TASK 19.8 - DRAFT TECHNICAL SPECIFICATIONS

Consor will prepare edited Technical Special Provisions utilizing the 90% project plans. The special provisions will be prepared in accordance with the most current version of the Caltrans Standard Specifications..

TASK 19.9 - 90% ENGINEER'S ESTIMATE AND JUSTIFICATION MEMORANDUM

Two independent sets of quantity calculations will be prepared by individuals experienced in this work. The quantity calculations will be organized and detailed for use by field inspectors during construction.

Standard Caltrans summary sheets will be used for quantity calculations, aiding in facilitating the review process and use by the construction personnel. Bridge quantity estimators must agree within tolerances prescribed in Chapter 11 of the Caltrans Bridge Design Aids Manual. Any deviations will be resolved and the Marginal Estimate sheet will be prepared. Unit prices will be applied to each contract item resulting in the Engineer's Estimate of Probable Construction Cost (Estimate). Prices used will be based on the latest available data from the City and Caltrans, reflecting the location of the project and the quantity of each item. The estimate will be segregated into two categories: roadway and bridge. Non-participating costs, if federal funds will be used, will also be segregated. Five percent of the total estimate will be added for contingencies, per current Caltrans guidelines, and an additional City contingency will be added to effectively administer the project.

Consor will prepare a brief memorandum describing fluctuations to the costs associated with the project between 65% and 90% submittals. We will document the process used for determining the quantity of items and include the back up information regarding the unit prices for each item. This information will be summarized in a Justification Memorandum and submitted with the 90% Engineer's Opinion of Probable Construction Costs.

TASK 19.10 - FINAL BRIDGE HYDRAULICS, STORMWATER DATA, DRAINAGE REPORTS

This task includes our team preparing responses and incorporating revisions, as appropriate, to the Bridge Design Hydraulics, Stormwater Data, and Drainage Reports. Our scope includes two rounds of comments from the City and Caltrans.

TASK 19.11 - FINAL GEOTECHNICAL REPORT (GDR), FOUNDATION REPORT (FR) AND LOG OF TEST BORINGS

19.11.1 Final Geotechnical Design Report (GDR)

The final Geotechnical Design Report (GDR) incorporating review comments, as appropriate from the City , and Caltrans. It is not anticipated that the final report would incorporate evaluating additional alternatives, information or recommendations for improvements that are not described in this proposal. Up to two rounds of review are anticipated for the deliverable.

19.11.2 Final Foundation Report (FR) for Earth Retaining Structures

The final Foundation Report incorporating review comments, as appropriate from the City, and Caltrans for the ERS on the project. It is not anticipated that the final report would incorporate evaluating additional alternatives, information or recommendations for improvements that are not described in this proposal. Up to two rounds of review are anticipated for the deliverable.

19.11.3 Final Foundation Report (FR) for US 101 Overcrossing at Prado Road

The final Foundation Report for the US 101 overcrossing structure at Prado Road incorporating review comments, as appropriate from the City, and Caltrans. It is not anticipated that the final report would incorporate evaluating additional alternatives, information or recommendations for improvements that are not described in this proposal. Up to two rounds of review are anticipated for the deliverable.

Detailed Scope

19.11.4 Log of Test Borings (LOTB)

Yeh will prepare and submit a Log of Test Borings (LOTB) sheets including layout sheet(s) of the borings (using the project stationing and plans provided by the client) and boring profile sheets in accordance with Caltrans guidelines. Draft and final versions of the project LOTB's will be submitted. The plan can be presented on the City's project border if requested. LOTBs for the earth retaining structures and overcrossing structure and ramps will be provided.

TASK 19.12 - LEED/ENVISION SUBMISSION PACKAGE

Based on the determination of the Feasibility Memorandum and Public Input from Phase I, the Consor team will prepare a submission package for either LEED or Envision or Greenroads for evaluation of the sustainability of the project. We will submit a draft copy of the package for the City to provide comments. Those comments will be incorporated as appropriate and a final submittal package will be provided to the City for submission. Each program has a cost to submit, and these costs are not included in this scope of work.

TASK 19.13 - SUSTAINABILITY MEMORANDUM

The Sustainability Memorandum that was prepared during Phase I will be updated to reflect the approved project and discuss material types, construction techniques, and traffic control that have been incorporated into the project to reduce GHG emissions and limit environmental impact. A draft final report will be submitted to the City for comment. Comments will be incorporated as appropriate and a final report will be submitted.

TASK 19.14 - RESPONSE TO 3RD PARTY REVIEW COMMENTS AND MEETINGS (3)

The City will be contracting separately with a 3rd party to review the 90% submittal. Our team will meet virtually with the 3rd party reviewers and the City to review the submittal and subsequent comments. We envision the first meeting will be a walk-through of the prepared plans, technical special provisions, and estimate, including discussing special details, specifications or items. The second meeting will focus on a review of the comments provided and our team's responses. The third meeting will be prior to our final 90% submittal to discuss the 3rd party's final comments and how our team will address those comments. At each submittal, our team will prepare a comment response form. The form will include the location of the comment, a summary of the comment, who is responsible for the response, and the response to the comment.

TASK 19.15 - RESPONSE TO CITY/CALTRANS REVIEW COMMENTS (2)

A Draft 90% Submittal will be made to the City and Caltrans for their review. Our team has assumed we will receive consolidated comments. We will address these comments and submit a Draft Final 90% submittal, which will be reviewed. Upon receiving the second set of consolidated comments, the team will address the applicable comments and submit a Final 90% submittal. At each submittal, our team will prepare a comment response form. The form will include the location of the comment, a summary of the comment, who is responsible for the response, and the response to the comment.

TASK 19.16 – CALTRANS SAFETY REVIEW

We will coordinate with Caltrans design oversight staff to schedule and conduct the Caltrans Safety Review. This task includes meeting coordination, attendance, presenting the project at the meeting, producing meeting notes and developing a response to comments.

TASK 19.17 – CALTRANS 90% CONSTRUCTABILITY REVIEW

Consor will utilize our in-house construction management staff to perform a comprehensive constructability review on the 90% plans. We will coordinate with Caltrans design oversight staff to schedule and conduct the Caltrans 90% Constructability Review. This task includes meeting coordination, attendance, presenting the project at the meeting, producing meeting notes and developing a response to comments.

TASK 19.18 – PREPARE WORKING DAY CONSTRUCTION SCHEDULE

Consor will prepare a construction schedule to estimate the number of working days to be included in the construction contract. The schedule will be done using Microsoft Project, unless the City prefers another format. The schedule will also be provided to the Resident Engineer for their use during construction.

TASK 19.19 - 90% SUBMITTAL TO OSFP

Consor will assemble and submit the 90% PS&E (Initial PS&E) to Caltrans OSFP for review. Submittals and review duration is expected to be in accordance with the OSFP Information and Procedures Guide.

TASK 19.20 PEER REVIEW CALTRANS SIGN STRUCTURE PS&E PACKAGE

Caltrans will be preparing a PS&E package for the construction of a new permanent changeable message sign near the Prado Road Interchange project. As part of this task, Consor will conduct a peer review of Caltrans 90% PS&E package for the improvements. We have anticipated two reviews of Caltrans' package.

Detailed Scope

TASK 19 DELIVERABLES

- Half Size (11x17) 90% Plans
- 90% Technical Special Provisions
- Design and Independent Check Calculations
- 90% Engineer's Opinion of Probable Construction Cost and Justification Memorandum
- Final Bridge Design Hydraulics Report (PDF)
- Final Stormwater Data Report (PDF)
- Final Drainage Report (PDF)
- Final Geotechnical Design Report (GDR)
- Final Foundation Report (FR) for Earth Retaining Structures
- Final Foundation Report (FR) for US 101 Overcrossing at Prado Road
- Draft and Final LEED/Envision submittal package (PDF)
- Draft final and Final Sustainability Memorandum (PDF)
- Attendance at three (3) virtual meetings with City 3rd Party Review consultant
- Response to Comment Forms – 3rd Party Review
- Response to Comment Forms – City and Caltrans Review
- Working Day Construction Schedule
- Quantity Calculations and Independent Quantity Calculations
- Quantity Summary Sheets
- QA/QC Documentation including Independent Design Check
- Caltrans Safety Review Documentation
- Caltrans Constructability Review Documentation
- Draft and Final 90% Submittal to OSFP
- Two reviews of Caltrans 90% Sign PS&E package

Task 20.0 - 100% PS&E Submittal

TASK 20.1 - 100% ROADWAY, SIGNALS/LIGHTING, DRAINAGE, STORMWATER TREATMENT, LANDSCAPE, WET UTILITIES, AESTHETIC DETAILS & STRUCTURE PLANS

The 90% plans will be revised based on comments received from the 90% submittal and reviewed for compatibility between portions of work and design disciplines, including a Road Plan Review as described in the Caltrans Memo to Designers 2-25. YEH will also review plans, specifications and provide general consultation within the proposed level of effort to check whether the recommendations of the geotechnical report were incorporated into the design and construction documents, and to assist with preparation/verification of the geotechnical aspects of the specifications. Consor will perform a QA/QC review prior to the submittals listed above being transmitted to the City, and Caltrans. The review of the Draft PS&E will be performed by a senior level engineer for uniformity, compatibility, and constructability. Separate QA/QC reviews will be done for the on the entire PS&E package. Consor will incorporate comments and submit 100% plans to the City and Caltrans.

TASK 20.2 - DRAFT FINAL TECHNICAL SPECIFICATIONS

Consor will update the 90% Technical Special Provisions as necessary based on comments received and changes made for the 100% project plans. It is assumed the City will perform a final review on Boilerplate language and provide any updated language that needs to be incorporated.

TASK 20.3 - ENGINEER'S ESTIMATE AND JUSTIFICATION MEMORANDUM

Consor will update the 90% construction Cost Estimate as necessary based on comments received and changes made for the 100% project plans. We do not anticipate there to be appreciable changes in the item costs at the 100% submittal. However, if due to delays in the project or unforeseen circumstances beyond the control of Consor, we will update the Justification Memorandum to provide reasons for the cost revisions.

TASK 20.4 – RESIDENT ENGINEER FILE

Consor will prepare the resident engineer (RE) file according to Chapter 15 of the Caltrans Project Development Procedures Manual (PDPM). Consor will also utilize PDPM Appendix GG to ensure all items are included in the RE file as appropriate for the project. The RE file will include any pertinent project data required to administer the construction contract. The information will be compiled in two separate binders, one for the City and one to be passed onto the resident engineer in the field administering the construction contract.

TASK 20.5 - RESPONSE TO CITY/CALTRANS REVIEW COMMENTS (2)

A Draft 100% Submittal will be made to the City and Caltrans for their review. Our team has assumed we will receive consolidated comments. We will address these comments and submit a Draft Final 100% submittal, which will be reviewed. Upon receiving the second set of consolidated comments, the team will address the applicable comments and submit a Final 100% submittal. At each submittal, our team will prepare a comment response form. The form will include the location of the comment, a summary of the comment, who is responsible for the response, and the response to the comment.

TASK 20 DELIVERABLES

- Response to Comments Forms – City and Caltrans review
- 11"x17" project plans (PDF)
- Draft special provisions (PDF)
- Engineer's estimate and (PDF)
- Cross-sections at 50-foot intervals
- QA/QC Documentation
- Roadway earthwork calculations
- Resident Engineer File (PDF)

Detailed Scope

Task 21.0 - Final PS&E Package

TASK 21.1 - STAMPED AND SIGNED PROJECT PLANS

The100% plans will be revised based on comments received from the 100% submittal. Each plan sheet will be electronically stamped and signed by the Engineer/Architect in Responsible Charge of the elements contained on the specific sheet.

TASK 21.2 - STAMPED AND SIGNED TECHNICAL SPECIFICATIONS

The technical special provisions will be electronically stamped and signed by the Engineer/Architect in responsible charge for the development of the various specifications section. Stamped and signed specifications will be submitted to the City and Caltrans.

TASK 21.3 - ENGINEER'S ESTIMATE AND JUSTIFICATION MEMO

Consor will update the 100% construction Cost Estimate as necessary based on comments received and changes made for the 100% project plans. We do not anticipate there to be appreciable changes in the item costs at the Final submittal. However, if due to delays in the project or unforeseen circumstances beyond the control of Consor, we will update the Justification Memorandum to provide reasons for the cost revisions.

TASK 21.4 - RESPONSE TO CITY/CALTRANS REVIEW COMMENTS (1)

A Draft Final Submittal will be made to the City and Caltrans for their review. Our team has assumed we will receive one set of consolidated comments. We will address these comments and submit a Final Stamped and Signed PS&E submittal. At each submittal, our team will prepare a comment response form. The form will include the location of the comment, a summary of the comment, who is responsible for the response, and the response to the comment.

TASK 21 DELIVERABLES

- Response to Comments Form – City and Caltrans review
- Stamped and Signed project plans (PDF)
- Stamped and Signed special provisions (PDF and MS Word)
- Engineer's Estimate and Justification Memorandum (PDF)

Task 22.0 - Advisory Body Assistance - Phase II

As the design progresses it is important to check in with City advisory bodies to inform them of the progress and provide them with the opportunity to provide input. During this Task, the Consor team will attend meetings, provide preparation sessions with staff, provide technical content for staff reports, and support City staff. Our scope assumes that the team will attend four (4) Advisory Body meetings. The renderings, conceptual exhibits, and technical content will be developed in various other Tasks in Phase II.

TASK 22.1 - ATTEND FOUR (4) MEETINGS IN PERSON

The Consor Project Manager, Deputy Project Manager, Bridge Project Engineer will be in attendance at four Advisory Body meetings throughout Phase II. The Advisory Bodies could be Planning Commission (PC), Architectural Review Committee (ARC), Chamber of Commerce, Downtown SLO, or the City Council.

TASK 22.2 - LEAD PREP MEETINGS WITH STAFF (8)

Team preparation is important for presentations at committee meetings. The Consor team will lead preparation meetings with City and Caltrans staff prior to committee or council meetings. These meetings will be virtual. We will attend two preparation meetings for each of the four (4) meetings. The meetings will focus on walking through the presentation to be made and discuss questions and issues that could be raised and our team's responses.

TASK 22.3 - PREPARE TECHNICAL CONTENT FOR STAFF REPORTS (4)

The Consor team will provide technical content for the City led staff reports for the Advisory Body meetings. The technical content will focus on project schedule, project costs, design decisions, aesthetic features, project layout, planting palettes, landscape and hardscape elements, bike and pedestrian features. Our team will provide renderings and plans prepared in previous tasks.

TASK 22.4 - COMMENT RESPONSE TO EACH MEETING (4)

Our goal in attending the Advisory Body meetings will be to answer questions from the committee members. However, there could be some comments or questions that cannot be effectively answered without additional analysis. Our team will document comments, questions and requests made during the meetings. We will prepare a memorandum documenting the comments and our team's responses to those comments. In the memorandum, our team will identify requests that can be incorporated within the scope and fee and those elements that will necessitate a scope and fee revision.

TASK 22 DELIVERABLES

- Attendance at four (4) Advisory Body Meetings (in person)
- Preparation and Attendance at a total of eight (8) preparation meetings for Advisory Body meetings (virtual)
- Technical Content for four (4) staff reports (Word)
- Preparation of four (4) comment response memorandums (PDF)

Detailed Scope

Task 23.0 - Public Outreach - Phase II

At the beginning of Phase II, Verdin and the Consor team will review the Draft Communications Plan (Phase II) and update to align with the goals of the City for communications for Phase II.

TASK 23.1 - PROJECT BRIEF AND FACT SHEET

The project Fact Sheet and FAQs that were developed in Phase I will be updated to reflect the input and direction of the Prado Interchange project as it moves forward.

TASK 23.2 - PUBLIC MEETING

A public meeting will be held during the development of the 90% PS&E package. The meeting will focus on updating the public on the project timeline, including when construction activities are likely to start, the impacts to traffic during construction, and the final design elements.

The public meeting will be attended by the Project Manager, Deputy Project Manager, Bridge Project Engineer, Utility Coordinator, Landscape Architect, Bridge Architect and Verdin Marketing staff.

As part of this task, the team will complete the following:

> Announcement, coordination and facilitation of one public meeting to present an update to the public. This effort includes:

- One press release and media outreach to get coverage before and after public meeting
- Utilizing the City's email program, send a branded email to residents and businesses
- Updated signage, comment cards, updates to fact sheet/FAQs. Printing not included.
- Presentation and display coordination for the meeting
- Coordination and facilitation of public meeting to present an update on the project. Our team recommends that the public meeting be held at the City Corp Yard on Prado Rd.

After the Public Meeting, Verdin and the design team will follow up with a meeting report with a summary of public engagement and comments/questions, the creation of a database for future outreach, and suggestions for project refinements based on public input.

As an option, the team can videotape the public meeting for posting on the City's Prado Interchange website to ensure information and ability to comment is inclusive of all audiences.

TASK 23.3 - LOCAL RESIDENT OUTREACH - MASS MAILERS (2)

Our team envisions that one mailer to all residents and businesses within the same area as Phase I public meeting, plus any additional addresses gathered from public comment cards, website inquiries, etc. Our scope assumes the City will print and mail the mailer.

A second mass mailer could either be specific to businesses in the area with a business focused Fact Sheet. Alternatively, the second mass mailer could be a recap and a link to view meeting (if the City authorizes the videotaping of the meeting). The mailer would be sent to the same audience that received the public meeting announcement. Our scope assumes the City would print and mail the mailer.

TASK 23.4 - PRESS RELEASES (8)

One press release would be prepared to get coverage for the Public Meeting to provide an project update. Seven additional press releases are included to coincide with planned events, and to communicate project milestones or unplanned eventualities.

TASK 23.5 - MEDIA MANAGEMENT

Our team recommends providing a continuation of outreach to the media to inform them of the project timeline, scope and plans to ensure channels of communication remain open throughout the final design phase.

Verdin will update the talking points developed for key staff as part of Phase I.

It is recommended that the media be updated regularly; Verdin is also available to develop additional press releases and media relations for unplanned eventualities where media and public information is needed. Depending on the amount and level of effort additional scope may be required.

TASK 23.6 - CITY OF SLO WEBPAGE QUARTERLY UPDATES

As the plans are being developed in Phase II, there may not be enough content to warrant monthly updates to the City of SLO Prado Interchange webpage. Our team is recommending that the website is updated quarterly during Phase II.

TASK 23.7 - PROJECT BOARDS FOR OUTREACH MEETINGS (8 EVENTS, 4 BOARDS)

The Consor team will provide project boards showing renderings of the final project improvements, including aesthetic treatments, landscaping (planting palettes), and hardscape options. The boards can also include project timelines, extents of construction, traffic patterns during construction and utility relocations. It is anticipated that the aesthetic content for these boards or other media will be similar to those created as part of Task 18.0.

These boards/graphics/renderings will be prepared to support the public meeting and seven other events like Farmer's Market, groundbreaking, Advisory Body meetings or placement at City offices.

Detailed Scope

Our scope includes the development, printing and mounting of four boards for seven separate events. It also assumes that at least two of the boards will be reused at the seven events for a total of sixteen boards.

TASK 23 DELIVERABLES

- Final Communications Plan (Phase II)
- Updated Prado Interchange Illustration, Fact Sheet, FAQs
- Talking points for Key Staff
- Attendance at Public Meeting (Consor and Verdin)
- Public Meeting Report (PDF), including comment matrix
- Two (2) mass mailers (PDF)- City to print and mail
- Eight press releases
- Twelve (12) City of SLO Prado Road Interchange Project webpage- Quarterly
- Sixteen (16) project information boards/graphics/renderings

Task 24.0 - Phase II Finalization

TASK 24.1 - SCOPING NARRATIVE - DESIGN CRITERIA/ DESIGN DECISION DOCUMENT

At the conclusion of Phase II, the team will update the Scoping Narrative prepared at the end of Phase I. The document will summarize the design criteria for the project, a list of design exceptions, not already identified previously, findings and decisions incorporated in the final PS&E package, Geotechnical recommendations, Stormwater and Drainage design decisions, wet utility relocations, recap of Public Meeting and Advisory Body comments. The RE Pending file developed in Phase II will be an attachment to the Scoping Narrative document. This document will serve as the basis for the Scope of Work for Phase III.

TASK 24.2 - PHASE III SCOPE, SCHEDULE, FEE

Upon completion of the Scoping Narrative Memorandum, the Consor team with the City and Caltrans input, will review the Scope, Schedule and Fee for Phase III. We will work with the team to revise to our original scope, including deliverables and provide it to the City for their review and approval. Once the revised scope has been approved, the fee will be modified to match the approved scope of work.

TASK 24 DELIVERABLES

- Phase II Scoping Narrative Memorandum (PDF)
- Draft and Final Scope of Work and Fee (Phase III)

PHASE III - BID ADVERTISEMENT AND AWARD PHASE ADMINISTRATION

The following scope for Phase III is based on Consor's estimate for a typical level of effort for a project of this size and complexity. It is assumed that the City will be responsible for the advertisement and award of the construction contract. At the conclusion of Phase II, the scope for Phase III will be updated accordingly.

Task 25.0 - Advertising Preparation

The City will be responsible for the advertisement and award of the construction contract for the Prado Road Interchange. The Consor team will provide the City with a list of potential contractors that have the experience and capability to perform a similar type of work as the Prado Road Interchange project.

During Phase II, the Consor team will deliver an RE pending file, Quantity Calculations (both sets), roadway design cross sections. In addition to these items, we will provide the City with bridge deck four scales as necessary for the completion of the bridge deck grades.

Survey notes and monumentation data will be provided. The data will be sufficient for a licensed surveyor to locate monuments to recreate the rights-of-way.

TASK 25 DELIVERABLES

- Bridge Deck 4-Scales (PDF)
- Survey notes and monumentation data

Task 26.0 - Bid and Award Phase Assistance

TASK 26.1 - REVIEW AND RESPOND TO RFI'S DURING BIDDING

During bidding Consor has assumed up to ten (10) Request for Information (RFI) and one (5) Addendum may be required. If additional RFI's or addendums are needed the scope and fee will need to be revisited. Consor will prepare responses within 5 business days.

Due to the indeterminate nature of this work, we has budgeted a total of 120 hours for this task.

TASK 26.2 - ANALYSIS OF BIDS, BID PROTEST SUPPORT, AND AWARD SUPPORT

Consor will review the received bids. We will consolidate the bids into one spreadsheet to easily compare the bids side by side with the Engineer's Estimate. We will review the bids for mathematical errors and unusual unit prices. Our review will focus on the bid items and costs. It is assumed that City Legal Staff will review the validity of bonds, DBE good faith efforts, and other associated bid forms.

If there is a bid protest, Consor will review the protest and provide our recommendation on the validity of the protest. Our review will focus on the elements of the protest that are technical in nature and will not focus on the quality of the lowest responsible bidder's submittal package (i.e. DBE good faith effort).

Detailed Scope

The Consor project manager and deputy project manager will attend one (1) City Council meeting for the award of the construction contract. We will prepare the technical portion of the presentation as it relates to the project's construction. For example, we will focus on items such as traffic control and handling, duration of construction, and anticipated impacts of the construction on the community. The recommendation for award and funding for the construction will be addressed by City staff. We will prepare meeting notes summarizing the questions, comments and action taken by City Council.

TASK 26.3 - PRECONSTRUCTION SUPPORT

Given the size of the Prado Road Interchange project, it is assumed that the City will be looking for a consultant that specializes in Construction Management (CM). Consor will be available to review and provide comments on the City prepared Request for Proposal for CM services, review proposals received and participate in interviews as requested by the City.

The Consor deputy project manager, bridge project engineer, roadway project engineer, wet utility task lead, and utility task lead, will attend the Pre-construction meeting in person. Other team members can be available virtually as necessary. This meeting will be led by the City's CM consultant. We will be available to answer technical questions as they relate to the project. Consor staff will participate in four (4) preparatory meetings virtually before the Pre-construction meeting. During the preparatory meetings, we will provide input to the CM consultant on critical items during construction, including utility relocation.

TASK 26 DELIVERABLES:

- Response to ten (10) Requests for Information
- Preparation of five (5) Addenda
- Bid comparison spreadsheet and assessment
- Assistance with Bid Protect, if required
- Attendance and meeting notes at one (1) City Council Meeting
- Review of City prepared RFP for CM services
- Review of CM consultant proposals and participation in CM interviews
- Attendance at four (4) Pre-construction preparation meetings (virtual)
- Attendance at Pre-construction meeting with CM consultant and contractor

Cost Control & Budgeting Methodology

We believe that effective communication and diligent project scoping are the keys to minimizing change orders with respect to design. Unforeseen circumstances and significant changes to project scope may necessitate additional fees on occasion. Preparation is critical to fully understand your needs and reduce change orders during the project. Furthermore, our firm's reputation and focus on quality lends itself to the development of appropriate project fees. We will be upfront with the City about potential risks and concerns—we prefer to potentially lose a price-competitive project than win with a low-price strategy and ask for more fee later. It is our goal to make sure we stay on budget throughout the life of the project.

Consor has a proven track record of completing projects on time, with excellent quality, and within budget. We accomplish this by continuously monitoring progress and budget expenditures of our project team. Consor incorporates a comprehensive project management plan that follows the guidelines provided in the Caltrans Project Management Handbook.

Our cost and schedule control starts with assigning staff who have expertise that aligns with the project needs to each task order. We apply several different cost tracking methods to correctly maintaining the budget This includes tracking progress (i.e., percent complete) and comparing to costs incurred in order to assess the project's budget status.

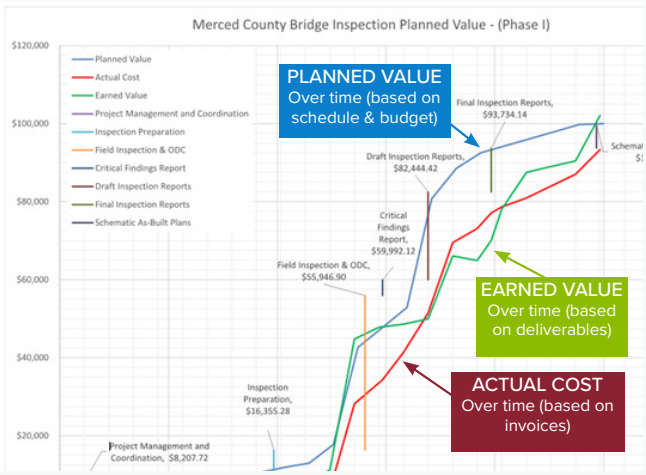
Our project managers will monitor the project's progress on a weekly basis and use the following approaches to maintain the project's schedule:

- Create a detailed project schedule that outlines all tasks, including QC efforts and tasks to be performed by client staff, with completion dates necessary to achieve the overall schedule goal.
- Assign staff with the appropriate level of expertise that can develop and deliver submittals correctly the first time and avoid costly rework.
- Check in frequently with the team's production staff to update on task progress and implement corrective measures to maintain schedule.
- Conduct project team meetings to discuss task progress related to schedule and tasks means and methods to confirm production staff remain on the path identified at the project onset.
- Develop thorough meeting minutes and hold team members accountable with specifically identified deadlines and decisions.

Tools Used by our Project Managers to Meet Cost Objectives

PM Software

Consor's Deltek Vision software is used to track progress and report budget status in real-time, allowing project managers to confirm work progress relative to budgets and adjust as necessary.



Earned Value Budget Analysis

The Earned Value Budget Analysis blends the project schedule with the planned project budget to forecast the anticipated financial path of the project, tracks deliverables and remaining budget per task. This tool combines the scope, schedule, and budget into a single snapshot of the project's overall health. This "Heads Up Display" allows the project manager to anticipate and proactively course correct if the project is spending too much or too little budget in a given invoicing period.

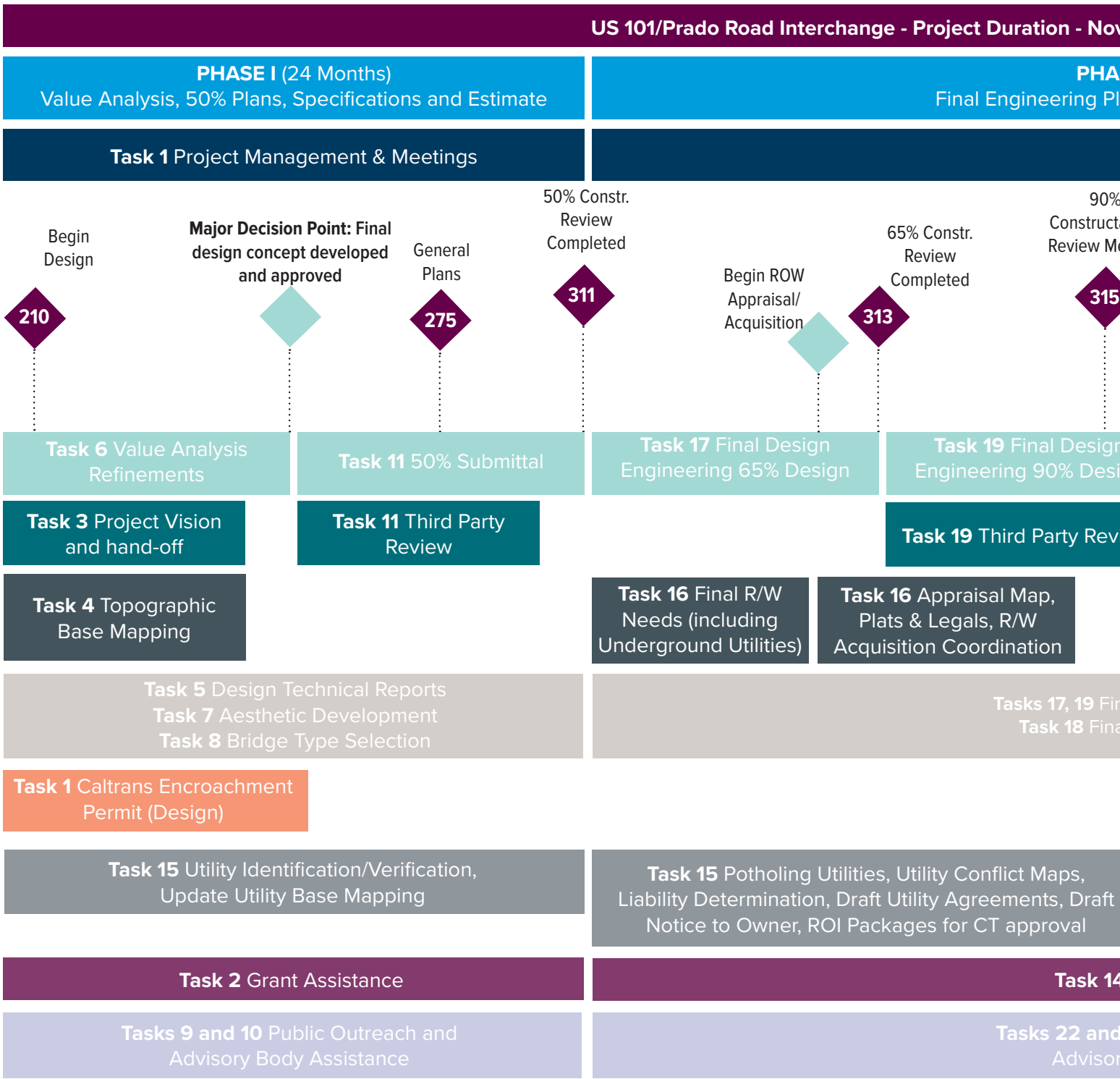
This graph shows an actual Consor project recently completed using the Earned Value Budget Analysis. The blue graph shows the planned project budget over the life of the project and is initiated at the beginning of the project. This line establishes the baseline for budget and schedule success. The red line tracks the actual cost of the project based on monthly invoicing and the green line tracks task deliverables with an assigned budget value per deliverable. As shown, Consor project managers have the tools for successful project budget management.

Schedule of Work

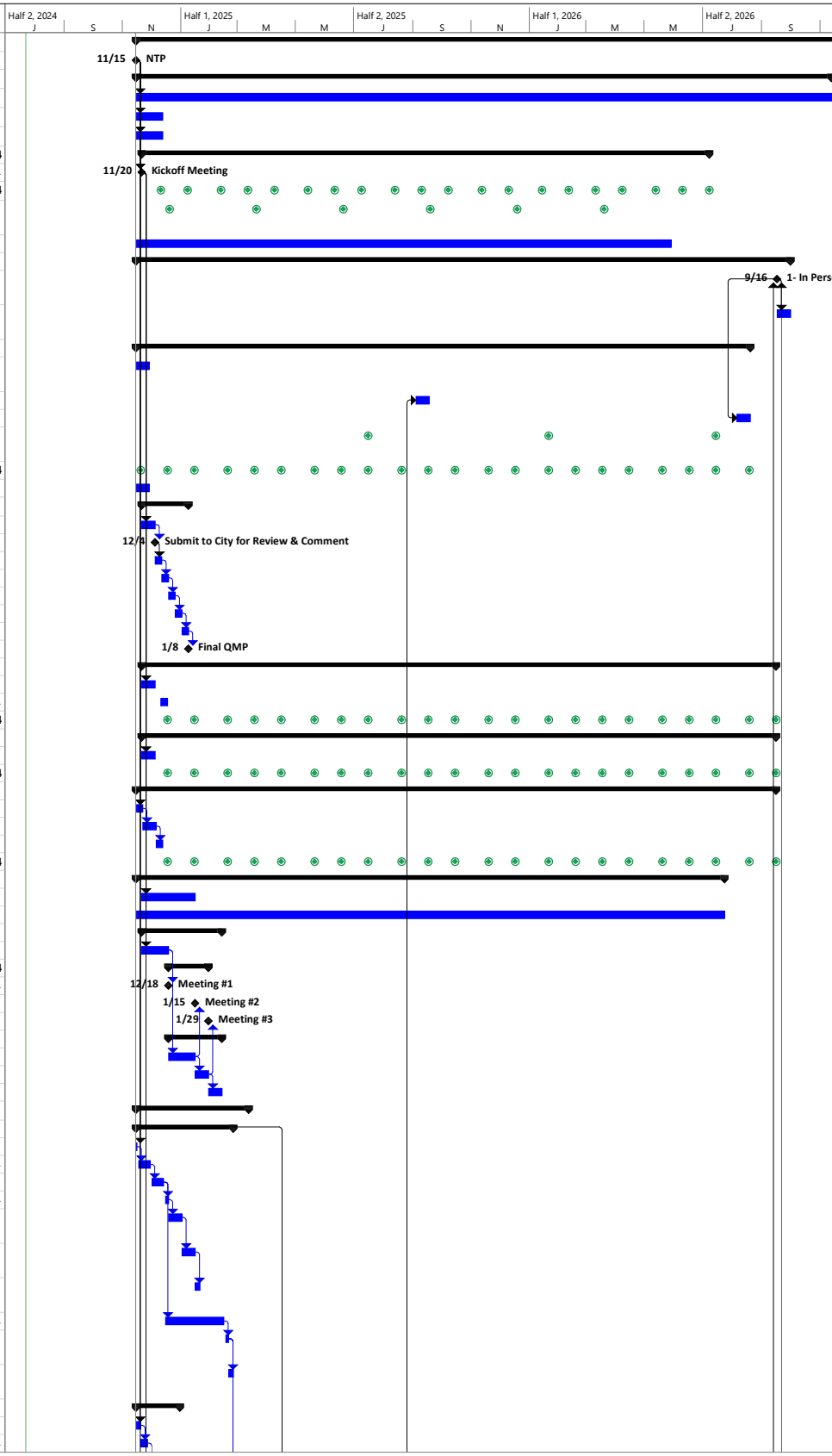
consor

Schedule of Work

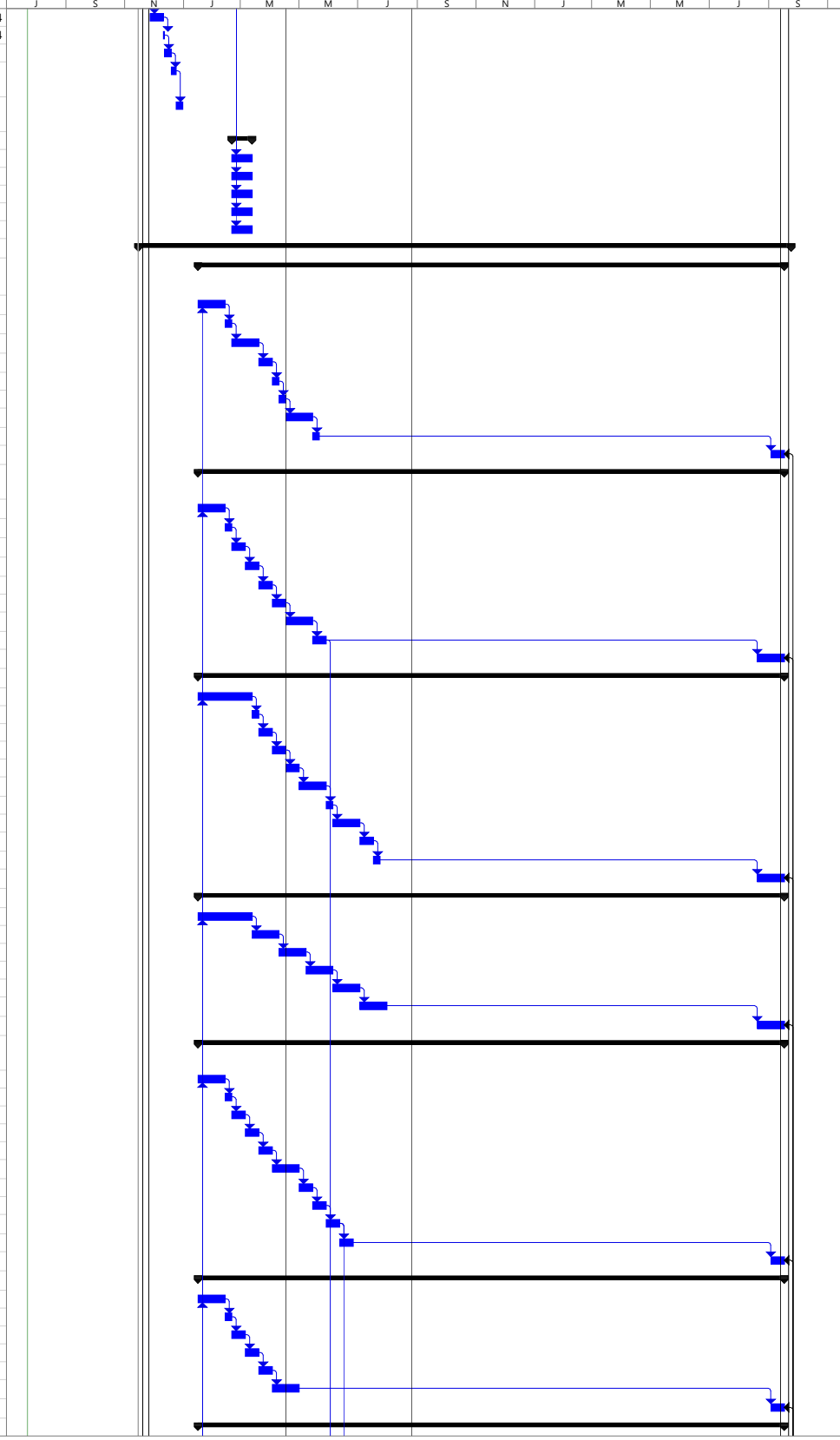
Consor has prepared a graphical schedule depicting the major tasks associated with the Prado Road Interchange Project and how they align with the Caltrans schedule based on our understanding of all of the tasks outlined in the Request for Proposals (RFP). Our team feels there are opportunities to condense this sc the City, and Caltrans. We also would like to recommend that the Bridge Type Selection process begin earlier in the process. This will require City and Caltrans alignments early in the Value Analysis task. The attached detailed schedule does show the Utility "A" letters being prepared and sent to utility companies in Ph better assess project impacts but is included in Phase II in our Scope of Services to match the City's RFP. Our team has other thoughts to accelerate the schedu



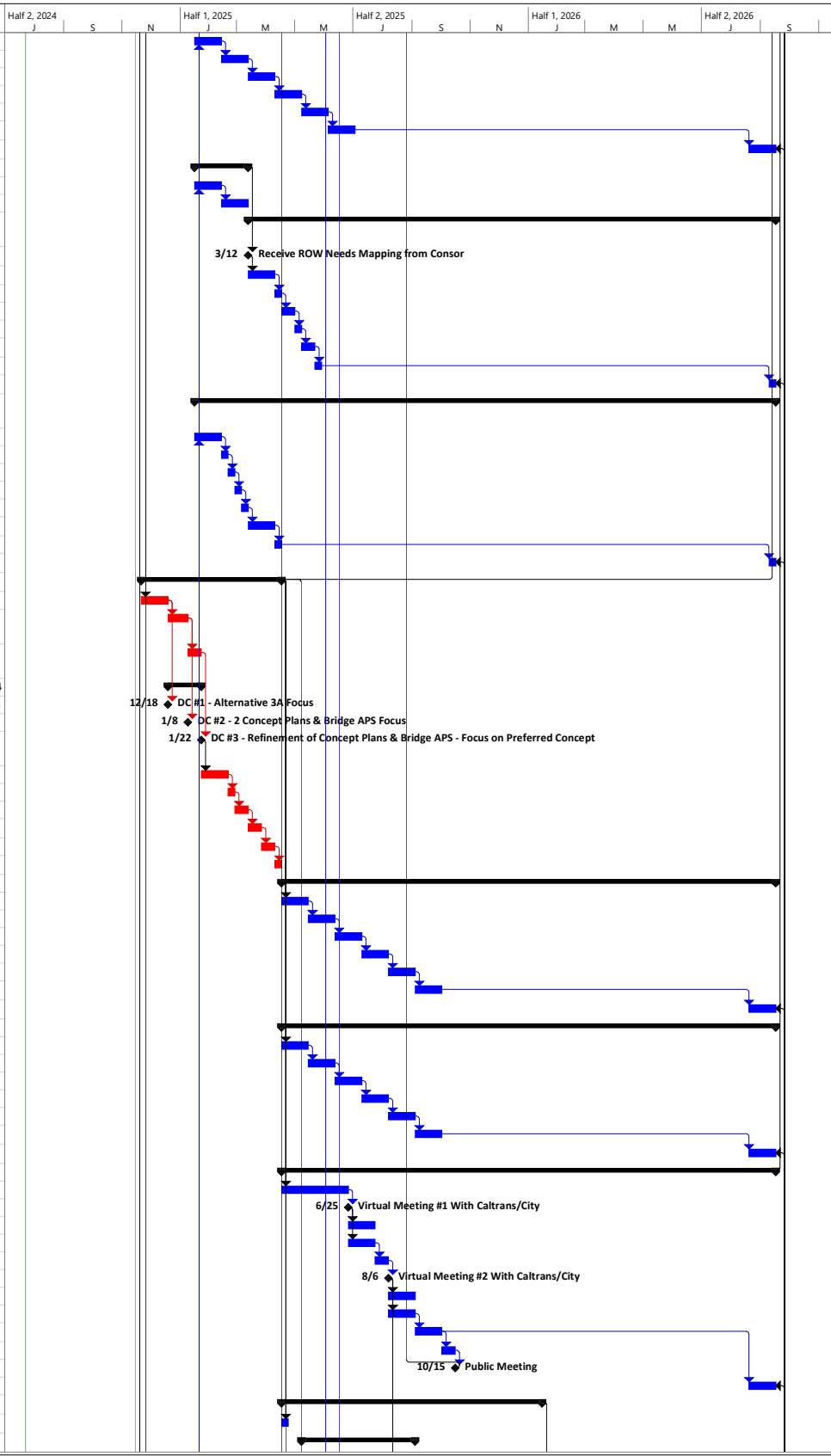
ID	Task Name	Duration	Start
1	**PHASE I WORKPLAN NTP**	**534 days**	**Fri 11/15/24**
2	NTP	0 days	Fri 11/15/24
3	**Project Management**	**520 days**	**Fri 11/15/24**
4	General Project Management	26 mons	Fri 11/15/24
5	Caltrans Encroachment Permit for PS&E Phase	4 wks	Fri 11/15/24
6	Submit Information Requests to Caltrans	4 wks	Fri 11/15/24
7	**MEETINGS**	**424 days**	**Wed 11/20/24**
8	Kickoff Meeting	0 days	Wed 11/20/24
9	**PDT MEETINGS**	**410 days**	**Wed 12/11/24**
30	**TECHNICAL FOCUS MEETINGS W/City & Caltrans (6), Two meetings in Person**	**325 days**	**Fri 12/20/24**
37	ADVISORY BODY ASSISTANCE	20 mons	Fri 11/15/24
38	**PUBLIC MEETINGS**	**489 days**	**Fri 11/15/24**
39	1- In Person Public Meeting After VA Implementation Recommendations are Agreed	0 days	Wed 9/16/26
40	Meeting Minutes, Comment Matrix, Proposed Changes Listing	2 wks	Thu 9/17/26
41	**Outreach**	**459 days**	**Fri 11/15/24**
42	Outreach to Residences/Businesses in Project Area	2 wks	Fri 11/15/24
43	Mass Mailer #1	2 wks	Thu 9/4/25
44	Mass Mailer #2	2 wks	Thu 8/6/26
45	**Press Releases (3), Interview Preparation, Response to Questions**	**260 days**	**Wed 7/16/25**
49	**City of SLO Webpage Monthly Update**	**455 days**	**Wed 11/20/24**
72	Collateral Materials for 3 Events	2 wks	Fri 11/15/24
73	**Quality Management Plan**	**35 days**	**Thu 11/21/24**
74	Develop QMP	2 wks	Thu 11/21/24
75	Submit to City for Review & Comment	0 days	Wed 12/4/24
76	Update QMP	1 wk	Thu 12/5/24
77	Caltrans/City Review & Comment	1 wk	Thu 12/12/24
78	Update QMP	1 wk	Thu 12/19/24
79	Submit Final QMP to Caltrans & City	1 wk	Thu 12/26/24
80	Caltran & City Review/Concurrence	1 wk	Thu 1/2/25
81	Final QMP	0 days	Wed 1/8/25
82	**Caltrans Quantative Risk Register**	**474 days**	**Thu 11/21/24**
83	Develop Risk Register	2 wks	Thu 11/21/24
84	Review and Input to Risk Register	1 wk	Wed 12/11/24
85	**RR Monthly Update**	**455 days**	**Wed 12/18/24**
108	**Design Decision Log**	**474 days**	**Thu 11/21/24**
109	Create Shared Drive Document	2 wks	Thu 11/21/24
110	**Design Decision Log Monthly Update**	**455 days**	**Wed 12/18/24**
133	**Project Schedule (MS Project)**	**478 days**	**Fri 11/15/24**
134	Develop Initial Schedule	1 wk	Fri 11/15/24
135	City and Caltrans Review	2 wks	Fri 11/22/24
136	Baseline Schedule Completed	1 wk	Fri 12/6/24
137	**Schedule Monthly Update**	**455 days**	**Wed 12/18/24**
160	**Grant Application Assistance**	**440 days**	**Fri 11/15/24**
161	Applicable Grant Opportunity Memo	8 wks	Thu 11/21/24
162	Grant Application Assistance	22 mons	Fri 11/15/24
163	**PROJECT VISION AND HANDOFF**	**60 days**	**Thu 11/21/24**
164	Previous Work Inventory	4 wks	Thu 11/21/24
165	**Handoff Meetings**	**30 days**	**Wed 12/18/24**
166	Meeting #1	0 days	Wed 12/18/24
167	Meeting #2	0 days	Wed 1/15/25
168	Meeting #3	0 days	Wed 1/29/25
169	**Handoff Memorandum**	**40 days**	**Thu 12/19/24**
170	Draft Memo	4 wks	Thu 12/19/24
171	City Review	2 wks	Thu 1/16/25
172	Final Memo	2 wks	Thu 1/30/25
173	**Surveying and Topographic Mapping**	**84 days**	**Fri 11/15/24**
174	**Field Work/Topographic Data Collection**	**72 days**	**Fri 11/15/24**
175	Design Aerial Control Network	1 day	Fri 11/15/24
176	Submit Aerial Control Network	10 days	Mon 11/18/24
177	Field Survey Aerial Control Network	10 days	Mon 12/2/24
178	Adjust Aerial Control Network	3 days	Mon 12/16/24
179	Submit Aerial Control Network Adjustment to CT for ABC Review	10 days	Thu 12/19/24
180	Submit Bundle Adjustment to CT for ABC Review/Approval	10 days	Thu 1/2/25
181	Prepare Control Report and Submit to CT for ABC Review/Approval	3 days	Thu 1/16/25
182	Topographic and Orthophotography Mapping	45 days	Mon 12/16/24
183	Topographic Mapping Field Checks for Accuracy QA/QC	3 days	Mon 2/17/25
184	Submit Finished Survey to CT for ABC Review/Approval	3 days	Thu 2/20/25
185	**Landnet and Boundary Basemapping**	**32 days**	**Fri 11/15/24**
186	Research of Record Maps and Caltrans R/W Maps	3 days	Fri 11/15/24
187	Compute Locations of Record Monumentation	5 days	Wed 11/20/24



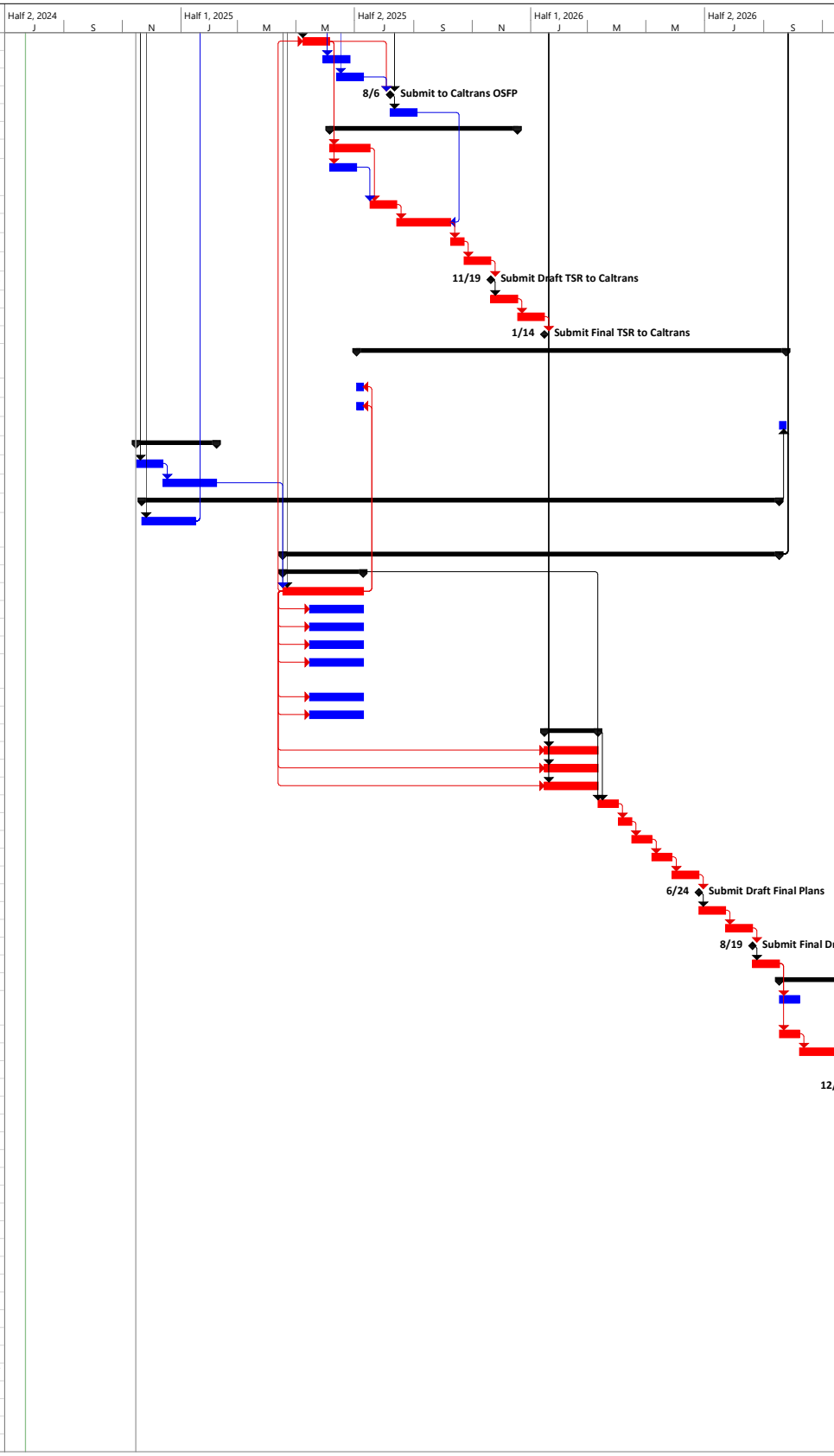
ID	Task Name	Duration	Start
188	Create Basemap of Record R/W	10 days	Wed 11/27/24
189	Control Survey Densification	1 day	Wed 12/11/24
190	Field Locate Record Monumentation	5 days	Thu 12/12/24
191	Least Square Adjustment of Field Located Monumentation	3 days	Thu 12/19/24
192	Best Fit Field Located Monumentation to Record Maps	5 days	Tue 12/24/24
193	**Supplemental Field Surveying**	**15 days**	**Thu 2/20/25**
194	Conform Surveys	15 days	Thu 2/20/25
195	Drainage System Surveys	15 days	Thu 2/20/25
196	San Luis Obispo Creek Channel Cross Sections	15 days	Thu 2/20/25
197	Building Finish Floor Elevation Data Collection	15 days	Thu 2/20/25
198	Topographic Feature Data Collection	15 days	Thu 2/20/25
199	**Design Technical Reports**	**484 days**	**Fri 11/15/24**
200	**Geotechnical Design and Materials Report (PGDR)**	**435 days**	**Thu 1/16/25**
201	Prepare Draft PGDR	4 wks	Thu 1/16/25
202	Consor Review	1 wk	Thu 2/13/25
203	Update PGDR	4 wks	Thu 2/20/25
204	Draft Report	2 wks	Thu 3/20/25
205	City Review	1 wk	Thu 4/3/25
206	Update Draft Report	1 wk	Thu 4/10/25
207	Caltrans/City Review	4 wks	Thu 4/17/25
208	Respond to comments	1 wk	Thu 5/15/25
209	Final Report	2 wks	Thu 9/3/26
210	**Draft Structure Preliminary Geotechnical Report (SPGR)**	**435 days**	**Thu 1/16/25**
211	Prepare Draft SPGR	4 wks	Thu 1/16/25
212	Consor Review	1 wk	Thu 2/13/25
213	Update PGDR	2 wks	Thu 2/20/25
214	Draft Report	2 wks	Thu 3/6/25
215	City Review	2 wks	Thu 3/20/25
216	Update Draft Report	2 wks	Thu 4/3/25
217	Caltrans/City Review	4 wks	Thu 4/17/25
218	Respond to comments	2 wks	Thu 5/15/25
219	Final Report	4 wks	Thu 8/20/26
220	**Updated Location Hydraulic Study**	**435 days**	**Thu 1/16/25**
221	Develop Draft LHS	8 wks	Thu 1/16/25
222	Consor Review	1 wk	Thu 3/13/25
223	Admin Draft	2 wks	Thu 3/20/25
224	City Review	2 wks	Thu 4/3/25
225	Update Draft LHS	2 wks	Thu 4/17/25
226	Caltrans/City Review	4 wks	Thu 5/1/25
227	1ST Round Response to comments	1 wk	Thu 5/29/25
228	Submit updated LHS	4 wks	Thu 6/5/25
229	Caltrans/City Review	2 wks	Thu 7/3/25
230	2ND Round Response to Comments	1 wk	Thu 7/17/25
231	Final LHS	4 wks	Thu 8/20/26
232	**Drainage Impact Study Report**	**435 days**	**Thu 1/16/25**
233	Develop Draft Report	8 wks	Thu 1/16/25
234	Consor Review	4 wks	Thu 3/13/25
235	Admin Draft	4 wks	Thu 4/10/25
236	City Review	4 wks	Thu 5/8/25
237	Update Draft Report	4 wks	Thu 6/5/25
238	Caltrans/City Review	4 wks	Thu 7/3/25
239	Final Report	4 wks	Thu 8/20/26
240	**Preliminary Floodplain and Bridge Design Hydraulic Study**	**435 days**	**Thu 1/16/25**
241	Develop Draft Study	4 wks	Thu 1/16/25
242	Consor Review	1 wk	Thu 2/13/25
243	Admin Draft	2 wks	Thu 2/20/25
244	City Review	2 wks	Thu 3/6/25
245	Update Draft Study	2 wks	Thu 3/20/25
246	Caltrans/City Review	4 wks	Thu 4/3/25
247	1ST Round Response to comments	2 wks	Thu 5/1/25
248	Submit updated Study	2 wks	Thu 5/15/25
249	Caltrans/City Review	2 wks	Thu 5/29/25
250	2ND Round Response to Comments	2 wks	Thu 6/12/25
251	Final Study	2 wks	Thu 9/3/26
252	**Preliminary Storm Water Data Report**	**435 days**	**Thu 1/16/25**
253	Develop Draft Report	4 wks	Thu 1/16/25
254	Consor Review	1 wk	Thu 2/13/25
255	Admin Draft	2 wks	Thu 2/20/25
256	City Review	2 wks	Thu 3/6/25
257	Update Draft Report	2 wks	Thu 3/20/25
258	Caltrans/City Review	4 wks	Thu 4/3/25
259	Final Report	2 wks	Thu 9/3/26
260	**Water Quality Assessment Report**	**435 days**	**Thu 1/16/25**



ID	Task Name	Duration	Start
261	Develop Draft Report	4 wks	Thu 1/16/25
262	Consor Review	4 wks	Thu 2/13/25
263	Admin Draft	4 wks	Thu 3/13/25
264	City Review	4 wks	Thu 4/10/25
265	Update Draft Report	4 wks	Thu 5/8/25
266	Caltrans/City Review	4 wks	Thu 6/5/25
267	Final Report	4 wks	Thu 8/20/26
268	**Right of Way Needs Determination**	**40 days**	**Thu 1/16/25**
269	Preliminary ROW Assessment	4 wks	Thu 1/16/25
270	Develop ROW Parcel Needs Spreadsheet	4 wks	Thu 2/13/25
271	**Right of Way Estimating/Right of Way Data Sheet for Perferred Alternative**	**395 days**	**Wed 3/12/25**
272	Receive ROW Needs Mapping from Consor	0 wks	Wed 3/12/25
273	Preparation of ROW Data Sheet	4 wks	Thu 3/13/25
274	Admin Draft	1 wk	Thu 4/10/25
275	City Review	2 wks	Thu 4/17/25
276	Update Draft Data Sheet	1 wk	Thu 5/1/25
277	Caltrans/City Review	2 wks	Thu 5/8/25
278	Respond to comments	1 wk	Thu 5/22/25
279	Final Data Sheet	1 wk	Thu 9/10/26
280	**Environmental Permit and Monitoring Memorandum (EPMM)**	**435 days**	**Thu 1/16/25**
281	Develop Draft EPMM	4 wks	Thu 1/16/25
282	Consor Review	1 wk	Thu 2/13/25
283	Admin Draft Memo	1 wk	Thu 2/20/25
284	City Review	1 wk	Thu 2/27/25
285	Update Draft Memo	1 wk	Thu 3/6/25
286	Caltrans/City Review	4 wks	Thu 3/13/25
287	Respond to comments	1 wk	Thu 4/10/25
288	Final Memo	1 wk	Thu 9/10/26
289	**Value Analysis Report**	**105 days**	**Thu 11/21/24**
290	Initial Alternative 3A Roll Map & APS	4 wks	Thu 11/21/24
291	Meeting 2 Material Development - Conceptual Roll Map with APS for 2 Concepts	3 wks	Thu 12/19/24
292	Meeting 3 Material Development - Refinement of Conceptual Roll Map and APS for 2 Concepts	2 wks	Thu 1/9/25
293	**Design Charrettes**	**25 days**	**Wed 12/18/24**
294	DC #1 - Alternative 3A Focus	0 days	Wed 12/18/24
295	DC #2 - 2 Concept Plans & Bridge APS Focus	0 days	Wed 1/8/25
296	DC #3 - Refinement of Concept Plans & Bridge APS - Focus on Preferred Concept	0 days	Wed 1/22/25
297	Admin Draft VA Report	4 wks	Thu 1/23/25
298	City Review	1 wk	Thu 2/20/25
299	Update Draft VA Report	2 wks	Thu 2/27/25
300	Caltrans/City Review	2 wks	Thu 3/13/25
301	Respond to comments	2 wks	Thu 3/27/25
302	Final VA Report	1 wk	Thu 4/10/25
303	**LEED/Envision Memo of Feasibility**	**370 days**	**Thu 4/17/25**
304	Develop Draft Memo	4 wks	Thu 4/17/25
305	Consor Review	4 wks	Thu 5/15/25
306	Admin Draft	4 wks	Thu 6/12/25
307	City Review	4 wks	Thu 7/10/25
308	Update Draft Memo	4 wks	Thu 8/7/25
309	City Review	4 wks	Thu 9/4/25
310	Final Draft Memo	4 wks	Thu 8/20/26
311	**Sustainability Memo**	**370 days**	**Thu 4/17/25**
312	Develop Draft Memo	4 wks	Thu 4/17/25
313	Consor Review	4 wks	Thu 5/15/25
314	Admin Draft	4 wks	Thu 6/12/25
315	City Review	4 wks	Thu 7/10/25
316	Update Draft Memo	4 wks	Thu 8/7/25
317	City Review	4 wks	Thu 9/4/25
318	Final Draft Memo	4 wks	Thu 8/20/26
319	**Schematic Aesthetic Development**	**370 days**	**Thu 4/17/25**
320	Develop 3 Concept Alternatives	10 wks	Thu 4/17/25
321	Virtual Meeting #1 With Caltrans/City	0 wks	Wed 6/25/25
322	Refine Concepts	4 wks	Thu 6/26/25
323	Admin Draft Aesthetics Report	4 wks	Thu 6/26/25
324	City Review	2 wks	Thu 7/24/25
325	Virtual Meeting #2 With Caltrans/City	0 wks	Wed 8/6/25
326	Refine Concepts	4 wks	Thu 8/7/25
327	Draft Aesthetics Report	4 wks	Thu 8/7/25
328	Caltrans/City Review	4 wks	Thu 9/4/25
329	Update Report	2 wks	Thu 10/2/25
330	Public Meeting	0 days	Wed 10/15/25
331	Final Draft Aesthetics Report	4 wks	Thu 8/20/26
332	**Bridge Type Selection**	**195 days**	**Thu 4/17/25**
333	As-Built Review and Assessment	1 wk	Thu 4/17/25
334	**Pre-Type Selection Submittal to OSFP**	**85 days**	**Thu 5/8/25**

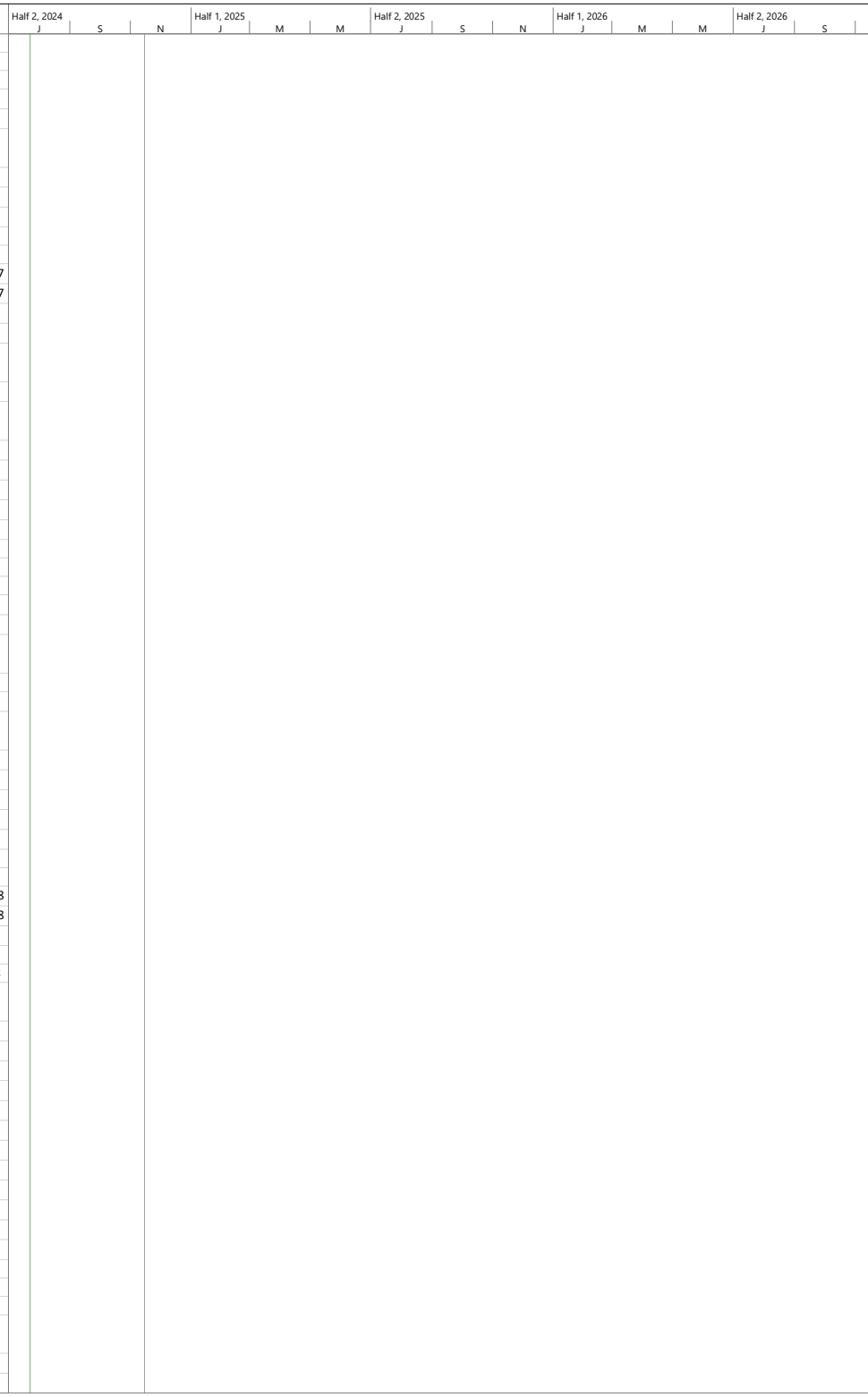


ID	Task Name	Duration	Start
335	Bridge Site Data Submittal Package	4 wks	Thu 5/8/25
336	Foundation Boring Plan	4 wks	Thu 5/29/25
337	Draft Bridge Design Hydraulics Report	4 wks	Thu 6/12/25
338	Submit to Caltrans OSFP	0 days	Wed 8/6/25
339	OSFP Review and Comment	4 wks	Thu 8/7/25
340	**Draft Type Selection Report**	**140 days**	**Thu 6/5/25**
341	Develop GP & Foundation Plan 3-Bridges	6 wks	Thu 6/5/25
342	Develop GP & Foundation Plan Retaining Structures	4 wks	Thu 6/5/25
343	Develop GP Estimates	4 wks	Thu 7/17/25
344	Draft Type Selection Report	8 wks	Thu 8/14/25
345	City Review	2 wks	Thu 10/9/25
346	Incorporate Comments	4 wks	Thu 10/23/25
347	Submit Draft TSR to Caltrans	0 days	Wed 11/19/25
348	Type Selection Meeting	4 wks	Thu 11/20/25
349	Update TSR and Incorporate Comments	4 wks	Thu 12/18/25
350	Submit Final TSR to Caltrans	0 wks	Wed 1/14/26
351	**Preliminary Assessment - Design Standard Decision Dcoumentation**	**320 days**	**Thu 7/3/25**
352	DIB 78	1 wk	Thu 7/3/25
353	DSDD Assessment Table	1 wk	Thu 7/3/25
354	Conceptual Concurrence on DSDD Types	1 wk	Thu 9/17/26
355	**Utility Coordination**	**60 days**	**Fri 11/15/24**
356	Conflict Identification - Utility A Letter	4 wks	Fri 11/15/24
357	Receive Facility Maps and Update Base Map	8 wks	Fri 12/13/24
358	**50% Submittal**	**475 days**	**Thu 11/21/24**
359	Develop Preliminary Geometric Plan and Constraints Assessment	8 wks	Thu 11/21/24
360	**Draft Plan Package Development**	**370 days**	**Thu 4/17/25**
361	**Roadway Plans**	**60 days**	**Thu 4/17/25**
362	Roadway plans	12 wks	Thu 4/17/25
363	Preliminary Signal & Lighting Plans	8 wks	Thu 5/15/25
364	Preliminary Landscape Concept Plans	8 wks	Thu 5/15/25
365	Preliminary Drainage Concept Plans	8 wks	Thu 5/15/25
366	Preliminary Traffic Handling/Stage Construction Plans	8 wks	Thu 5/15/25
367	Preliminary Right of Way	8 wks	Thu 5/15/25
368	Preliminary Wet Utility Plans	8 wks	Thu 5/15/25
369	**Structure Plans**	**40 days**	**Thu 1/15/26**
370	Prado Road Mainline Bridge Plans	8 wks	Thu 1/15/26
371	Prado Road/US 101 Offramp Bridge Plans	8 wks	Thu 1/15/26
372	Prado Road/US 101 Onramp Bridge Plans	8 wks	Thu 1/15/26
373	Preliminary Engineers Estimate	3 wks	Thu 3/12/26
374	Internal QA/QC	2 wks	Thu 4/2/26
375	Draft Plan Package Assembled	3 wks	Thu 4/16/26
376	City Review/3rd Party Review	3 wks	Thu 5/7/26
377	Update Plans & Response to Comments	4 wks	Thu 5/28/26
378	Submit Draft Final Plans	0 days	Wed 6/24/26
379	Caltrans/City Review	4 wks	Thu 6/25/26
380	Update Plans & Response to Comments	4 wks	Thu 7/23/26
381	Submit Final Draft Plans	0 days	Wed 8/19/26
382	Caltrans/City Review	4 wks	Thu 8/20/26
383	**NEXT STEPS**	**55 days**	**Thu 9/17/26**
384	Scoping Document Summarizing Conceptual Phase and Recommendations	3 wks	Thu 9/17/26
385	Simplified Proposal for PHASE II WORK PLAN	3 wks	Thu 9/17/26
386	City Approval of Phase II Work Plan	8 wks	Thu 10/8/26
387	**PHASE II WORK PLAN**	**705 days**	**Wed 12/2/26**
388	Phase II NTP	0 days	Wed 12/2/26
389	General Project Management	19 mons	Thu 12/3/26
390	**Project Management Plan**	**704 days**	**Thu 12/3/26**
391	QMP	3 wks	Thu 12/3/26
392	**Risk Management Plan**	**630 days**	**Wed 3/17/27**
423	**Schedule Management**	**630 days**	**Wed 3/17/27**
454	**PDT MEETINGS**	**630 days**	**Wed 2/10/27**
485	**Project Technical Focus Virtual Meetings (15)**	**560 days**	**Wed 3/17/27**
501	**Grant Application Assistance**	**80 days**	**Thu 12/3/26**
502	Yearly Report of Grant Opportunities	8 wks	Thu 12/3/26
503	Grant Application Assistance	8 wks	Thu 1/28/27
504	**Advisory Body Assistance (ARC, PC, others)**	**456 days**	**Fri 5/7/27**
505	**4- Meetings in Person as Technical Support**	**325 days**	**Wed 5/12/27**
510	**Lead 8-Prep Meetings with City Staff**	**456 days**	**Fri 5/7/27**
519	**Public Outreach**	**576 days**	**Thu 12/3/26**
520	Develop Project Fact Sheet	8 wks	Thu 12/3/26
521	Pubilc Meeting Near 90%	0 wks	Wed 12/29/27
522	**Outreach Efforts**	**522 days**	**Wed 2/17/27**
523	Residences/Businesses in Project Area	3 wks	Thu 12/2/27
524	Mass Mailer #1	3 wks	Thu 12/2/27
525	Mass Mailer #2	3 wks	Thu 6/8/28



ID	Task Name	Duration	Start
526	**8-Press Releases**	**455 days**	**Fri 5/21/27**
535	**City Webpage Monthly Updates**	**500 days**	**Fri 3/5/27**
560	**Collateral Materials for 8-Events**	**455 days**	**Wed 2/17/27**
569	**Public Meeting**	**10 days**	**Wed 7/19/28**
570	1-Meeting Post 90%	0 wks	Wed 7/19/28
571	Meeting Minutes, Comment Matrix, Capture Proposed Changes to Address Public Comments	2 wks	Thu 7/20/28
572	**Next Steps**	**55 days**	**Thu 12/21/28**
573	Scoping Narrative Documentation for Design Decisions and Reasoning	3 wks	Thu 12/21/28
574	Simplified Proposal for Phase III Work Plan	3 wks	Thu 12/21/28
575	City Authorization for Phase III Work Plan	8 wks	Thu 1/11/29
576	**UTILITY COORDINATION**	**280 days**	**Thu 12/3/26**
577	**Coordination Meetings with Utilities**	**140 days**	**Thu 12/3/26**
578	Field Meeting #1	0 days	Wed 12/16/26
579	Field Meeting #2	0 days	Wed 6/16/27
580	Virtual Meeting #1	0 days	Thu 12/3/26
581	Virtual Meeting #2	0 days	Thu 6/3/27
582	**Determine ROW Needs for Utilities**	**15 days**	**Thu 12/9/27**
583	Confirm ROW Needs for Utilities	3 wks	Thu 12/9/27
584	Pothole Exhibits to City Polholing Vendor	3 wks	Thu 12/9/27
585	Utility B Letters	8 wks	Thu 12/3/26
586	**Develop Caltrans Utility Reports of Investigation**	**160 days**	**Thu 1/28/27**
587	Confirm Liability Determination	8 wks	Thu 1/28/27
588	Assemble Prior Rights Documentation & Review of Prelim Title Reports	8 wks	Thu 1/28/27
589	Draft Utility Agreements	8 wks	Thu 1/28/27
590	Draft Notice to Owners	4 wks	Thu 1/28/27
591	Assemble Complete ROI Packages For Each Utility	8 wks	Thu 3/25/27
592	City Review of ROI Package	4 wks	Thu 5/20/27
593	Update ROI Package	4 wks	Thu 6/17/27
594	Caltrans/City Review of ROI Submittal	4 wks	Thu 7/15/27
595	Final ROI Package	4 wks	Thu 8/12/27
596	Contirm Utility Relocation Needs and Review of Utility Relocation Plan	8 wks	Thu 1/28/27
597	Utility C Letters	8 wks	Thu 9/9/27
598	**ROW COORDINATION**	**350 days**	**Thu 2/25/27**
599	Finalize ROW Map for Proposed Takes and Utility Needs	8 wks	Thu 2/25/27
600	**Right of Way Engineering**	**140 days**	**Thu 2/25/27**
601	Caltrans Appraisal Map	8 wks	Thu 2/25/27
602	Caltrans Review of Appraisal Map	4 wks	Thu 4/22/27
603	Plats & Legal Descriptions	4 wks	Thu 5/20/27
604	Caltrans/City Review	4 wks	Thu 6/17/27
605	Final Plats & Legals	4 wks	Thu 7/15/27
606	Coordination with ROW Acquisition Agent	4 wks	Thu 8/12/27
607	**Right of Way Appraisals**	**80 days**	**Thu 6/17/27**
608	Prepare Appraisals	8 wks	Thu 6/17/27
609	Caltrans/City Review	4 wks	Thu 8/12/27
610	Update Appraisal	4 wks	Thu 9/9/27
611	**Right of Way Acquisitions**	**190 days**	**Thu 10/7/27**
612	Issue First Written Offer	4 wks	Thu 10/7/27
613	Property Owner Negoiations	4 wks	Thu 11/4/27
614	Finalize acquistions	26 wks	Thu 12/2/27
615	Draft Right of Way of Certification	4 wks	Thu 6/1/28
616	**65% PS&E**	**265 days**	**Thu 12/3/26**
617	**Prepare Draft Plans**	**200 days**	**Thu 12/3/26**
618	**Roadway Plans**	**60 days**	**Thu 12/3/26**
619	Roadway plans	12 wks	Thu 12/3/26
620	Signal & Lighting Plans	8 wks	Thu 12/31/26
621	Landscape Concept Plans	8 wks	Thu 12/31/26
622	Drainage Concept Plans	8 wks	Thu 12/31/26
623	Traffic Handling/Stage Construction Plans	8 wks	Thu 12/31/26
624	Confirm Right of Way	8 wks	Thu 12/31/26
625	Wet Utility Plans	8 wks	Thu 12/31/26
626	**Bridge Design**	**40 days**	**Thu 12/24/26**
627	Prado Road Mainline Bridge Plans	8 wks	Thu 12/24/26
628	Prado Road/US 101 Offramp Bridge Plans	8 wks	Thu 12/24/26
629	Prado Road/US 101 Onramp Bridge Plans	8 wks	Thu 12/24/26
630	**Final Aesthetic Development**	**125 days**	**Thu 2/18/27**
631	Develop Admin Draft Plan	4 wks	Thu 2/18/27
632	Consor Review and Update	1 wk	Thu 3/18/27
633	Submit Admin draft	0 wks	Wed 3/24/27
634	City Review	2 wks	Thu 3/25/27
635	Update Draft	4 wks	Thu 4/8/27
636	Draft Review Caltrans/City	4 wks	Thu 5/6/27
637	1ST Round Response to Comments	2 wks	Thu 6/3/27
638	Submit Updated Draft	0 wks	Wed 6/16/27

ID	Task Name	Duration	Start
639	Caltrans/City Review	4 wks	Thu 6/17/27
640	2ND Round Response to Comments	2 wks	Thu 7/15/27
641	Final Aesthetic Plan	2 wks	Thu 7/29/27
642	Assemble Draft Plans	4 wks	Thu 8/12/27
643	Design Standards Decision Document	4 wks	Thu 8/12/27
644	Utility Encroachment Variance Request If Needed	4 wks	Thu 8/12/27
645	Prepare Draft Quantities and Estimate	4 wks	Thu 9/9/27
646	Prepare Draft Special Provisions	4 wks	Thu 9/9/27
647	Internal QA/QC	2 wks	Thu 10/7/27
648	City Review	1 wk	Thu 10/21/27
649	Update Plans	2 wks	Thu 10/28/27
650	Submit 65% PS&E to District	0 days	Wed 11/10/27
651	Submit 65% PS&E to Structures	0 days	Wed 11/10/27
652	Independent Check	4 wks	Thu 11/11/27
653	65% Constructability Review	4 wks	Thu 11/11/27
654	Caltrans Functional Unit Review and Structures Review	4 wks	Thu 11/11/27
655	**90% PS&E**	**160 days**	**Thu 12/9/27**
656	Comment Resolution Documentation 65% Reviews and incorporate comments	4 wks	Thu 12/9/27
657	Update PS&E	8 wks	Thu 1/6/28
658	Final Plan Package	4 wks	Thu 3/2/28
659	Final Estimate	2 wks	Thu 3/30/28
660	Final Specifications	2 wks	Thu 3/30/28
661	Internal QA/QC	2 wks	Thu 4/13/28
662	Update Package	4 wks	Thu 4/27/28
663	City Review/3rd Party Review	2 wks	Thu 5/25/28
664	Update Plans	2 wks	Thu 6/8/28
665	Submit 90% PS&E to District	0 days	Wed 6/21/28
666	Submit 90% PS&E to Structures	0 days	Wed 6/21/28
667	District Functional Unit Reviews, Safety Review, Constructability Review	4 wks	Thu 6/22/28
668	Structures Review	4 wks	Thu 6/22/28
669	**100% PS&E**	**110 days**	**Thu 7/20/28**
670	Comment Resolution Documentation 95% Reviews and incorporate comments	2 wks	Thu 7/20/28
671	Update PS&E	4 wks	Thu 8/3/28
672	Final Plan Package	4 wks	Thu 8/31/28
673	Final Estimate	2 wks	Thu 9/28/28
674	Final Specifications	2 wks	Thu 9/28/28
675	Internal QA/QC	2 wks	Thu 10/12/28
676	City Review	2 wks	Thu 10/26/28
677	Update Plans	2 wks	Thu 11/9/28
678	Submit 100% PS&E to District	0 days	Wed 11/22/28
679	Submit 100% PS&E to Structures	0 days	Wed 11/22/28
680	District Functional Unit Reviews	4 wks	Thu 11/23/28
681	Structures Review	4 wks	Thu 11/23/28
682	**Final PS&E**	**110 days**	**Thu 12/21/28**
683	Comment Resolution Documentation 100% Reviews	2 wks	Thu 12/21/28
684	Update PS&E	4 wks	Thu 1/4/29
685	Final Plan Package	2 wks	Thu 2/1/29
686	Final Estimate	2 wks	Thu 2/1/29
687	Final Specifications	2 wks	Thu 2/1/29
688	Internal QA/QC	2 wks	Thu 2/15/29
689	RE Pending File	2 wks	Thu 3/1/29
690	Geotechnical Information Handout	2 wks	Thu 3/1/29
691	Materials Informaiton Handout	2 wks	Thu 3/1/29
692	Design Cross Sections and Staking Notes	2 wks	Thu 3/1/29
693	Right of Way Certification	2 wks	Thu 3/1/29
694	Assemble Final PS&E Package	2 wks	Thu 3/15/29
695	Submit Final PS&E	0 wks	Wed 3/28/29
696	Caltrans/City Review	4 wks	Thu 3/29/29
697	Update Pacakage	2 wks	Thu 4/26/29
698	Assemble Final Advertise Ready Package	2 wks	Thu 4/26/29
699	Caltrans Approval of Encroachment Permit to Construct	2 wks	Thu 5/10/29
700	City Advertise Project	8 wks	Thu 5/24/29
701	City Award Project	4 wks	Thu 7/19/29



Conflict of Interest

consor

Conflict of Interest Statement

Consor does not have any financial, business, or other relationship with the City of San Luis Obispo that may have an impact upon the outcome of this project. Consor does not have any clients who have a financial interest in the outcome of this consultant services agreement. Consor will be able to comply with the requirements of the City's Conflict of Interest Statement during the duration of this project.

Local Presence

consor

Local Presence

Consor has an established office in the City of San Luis Obispo.

Our office location is:
364 Pacific Street, 1st Floor
San Luis Obispo, CA 93401

References

consor

References

Consor has experience completing feasibility studies, preliminary studies, PS&Es, and other technical documents needed to take this project from concept to construction. Our expertise and success with public outreach as well as designing and supporting construction of interchanges can give the City confidence that the Consor team can provide a PS&E that accurately and comprehensively considers trade-offs for alternatives and impacts to the public. We are eager to partner with the City of San Luis Obispo to help make the US 101/Prado Road Interchange a reality. Below are three references from recent similar projects that will give the City a sense of what it is like to work with our team.

Project: US 50 HOV/LATROBE ROAD/EL DORADO HILLS BOULEVARD INTERCHANGE IMPROVEMENTS PHASED PROJECTS

COUNTY OF EL DORADO
Matt Smeltzer, Deputy Director of Engineering
E: matt.smeltzer@edcgov.us
P: 530.621.5912

Project: SR-4/BALFOUR ROAD INTERCHANGE

CONTRA COSTA TRANSPORTATION AUTHORITY
Ivan Ramirez
E: iramirez@ccta.net
P: 925.256.4737

Project: ATWATER-MERCED EXPRESSWAY PHASE 1B

MERCED COUNTY DEPARTMENT OF PUBLIC WORKS
Nathan Bray, Public Works Director
E: nathan.bray@countyofmerced.com
P: 209.385.7601

Exceptions to Standard Agreement

consor

Exceptions to the Standard Agreement

Consor respectfully requests the City consider the following revisions to the Standard Agreement. Requested revisions are indicated by red font.

25. Hold Harmless and Indemnification.

To the fullest extent permitted by law (including, but not limited to California Civil Code Sections 2782 and 2782.8), Consultant shall indemnify, defend, and hold harmless the City, and its elected officials, officers, employees, authorized volunteers, and agents ("City Indemnitees"), from and against any and all causes of action, claims, liabilities, obligations, judgments, or damages, including reasonable legal counsels' fees and costs of litigation ("claims"), arising out of the Consultant's negligent performance or Consultant's failure to perform its obligations under this Agreement or out of the operations conducted by Consultant, including the City's passive negligence, except for such loss or damage arising from the ~~sole or active~~ negligence or willful misconduct of the City. Notwithstanding the foregoing, in no event shall Consultant's obligations under this section extend to the proportionate share of fault of any indemnified party. In the event the City Indemnitees are made a party to any action, lawsuit, or other adversarial proceeding arising from Consultant's performance of this Agreement, the Consultant shall provide a defense to the City Indemnitees or at the City's option, reimburse the City Indemnitees their costs of defense, including reasonable legal fees, incurred in defense of such claims.

The review, acceptance or approval of the Consultant's work or work product by any indemnified party shall not affect, relieve or reduce the Consultant's indemnification or defense obligations. This Section survives completion of the services or the termination of this contract. The provisions of this Section are not limited by and do not affect the provisions of this contract relating to insurance.

Appendix – Resumes

consor

R. Brent Lemon, PE, PMP

Project Manager

EXPERIENCE
38 years

EDUCATION
MS, Civil Engineering, California State University, Fresno

BS, Civil Engineering, California State University, Fresno

REGISTRATION
Professional Civil Engineer-CA #46715

Project Management Institute-PMP Cert #2022265

YEARS WITH CONSOR
16 years

Brent will leverage his 38 years of public-sector experience providing oversight on projects and will act as an advisor and advocate for clients and mentor for staff. Brent has extensive experience on both the public agency and consultant side. His career includes 18 years at Caltrans where he served in many roles including: Staff Engineer, Project Engineer, Design Engineer, Geometric Reviewer, Design Manager, and Capital Delivery Manager while delivering projects statewide. He provides a valuable perspective on transportation projects that span major interchanges, bridges, corridor studies, roundabouts, roadways, and trails. He has led numerous design teams in the development of Project Study Reports, Project Reports, and PS&Es. From the smallest to the largest, most complex project, the thing that sets Brent apart is his second-to-none project management and collaboration skills.

Select Project Experience

ATWATER - MERCED EXPRESSWAY PHASE 1B, Merced County, CA; *Project Manager & Principal-In-Charge.* Brent was responsible for developing the Environmental Document, Report Project, and PS&E package for the construction of approximately one mile of new expressway near State Route 99 south of the City of Atwater in Merced County. The project evaluates several alternative alignments for a two-mile segment of four-lane divided expressway. Improvements will be phased with Phase 1B constructing approximately one mile of the new expressway consisting of a two-lane interim facility which is expected to facilitate ongoing economic development through improved freight mobility (including accessibility to the Mid-California International Trade District), and benefit surrounding communities with increased safety, air quality, and mobility to nearby schools, residences, and businesses.

STATE ROUTE 4 BALFOUR ROAD INTERCHANGE; City of Brentwood, Contra Costa County, CA; *Project Manager.* A phased interchange improvement project to convert an existing at-grade intersection with the City of Brentwood to an interchange. The project included significant utility relocations involving PG&E transmission towers, PG&E underground joint trench construction with AT&T, Comcast and the City participating, relocation of a 10-inch Kinder Morgan high-pressure oil line and booster station, Contra Costa Water District 90-inch Los Vaqueros Pipeline. As the project manager, Brent led the utility effort and developed reports of investigation, utility agreements and staging plans to accomplish the work without disruption to service. The interchange area provides access to a high school, middle school and regional medical center which necessitated access to these facilities throughout construction. John Muir Regional Medical facility included a Helipad adjacent to the freeway and required the proposed improvements meet FAA clearance requirements. Brent also led the efforts with the East Contra Costa Habitat Conservancy, coordinated permitting agreements and monitoring report requirements. He provided direction for the completion of the environmental revalidation which required three separate addendums through the life of the design phase of the project. Lead the project team in concert with working with Caltrans functional units to obtain project approvals, the City of Brentwood, the SR4 Bypass Authority, Contra Costa County (performing right of way acquisitions) and the Contra Costa Transportation Authority.

US 50 EL DORADO HILLS/LATROBE ROAD INTERCHANGE PHASE 2B, El Dorado County, CA; *Project Manager.* Brent served as project manager for this phased interchange improvement project delivered within 2 ½ months from the notice to proceed. This unprecedented accelerated delivery was in response to the County DOT's desire to capture CMIA fund savings and further the completion of ultimate interchange improvements. The project included right-of-way acquisitions, utility relocations (PG&E electric, AT&T fiber, and Comcast fiber), ACOE Nation Wide Permit, signalized

intersections, ramp metering, a new off-ramp bridge and complex staging. Expedited approvals were completed for mandatory and advisory design exceptions and longitudinal utility encroachment exceptions approval through Caltrans Headquarters. Consor was able to capture over $16 million in construction funding for this project which is currently under construction.

US 50/PHASE 1 HOV LANE (PS&E), El Dorado County, CA; *Project Manager.* Responsible for preparing the PS&E of initial improvements within the corridor (Phase 1 HOV Lane Project), which were constructed as part of the Governor's Corridor Mobility Improvement Account (Prop 1B). This complex project was delivered in less than 12 months from notice to proceed to advertised construction documents. Development of the project plans included coordinating with five separate environmental documents, performing an environmental revalidation during the PS&E phase, developing complex stage construction plans for replacement of the Latrobe Road UC while maintaining local road access within the interchange, widening of the Clarksville UC, coordination of high risk utility facilities, obtaining approval for a Longitudinal Utility Encroachment Exception from Caltrans, approvals of mandatory and advisory design exceptions and developing a pavement rehabilitation strategy for 3-miles on mainline U.S. 50. Pavement rehabilitation included establishing a new profile grade, variable depth paving, and cross slope corrections.

STATE ROUTE 20/WESTERN PARKWAY, YUBA CITY, CA; *Project Manager.* Responsible for delivery of a PSR/PR, preparing the environmental document, obtaining City approval for local street access modifications, obtaining California Transportation Commission approval for a new connection to State Route 20, and developing the project plans, specifications, and estimate for this major intersection and local street improvement project. This project was delivered in two phases, the first phase of improvements were included in a construction contract change order to an on-going Caltrans administered contract on SR20 to perform pavement rehabilitation on the mainline highway. This first phase required development of the change order, specifications and estimate for the Caltrans Resident Engineer to negotiate and administer in the field. Improvements implemented were widening SR 20 for a right & left turn pockets, paving the median, correcting superelevation and drainage improvements. This approach saved the City over $1 million in estimated capital improvement costs. The second phase involved construction of the local street "T" Intersection improvements which included utility relocations, signals, lighting, drainage, Caltrans right-of-way mapping, recording quit claim deeds for Caltrans and local agency right-of-way changes. The second phase was constructed by the local agency under a Caltrans encroachment permit.

OLD DAVIS ROUNDABOUT, UNIVERSITY OF CALIFORNIA, DAVIS; *Project Engineer.* A project to improve the Old Davis Road intersection with California Avenue on the campus of the University of California, Davis. This intersection is the main campus entrance for Interstate 80 traffic exiting to the campus. The improvements are compatible with future facility expansion plans adjacent to the project area. This required the Consor team to utilize AutoCAD files from the university's GIS system for base mapping preparation. The project had an expedited delivery time line which required the final PS&E package to be developed within a four-month time frame.

PEASE ROAD INTERCHANGE PROJECT REPORT, CITY OF YUBA CITY, CA; *Project Manager.* Responsible for developing interchange alternatives and preparing the Project Report and coordinating the Environmental Document for this interchange project. Interchange alternatives included a Type L-2 with roundabouts at the ramp intersections, a Type L-7, and a Type L-9.

STATE ROUTE 246/ALAMO PINTADO ROAD, SOLVANG, CA; *Project Manager.* Responsible to develop a Project Study Report (PSR) for traffic operational improvements to the State Route 246 and Alamo Pintado Road intersection. Developed a multi-lane roundabout alternative and worked closely with Caltrans in facilitating Design Workshops between the City and Caltrans to obtain approval of the Roundabout Concept Approval Report. The project also involved developing a conventional intersection widening alternative to provide the necessary capacity. Other issues that were addressed included bridge replacement/widening alternative investigation, hydraulic studies of Alamo Pintado Creek, access management of multiple ingress/egress points on intersection approaches, development of alternative creek crossings for a Class 1 bike path, utility relocations, and development of a roundabout north of the study intersection.

BRIDGE STREET BRIDGE (HBP), CITY OF ARROYO GRANDE, CA; *Roadway Project Engineer.* Responsible for design alternatives for this historic bridge (built in 1908) replacement project. Replacement or rehabilitation of the structure will require closure of the local road in a highly sensitive historic district of down town Arroyo Grande. Public outreach efforts have included the community, business interests, and the historic society. The existing bridge is a steel truss that is both functionally obsolete and structurally deficient. The replacement structure needed to clear span the Arroyo Grande Creek approximately 115 feet. The rehabilitation of the existing bridge maintained the same span lengths, although all of the substructure needed to be replaced. Utility relocations included a six-inch gas main. This project required close coordination with Caltrans to navigate the Section 106 Process, development of the FNOAE, evaluation of 4f impacts both for historic resource and park access. This project also involved close coordination with several stakeholder groups including historic societies all closely monitoring project. Project was completed in February 2021.

Dace Morgan, PE

Deputy Project Manager/Roadway Project Engineer

EXPERIENCE
28 years

EDUCATION
MS, Structural Engineering, University of California, Berkeley

BS, Civil Engineering, University of California, Davis

REGISTRATION
Professional Engineer-CA #54408

YEARS WITH CONSOR
4 years

As a former Deputy Director of Transportation for the County of Santa Barbara, Dace has experience working with citizen groups, regulatory agencies, boards and commissions, and special interest groups which will be of great value to all her clients. She has over 26 years of experience on transportation projects in both design and construction and spent over 9 years with the Public Works Department of the County of Santa Barbara where she spent 4 years as the Deputy Director responsible for the Transportation Division. Dace brings a strong project management background as well as a wealth of experience in civil, transportation, and bridge design. She also has a wealth of knowledge of Federal, State, and Local Transportation Funding.

Select Project Experience

DEL RIO ROAD/US 101 INTERCHANGE IMPROVEMENTS, City of Atascadero, CA; *Project Engineer.* Responsible for the preparation of the PSR for the interchange improvements at the Del Rio Road/US 101 Interchange. The improvements consist of two roundabouts, one at each ramp termini and planning for a third roundabout at the local frontage road. Dace worked closely with the internal and external team members to successfully complete the PID phase of the project.

US 101/BETTERAVIA INTERCHANGE IMPROVEMENTS, City of Santa Maria, CA; *Project Manager.* The City of Santa Maria was experiencing a large amount of development on the Enos Ranchos property just west of the US 101/Betteravia Interchange. As a result of this development and other growth within the City, improvements to the interchange were needed. Dace and her team worked with the City to develop an interim solution to increase vehicle storage on eastbound Betteravia for vehicles wanting to access northbound US 101 and widening the southbound US 101 offramp to accommodate a dedicated right turn lane. Dace was the Project Manager responsible for the PS&E package for the improvements and the PEER document for the Caltrans Encroachment Permit. The project offered much needed relief for the interchange and allowed the City to work with Caltrans on needed long term improvements to the interchange.

PRADO ROAD BRIDGE WIDENING, City of San Luis Obispo, CA; *Roadway Project Engineer.* The existing bridge is a constriction point for vehicles traveling along Prado Road between South Higuera and US 101 and is in need of widening for current and future traffic volumes. The existing three-span bridge structure is going to be replaced with a single-span bridge to offer protection to an existing 24-inch diameter gravity sewer line in times of high-flow. A dual retaining wall system will be constructed along the creek banks to provide additional hydraulic capacity and sour protection for the new bridge.

CENTRAL AVENUE OVERPASS, City of Newark, CA; *Independent Check.* Responsible for the independent check of the overhead structure for Central Avenue over the Union Pacific Railroad (UPRR) right-of-way, between Sycamore Street and Morton Avenue. The bridge structure is a 940-foot-long,, seven-span precast, prestressed California Wide Flange bridge. The bridge is supported on large diameter cast-in-drilled hole concrete piles. The design and the check of the bridge was made additionally more complicated given the varying heights of the bents. This resulted in the need to balance the stiffnesses between the eight supports to meet current Caltrans Seismic Design Criteria. This balance was achieved through different connections between the superstructure and substructure and between the dropped bent cap and the concrete columns. The bridge width varied from just over 74 feet wide to 84 feet wide. Given the amount of variations in the geometry of the bridge, an independent check was performed on all eight supports, the seven girder spans, and multiple girders per span.

Mark Reno, PE

Principal-in-Charge

consor

EXPERIENCE
36 years

EDUCATION
BS, Civil Engineering,
University of California, Davis

REGISTRATION
Professional Engineer-
CA # 47756

YEARS WITH CONSOR
22 years

With 36 years of experience, Mark has been involved in and responsible for the PS&E and construction support of over 170 projects involving more than 280 bridges, primarily throughout California and other western states. These projects have included new structures, widenings, upgrades, retrofits, as well as retaining structures, storm damage and emergency projects. Mark is a nationally recognized bridge engineer and project manager and serves on several national committees and boards. He has also been involved in delivering projects in Caltrans District 5 for nearly 30 years. His extensive project experience coupled with his many agency and resource contacts enables him to effectively manage and deliver successful transportation projects. He also brings a keen understanding of local, state, and federal funding programs. Mark is a former Branch Chief in Caltrans Division of Structures and has extensive experience delivering Caltrans on-system projects not only internally to Caltrans but also externally working as a consultant for Local Agencies.

Mark brings a solid understanding of the City's staff, processes and has worked with various City staff on multiple projects with other agencies. In addition, he maintains strong relationships with the City, Utility, Regulatory Agencies and Caltrans District 5 personnel.

Select Project Experience

TRAFFIC WAY BRIDGE REPLACEMENT, City of Arroyo Grande; *Principal-In-Charge, Project Manager.* Mark was responsible for completing the preliminary scour evaluation of the bridge and then supported the City in securing Highway Bridge Program (HBP) federal funds for the replacement of this scour-critical bridge. Mark has led the team in the development of all the necessary documents for the NEPA and CEQA clearance and is currently closing out the right of way phase. Mark proposed the early NEPA delivery alternative on this project which has saved one year of the overall delivery. This project requires a complex and out of the box solution for construction access, has eliminated the need for any permanent right of way acquisitions and required coordination with Caltrans for various encroachment requirements and permits of the project. Currently scheduled for construction in 2025.

I-680/SR 4 INTERCHANGE (PHASES 1, 2A & 4), Contra Costa County; *Project Manager.* Under contract to Contra Costa Transportation Authority (CCTA), responsible for independent quality control review of the entire project design submittals including both Roadway and Structures elements. This project includes the increase and reconfiguration of the current interchange requiring large direct connector ramps. Responsible for providing quality control review of reports, advanced planning studies, type selection reports, DIB-78, proposed design exception listings, providing constructability reviews, quality control reviews of engineering plans for 35%, 65%, 95% & 100% submittals prior to submittal to Caltrans. Structures including widenings, retaining walls, connectors.

STATE ROUTE 4 BALFOUR ROAD INTERCHANGE; City of Brentwood, Contra Costa County, CA; *Principal-in-Charge.* Mark was responsible for this intersection replacement project. His team developed a project study report/project report and prepared the PS&E package to construct a grade-separated interchange at State Route 4 and Balfour Road in the City of Brentwood. The interchange replaced an at-grade intersection and included the construction of bridges, utility relocation, drainage facilities, and traffic signals. The replacement also required coordination with Caltrans, Contra Costa Transportation Authority, the City of Brentwood, the local regional water quality control board, and various utility agencies.

consor

EXPERIENCE
24 years

EDUCATION
BS, Civil Engineering,
University of California, Davis

REGISTRATION
Professional Engineer-
CA #82850

YEARS WITH CONSOR
24 years

Greg Young, PE

Quality Assurance/Quality Control - Bridge Design

With over 20 years of tenure at Consor, Greg started as a student intern and has now served as a Project Manager, Project Engineer, Design Engineer, Assistant Resident Engineer, and Structure Representative on a variety of California transportation projects. What makes Greg's experience unique is that he has spent approximately 25 percent of his time in the field. As a result, Greg approaches every PS&E package with constructability as one of the primary considerations. He is an HBP project specialist and uses his strong technical background in conjunction with his knowledge of the federally funded project process to successfully navigate the design, environmental, utility and right-of-way phases.

Select Project Experience

SHELDON ROAD INTERCHANGE, City of Elk Grove, CA; *Design Engineer.* Replacement structures for the Sheldon Road Interchange over Highway 99. The two-span overcrossing structure (approximately 148-feet wide and 273-feet long) is a cast-in-place, prestressed concrete box girder bridge that was designed to be built in stages so that traffic on Sheldon Road could be maintained throughout construction. This project also involved the design and construction of a free-standing soldier pile wall with a free height of 16.5 feet placed along the edge of the Highway 99 shoulder, near an historic cemetery. In addition, this project involved the design of a replacement Pump-Plant Station to maintain the drainage of the low-point of Highway 99.

BRIDGE STREET BRIDGE REHABILITATION (HBP), City of Arroyo Grande, CA; *Project Engineer.* Responsible for design alternatives for this historic bridge (built in 1908) replacement project. Replacement or rehabilitation of the structure will require closure of the local road in a highly sensitive historic district of down town Arroyo Grande. Public outreach efforts have included the community, business interests, and the historic society. The existing bridge is a steel truss that is both functionally obsolete and structurally deficient. The replacement structure needed to clear span the Arroyo Grande Creek approximately 115 feet. The rehabilitation of the existing bridge maintained the same span lengths, although all of the substructure needed to be replaced. Utility relocations included a six-inch gas main. This project required close coordination with Caltrans to navigate the Section 106 Process, development of the FNOAE, evaluation of 4f impacts both for historic resource and park access. This project also involved close coordination with several stakeholder groups including historic societies all closely monitoring project.

BELLO STREET BRIDGE REPLACEMENT (HBP), City of Pismo Beach, CA; *Project Engineer.* Responsible or the preliminary engineering and final PS&E for this bridge replacement project. Consor approached the City of Pismo Beach with an opportunity to secure HBP funding for a bridge that was identified as a "closed bridge" (i.e., a bridge taken out of the National Bridge Inventory [NBI] and therefore not eligible for Federal Funding). Consor got the bridge added back into the NBI and therefore eligible for HBP funding. This project provides a key link back into the City's network and direct access to the City's recreation fields and maintenance facilities. The bridge also connects the City's bike and pedestrian trails.

SANTA LUCIA BRIDGE REPLACEMENT (HBP), City of Atascadero, CA; *Project Engineer.* Responsible for the replacement of the existing 45-foot-long, conventionally-reinforced concrete T-beam span. This structure is located within a narrow strip of City right-of-way and is flanked by private property on both sides. This condition presented a challenge as the bridge provides the sole access to this rural residential area. Given the higher ADT, keeping traffic open during construction was a primary consideration. Consor presented several traffic staging alternatives to the City along with the pros and cons of each alternative. This allowed the City to make the best decision for their residents which resulted in less public impact and political fallout.

Scott McCauley, PE

Bridge Lead Engineer

consor

EXPERIENCE
21 years

EDUCATION
MS, Civil Engineering,
University of California, Davis

BS, Civil Engineering,
University of California, Davis

REGISTRATION
Professional Engineer-
CA #88532

YEARS WITH CONSOR
11 years

Scott is a structural design engineer with experience on bridges, civil structures, and building design projects. He has over 18 years of experience in the design of several bridge projects, retaining walls, and masonry buildings, as well as other miscellaneous hydraulic structures. Scott has been involved in Caltrans and local agency projects in addition to private developer projects.

Select Project Experience

STATE ROUTE 4 BALFOUR ROAD INTERCHANGE; City of Brentwood, Contra Costa County, CA; *Structural Designer.* The conversion of a two-lane expressway (and at-grade intersection) to a four-lane divided Highway and I/C. This project included the following four structures: (1) Deer Creek Bridge, a single-span, 160-foot-long by 71-foot-wide precast girder bridge; (2) Deer Creek Bridge at EB SR4 On-ramp Bridge, a single-span, 100-foot-long by 48-foot-wide reinforced concrete, box girder bridge on a 150-foot radius curve; (3) Balfour Road UC – Bridge, a two-span, 195-foot-long by 92-foot-wide precast girder bridge, of which the design utilized an integral bent cap with continuous post-tensioning; (4) Deer Creek MSE Retaining Wall, a 104-foot-long by 22-foot-high MSE wall.

I-880, 23RD AVENUE AND 29TH AVENUE OPERATIONAL AND SAFETY IMPROVEMENT PROJECT, Alameda County Transportation Commission, Oakland, CA; *Structural Designer.* Responsible for the design of eight Mechanically Stabilized Embankment (MSE) walls, one Sound Wall on Barrier/ Retaining Wall, and one concrete cantilever retaining wall. Design has included single stage MSE walls as well as multiple stage constructed geosynthetic reinforced walls to support the approach embankments for the proposed bridges. Also prepared Type Selection Report, design calculations, and final plans for the construction of the walls. For Phase I (PSR/PR) of this $75 million project, responsibilities consisted of the production of an Advanced Planning Study (APS) for two proposed bridge replacements, including 23rd Avenue Overcrossing and the 29th Avenue Overcrossing.

INTERSTATE 15/CALIFORNIA OAKS ROAD INTERCHANGE BRIDGE WIDENING, City of Murrieta, CA; *Structural Designer.* Responsible for the design of two (2) single-span, cast-in-place post-tensioned reinforced box girder bridges and two tieback walls. Prepared Type Selection Report, structural design calculations, engineer's estimate and final plans for construction. Limited vertical clearance required the superstructure to be constructed above final grade then lowered into place.

PRADO ROAD BRIDGE WIDENING, City of San Luis Obispo, CA; *Project Manager.* This project replaced the existing Prado Road Bridge with a new bridge and two retaining walls to support the new Prado Road improvements. The existing bridge is a constriction point for vehicles traveling along Prado Road between South Higuera and US 101 and is in need of widening for current and future traffic volumes. The existing three-span bridge structure will be replaced with a single-span precast concrete wide flange girder bridge which will offer protection to an existing 24-inch diameter gravity sewer line in times of high-flow. Retaining walls will be constructed along the creek banks to provide additional hydraulic capacity and scour protection for the new bridge. The existing Bob Jones Pedestrian bridge will also be relocated on to new abutment supports located further downstream to avoid conflict with the new wider Prado Road Bridge.

consor

Ashley Hanson, PE

Bridge Design Engineer

EXPERIENCE
5 years

EDUCATION
BS, Civil Engineering, California State University, Chico

REGISTRATION
Professional Engineer- CA #94887

YEARS WITH CONSOR
5 years

Ashley is a talented and enthusiastic Project Engineer, who excels at managing assigned tasks in support of Consor engineers on multiple projects with specific duties including geometric design, calculating road quantities, spec writing, and support with AutoCad and Microstation.

Select Project Experience

HUER HUERO CREEK BRIDGE & ROUNDABOUT, City of Paso Robles, CA; *Bridge Designer.* Responsible for the design of a new, four span bridge over Huer Huero Creek in Paso Robles, California. The Huer Huero Creek Bridge is part of a greater project to construct a realignment of Airport Road. The project is a response to increased traffic demands on Highway 46 in the eastern portion of Paso Robles. The bridge is a cast-in-place, post-tensioned Concrete, box girder bridge on multi column piers with drilled shafts. The bridge design required significant coordination efforts for utilities, hydraulic, and foundation design. Services provided included type selection and the production of plans, specs, quantities, and cost estimates.

MID HIGUERA BYPASS AND BIANCHI LANGE BRIDGE, City of San Luis Obispo, CA; *Independent Check.* Performed the GP Estimate on this project to replace a single-span steel plate girder bridge approximately 64 feet long and 16 feet wide with a two-span, 120' long bridge founded on Cast-In-Drilled-Hole (CIDH) deep foundations.

LOPEZ DRIVE BRIDGE RETROFIT, San Luis Obispo County, CA; *CADD.* Performed redlines and minor design for the existing Lopez Drive Bridge spanning over Lopez Lake in San Luis Obispo County, CA. The existing three-span precast concrete girder structure, founded on pier wall substructure, is founded on soil material highly susceptible to liquefaction and lateral spreading. Responsibilities included the seismic evaluation and design calculations, preparation of a Retrofit Strategy Report, and preparation of plans for the retrofit/ replacement alternatives.

MORGAN TERRITORY ROAD BRIDGES AT PM 5.0 AND PM 5.2, Contra Costa County, CA; *Independent Check.* Performed independent checks of three soldier pile retaining wall designs. The retaining walls act as wingwall extensions for bridge replacements of two Morgan Territory Road Bridges Crossing Marsh Creek. The existing structures were severely damaged by heavy storm flows and scour making layout of the proposed structures critical for preventing similar damage in the future.

UVAS ROAD BRIDGE OVER LITTLE UVAS CREEK, County of Santa Clara, CA; *Independent Check.* Replacement of a single span bridge with Precast Pre-stressed I-girders on a realignment of Uvas Road in Santa Clara County, California. Services provided include independent check of the Replacement Bridge and modified Caltrans Type 5 Retaining Wall.

CARROL CREEK & WALKER CREEK BRIDGES, Inyo County, CA; *Design Engineer.* Carroll Creek: Design Engineer on this proposed project that includes constructing a new bridge along Carroll Creek Road over the Los Angeles Aqueduct, approximately 275 feet south of the existing bridge and realigning the roadway approaching the bridge from either direction. Walker Creek: Designer Engineer on this proposed project that includes constructing a new bridge along Walker Creek Road over the Los Angeles Aqueduct, approximately 400 feet south of the existing bridge and realigning the roadway approaching the bridge from either direction.

consor

Brent Harrison, PE

Roadway Design Engineer

EXPERIENCE
5 years

EDUCATION
BS, Civil Engineering, California State University, Chico

REGISTRATION
Professional Engineer-CA #93977

YEARS WITH CONSOR
5 years

Brent has five years of experience as a professional engineer with a focus on transportation engineering. In his tenure with Consor, Brent has assisted the team on multiple projects with duties that include calculating road and bridge quantities, designing road geometry, utility coordination, technical writing, survey field work and map drawing, surveying measurements, and support with AutoCAD and Microstation.

Select Project Experience

DANVILLE BOULEVARD – ORCHARD COURT COMPLETE STREETS IMPROVEMENTS, Pleasanton, CA; *Roadway Design Engineer.* Brent was responsible for stage construction design of the roadway and roundabout for Danville Boulevard. This complete streets improvement project in Danville located in Contra Costa County includes the implementation of a roundabout on Danville Boulevard. Due to the high ADT of Danville Boulevard the county wanted to keep traffic open through the use of staged construction. Brent worked through the design to keep the flow of traffic along Danville Boulevard while staging the construction of the proposed roundabout.

YANKEE JIMS ROAD BRIDGE OVER NORTH FORK AMERICAN RIVER (HBP), Placer County, CA; *Roadway Design Engineer.* Brent was responsible for the geometric design of the roadway elements for the Yankee Jims Bridge. The Yankee Jims Bridge is located in a remote area of Placer County and spans over the North Fork of the American River. The rural location of the project site creates many different challenges for design and access to the project for construction. Brent was responsible for implementing design alternatives of over 17 different locations along the access road that need to be altered for the contractor to have access down to the bridge at the project location. Due to the CM/GC project delivery method, Brent was able to work with the contractor to discover the best alternatives for the project. This project includes a large hillside cut to realign the roadway to construct the proposed bridge adjacent to the existing bridge. Brent designed a large infill area to relocate all the excavated cut material from the roadway and minimize all hauling of material off the project site.

MCBEAN PARK DRIVE BRIDGE REPLACEMENT OVER AUBURN RAVINE (HBP), Lincoln, CA; *Roadway Design Engineer.* Brent was responsible for the geometric design of the roadway and drainage design for the McBean Park Drive Bridge. This project, located in Lincoln, California, includes approximately 0.5 miles of roadway with 1.5 intersections to rebuild and a bridge over Auburn Ravine. Brent used his knowledge of the ADA design standards to design ADA compliant access routes along the stretch of the project. This project includes various utility coordination for intermediated and final stages of utility relocation during the project construction. McBean Park Drive's drainage plan was designed in conjunction with its many existing drainage features. The proposed drainage plan tied into the existing network to create an efficient and environmentally friendly drainage system.

EMERGENCY STORM DAMAGE ON TORO AND VIEJO ROAD, Monterey County, CA; *Roadway Design Engineer.* Brent was responsible for the geometric design, drainage design, utility coordination, and plan preparation for the roadway plans at Toro and Viejo Road. These two projects are located in Monterey County. Both these projects include the correction of slope failures and roadway geometry to make the roadway safer. Brent was able to redesign the roadway and drainage systems, which will correct the slope failures and allow water to move through the sites without erosion or slope instability in the future. Utility coordination was needed to move underground utilities out of the way for the construction of the roadway and drainage features.

consor

Michael Sanchez, PE

Utility Coordination

EXPERIENCE
29 years

EDUCATION
BS, Civil Engineering, University of California, Berkeley

REGISTRATION
Professional Engineer-CA #60254

YEARS WITH CONSOR
22 years

Mike has 29 years of experience focused on improving transportation for local agencies and the State of California. He has worked extensively on roadway projects including major corridor improvements, highways, interchanges, as well as local agency bridge replacement and rehabilitation projects in support of the Highway Bridge Program. Mike offers particular expertise in roadway design, geometric layout of highways and ramps, drainage system analysis and design, pavement management, design and coordination of underground utilities, and construction support.

Select Project Experience

COMBIE ROAD WIDENING, Nevada County, CA; *Project Engineer.* Responsible for utility coordination, drainage and roadway design. The proposed project will include widening Combie Road to five lanes (including a two-way, left turn lane), a traffic signal at the Combie Road/Higgins Road intersection, a shared use Bicycle/Pedestrian Path, along with the extension of a sewer line and other drainage improvements. The project will result in the realignment of a small portion of Ragsdale Creek, requiring consultation with ACOE and coordination with the United States Fish and Wildlife Service regarding potential impacts to California Red-Legged Frog habitat. Also included is a Rule 20A Undergrounding Project where PG&E and AT&T will be relocating to a joint trench. Work includes PA/ED as well as PS&E.

SHELDON ROAD/WATERMAN ROAD ROUNDABOUT, Elk Grove, CA; *Project Manager.* Project Manager responsible for completing the plans, specifications, and estimates to improve the intersection of Sheldon Road and Waterman Road with the construction of a single-lane roundabout. The intersection is located in the east part of Elk Grove within the City's designated Rural Sheldon/Rural Residential Area and is adjacent to a powerline corridor with Sacramento Municipal Utility District, Pacific Gas & Electric, and Western Area Power Administration. The improved intersection included pervious colored concrete pedestrian paths around the perimeter of the roundabout as well as public art themed to match the rural character of the area. The roadway approach legs included accommodations for shoulders/bike lanes and storm drainage facilities with detention ponds to maintain pre-construction run-off conditions and historical drainage patterns. Construction was completed in less than two months under a full intersection closure. Mike was responsible for the roundabout geometrics, final design, construction details, utility coordination, and community outreach meetings. Mike worked closely with the City of Elk Grove and the community to obtain support for construction under a full intersection closure, which resulted in schedule and construction budget savings.

16TH AVENUE OVER TULARE LAKE CANAL BRIDGE REPLACEMENT (HBP), Kings County, CA; *Project Manager/Roadway Project Engineer.* Responsible for the design and delivery of PS&E for roadway improvements of the replacement of this bridge. Michael developed the preliminary and final horizontal and vertical layouts. He led the utility coordination effort, which facilitated PG&E's relocation of a utility pole conflict prior to construction.

PUBLIC WORKS ENGINEER/STAFF AUGMENTATION, Stanislaus County, CA; *Project Manager.* Responsible for general project oversight, management, and coordination of multiple bridge replacement projects within Stanislaus County as a part time staff augmentation County employee. Mike represents the County to facilitate coordination of various project elements with property owners, utility companies, Caltrans and each design team. In addition to daily remote work, Mike's dedication to Stanislaus County includes working in the public works office in Modesto, CA as needed.

John Thayer, PE

Utilities Design - Wet

consor

EXPERIENCE
30 years

EDUCATION
MS, Wind Engineering, Kiel University of Applied Sciences

ME, Geological Sciences, Cornell University

BS, Civil Engineering, California Polytechnic State University, San Luis Obispo

REGISTRATION
Professional Engineer- CA #59270

YEARS WITH CONSOR
4 years

John has over 30 years of experience as a civil engineer and senior project manager, designing and planning infrastructure for water resources, wastewater treatment, water treatment, pumping, conveyance, and other water-related projects. His experience encompasses detailed civil and mechanical design of infrastructure and equipment, project management, construction management, technical writing, cost estimation, permitting, subcontractor/subconsultant management, and client service for capital improvement projects.

John has extensive experience managing technical subdisciplines such as structural, electrical, instrumentation, SCADA, geotechnical, corrosion/cathodic protection, site civil, mechanical piping and pumping, architectural, and HVAC/plumbing.

Select Project Experience

RESERVOIR TOWER STRUCTURAL AND CONDITION ASSESSMENT, Helix Water District, CA; *Project Manager.* Project involves a condition assessment and dive inspection of the 150-foot-tall reservoir outlet tower at Lake Jennings. Consor performed a comprehensive 5-day dive inspection of the 150-foot tall Lake Jennings Inlet/Outlet Tower, using six professionally-trained divers with surface-supplied air up to 135 foot dive depth. Consor then prepared a detailed condition assessment report which included a seismic evaluation of the tower. Consor also performed a field evaluation of the existing 54-inch and 60-inch raw water piping connecting the tower and the Levy Water Treatment Plant. The findings of this condition assessment were necessary to inform Helix Water District and other partner agencies for the East County Advanced Water Purification Program that the tower was capable of serving as the primary conduit for purified recycled water delivered through the tower and into the existing water treatment plant.

WELL 13 TREATMENT PLANT DESIGN SERVICES, City of Lakewood, CA; *Deputy Project Manager.* John served as Deputy Project Manager on this project which includes design and construction support for the City's Well 13 Arsenic Removal Treatment Plant and was based on results of pilot testing the full-scale facilities, also performed by the design team. Treatment plant improvements included installation of the filter package, backwash recycle pump, and a ferric chloride feed system. An existing tank at the treatment plant site was proposed by the City to be re-purposed for backwash settling and recycle. Design of the filter equipment incorporated the existing electrical services to supply power to the filter controller, the backwash pump, and the chemical feed facility with single phase power. A cost-effective control strategy was included to allow staff to remotely monitor the facility and the equipment to operate automatically.Deodar Reservoir Rehabilitation Design, Vista Irrigation District, CA; Project Manager. Consor conducted a comprehensive raft inspection, dry inspection, condition assessment, and seismic analysis of the existing 1.3 MG Deodar Reservoir. This prestressed circular concrete reservoir was constructed in 1976. Consor also performed condition assessment of the existing on-site buried steel piping. Following the condition assessment, Consor designed a reservoir rehabilitation consisting of the following elements:Full roof replacement with a new aluminum geodesic roof dome; New interior and exterior stairs, roof hatches, and roof railing; new perimeter road and access road; new cast-in-place retaining wall on the north cut slope; repair of existing retaining walls; new site fencing, gates, and fence replacement; valve replacement; new reservoir overflow and inlet piping and check valves; reservoir coating; on-site stormwater improvements; and landscaping enhancements.

Linda Scroggs, PE

Utilities Design - Wet

EXPERIENCE
37 years

EDUCATION
MS, Civil Engineering, California State University, Sacramento

BA, Geography, University of California, Davis

REGISTRATION
Professional Engineer-
CA #49691
OR #91396

YEARS WITH CONSOR
9 years

Linda has 37 years of experience as a project manager/project engineer for a variety of water and wastewater system improvement projects for public agencies throughout Central and Northern California. Linda has been responsible for the design of both potable water systems and wastewater facilities. Her experience covers a wide range of projects including water distribution, transmission, and storage systems, as well as wastewater collection and treatment facilities. Linda is experienced in water projects which include planning and design of production wells, distribution systems, booster pump stations, storage tanks, and transmission pipelines. Apart from project management duties, Linda performs peer review and QA/QC review on water and wastewater design projects and studies, and is a mentor for junior engineering staff.

Select Project Experience

NUT TREE ROAD OVERCROSSING UTILITY DESIGN, City of Vacaville, CA; *Design/Utility Coordinator.* Design and construction services for City utilities including water and sewer pipelines for the new six-lane structure and frontage road improvements at Nut Tree Road and I-80. Included relocation of existing water transmission mains and the addition of future transmission capacity for the City in the form of a 24-inch water transmission main crossing under I-80. Coordination with Caltrans for pipeline crossing alternatives was included and resulted in boring and jacking steel casing under the interstate and installing DIP carrier pipe.

NACIMIENTO PIPELINE AT EL CAMINO REAL BRIDGE REPLACEMENT, San Luis Obispo County, CA; *Project Manager.* Design of an 18-inch raw water pipeline that was relocated from an independent truss structure with deteriorating abutments, onto an adjacent new vehicular bridge that was replacing a structurally deficient bridge over Santa Margarita Creek. The high pressure pipeline (350 psi) is a critical component of the Nacimiento Water Project that delivers raw water over 45 miles from Lake Nacimiento to the San Luis Obispo Water Treatment Plant. The ductile iron pipe was designed to be hung on the north side of the bridge by a series of hangers and brackets, with flex joints, combination air valves, and pump outs to match the existing original design. Existing cathodic protection on the pipeline and fiber optic cables installed adjacent to the pipeline were replaced and reconnected on each side of the creek crossing.

CENTRAL AVENUE OVERHEAD PROJECT, City of Newark, CA; *Project Manager/Engineer.* Responsible for the relocation of potable water and gravity sewer due to the roadway improvements and grade separation structure for Central Avenue over the Union Pacific Railroad (UPRR) right-of-way, between Sycamore Street and Morton Avenue. Closely coordinated with Alameda County Water District (ACWD) and Union Sanitation District (USD). The pipelines ranged in size from 8 inch to 24 inch diameter. The design included bore and jack at the UPRR crossing. The project scope includes preliminary engineering, final design and preparation of construction bid documents.

CONN CREEK BRIDGE WATER LINE PROJECT, City of Calistoga, Calistoga, CA; *Project Manager.* The City of Calistoga's existing potable water pipeline under Conn Creek has historically been exposed to erosion, scour damage, and in 2006 required emergency repairs. The concrete cap over the pipeline was exposed and in need of repair. Repeated repairs/maintenance in the creek bed have impacted the natural habitat of endangered California Freshwater Shrimp and threatened and endangered salmonids. The project included design of a 16-inch transmission main (increased capacity for the City), attached to a bridge recently completed by Caltrans. The City received an HMPG grant through FEMA for 65% design. The project included coordination with environmental agencies to obtain permits. Local indigenous Tribes were involved to monitor the project.

consor

Nicholas McMurtrey, PE, LEED AP, ENV SP

LEED/Envision

EXPERIENCE
22 years

EDUCATION
BS, Civil Engineering, Oregon State University

REGISTRATION
Professional Engineer-
OR #72710PE
WA #52873
CO #55472

CERTIFICATION
U.S. Green Building Council, LEED AP BD+C

Institute for Sustainable Infrastructure, ENV SP

YEARS WITH CONSOR
10 years

As one of our stormwater enthusiasts, Nick brings expertise in the design construction of various types of stormwater projects, including pipeline design, low impact development, regional treatment and detention systems and integration with other adjacent utilities. He is also well-versed in transportation, water and wastewater, making him one of the firm's sought-after cross-discipline engineers. A returned Peace Corps volunteer, Nick's work experience extends outside of the boundaries of the United States on projects ranging from master planning to site development.

While he enjoys getting technical, it's engaging with clients, colleagues, system operators, maintenance personnel, and the community that truly motivates Nick. While he nourishes existing relationships, he also develops new relationships to connect people who share common goals and can support one another in their passion for sustainable infrastructure. This sustainable infrastructure passion has even earned Nick some valuable certifications such as LEED AP BD+C and ENV SP.

Select Project Experience

STORMWATER MASTER PLAN UPDATE; City of Sherwood, OR; *Project Manager*. Consor updated the City of Sherwood's 2007 comprehensive Stormwater Master Plan in coordination with Clean Water Services (CWS) and the governing watershed-based DEQ NPDES Permit. Planning work for the City was conducted in parallel to a sanitary sewer master plan update to efficiently assess stormwater management issues. The project utilized current City as-builts, planning documents, GIS mapping, and hydrologic/hydraulic modeling and analysis using InfoSWMM, (EPASWMM 5 hydraulic engine) and Tualatin River Urban Stormwater Tool (TRUST).

COOPER MOUNTAIN UTILITY PLAN (CMUP); City of Beaverton, OR; *Technical Advisor QA/QC.* Consor provided planning and design services to cohesively integrate stormwater, water, and wastewater utilities within the urban reserve area (URA) boundary expansion of Cooper Mountain. Stormwater services include natural area enhancement strategies that complement utility corridors, including low impact stormwater infrastructure and resilient streams, coupled with permitting guidance and building consensus with regulators for those approaches. Future storm conveyances were sized to reflect regional detention and treatment needs. This approach maximized develop-able land by prioritizing and co-locating in-stream stormwater management within vegetated corridor buffers. Nick oversaw production of deliverables and provided QA/QC review of project documents.

MASTER PLANNING SERVICES; City of Pendleton, OR; *Project Engineer.* Consor developed stormwater, sewer, and water master plans for the City of Pendleton. The first step in the project was to develop a GIS database for each of the water, sewer, and stormwater utilities for use in developing hydraulic models and supporting the overall master plan development. The plans evaluated the ability for the City to meet existing and future service requirements for all three utilities through build-out. The project will included updated design and construction standards for use internally as well as for developer reference. A CIP was developed to address any existing and future projects. Consor delivered updated water, sewer, and stormwater GIS and associated hydraulic models as part of the project.

Erin Krug, PE, LEED AP, ENV SP, PMP

LEED/Envision

EXPERIENCE
12 years

EDUCATION
MS, Civil Engineering, Johns Hopkins University

BS, Civil Engineering, University of Vermont

REGISTRATION
Professional Engineer-
MN #56000
WA #24004487
OR #104731PE
TX #152176

CERTIFICATION
LEED AP #10932410

Envision SP #62934

PMI, Project Management Professional #7780505

YEARS WITH CONSOR
< 1 year

Erin has 12 years of experience focused on structural systems for flood risk management projects, and is currently serving as Consor's Hydraulic Structures Practice Lead. Prior to joining Consor, Erin worked for the U.S. Army Corps of Engineers (USACE) where she served as a structural engineer subject matter expert and technical lead specializing in the design, inspection, operation, and repair of hydraulic steel structures for multi-million-dollar flood risk management and navigation projects across the US. Erin is experienced in performing design charrettes and value engineering studies for large-scale, multi-disciplinary projects which involved leading design teams, consulting with stakeholders, understanding project requirements, and improving operations and material selection. While Erin has a structural background, she has a passion for environmental stewardship and green infrastructure dating back to her time as an Eco-Rep while attending the University of Vermont.

Erin will be able to utilize her design charrette experience and passion for environmental sustainability to lead the project team through sustainable project selections and application of a sustainable rating system.

Select Project Experience

FIBER REINFORCED POLYMER (FRP) COMPOSITE PROGRAM, USACE, Inland Navigation Design Center; *Program Lead.* Erin led, developed, and implemented the FRP Composite Program to expand hydraulic structures applications in USACE. She coordinated with partners in other federal agencies, industry, and researchers to expand the use of FRP in civil works structures. Erin provided expertise on FRP while participating in design charrettes and presented to varying audiences in workshops and on virtual platforms. She planned and developed guidance documents. Erin coordinated presentors and facilitated bi-monthly meetings for the USACE FRP Composite Users' and Interest Group.

MITER GATE AND ANCHORAGE REPLACEMENTS AT LOCKS 2-10, USACE; *Technical Lead & Structural Lead.* Erin led multi-disciplinary design teams through project conception, design charrettes, development of plans and specifications, contract award, engineering-during-construction, and installation for the miter gate and anchorage replacements at ten lock and dam sites on the Mississippi River. Erin increased commonality of components with site standardization, and worked through complex, short fuse issues to develop engineering solutions with Engineering and Operations team, A/E firms, and Contractors. Erin led the development of the scope, schedule, and budgets for these multifaceted multi-million-dollar navigation projects.

FARGO MOORHEAD METROPOLITAN AREA PROGRAM, USACE, St. Paul District, MN; *Structural.* Erin developed designs, plans, and specifications for the dam control building, waterway and safety signs, stairs, walkways, and miscellaneous features, and performed QC reviews of the dam bulkheads, control structure foundation, Tainter gates, and gage well house for three control structures on the Fargo-Moorhead Metropolitan Area Flood Control Diversion Project. Performed design reviews and sustainability reviews and coordinated across multiple disciplines on this multi-billion-dollar Public-Private Partnership project.

Lincoln James

Grant Writing Assistance

AECOM

EXPERIENCE
23 years

EDUCATION
Master, Business, Macquarie University, Sydney

Master, International Relations, Macquarie University, Sydney

Bachelor of Arts, History, University of California, Santa Barbara/Universidad de Barcelona, Spain

YEARS WITH AECOM
13 years

Lincoln is a Senior Consulting Manager within AECOM's National Infrastructure Economics Practice and is the national lead for Grant Support Services for Transportation. He has more than two decades of international experience across a wide spectrum of strategic planning, economic analysis, and project management in infrastructure advisory, transportation economics, land use economics, and regional development. Lincoln specializes in the development and support of grant applications for public and private sector clients, as well as grant administration once projects are awarded federal funding.

Select Project Experience

US 64 ITHMAS HIGHWAY CORRIDOR RECONSTRUCTION, *MPDG Grant Application.* Lincoln was the author, lead economist, and grant coordinator in the development of an application for the New Mexico Department of Transportation and Navajo Department of Transportation for MPDG grant funding. The project comprised the reconstruction of approximately 26 miles of highway in northwest New Mexico which acts as the primary access to the Navajo Nation. Improvements include bridge replacement, shoulder widening, safety and lighting upgrades, and the installation of fiber conduit. The application was awarded $59M in funding in January 2024.

BORDER HIGHWAY CONNECTOR AT SANTA TERESA PORT OF ENTRY, *INFRA Grant Application.* Lincoln was the author and coordinator of a successful turnkey grant application submitted by New Mexico Department of Transportation seeking funding under the 2022 INFRA grant program. The project comprised the development of a six-mile-long greenfield highway facility connecting the Santa Teresa Port of Entry with Interstate 10 near El Paso. The implementation of the project will result in the removal of commercial traffic from local roads, leading to improved safety, as well as the more efficient movement of freight between the nation's ports of entry, interstate system, and intermodal facilities. The project was awarded $45M in funding in September 2022.

US64 ITHMAS HIGHWAY CORRIDOR RECONSTRUCTION, *RAISE Grant Application.* Lincoln was the author, lead economist, and grant coordinator in the development of an application for the New Mexico Department of Transportation and Navajo Department of Transportation for RAISE grant funding. The project comprised the reconstruction of approximately 26 miles of highway in northwest New Mexico which acts as the primary access to the Navajo Nation. Improvements include bridge replacement, shoulder widening, safety and lighting upgrades, and the installation of fiber conduit. The application was awarded $25M in funding in November 2021.

US 74 CORRIDOR OPPORTUNITIES FOR RURAL EFFICIENCY & SAFETY IMPROVEMENT (CORESI), *INFRA Grant.* Lincoln was the primary author of the successful application for this project spanning 350 miles of the US Route 74 corridor between Asheville and Wilmington in North Carolina. Comprising the construction of bypasses, safety improvements, ITS upgrades, and the installation of hundreds of miles of fiber optic cabling. The CORESI project will bring about a harmonization and continuity of free flow (toward full control of access) along the key freight corridor, with outcomes including an increase in vehicle capacity, faster travel times throughout the entire corridor, a decrease in recurring and non-recurring congestion, and improved safety conditions resulting in a reduction in accidents and fatalities. Furthermore, the installation of fiber optics cabling will enable the foundation for the future deployment of ITS technologies providing tremendous potential for many other communications mechanisms including broadband internet, cameras, and future connected and autonomous vehicle (both passenger and freight) technology. The project was awarded $25 million under the INFRA program in July 2020.

Nathan Brierley

Grant Writing Assistance

EXPERIENCE
7 years

EDUCATION
Bachelor of Commerce, Economics & Finance with Honors (Economics) (Class I), Griffith University, Australia

YEARS WITH AECOM
1 year

Nathan Brierley is a Senior Consultant in the Infrastructure Economics team at AECOM. He has over seven years of experience providing economic and financial advice to support public and private sector clients with strategic planning and investment decisions. He is experienced in benefit-cost analysis (BCA), grant writing, economic impact analysis and other bespoke economic and financial analysis across a range of infrastructure types including transportation and others. Prior to joining AECOM, Nathan worked at Deloitte Access Economics and Infrastructure Australia.

Select Project Experience

BIPARTISAN INFRASTRUCTURE LAW SYSTEM SUPPORT, BNSF. Nathan is working with BNSF to identify opportunities for funding across the Red River and Southwest Divisions. An extensive pipeline of potential projects has been developed through research and consultation, and various discretionary grant programs have been reviewed to identify potential funding opportunities. The scope also involves grant writing and benefit-cost analyses (BCA) to support the various applications.

REGION 1 BRIDGE PRE-SCOPING STUDY; COLORADO DEPARTMENT OF TRANSPORTATION. Nathan is currently working with the Colorado Department of Transportation (CDOT) to prioritize and identify funding opportunities for structures across Region 1. This engagement involves prioritizing the structures in need of rehabilitation or replacement and researching various discretionary grant programs to identify competitive candidates. The scope also involves grant writing and BCA to support the various applications.

DOWNTOWN RAIL EXTENSION PROJECT, TRANSBAY JOINT POWERS AUTHORITY. Nathan supported the BCA for the Downtown Rail Extension (DTX) Project, to support the Transbay Joint Powers Authority's application for the 2023 Federal-State Partnership (FSP) for Intercity Passenger Rail Discretionary Grant Program. The DTX Project will extend Caltrain commuter rail from its current terminus at Fourth and King to the new Transit Center. It will also deliver the California High-Speed Rail Authority's future high-speed rail service to the Transit Center. Because the program focused specifically on intercity passenger rail, the BCA considered the costs and benefits to California High-Speed Rail only. The range of economic costs and benefits included economic competitiveness, safety, quality of life, environmental sustainability, and state of good repair.

LOUISIANA INTERNATIONAL TERMINAL, PORT OF NEW ORLEANS. Nathan supported the BCA for the Louisiana International Terminal (LIT) Project, as part of the Port of New Orleans' application for the 2023 Multimodal Project Discretionary Grant (MPDG) Program. The BCA considered transportation cost savings, container handling savings, accident cost savings, social cost savings, emissions reductions, and residual value.

INTERSTATE 25 NORTH, SEGMENT 5 PROJECT, WELD COUNTY, CO. Nathan developed the BCA for the Interstate 25 North, Segment 5 Project, as part of Weld County's application for the 2023 Multimodal Project Discretionary Grant (MPDG) Program. The BCA monetized benefits related to safety, state of good repair, economic impacts, freight movement and job creation, climate change, resiliency, and the environment.

DAVE LYLE BOULEVARD PEDESTRIAN BRIDGE PROJECT, CITY OF ROCK HILL, SC. Nathan led the BCA for the Dave Lyle Boulevard Pedestrian Bridge Project, as part of the City of Rock Hill's application for the 2023 Reconnecting Communities and Neighborhoods (RCN) Program. The BCA monetized benefits related to safety, economic strength, equity, and climate and sustainability.

Kendall Myers

Grant Writing Assistance

AECOM

EXPERIENCE
5 years

EDUCATION
MA, Economics, Graduate Program in Economic Development, Vanderbilt University

BS, Business & Economics, Minors in Spanish & International Business, University of Kentucky

REGISTRATION
Professional Engineer-CA #84726

Qualified SWPPP Developer/ Practitioner (QSD/P) #26790

YEARS WITH AECOM
2 years

Kendall Myers is an Economist with AECOM's National Infrastructure Economics Practice. She brings experience in economic analysis and both quantitative and qualitative research. In her daily work, she applies skills in project management, benefit-cost analyses, and economic modelling. In less than two years, Kendall has assisted clients to win $500 million in federal grants. Kendall has strong interests in economic development, environmental resilience, and demography.

Prior to joining AECOM, Kendall was a Research Assistant at Vanderbilt University's Owen Graduate School of Management. In that role, she managed various research projects involving wage discrepancy, project evaluation, survey formation, climate change and more. This research was performed using Stata, R/RStudio, REDCap, and advanced Microsoft Excel functions.

Select Project Experience

NEW RIVER GORGE BRIDGE STRUCTURAL HEALTH MONITORING PROJECT APPLICATION TO STRENGTHENING MOBILITY AND REVOLUTIONIZING TRANSPORTATION (SMART) GRANT PROGRAM, New River Gorge National Park & Preserve, West Virginia Department of Transportation Division of Highways (WVDOT DOH)**.** Kendall developed the grant narrative to support WVDOT's application seeking funding to plan and install a system of sensors to monitor the structural health of the historic, marquee New River Gorge Bridge in Fayette County, West Virginia.

GOLD LINE EASTSIDE TRANSIT CORRIDOR PROJECT, Los Angeles County Metropolitan Transportation Authority. Kendall was the task lead for preparing Growth-Inducing Impacts Technical Report according to local trends and National Environmental Policy Act (NEPA) guidelines. The Project would extend the Los Angeles County Metropolitan Transportation Authority's (Metro's) E Line, a light rail transit (LRT) line, 4.6 miles from its current terminus at the Atlantic Station in the unincorporated community of East Los Angeles to the cities of Commerce and Montebello.

AMTRAK CASCADES CORRIDOR IDENTIFICATION AND DEVELOPMENT (CORRIDOR ID) PROGRAM GRANT APPLICATION, Washington Department of Transportation (WSDOT). Coordinated efforts between Amtrak, WSDOT, and Oregon Department of Transportation (ODOT). Contributed to the development of narratives, maps, and graphics for the corridors, including rolling submissions of drafts for client review and feedback. This project was awarded an initial $500 thousand in December 2023.

RAIL DIVISION, CORRIDOR IDENTIFICATION, AND DEVELOPMENT (CID) GRANTS, North Carolina Department of Transportation. Kendall supported the development of five CID grant application narratives on behalf of NCDOT. Assessed possible corridors against state planning documents. NCDOT was awarded an initial $1 million for the Asheville to Salisbury and Winston-Salem to Raleigh routes in December 2023.

REBUILDING AMERICAN INFRASTRUCTURE WITH SUSTAINABILITY & EQUITY (RAISE) PROGRAM GRANT APPLICATION, City of Hartford, CT. Kendall led the development of the BCA to support the City of Hartford's 2023 Rebuilding American Infrastructure with Sustainability and Equity (RAISE) program grant application seeking funding to transform an existing multilane roadway into an inclusive complete street that improves safety, connects communities, and promotes active transportation and transit options by improving amenities for transit users, pedestrians, and cyclists. Authored supporting technical memo documenting the BCA approach, assumptions, and findings. This project was awarded $19 million in June 2023.

Maxim D. Nasab, AIA, NCARB

Bridge Architect

EXPERIENCE
13 years

EDUCATION
Master of Architecture, Savannah College of Art & Design

Bachelor of Fine Arts, Savannah College of Art & Design

REGISTRATION
Architect - CA #C-40321

NCARB Certificate

LEED Green Associate

YEARS WITH APEXX
8 years

Maxim Nasab has international experience as an architect, having worked in the United States, Canada, and China. With over 10 years of experience, Maxim has worked on dozens of bridge projects as lead bridge design architect including Centennial Park Bridge, Blue Ridge Pedestrian Bridge, Sumner Street Pedestrian Bridge, and Kosciusko Bridge. He is a spokesperson for bridge architecture and has published countless articles on the subject and has given presentations regarding the importance that aesthetics and architects bring to infrastructure projects.

Maxim is a licensed architect as well as NCARB Certified, allowing him to have reciprocity throughout the United States and Canada. He currently serves as Leadership for NCARB's Item Development Subcommittee, is a member of AIA Tallahassee's Board of Directors, and is an visiting professor at Florida Agricultural & Mechanical University's School of Architecture.

Select Project Experience

BLUE RIDGE ROAD PEDESTRIAN BRIDGE, Raleigh, NC. The City of Raleigh contracted the design team to provide professional engineering design services, final construction plans, and contract bid documents for the bicycle and pedestrian improvement project located near the heart of Downtown Raleigh. The project consists of designing a gateway-pedestrian bridge that crosses Wade Avenue, a six-lane, controlled-access freeway entering Downtown Raleigh, and extensive stakeholder outreach. Maxim is the bridge architect on the project.

CENTENNIAL PARK BRIDGE, Cañon City, CO. This small design/build project focuses on the City of Cañon City's desire to create a "WOW Factor" at night with their historic steel truss bridge that crosses the Arkansas River. The project is part of a larger master plan to enhance connectivity with Main Street businesses and Centennial Park. Maxim was the lead architect on the project to design and specify all the lighting.

SUMNER STREET BRIDGE, Akron, OH. The University of Akron in Ohio required an up-to-date replacement for one of their pedestrian bridges crossing Sumner Street in the center of campus. The bridge connects two important nodes for the school; the student union and the Auburn Science and Engineering building. The connection is a main artery for the campus to get students from one side to the other. Maxim was the bridge architect responsible for the design of all aesthetic elements including the materials, texture, pier types and shapes as well as the stairways and aesthetic lighting.

Publications

Nasab, M., Pre-Fabricated Without Compromising Unique Design. Proceedings of International Bridge Conference (IBC). (2023) National Harbor, MD.

Nasab, M., Prescribing Bridge Architecture for Social Resilience, The Evolving Metropolis, 2019 IABSE Congress, New York, NY.

Nasab, M., The Architect's Role in Designing Sustainable Bridges: An Essay, Florida/Caribbean ARCHITECT, AIA Florida Magazine, 2018.

Daniel Yau, PE, TE, PTOE

Signals & Lighting

EXPERIENCE
40 years

EDUCATION
MS, Transportation Engineering, University of California, Berkeley

BS,Civil Engineering, California State University, Fresno

REGISTRATION
Professional Engineer- CA #44611

Traffic Engineer- CA #TR1471

Professional Traffic Operations Engineer, ITE, #211

YEARS WITH BENNETT+Y&C
27 years

Dan has more than 40 years of experience in traffic/electrical engineering specializing in traffic signals, lighting, and transportation electrical systems. He has completed traffic/electrical engineering plans, specifications, and estimates (PS&E) for more than 1,200 transportation projects in over 100 jurisdictions, including County of San Luis Obispo and Caltrans District 5.

Select Project Experience

SR 217/HOLLISTER AVENUE INTERCHANGE, City of Goleta, CA; *Electrical Design Task Manager.* Dan was responsible for managing all electrical design activities related to preparation of PS&E for traffic signals and lighting. This project is to convert the existing diamond interchange to a roundabout interchange. This project also included improvements on Hollister Avenue between SR 217 and Kellogg Avenue.

SCCRTC HIGHWAY 1 AUXILIARY LANES, Caltrans – Santa Cruz County, CA; *Electrical Design Task Manager.* Dan was responsible for managing all electrical design activities related to preparation of PS&E for traffic signals, lighting, ramp metering, traffic monitoring station, camera system, flashing beacons, and electric service for irrigation controllers. The project is to widen Highway 1 to include auxiliary lanes between interchanges from Soquel Drive to Freedom Boulevard.

AVILA BEACH DRIVE/HWY 101 ROUNDABOUT INTERCHANGE, San Luis Obispo County, CA; *Electrical Design Task Manager.* Dan was responsible for managing all electrical design activities related to preparation of PS&E for roundabout lighting and park-n-ride lot lighting. This project is to construct a roundabout at the US 101 SB off-ramp intersection to improve traffic operations at the US 101/Avila Beach Drive interchange. This project also included construction of a park- n-ride lot on the southwest quadrant of the interchange.

US 50/EL DORADO HILLS BLVD-LATROBE ROAD INTERCHANGE, El Dorado County, CA; *Electrical Design Task Manager.* Dan was responsible for managing all electrical design activities related to preparation of PS&E for traffic signals, lighting, sign illumination, and ramp metering. This multi-phase project included widening of US 50 to add HOV lanes, widening of El Dorado Hills Blvd-Latrobe Road under US 50, widening of on and off-ramps, as well as realignment of Saratoga Way.

SR120/MCKINLEY AVENUE INTERCHANGE, City of Manteca, CA; *Electrical Design Task Manager.* Dan was responsible for managing all electrical design activities related to preparation of PS&E for traffic signals, lighting, and ramp metering. The project will build a new partial cloverleaf interchange that includes on-and off-ramps, two new ramp bridges, auxiliary lanes on SR120, ramp metering, and roadway improvements on McKinley Avenue, including Class II bike lanes.

Kin Chan, PE

Signals & Lighting

Kin Chan has 33 years of experience in traffic/electrical engineering, specializing in traffic signals, lighting, and intelligent transportation systems. He has completed traffic/electrical engineering plans, specifications, and estimates (PS&E) for more than 1,000 transportation projects for numerous public agencies, including County of San Luis Obispo and Caltrans District 5.

EXPERIENCE
33 years

EDUCATION
MS, Civil Engineering, San Jose State University

BS, Civil Engineering, San Jose State University

REGISTRATION
Professional Engineer-CA #55391

YEARS WITH BENNETT+Y&C
27 years

Select Project Experience

SR 217/HOLLISTER AVENUE INTERCHANGE, City of Goleta, CA; *Lead Electrical Design Engineer.* Kin was responsible for preparing PS&E for traffic signals and lighting. This project is to convert the existing diamond interchange to a roundabout interchange. This project also included improvements on Hollister Avenue between SR 217 and Kellogg Avenue.

SCCRTC HIGHWAY 1 AUXILIARY LANES, Caltrans – Santa Cruz County, CA; *Lead Electrical Design Engineer.* Kin was responsible for preparing PS&E for traffic signals, lighting, ramp metering, traffic monitoring station, camera system, flashing beacons, and electric service for irrigation controllers. The project is to widen Highway 1 to include auxiliary lanes between interchanges from Soquel Drive to Freedom Boulevard.

AVILA BEACH DRIVE/HWY 101 ROUNDABOUT INTERCHANGE, San Luis Obispo County, CA; *Lead Electrical Design Engineer.* Kin was responsible for preparing PS&E for roundabout lighting and park-n-ride lot lighting. This project is to construct a roundabout at the US 101 SB off-ramp intersection to improve traffic operations at the US 101/Avila Beach Drive interchange. This project also included construction of a park- n-ride lot on the southwest quadrant of the interchange.

US 50/EL DORADO HILLS BLVD-LATROBE ROAD INTERCHANGE, El Dorado County, CA; *Lead Electrical Design Engineer.* Kin was responsible for preparing PS&E for traffic signals, lighting, sign illumination, and ramp metering. This multi-phase project included widening of US 50 to add HOV lanes, widening of El Dorado Hills Blvd-Latrobe Road under US 50, widening of on and off-ramps, as well as realignment of Saratoga Way.

SR120/MCKINLEY AVENUE INTERCHANGE, City of Manteca, CA; *Lead Electrical Design Engineer.* Kin was responsible for preparing PS&E for traffic signals, lighting, and ramp metering. The project will build a new partial cloverleaf interchange that includes on-and off-ramps, two new ramp bridges, auxiliary lanes on SR120, ramp metering, and roadway improvements on McKinley Avenue, including Class II bike lanes.

SR 227/PRICE CANYON ROAD INTERSECTION IMPROVEMENTS, San Luis Obispo County, CA; *Lead Electrical Design Engineer.* Kin was responsible for preparing PS&E for modification of traffic signal and intersection safety lighting. This project was to widen the SR 227/Price Canyon Road intersection to include a southbound right-turn lane.

Jim Damkowitch

Traffic

EXPERIENCE
34 years

EDUCATION
MS, Geography, University of California, Santa Barbara, CA

BA, Geography (Honors), University of California, Santa Barbara, CA

YEARS WITH DKS
3 years

Jim has over 30 years of experience in regional multimodal transportation planning, congestion management, multidisciplinary corridor studies, safety studies, transit studies, active transportation studies, operational analyses, transportation and air quality modeling, and performance measure applications. He has managed regional transportation plan/sustainable community strategy updates and general plan circulation element updates; operational traffic studies for state highway infrastructure improvement projects (PSR/PA-ED Phases); corridor studies; active transportation studies; traffic impact fee programs; travel demand modeling; air quality modeling; and transportation operational studies for a variety of clients including Caltrans, MPOs, and various cities and counties in California. He has served on state and regional planning committees and conference panels for transportation air quality conformity, performance measurement, and SB 743, respectively.

Select Project Experience

US 50/LATROBE RD/EL DORADO HILLS BLVD INTERCHANGE PHASE 2B, El Dorado County, CA; *Project Manager.* Jim's team prepared the travel forecasts and traffic operations studies for the El Dorado Hills Blvd Interchange Phase 2B. Three eastbound ramp alternatives were analyzed for two horizon years (2027 and 2047). In addition to travel forecasts and operations DKS performed a Level of Traffic Stress for pedestrian and bike travel and a IHSDM Safety analysis of the three design concepts.

EL DORADO HILLS INTERCHANGE AND HOV LANES TRAFFIC OPERATIONS ANALYSIS, El Dorado County, CA; *Project Manager.* Jim's team prepared the travel forecasts and traffic operations studies for the El Dorado Hills Interchange and U.S. 50 HOV lanes. Two alternatives under three phasing scenarios were analyzed for two horizon years (2010 and 2030). Travel forecasts and operations to inform design concepts for the reconfiguration of the interchange and identified future impacts and proposed mitigation was developed.

SR 99 WHITELOCK PARKWAY INTERCHANGE PSR-PDS TRAFFIC ANALYSIS, City of Elk Grove, CA; *Project Manager.* Jim managed the traffic analysis to provide technical support for the PSR-PDS phase of the SR 99 Whitelock Interchange Improvement Project in the City of Elk Grove. A detailed operational analysis, evaluation, and finding of the traffic operational performances of 17 study intersections also performed within vicinity of the proposed new interchange for SR-99 at Whitelock Parkway. Three interchange configuration alternatives were evaluated including tight diamond (1A), diverging diamond (2A), and tight diamond with roundabouts (3A). The analysis was performed based on methodologies, assumptions, criteria, and traffic conditions under Cumulative Plus Project scenario.

ATWATER-MERCED EXPRESSWAY (STATE ROUTE 59 BYPASS AND SR 99 INTERCHANGE) PA-ED & PS&E TRAFFIC STUDY, Merced County, CA; *Project Manager.* Jim managed the development of the travel forecasts and operations for three Atwater-Merced Expressway alignment alternatives including two new interchanges with SR 99 and Santa Fe Road in Merced County. Traffic modeling was used to generate traffic performance information for each alignment alternative as well as inform the interchange configuration design alternatives. Various project phases were analyzed independently which carried through to the PS&E of Phase 1A_Reduced which is now constructed and open to traffic.

Daniel Block, TE

Traffic

DKS

EXPERIENCE
17 years

EDUCATION
MS, Transportation Technology and Policy, University of California, Davis

BS, Civil Engineering, California Polytechnic State University, San Luis Obispo

REGISTRATION
Professional Traffic Engineer-CA #2676

YEARS WITH DKS
<1 year

Daniel is an experienced transportation engineer and planner with a diverse background in working on projects throughout California. He specializes in data-driven planning for roadways, active modes, transit, site developments, and general plans. Daniel excels in developing, validating, and applying travel demand and economic/behavioral models. He is skilled in micro-simulation and proficient with various transportation analysis software, including VISSIM, VISUM, VISTRO, Synchro/SimTraffic, TransCAD, Cube/Voyager, ArcGIS, HCS, FREEVAL, and Traffix.

Select Project Experience

PIER AVENUE MULTIMODAL CORRIDOR STUDY, San Luis Obispo County, CA; *Traffic Operations and Forecasting Support.* DKS is transforming Pier Avenue from an auto-centric design to a multimodal street to better connect the Oceano community with the beach and dunes. The study includes traffic operations analysis, bicycle and pedestrian stress levels, and parking analysis to prioritize safety for pedestrians and cyclists.

HOLIDAY INN EXPRESS TIA REVIEW, City of Santa Maria, CA; *Peer Review Lead.* Daniel performed a peer review of a Traffic Impact Analysis for a hotel in Santa Maria. The review focused primarily on the VMT analysis.

CALIFORNIA POLYTECHNIC STATE UNIVERSITY (CAL POLY), SAN LUIS OBISPO CAMPUS MASTER PLAN EIR, Cal Poly, San Luis Obispo, CA; *Traffic Operations and Forecasting Support.* Daniel performed intersection-level multimodal traffic operations analysis to identify and mitigate impacts under CEQA for the update of the Cal Poly Campus Master Plan.

STOCKTON BLVD CORRIDOR COMPLETE STREETS, City of Sacramento, CA; *Traffic Operations and Forecasting Support.* Daniel led the traffic engineering study for a 4-mile urban arterial, initially an intercity autoroute, to accommodate various users (pedestrians, cyclists, transit). He used SACOG's regional travel demand model to forecast future demand, assess the impact on parallel routes, and perform VISSIM micro-simulation for a challenging intersection.

SANTA CLARA COUNTY EXPRESSWAY PROGRAM SUPPORT SERVICES, Santa Clara County, CA; *Traffic Operations and Forecasting Lead.* Daniel was the traffic analysis lead for the Montague Expressway corridor study, providing planning and design services. The project included VISSIM modeling and testing operational improvements.

US 101 HOV LANES PA/ED, Ventura County Transportation Commission, CA; *Traffic Operations and Forecasting Support.* Daniel led the freeway operations analysis for adding 29 miles of HOV lanes on US 101 through Thousand Oaks and Ventura, using the HCM method and FREEVAL software.

Sean Carney, EIT

Traffic

EXPERIENCE
10 years

EDUCATION
BS, Civil Engineering, Cal Poly San Luis Obispo

REGISTRATION
Engineer in Training-CA #146088

YEARS WITH DKS
10 years

Sean offers a broad range of analysis skills, including signal timing, traffic operations analysis, transportation system planning, and crash data and safety analysis. Sean works with public agencies to identify and resolve today's transportation issues and plan for future travel demand. He is experienced in providing quantitative and qualitative analysis for all mobility methods. He has worked on projects throughout California and Oregon to address the needs of growing traffic, transit, and active mobility demands. Sean is adept at applying various software packages for traffic analysis, including Synchro/SimTraffic, Vissim, ArcGIS, and Cube.

Select Project Experience

SLOCOG US 101 CORRIDOR MOBILITY MASTER PLAN ADDENDUM, San Luis Obispo County, CA; *Traffic Operations and Analysis Support.* Sean conducted safety and operations analysis for the US 101 Corridor Mobility Master Plan Addendum in 2020. This involved preparing materials for Avila Beach Drive Interchange, US 101 Pismo shoulder lanes, and Shell Beach Streetscape projects. Sean also provided data inputs for SLOCOG's SB-1 grant application.

PIER AVENUE MULTIMODAL CORRIDOR, San Luis Obispo County, CA; *Traffic Operations and Analysis Lead.* Sean is developing a corridor plan for Pier Avenue in Oceano, aimed at enhancing bicycle and pedestrian access to the beach. Pier Avenue is a primary access point for the Oceano Dunes State Vehicular Recreation Area, leading to varying demand due to tourist activity. Sean leads alternative concept development driven by stakeholder outreach conducted by DKS in the project study area.

CHURCH STREET ROUNDABOUT FEASIBILITY STUDY, Santa Maria, CA; *Traffic Operations and Analysis Lead.* Sean led a traffic analysis to assess the feasibility of installing roundabouts at five locations along Church Street in Santa Maria. Using Sidra and HCM methodologies, Sean determined lane requirements and evaluated traffic operations. Each location was assessed for necessary right-of-way for proposed improvements.

I-5/RICHARDS BOULEVARD INTERCHANGE, Sacramento, CA; *Traffic Operations and Analysis Lead.* Sean leads traffic analysis to evaluate interchange design alternatives. Initial screening via SimTraffic microsimulation determines viability, followed by Vissim analysis of top alternatives for comprehensive impact assessment on local and freeway systems. The project requires extensive coordination between the City and Caltrans to ensure analysis consistency across multiple projects in the study area.

I-5/I STREET INTERCHANGE, Sacramento, CA; *Traffic Operations and Analysis Lead.* Sean led traffic and safety analysis for the I-5/I Street Interchange redesign in Downtown Sacramento, aiming to improve local transit, bicycle, and pedestrian access to Sacramento Valley Station. Unique design considerations required Vissim microsimulation to compare alternatives and ensure operational feasibility amidst physical constraints.

Lillian D. Jewell

Right-of-Way Acquisition

EXPERIENCE
44 years

EDUCATION
BA, University of California, Santa Barbara

REGISTRATION
Corporate Real Estate Broker
Licensed Real Estate Broker: DRE #00704804

YEARS WITH HAMNER, JEWELL & ASSOCIATES
34 years

Lillian has been the Managing Senior Associate of Hamner, Jewell & Associates since 1990, and since 1979 has spent her entire career in real estate. Lillian has functioned in a primary role in residential, commercial, and agricultural land negotiations and acquisitions for cities, counties, special districts, water agencies, utilities, and redevelopment agencies. A resident of Arroyo Grande in San Luis Obispo County, Lillian is very familiar with the area and has managed projects that include federally funded freeway interchange projects, the acquisition of sites for federally funded transportation centers, Metrolink stations, and transit maintenance facility sites, as well as several park acquisitions, many roadway and public trail projects. She also managed the acquisition and relocation services in conjunction with approximately 200 parcel acquisitions for the California High Speed Rail Project.

Over the years she has had extensive specialized training in the governmental real estate sector through professional courses and seminars offered by the International Right of Way Association, Caltrans, FHWA, FRA, HUD, CRLA (continuing legal education) and through the Ventura Center for Dispute Resolution. Courses have also included Understanding Environmental Contamination in Real Estate Transactions. Lillian has a lengthy resume of experience in providing acquisitions, sales of excess lands, and interim property management in conjunction with transportation, public works, housing, and redevelopment projects. She is a “hands-on” manager who closely monitors project progress and maintains direct relationships with our clients and project teams.

Qualifications and Capabilities

- Federal Uniform Act
- State Government Code
- Eminent domain requirements
- Caltrans policies and procedures
- Organizational leadership and project management
- Drafting relocation guidelines, plans, and cost estimates
- Central Coast, Central Valley, and other California real estate

Relevant Project Experience

- Freeway interchange projects
- Fee purchases of vacant and improved properties
- Easement acquisition for pipelines and street widening
- Sidewalk and bike path projects
- Project planning, budgetary estimates and right of way data sheets
- Securing rights of entry
- Relocation Assistance
- Acquisition of sites for federally funded transportation
- Transit maintenance facility sites
- Park acquisitions
- Roadways and bridges

J.T. Katavich

Right-of-Way Acquisitions

EXPERIENCE
7 years

EDUCATION
MA, Education, San Diego State University

BA, Journalism, San Diego State University

REGISTRATION
California Real Estate License: DRE #02109021

YEARS WITH HAMNER, JEWELL & ASSOCIATES
7 years

J.T. joined Hamner, Jewell & Associates in January 2017. Over the years, he has progressed to increasingly responsible positions, and is a well-rounded, cross trained Right of Way Agent and Project Manager with excellent communication skills, technical skills, and organizational skills. He is thoroughly experienced with public right of way acquisition projects from inception through completion, including initial property identification and research and completing Right of Way Data Sheets and budgetary estimates for projects small and large primarily throughout San Luis Obispo County, where he also lives. J.T. has worked closely with the Consor team on the early stages of the Atwater Merced Expressway Project, a large scale highway project involving federal requirements and Caltrans oversight. He has also worked with Consor on several federally funded bridge projects in San Luis Obispo and Merced Counties.

J.T. holds a California Real Estate License and Notary Public Commission, as well as a Right of Way Agent designation from the International Right of Way Association. His active, on-the-job training has been supplemented by attending specialized professional level courses offered through the IRWA, Caltrans, and FHWA. J.T.'s interpersonal skills lend themselves to a skillful approach to property owner negotiations. Through these negotiations, he has acquired fee title, permanent and temporary easements for federally funded and local agency projects.

J.T. has also assisted public agency clients with preparing Caltrans Right of Way Certification forms. Additionally, he has completed relocation plans for temporary relocations prompted by housing rehabilitation projects. J.T. has excellent aptitude, judgment, and presentation skills, excellent communication skills, both verbal and in writing, and top-notch technical skills.

Qualifications and Capabilities

- Right of Way Acquisition, federally funded Caltrans oversight & Local Agency
- Streets and Highways, Water and Wastewater Systems
- Full & Partial Acquisitions, Fee & Easements, Temporary Easements
- Right of Way Data Sheets & Budgetary Analysis
- Relocation Impact Analysis and Relocation Plans
- Relocation Assistance per State and Uniform Act Guidelines
- Waiver Valuations
- Williamson Act Compliance
- Development Conditions/Required Dedications

Relevant Project Experience

- Prado Interchange RW Data Sheets, City of San Luis Obispo, CA
- Chorro Murray Sewerline Project, City of San Luis Obispo, CA
- Two Federally-Funded Bridge Replacement Projects, City of Atascadero, CA
- Recycled Water Conveyance Project/Several condition of development transportation and utility projects, City of Paso Robles, CA
- Atwater Merced Expressway and Several Federally Funded Bridge Projects, Merced County, CA
- Multiple Street Improvement and Roundabout Projects, City of Dinuba, CA
- Several Federally Funded Road Widening projects including business relocation assistance, City of Fresno, CA

Stephen Myrick

Right-of-Way Acquisition

EXPERIENCE
4 years

EDUCATION
BS, Health Sciences and Public Health Systems, Kaplan University, Davenport, IA

AS, General Education, Colorado Technical University, Colorado Springs, CO

REGISTRATION
California Real Estate DRE #02105416

YEARS WITH HAMNER, JEWELL & ASSOCIATES
1 year

Stephen Myrick joined Hamner, Jewell & Associates in 2023, bringing with him several years of commercial and residential real estate experience in San Luis Obispo County. A San Luis Obispo native, he continues to live in south county and has exceptional knowledge and contacts in the area that set the stage for his success in providing right of way acquisition services for local San Luis Obispo County communities. His familiarity with the Central Coast and its real estate market has made him a perfect fit for the right of way industry and boosted him into several important local projects involving right of way acquisition on state, local, and federally-funded projects that have included a sidewalk infill project in the City of San Luis Obispo, a pending federally funded bridge replacement project in Arroyo Grande, and he has assisted with the City of San Luis Obispo Mid-Higuera Bypass Project, among other projects.

Prior to joining Hamner, Jewell & Associates, Stephen gained general real estate experience through his work with Elite Real Estate Group and with Richardson Properties. In both capacities, he worked to assist clients with leasing, buying, and selling real estate on the Central Coast. His work was primarily focused on commercial real estate transactions involving a variety of property types including retail, office, medical, land, development, industrial, and investment properties. He was able to develop strong skills in negotiation, marketing, contract management, and an overall strong understanding of the local real estate market.

Prior to entering the real estate field, Stephen was a first responder in the San Luis Obispo area after completing his service to our country in the US Military, where he was trained as a medic.

Qualifications and Capabilities

- San Luis Obispo County communities
- Residential and commercial real estate
- California lease and rental agreement laws
- Contract law
- Appraisal principles and practices
- Excellent written and verbal communication skills
- Establishing relationships; negotiation skills
- Excellent technical skills

Relevant Project Experience

- Mid-Higuera Bypass Project, City of San Luis Obispo, CA
- Prado Road Bridge Widening Project, City of San Luis Obispo, CA
- Traffic Way Bridge Project, City of Arroyo Grande, CA
- South Higuera Sidewalk Project, City of San Luis Obispo, CA
- Kings County Fire Station Site Acquisition, Kings County, CA

Chris Sewell, PE, QSD/P

Water Resources, Floodplain, Drainage Design, Drainage Report

EXPERIENCE
28 years

EDUCATION
BASc, Civil & Environmental Engineering, University of British Columbia

AAsc, Civil Engineering, College of New Caledonia

REGISTRATION
Professional Engineer- CA #64807

Qualified SWPPP Developer/ Practitioner (QSD/P)- CA #618

YEARS WITH HDR
23 years

Chris has 28 years of experience working on a number of projects involving highway and roadway drainage, water supply issues, and hydraulic modeling of rivers and floodplains. He has a wide range of field experience in environmental and hydraulic and hydrologic projects. His typical projects include floodplain analysis and delineation, drainage design, bridge hydraulics, scour analyses, wetland impact mitigation, water quality assessment, and water rate measurement and availability. His experience includes working with and delivering on-call transportation projects for public agency clients, including the City of San Luis Obispo.

Select Project Experience

PRADO ROAD OVERCROSSING PROJECT, City of San Luis Obispo, CA; *Project Manager.* The City of San Luis Obispo proposes to extend Prado Road over US 101 to connect with Dalidio Drive to the north. The project limits are located within the Federal Emergency Management Agency's (FEMA) regulatory floodplain, with flooding sources including San Luis Obispo Creek, Prefumo Canyon Creek, and Froom Creek. Chris worked with the City and oversaw the development the two-dimensional (2D) hydraulic model of the project reach of San Luis Obispo Creek to evaluate the project's impacts on the floodplain. Work involved evaluating the existing hydraulic conditions based on FEMA design flows, current available data, and the associated Letter of Map Revisions (LOMR) and assessing the proposed conditions based on preliminary interchange improvement configurations. Chris worked closely with the City, guiding the analyses and overseeing the development of the Floodplain Evaluation Report.

LOS OSOS VALLEY ROAD/US 101 INTERCHANGE IMPROVEMENT PROJECT, City of San Luis Obispo, CA; *Senior Engineer.* The purpose of this project was to perform a floodplain risk assessment and recommend mitigation measures for the proposed improvements to the Los Osos Valley Road/US 101 interchange in the city of San Luis Obispo. The improvements were proposed by the City of San Luis Obispo, Caltrans, and the Federal Highway Administration. Chris performed studies for the design of fish passage enhancement, which included the design of facilities through which both adult and juvenile steelhead could pass. He also prepared the Floodplain Evaluation Report and Bridge Design Hydraulic Study Report.

RIVER GROVE BRIDGE REHABILITATION PROJECT, San Luis Obispo County, CA; *Supervising Engineer.* Chris prepared the Bridge Design Hydraulic Study Report to present the design flow characteristics for the existing bridge and the proposed rehabilitation bridge. He reviewed available hydrologic data and prepared a hydrologic study; a hydraulic analysis to determine the design water surface elevations and flow velocities for the existing and proposed rehabilitation bridges over Estrella River; a scour analysis to estimate potential scour depths for the proposed bridge condition; and scour countermeasure analyses and recommendations for the proposed bridge rehabilitation.

Jeanette Newmiller

Water Resources, Floodplain, Drainage Design, Drainage Report

EXPERIENCE
10 years

EDUCATION
MS, Civil & Environmental Engineering, University of California, Davis

BS, Civil & Environmental Engineering, University of California, Davis

YEARS WITH HDR
5 years

Jeanette has more than 10 years of experience performing hydrologic and hydraulic modeling of watersheds, rivers, and floodplains for tasks such as channel improvements, fish passage design, hydraulic structure analysis, stormwater drainage, sea level rise, and floodplain delineation. Her modeling experience includes HEC-RAS, HEC-HMS, ICM, PC SWMM, and Flow 3D. She also has experience with ArcGIS and R for tasks such as data preparation, results post-processing, and specialized analysis.

Select Project Experience

PRADO ROAD OVERCROSSING PROJECT, City of San Luis Obispo, CA; *Associate Engineer.* The City of San Luis Obispo proposes to extend Prado Road over US 101 to connect with Dalidio Drive to the north. The project limits are located within the Federal Emergency Management Agency's (FEMA) regulatory floodplain, with flooding sources including San Luis Obispo Creek, Prefumo Canyon Creek, and Froom Creek. Jeanette developed a HEC-RAS two-dimensional (2D) hydraulic model of the project reach of San Luis Obispo Creek to evaluate the project's impacts on the floodplain. Work involved evaluating the existing hydraulic conditions based on FEMA design flows, current available data, and the associated Letter of Map Revisions (LOMR) and assessing the proposed conditions based on preliminary interchange improvement configurations. Jeanette was also responsible for analyzing and calibrating split-flows, identifying level of impacts, and documenting the results in the Floodplain Evaluation Report.

STATE ROUTE 41 EXPANSION PROJECT, Madera County, CA; *Associate Engineer.* The County of Madera, in cooperation with Caltrans District 6, proposes to expand SR 41 from 0.4 miles south of the Avenue 11 undercrossing to 0.4 miles north of Avenue 15, about 15 miles east of the city of Madera and 12 miles north of the city of Fresno. Jeanette was responsible for hydraulic modeling and assessed existing hydraulics and hydrology so that appropriate drainage can be proposed for Caltrans' approval. She analyzed the existing conditions, created watershed exhibits and summaries of results, and provided recommendations for drainage sizing and conceptual input. Jeanette created HEC-RAS 2D and HEC-HMS models and provided the models to a third-party developer's engineers for existing flow results. She was also responsible for updating models and exhibits according to the third-party developer's engineers' recommendation and input on what should be included in the analyses.

HIGHWAY 1 IN SONOMA COUNTY PM 15.1 TO 15.8, Caltrans District 4, Sonoma County, CA; *Associate Engineer.* The project was to perform erosion control analysis at Gleason Beach for the Highway 1 Relocation Project. Jeanette analyzed coastal conditions including the effects of storm frequency, wave run-up, and sea level rise to determine the rate of bluff retreat and map the predicted shoreline for the years 2050 and 2100. The study included a statistical analysis of available data and a sensitivity analysis of the predictive parameters used.

Analette Ochoa, PE, QSD/P, ToR

Stormwater Treatment, SWDR, Erosion Control

EXPERIENCE
31 years

EDUCATION
BS, Civil Engineering,
University of California, Davis

REGISTRATION
Professional Civil Engineer-
CA #55279

Qualified SWPPP Developer
and Practitioner (QSD/P)-
CA #178

QSD/P Trainer of Record (ToR)-
CA #178

YEARS WITH HDR
17 years

Analette has 31 years of experience in the fields of water quality, stormwater management and hydraulics. She has been involved in hundreds of Caltrans projects statewide for drainage and stormwater best management practices (BMP) design. Her experience ranges from large-scale projects to local infrastructure improvements and low-impact development (LID). Analette also has trained local agencies and Caltrans staff on LID and Construction General Permit (CGP) requirements. Her experience negotiating stormwater permit compliance with the Regional Water Quality Control Boards (RWQCB) has helped her develop strong working relationships with RWQCB staff and facilitates efficient permitting and compliance.

Select Project Experience

JACK CREEK ROAD AT PASO ROBLES CREEK BRIDGE REPLACEMENT PROJECT, San Luis Obispo County, CA; *Hydraulics Project Manager.* San Luis Obispo County is proposing to replace the existing timber bridge on Jack Creek Road with a new concrete bridge. The project area is located approximately 4.3 miles west of US 101 and 0.2 mile north of State Route (SR) 46. HDR was responsible for the post-construction BMP design, Roadway Drainage Hydrologic and Hydraulic Memorandum, and the Phase I Initial Site Assessment. Analette oversaw the preparation of the 65%, 95% and Final Submittal for LID BMP Design Plans, Specifications, and Estimates (PS&E), as well as the Roadway Drainage Hydrology and Hydraulics Memorandum for the 65%, 90% and Final PS&E.

NORTHBOUND INTERSTATE 280 OFF-RAMP TO FOOTHILL EXPRESSWAY PROJECT, Cupertino and Los Altos, CA, Santa Clara Valley Transportation Authority (VTA); *Supervising Engineer.* VTA proposes to widen the existing northbound Interstate 280 (I-280) exit to Foothill Expressway from one lane to two lanes in order to improve traffic operations in the section of northbound I-280 between the two-lane branch connector from SR 85 and the Foothill Expressway off-ramp in the cities of Cupertino and Los Altos. Analette was responsible for preparation of the Stormwater Data Report, as well as the water pollution and erosion control PS&E. The recommended BMPs met the design requirements of Caltrans, VTA, Santa Clara Valley Urban Runoff Pollution Prevention Program, and the San Francisco Bay RWQCB.

YERBA BUENA ISLAND SOUTHGATE ROAD REALIGNMENT, San Francisco, CAMTC-BATA & San Francisco County Transportation Authority; *Supervising Engineer.* The project was for the realignment of Southgate Road and Hillcrest Road as well as the construction of the previously approved eastbound off-ramp south of I-80 and bicycle/pedestrian facilities. Analette oversaw the hydrologic and hydraulic analyses; Drainage Report; and the water pollution control and erosion control PS&E.

Andrew P. Chin, EIT

Stormwater Treatment, SWDR, Erosion Control

EXPERIENCE
16 years

EDUCATION
BS, Environmental Engineering, University of California, Riverside

REGISTRATION
Engineer-in-Training-CA #61526

YEARS WITH HDR
16 years

Andrew has 16 years of experience in civil and environmental engineering studies. He develops reports and presentations in the fields of water quality and stormwater, including preparing Water Quality Assessment Reports, Stormwater Data Reports, and Conceptual Stormwater Pollution Prevention Plans (SWPPP), meeting Caltrans and local agency guidelines. He also develops plans, specifications, and estimates (PS&E), and he provides construction support for stormwater and roadway drainage projects. Andrew uses his experience to meet current design regulations for stormwater treatment, low-impact development, and hydromodification management as well as the design of bioretention facilities, media filters, and other treatment devices.

Select Project Experience

STATE ROUTE 178 WIDENING PROJECT, City of Bakersfield, CA and Caltrans District 6; *Project Engineer.* The project widened State Route 178 in the northeast portion of the City of Bakersfield. Andrew prepared the Stormwater Data Report for the project.

SOUTH COUNTY CONNECTOR, Stanislaus Council of Governments, Stanislaus County, CA; *Water Quality Specialist.* Andrew is assisting with the preparation of the Preliminary Hydrology, Floodplain, and Water Quality technical studies for this project. Local and regional investment limitations and the preliminary cost-benefit analysis of the proposed alternatives were provided for this project.

US 101/SR 25 INTERCHANGE – PHASE 1 PROJECT, Santa Clara Valley Transportation Authority, Santa Clara County, CA; *Senior Engineer.* The Santa Clara Valley Transportation Authority (VTA) proposes to construct a new US 101/SR 25 interchange and modify northbound and southbound on- and off-ramps to US 101 in southern Santa Clara County. Andrew completed the roadway drainage and stormwater treatment calculations and reports for the project, which included performing the design sizing calculations and modeling for the drainage, hydromodification management, and stormwater facilities to meet Caltrans and Santa Clara County's criteria. Andrew also assisted and provided oversight for completion of the project's water well replacement studies, preliminary site investigation, and geomorphic assessment.

STATE ROUTE 9 DRAINAGE FACILITIES UPGRADE PROJECT, Caltrans District 5, Santa Cruz County, CA; *Senior Engineer.* The project proposes to upgrade drainage facilities at 16 locations on SR 9 in Santa Cruz County from PM 0.09 to PM 7.53. This project was initiated by Pete Riegelhuth and the District 5 NPDES Unit as a result of a regulatory order from the Central Coast RWQCB. Andrew assisted with the development of the PS&E phase Stormwater Data Report.

Chris Bersbach

Environmental Permitting

EXPERIENCE
16 years

EDUCATION
MESM, Conservation Planning, Bren School of Environmental Science & Management, University of California, Santa Barbara

BA, Psychology, Brandeis University

YEARS WITH RINCON
16 years

Chris manages and prepares CEQA and NEPA documentation in the California central coast region and technical air quality, greenhouse gas emissions, and noise analyses for public agencies and private sector clients throughout California. He has 16 years of planning experience with an emphasis on environmental planning and technical environmental analysis. His experience includes a wide range of technical environmental and planning studies, including infrastructure development projects, urban land redevelopment projects, general plans and specific plans, solar power facilities and other energy projects, waste and wastewater management facilities, and other long-range planning projects.

Select Project Experience

PRADO ROAD-US 101 INTERCHANGE PROJECT: CALTRANS PEAR, CEQA/NEPA ENVIRONMENTAL TECHNICAL STUDIES, AND IS-MND/EA, City of San Luis Obispo, CA; *Environmental Project Manager.* Chris managed preparation of technical studies and an IS-MND/EA for the Prado Road-U.S. 101 Interchange Project. The project will provide connectivity between the existing and planned neighborhoods east and west of U.S. 101 and resolve operational deficiencies on State and City facilities for all transportation modes. Rincon worked with the City of San Luis Obispo and Caltrans staff to prepare environmental technical studies in conformance with Caltrans' Standard Environmental Reference, including a Natural Environment Study, Archaeological Survey Report, Historic Resources Evaluation Reports, Historic Property Survey Reports, Noise Study Report, Air Quality and GHG technical analyses, Community Impact Analysis, Visual Impact Analysis and Water Quality Report.

SAN YSIDRO ROAD/NORTH JAMESON LANE/US 101 ROUNDABOUT PROJECT, CALTRANS NEPA ENVIRONMENTAL TECHNICAL STUDIES AND CEQA ANALYSIS, Santa Barbara County, CA; *Project Manager.* Chris managed preparation of technical studies and an EIR Addendum for the San Ysidro Road/North Jameson Lane/U.S. 101 Roundabout Project. Rincon worked with County of Santa Barbara, City of Santa Barbara, Caltrans staff, and the contract engineer to prepare environmental technical studies in conformance with Caltrans' SER for each roundabout, including Natural Environment Study-Minimal Impact (NES-MI) reports, Archaeological Survey Reports (ASR), Historic Resources Evaluation Reports (HRER), Historic Property Survey Reports (HPSR), Initial Site Assessments (ISA), Noise Studies, Air Quality and GHG analyses, Community Impact Analyses (CIA), Visual Impact Analyses (VIA) and Water Quality Reports.

US 101/CLARK AVENUE INTERCHANGE IMPROVEMENTS PROJECT PEAR, Santa Barbara County, CA; *Project Manager.* Chris oversaw preparation of a Preliminary Environmental Analysis Report (PEAR) in accordance with the Caltrans PEAR Manual, in support of a PSR for the Clark Avenue Northbound Ramps at U.S. Highway 101 Interchange Improvements Project. The project proposes to construct a new wide diamond configuration of the U.S. 101 northbound on- and off-ramps and signalize the intersection with Clark Avenue. The PEAR was used to document the issues that are anticipated to be addressed in the NEPA and CEQA documentation and the assumptions that were used to anticipate those issues.

STATE ROUTE 227 OPERATIONS ANALYSIS: ENVIRONMENTAL CONSTRAINTS ANALYSIS, San Luis Obispo Council of Governments, San Luis Obispo County, CA; *Project Manager.* Chris served as Project Manager for an Environmental Constraints Analysis for traffic improvements, including road widening, identified along a 1.3-mile segment of State Route (SR) 227, Broad Street, and Los Ranchos Road. The project corridor also included a segment of the Union Pacific Railroad east of Edna Road and north of Biddle Ranch Road.

Colby J. Boggs

Environmental Permitting

Colby is a Principal and Senior Ecologist with Rincon Consultants. He has 26 years of professional experience as a botanist, ecologist, wetlands specialist, and biological sciences educator and researcher. His duties at Rincon include biological field surveys for special status species, habitat and plant community mapping, wetlands assessments, biological resources analyses, construction and mitigation monitoring, conservation planning, regulatory compliance, and the preparation of biological reports, environmental documents and permit applications in support of California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), Porter-Cologne Water Quality Control Act, California Fish and Game Code, California Coastal Act, Clean Water Act, Rivers and Harbors Act of 1899, and State and federal Endangered Species Acts.

Select Project Experience

PRADO ROAD-US 101 INTERCHANGE PROJECT: CALTRANS PEAR, CEQA/NEPA ENVIRONMENTAL TECHNICAL STUDIES, AND IS-MND/EA, City of San Luis Obispo, CA; *QA/QC Biological Resources.* Colby provided oversight and QA/QC for the preparation of technical studies and an IS-MND/EA specific to biological resources for the Prado Road-U.S. 101 Interchange Project. The project will provide connectivity between the existing and planned neighborhoods east and west of U.S. 101 and resolve operational deficiencies on State and City facilities for all transportation modes. Rincon prepared the PEAR for the interchange project and worked with the City of San Luis Obispo, Caltrans staff, and project engineer to prepare environmental technical studies in conformance with Caltrans' Standard Environmental Reference, including a Natural Environment Study, Archaeological Survey Report, Historic Resources Evaluation Reports, Historic Property Survey Reports, Noise Study Report, Air Quality and GHG technical analyses, Community Impact Analysis, Visual Impact Analysis and Water Quality Report.

WATER RESOURCE RECOVERY FACILITY PROJECT, City of San Luis Obispo, CA; *Principal Biologist and Regulatory Specialist.* Colby provided strategic regulatory planning support and negotiated permit conditions with the lead agencies as a part of completing an EIR. Rincon prepared the EIR to satisfy the requirements of CEQA-Plus to support application for federal funding under the State Clean Water Revolving Fund. Rincon provided expertise and advice on probable future regulatory conditions that could be attached to a potential cooling wetland option to assist the City in its decision-making process on that component of the project.

JOHNSON AVENUE EMERGENCY PROJECT, City of San Luis Obispo, CA; *Principal-in-Charge.* The Rincon team provided environmental consulting services to the City for this creek bank stabilization project. Rincon completed resource agency notifications, a pre-construction survey, aquatic species relocation, WEAP trainings, archaeological monitoring, biological monitoring, and a project completion report and NOC for the emergency repair activities that were conducted for the first phase of the project in 2022. Rincon then completed these again for the emergency work for the second/permanent phase of this project in 2023, which also include preparation of a HMMP to describe all impacts and present an approach to accomplishing compensatory mitigation for both phases.

EXPERIENCE

26 years

EDUCATION

MS, Botany, California State University, Chico

BS, Ecology and Evolution, University of California, Santa Barbara

CERTIFICATION/ REGISTRATION

Certified Ecologist – Ecological Society of America

California Rapid Assessment Method – CRAM.org

Wetland Delineation Training – Richard Chinn Env.

PERMITS

Rare, Threatened, and Endangered Plant Voucher Collecting Permit No. 2081(a)-23-081-V – CDFW

YEARS WITH RINCON

16 years

Michael Tom

Environmental Permitting

EXPERIENCE
14 years

EDUCATION
MS, Biological Sciences, California Polytechnic State University, San Luis Obispo

BS, Ecology & Systematic Biology, Concentration in Wildlife Biology, California Polytechnic State University, San Luis Obispo

YEARS WITH RINCON
14 years

Michael Tom is a Supervising Biologist with Rincon's biological resources group. Michael has 14 years of experience conducting general and focused surveys for a variety of plant and animal species. He is proficient in maintaining herpetology collections and providing assistance with a number of vertebrate and invertebrate species. Michael has working knowledge and training with the fauna and flora of the central coast, San Joaquin Valley, and desert regions of California. He has also received specific training in survey protocols, habitat requirements and natural histories of the California red-legged frog (CRLF) and desert tortoise. Michael has prepared and managed the preparation of documents to support Section 7 and Section 10 consultation with the U.S. Fish and Wildlife and National Marine Fisheries Services as well as 2081 Incidental Take Permit applications under the California Endangered Species Act. Michael has also been authorized under and implemented measures in issued Biological Opinions and 2081 Incidental Take Permits.

Select Project Experience

PRADO ROAD-US 101 INTERCHANGE PROJECT: CALTRANS PEAR, CEQA/NEPA ENVIRONMENTAL TECHNICAL STUDIES, AND IS-MND/EA, City of San Luis Obispo, CA; *Supervising Biologist.* Michael oversaw the preparation of technical studies and an IS-MND/EA specific to biological resources for the Prado Road-U.S. 101 Interchange Project. The project will provide connectivity between the existing and planned neighborhoods east and west of U.S. 101 and resolve operational deficiencies on State and City facilities for all transportation modes.

SAN LUIS RANCH SPECIFIC PLAN PROJECT EIR, City of San Luis Obispo, CA; *Biologist.* Michael prepared the Biological Resources section of the San Luis Ranch Project Specific Plan EIR on behalf of the City of San Luis Obispo. The 131-acre project site represented a key development area for the City, identified in the Land Use and Circulation Element Update. The proposed project included a Specific Plan, General Plan Amendment, and Development Plan for a 131-acre project site, including annexation of the site into the City of San Luis Obispo. This Specific Plan included a mixture of residential, commercial, office, and hotel uses, with a portion of the site preserved for agriculture and open space uses.

WASTEWATER TREATMENT PLAN REDUNDANCY PROJECT CEQA TECHNICAL STUDIES, Oceano, South San Luis Obispo County Sanitation District; *Biologist.* The South San Luis Obispo County Sanitation District Redundancy Project involves the construction and operation of backup infrastructure at the District's wastewater treatment facility in Oceano. In support of Clean Water State Revolving Fund and United States Department of Agriculture funding pursuits for the project, Rincon prepared technical studies compliant with CEQA-Plus and NEPA requirements. Technical studies include an Environmental Report for Categorical Exclusion, a Federal Clean Air Act Conformity Analysis, a Cultural Resources Assessment, and a Biological Evaluation. Rincon is also coordinating with U.S. Department of Agriculture staff to facilitate the environmental review process and receive a Biological Opinion from United States Fish and Wildlife Service for impacts to California red-legged frog.

ON-CALL ENVIRONMENTAL DOCUMENT & DOCUMENTATION SERVICES CALTRANS DISTRICT 5 — CENTRAL CALIFORNIA STATE ROUTE 46 CORRIDOR IMPROVEMENTS PROJECT, San Luis Obispo County, CA; *Biologist.* Michael served as a Designated Biologist for the project and implemented tasks including pre-construction surveys, biological monitoring during geotechnical investigations pursuant to the USFWS BO and 2081 ITP.

Brian Ray

QA/QC - Geometric Design, Traffic Peer Review Lead

Sunrise Transportation Strategies, LLC.

EXPERIENCE
38 years

EDUCATION
BS, Civil Engineering, Portland State University

REGISTRATION
Professional Engineer-
AL, AZ, CO, FL, GA, IA, ID, LA, MD, MO, MN, MS, MT, NM, OH, OR, TX, UT, WA, WI, & WY

YEARS WITH SUNRISE TRANSPORTATION STRATEGIES
3 years

Brian has over 38 years of experience in multimodal transportation planning, traffic engineering, and contextual roadway design. He has planned and designed roundabouts since the late 1990s and is presently leading efforts for new national roundabout guidance: A Guide for Roundabouts. He has performed location design and engineering evaluations for a variety of corridor studies and environmental impact review documents across the US and in the California central coast. He has actively supported projects within California for over 25 years, including extensive coordination with cities, counties, and Caltrans. Brian has been a trusted advisor to Caltrans, including supporting integrating roundabouts, Highway Design Manual review, staff training, and peer-to-peer support in developing the Intersection Evaluation Control (ICE) policy directive.

Brian is a nationally recognized leader in interchange planning and design and has been:

- A roundabout and Highway Safety Manual trainer to Caltrans District and Headquarters staff
- An advisor to Caltrans in developing Traffic Operations Policy Directive 13-02 Intersection Control Evaluation (ICE)
- A reviewer/contributor to the roundabout elements of the Highway Design Manual (HDM)

Select Project Experience

US 101/AVILA BEACH INTERCHANGE, San Luis Obispo County, CA; *Project Manager/ICE Lead.* Brian directed roundabout design activities to address safety and traffic operations performance issues at the US 101/Avila Beach Drive interchange. He oversaw the traffic operations sensitivity analyses, roundabout layout at the south bound ramp terminal intersection. The roundabout design formed the basis for the associated ICE and Caltrans project approval. The project is in PS&E and Brian was engaged in peer review of preliminary plans and led efforts on construction sequencing and staging.

I-80/ASHBY AVENUE INTERCHANGE PROJECT, Emeryville, CA; *Project Manager/ICE Lead.* Brian supported project approval and environmental document (PA&ED) efforts for this complex project. Specifically, Brian supported the project team in developing interchange concepts to supplement alternatives completed in earlier studies. Brian developed a range of high-capacity diamond forms (including a diverging diamond) and led intersection control evaluations for Step 1 and Step 2. He led interchange design evaluations that considered a wide range of performance metrics focusing on pedestrian and bicycle facilities, and solution optimization within the constrained environment. The project is being advanced to final design and PS&E.

I-580/VASCO ROAD INTERCHANGE, Livermore, CA; *Traffic Engineer.* Brian led the ICE and interchange concept evaluations to replace the existing interchange. Livermore is a growing community with increasing employment and a planned Valley Link rail transit extension to be integrated onto I-580. Contemporary interchange forms are needed to replace the existing rural interchange design. Brian led concept designs for service interchange forms that focused on integrating pedestrians and bicyclists while meeting increased forecast traffic. The forms included diamond and partial cloverleaf forms. A diverging diamond and single loop partial cloverleaf form ranked among the strongest alternative candidates.

Mary Verdin

Public Outreach

EXPERIENCE
30+ years

EDUCATION
Area of Study, Psychology,
University of Califorina, Davis

YEARS WITH VERDIN
21 years

With over 30 years of experience in marketing and communications, Mary Verdin has established herself as a visionary leader in the industry, being recognized by the Public Relations Society of America, Stevie Awards for Women in Business, Association for Fundraising Professionals, and the Rotary Club. Serving as the President/CEO at Verdin Marketing Ink Co. Since founding the company in December 2003, she has spearheaded its growth into a thriving multimillion-dollar business.

Alongside developing and mentoring a team of 12 employees, Mary leads the agency's business development programs and nurturing client relationships. Mary has always been dedicated to supporting the community and our local nonprofit organizations, underscoring her commitment to corporate social responsibility. She has received recognition from Public Relations Society of America, Rotary Club, Lumina Alliance, Assn of Fundraising Professionals, Stevie Awards, and Cuesta College.

Select Project Experience

Prado Interchange Environmental Phase Public Outreach, City of San Luis Obispo; ***Public Outreach and Communications Support.*** This was a short-term project supporting the City in coordinating and facilitating a public meeting for public input on the Prado Interchange environmental review and to present design options. In addition to the public meeting, Verdin provided media relations services, direct mail, website updates, and ongoing website updates.

Prado Bridge Replacement Project, City of San Luis Obispo; ***Public Outreach and Communications Support.*** Working with Wallace Group, Verdin provided media relations services, direct mail, website updates, and ongoing website updates. We also coordinated and facilitated a public meeting to give information and get input on the Prado Bridge replacement.

Coast Corridor Rail Study, San Luis Obispo Council of Governments; ***Public Outreach and Communications Support.*** Scope of work included creating a stakeholder database, coordinating a Community Advisory Committee, supporting on Community Open Houses, and collaborating on a countywide survey.

Neighborhood Meetings/Reballoting, City of Paso Robles; ***Public Relations and Communications Support.*** Worked with the City to coordinate and facilitate public meetings and materials to educate the community of coming changes to community parks and reballoting. Scope included public meetings facilitation, communications planning and execution, community based social marketing, mailers and collateral development.

Ashlee Akers

Public Outreach

VERDIN

EXPERIENCE
18 years

EDUCATION
BA, Agricultural Science/ Ag Business, California Polytechnic State University, San Luis Obispo

CERTIFICATIONS
Graphic Design Certification

Account Management Certification

YEARS WITH VERDIN
14 years

Since 2010, Ashlee Akers has been an integral part of the account team at Verdin, joining as an account manager before advancing to Vice President/Client Services and ultimately reaching the C-suite as Chief Strategy Officer in 2023. In this role, she supervises and mentors account staff in developing marketing strategies to achieve client goals, and reviews campaign concepts to ensure strategic alignment. Additionally, she consults on major media and public relations plans, builds relationships with senior client personnel, manages budgets and timelines, and actively seeks out new opportunities for our clients' success.

Ashlee serves on the agency's Board of Directors and is involved in the community, supporting organizations like Jack's Helping Hand and the United Way, and contributing to industry organizations serving on the marketing committee of Visit SLO CAL and on the board of the Central Coast Tourism Council.

Select Project Experience

Cultural Arts District Parking Structure, City of San Luis Obispo; *Communications Support.* Ashlee provided communications to support the two-year construction of this long-awaited parking structure in downtown SLO. Scope includes downtown business and residents surveys, communications plan and execution through email marketing, social media, and some paid media. Much of this will be in collaboration with the Arts partners in the district.

Marsh St. Bridge Replacement Project, City of San Luis Obispo; *Communications Support.* Ashlee provided communications services to notify residents, businesses and commuters of the construction for the Orcutt Roundabout. Verdin utilized press releases, emails, direct mail and website updates to keep community apprised of detours and progress of the Roundabout construction, through to completion.

Orcutt-Tank Farm Roundabout, City of San Luis Obispo; *Communications Support.* Ashlee provided communications services to notify residents, businesses and commuters of the construction for the Orcutt Roundabout. Verdin utilized press releases, emails, direct mail and website updates to keep community apprised of detours and progress of the Roundabout construction, through to completion.

LOVR Interchange Project, City of San Luis Obispo; Public Relations and *Communications Support.* This project included interfacing with the City, SLOCOG and Caltrans. This two-year effort included research, public relations activities and communications to adjacent residents and businesses, as well as cyclists, commuters and general cross-town traffic.

Clayton Bradshaw, PE, PLS

Survey/Right-of-Way Engineering

EXPERIENCE
23 years

EDUCATION
BS, Civil Engineering, California Polytechnic State University, San Luis Obispo, CA

REGISTRATION
Professional Engineer-CA #65864

Professional Land Surveyor-CA #8298

YEARS WITH WALLACE GROUP
23 years

Clayton has an extensive background in land surveying and civil engineering. He is proficient with a broad range of surveying services relating to boundaries, design, construction, and mapping with many of his professional services being performed to assist in the design of a variety of solar projects. Typical to his experience are corner searches, parcel maps, subdivisions, lot line adjustments, residential construction staking, pipeline staking, line staking, easement surveys and analysis, boundary surveys, topographic mapping, control for aerial mapping and Global Positioning System (GPS).

Select Project Experience

PRADO ROAD BRIDGE WIDENING, San Luis Obispo, CA; *Surveying Director.* Provided large scale ground-survey mapping in an area that included 2,000 feet of City of San Luis Obispo right-of-way, adjacent frontages and approximately 1,000 feet of creek corridor. The survey mapping included utilities, hardscape, bridge features, sewer and storm structure inverts, striping and found survey monuments. The mapping specific to the bridge structure included a detailed survey of the bridge columns and utilities attached to the bridge structure. He further researched the right-of-way property lines and easements with the mapping area. These items were then plotted and compiled into the survey base map.

SR227 LOS RANCHOS ROAD SURVEY, San Luis Obispo, CA; *Surveying Director.* For the County of SLO's Preliminary Engineering of the SR 227/Los Ranchos Road corridor, Clayton directed the survey team tasked with base mapping, digital terrain modelling, topographic surveying, point cloud scanning, photogrammetry, a detailed tree survey and boundary, right-of-way and easement retracement and plotting. Clayton's team also set primary control points for the proposed improvement project.

AVILA BEACH DRIVE AT US 101 INTERCHANGE, County of San Luis Obispo, CA; *Surveying Director.* Clayton directed the land surveying services related to the project, including right of way, boundary, easement and topographic mapping and oversaw the use of cutting-edge technology, deploying terrestrial scanners to capture dense point clouds throughout the project area and collect a variety of conventional measurements. The safety of field crew staff and the public is of upmost importance to Clayton and the selection of terrestrial scanning as an approach to field measurement collection kept the field crews safely away from traffic.

Luz Garcia, PLS

Survey/Right-of-Way Engineering

EXPERIENCE
8 years

EDUCATION
BS, Geomatics Engineering, California State University, Fresno

REGISTRATION
Professional Land Surveyor-CA #9657

YEARS WITH WALLACE GROUP
8 years

In 2016, after graduating from Fresno State University, Luz joined Wallace Group bringing her well-rounded background in geomatics engineering to the Survey Department. Her career has been focused on boundary, subdivision maps, topographic/right-of-way surveys, and the preparation of legal descriptions.

Luz's field experience includes data acquisition using the latest technology such as laser scanners, Unmanned Aerial Systems (UAS), GNSS, and total stations. Her versatile technical knowledge allows the survey team to deliver reliable and accurate data to Clients.

Select Project Experience

PRADO ROAD BRIDGE WIDENING, County of San Luis Obispo, CA; *Land Surveyor.* Luz's support during the easement legal description preparation for this project has been essential. She has been working alongside the senior surveyor, preparing map exhibits and reviewing the legal descriptions document before submittal.

BUCKLEY EXTENSION, County of San Luis Obispo, CA; *Land Surveyor.* Luz not only helped with the field work during the construction of the Buckley extension, but she also prepared the post-construction Record of Survey and coordinated with the County to get this recorded.

ANNUAL STREET RESURFACING PHASE 2, City of Marina, CA; *Surveying Tech.* Completed the office mapping and right-of-way determination of 14 intersections for ADA improvements using point cloud data with Trimble Business Center and Civil 3D.

CITY OF PACIFIC GROVE, CA; *Field Crew Member & Project Surveyor.* Luz participated as a field crew member in several projects involving field data collection for topographic surveys for the City's Sewer Master Plan capital improvement projects and the Pacific Grove Urban Division. Today she is helping manage the surveying scope for the City's Sewer Infrastructure improvements which includes coordinating with the design team, field crew, and drafting personnel.

JDH CORROSION CONSULTANTS, INC., County of San Luis Obispo, CA; *Project Surveyor.* Utilizing UAS and conventional technology, topographic surveys and high-quality orthographic imagery was collected for 22 working sites. Luz managed the field preparation and performed as both Party Chief and UAS pilot during the field collection. She also elegated and contributed to the office drafting and right-of-way re-establishment, delivering the final product in a timely manner.

DRY CREEK ROAD REPAIRS PHASE 2, City of Paso Robles, CA; *Land Surveyor.* Luz prepared pre- and post-construction Record of Surveys, and a right-of-way record of survey along with several easement legal descriptions. Luz also helped with monument perpetuation and setting of the right-of-way and centerline monuments.

Matt Wilkins, PLA

Landscape Architecture

Matt is the Director of Landscape Architecture at Wallace Group. His dedication to the profession and interest in 3D and digital technology has allowed him to lead the discussion about technology use in practice. He has prepared and led landscape design projects from concept to completion, and has created various 3D models, animations and photo simulations for site and city-wide design solutions.

EXPERIENCE
14 years

EDUCATION
Bachelor of Landscape Architecture, California Polytechnic State University, San Luis Obispo, CA

REGISTRATION
Professional Landscape Architect #6398

YEARS WITH WALLACE GROUP
1 year

Select Project Experience

GOLDEN HILL/UNION ROAD ROUNDABOUT, Paso Robles, CA; *Landscape Architecture Task Manager.* Matt was the Landscape Architecture Tasks Manager for the improvements at Union Road and Golden Hill Road intersection. He assisted with the oversight and design of the landscape, irrigation, site hardscape and furnishings. The Wallace Group team provided roadway design and project planning services including but not limited to: field surveys, utility design and coordination, public outreach, storm water quality, drainage, street, landscape, and irrigation. Design support services during construction were also a key component of our service offerings.

US 101/AVILA BEACH DRIVE INTERCHANGE, San Luis Obispo, CA; *Landscape Architecture Tasks Manager.* As the Landscape Architecture Tasks Manager for the operational improvement project at the US 101/Avila Beach Drive interchange Matt assisted with the oversight and design of the landscape, irrigation, and site hardscape and furnishings. The Wallace Group team provided roadway design and project planning services including but not limited to: field surveys, utility design and coordination, public outreach, storm water quality, drainage, street, landscape, and irrigation. Wallace Group is currently working with Caltrans and the contractor on the design support services during construction.

HUER HUERO CREEK BRIDGE AND ROUNDABOUT, Paso Robles, CA; *Landscape Architecture Task Manager.* As the Landscape Architecture Tasks Manager Matt supported the design of a 600'+ bridge over Huer Huero Creek and a three-leg single lane roundabout in a rural high-speed environment. He provided quality control for the landscape plan set, Caltrans formatted technical specifications, and an itemized cost estimate. Matt coordinated with City and electrical engineer to select appropriate light poles and standards.

BOB JONES BIKE PATH, County of San Luis Obispo, CA; *Director.* As Director, Matt is overseeing the landscape architectural improvements for the Bob Jones Bike Path, which is a 4.5-mile extension of the existing trail that connects from Avila Beach at Ontario Road to the Octagon Barn. Understanding how to refine the Bob Jones Trail alignment to maximize user experience while harmonizing the trail with active agricultural operations, a floodplain, and other natural constraints are major aspects of completing this project.

Judd King, PE, GE

Geotechnical

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EXPERIENCE
21 years

EDUCATION
BS Civil Engineering, California Polytechnic State University, San Luis Obispo, CA

REGISTRATION
Professional Engineer- CA #68257

Registered Geotechnical Engineer- CA #2903

YEARS WITH YEH
8 years

Judd has provided consulting services on the coast of California for over 20 years. He is the lead geotechnical engineer and project manager for public works and infrastructure projects on the coast of California. He has worked on several bridge and interchange improvement projects up and down the Highway 101 corridor. Judd is the lead geotechnical engineer and project manager on a consultant team for several Federal Highway Administration Lands Division (FHWA) projects in Nevada. He is also experienced with Caltrans Local Assistance, working with San Luis Obispo County and Santa Barbara County on highway bridge program projects. He is experienced with Caltrans design methods, standard plans and details, and with the AASHTO LRFD Bridge Design Specifications. Judd also teaches soil mechanics laboratory classes part time in the Civil Engineering Department at Cal Poly, San Luis Obispo.

Judd has extensive expertise in geotechnical exploration methods in complicated subsurface conditions. He also specializes in soft ground, mitigation of liquefaction, mechanically stabilized earth walls, reinforced soil slopes, ground improvement, tunneling, rock coring,

Select Project Experience

US 101/AVILA BEACH DRIVE INTERCHANGE IMPROVEMENTS, San Luis Obispo County, CA; *Geotechnical Engineer and Project Manager.* The project includes the design of a roundabout at the intersection of Shell Beach Road with Avila Beach Drive and rerouting southbound on and off-ramps from the highway. Design features include retaining walls, embankments, drainage improvements, stormwater infiltration, and pavement. Retaining walls will provide grade separation under the overcrossing and along the southbound on-ramp. Judd managed the preparation of a Preliminary Geotechnical Design Report, Geotechnical Design Report, and a Foundation Report for the project in accordance with Caltrans guidelines.

TRAFFIC WAY BRIDGE REPLACEMENT, Arroyo Grande, CA; *Geotechnical Engineer and Project Manager.* Project Manager for the replacement of Traffic Way Bridge, a multi-span bridge with a total length of approximately 210 feet that spans Arroyo Grande Creek. Scour and structure degradation has led to the need to replace the bridge that serves as a main arterial for the city. The new bridge will be a single span structure supported on CIDH pile abutments. Prefabricated girders are planned to support the new bridge structure. Judd managed the exploration and preparation of a Foundation Report for the project in accordance with Caltrans guidelines.

PRADO ROAD BRIDGE, San Luis Obispo, CA; *Geotechnical Engineer Senior Project Manager.* Judd has worked on this project since 2012 while with a different firm. The Prado Road Bridge replacement at San Luis Obispo Creek involves the replacement of a multi span bridge with a single span bridge supported on cast-in-drilled hole (CIDH) shafts. Preliminary work included subsurface exploration and development of pile design recommendations for the bridge. Other aspects of the project include tiered soldier pile tie-back walls to address scour potential and deep-seated abutments for the proposed structure. Judd is continuing work on the bridge replacement project with Yeh.

HIGHWAY 101 NORTHBOUND/SR46 EAST RAMP IMPROVEMENTS, Paso Robles, CA; *Geotechnical Engineer and Project Manager.* Project Manager for the preliminary phase of the project that is studying the widening of Highway 101 from Paso Robles Street to the existing SR 46 East Ramp. The project will likely involve the widening of the existing ramp bridge and possibly the Salinas River Bridge. Retaining walls and embankments are also planned for the project. Judd is managing the preparation of a Preliminary Geotechnical Design Report for the project in accordance with Caltrans guidelines.

Jamie Ross, PE

Geotechnical

Yeh and Associates, Inc.
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EXPERIENCE
9 years

EDUCATION
MS, Civil Engineering-Geotechnical Specialization, California Polytechnic State University, San Luis Obispo

BS, Civil Engineering, California Polytechnic State University, San Luis Obispo

REGISTRATION
Professional Engineer-CA #91504

YEARS WITH YEH
9 years

Jamie has more than 9 years of experience performing field logging and exploration, geotechnical analyses for slopes and foundation systems, geotechnical design for retaining walls and landslide repairs, and preparing preliminary and design-level geotechnical reports. She is experienced in performing field exploration and geotechnical evaluations for pipelines, pump stations, reservoirs, water and wastewater treatment plants, and seismic hazard assessments. She has worked on several bridge and interchange improvement projects up and down the Highway 101 corridor and throughout San Luis Obispo County. Jamie's field experience includes mud rotary, rock coring, hollow stem auger and other drilling methods as well as in-situ testing using the cone penetrometer. Jamie has experience in geotechnical investigation, analyses, and report preparation for a variety of public infrastructure projects. Jamie is experienced with Caltrans design methods, standard plans and details, and with the AASHTO LRFD Bridge Design Specifications. She also teaches soil mechanics classes part time in the Civil Engineering Department at Cal Poly, San Luis Obispo.

Select Project Experience

US 101/AVILA BEACH DRIVE INTERCHANGE IMPROVEMENTS, San Luis Obispo County, CA; ***Staff Engineer.*** The project includes the design of a roundabout at the intersection of Shell Beach Road with Avila Beach Drive and rerouting southbound on and off-ramps from the highway. Design features include retaining walls, embankments, drainage improvements, stormwater infiltration, and pavement. Retaining walls will provide grade separation under the overcrossing and along the southbound on-ramp. Jamie performed the field exploration and the geotechnical analyses for the project. She prepared the Preliminary Geotechnical Design Report, Geotechnical Design Report, and a Foundation Report for the project in accordance with Caltrans guidelines. Construction of the project is slated to begin in 2024.

TRAFFIC WAY BRIDGE REPLACEMENT, Arroyo Grande, CA; ***Project Engineer.*** This project includes the replacement of Traffic Way Bridge, a multi-span bridge with a total length of approximately 210 feet that spans Arroyo Grande Creek. Scour and structure degradation has led to the need to replace the bridge that serves as a main arterial for the city. The new bridge will be a single span structure supported on CIDH pile abutments. Prefabricated girders are planned to support the new bridge structure. Jamie logged the borings that were drilled through the existing bridge deck and performed the geotechnical analyses for the project. She prepared the Foundation Report for the project in accordance with Caltrans guidelines.

HIGHWAY 101 NORTHBOUND/SR46 EAST RAMP IMPROVEMENTS, Paso Robles, CA; ***Project Engineer.*** The preliminary phase of this project involves planning for widening Highway 101 from Paso Robles Street to the existing SR 46 East Ramp. The project will likely involve the widening of the existing ramp bridge and possibly the Salinas River Bridge. Retaining walls and embankments are also planned for the project. Jamie is preparing the Preliminary Geotechnical Design Report for the project in accordance with Caltrans guidelines.

PRADO ROAD BRIDGE REPLACEMENT, San Luis Obispo, CA; ***Project Engineer.*** The existing two-lane bridge over San Luis Obispo Creek at Prado Road will be replaced with a 104-foot-wide single-span bridge. Preliminary work included subsurface exploration and development of pile design recommendations for the bridge. Jamie has performed all of the geotechnical analyses and report preparation for the project. The project is in design and planned to be in construction sometime in 2025.

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Michael Finegan, PE

Geotechnical

EXPERIENCE
34 years

EDUCATION
BS, Civil Engineering, California State University,Chico

REGISTRATION
Professional Engineer-
CA #50138

CERTIFICATION/ TRAINING
National Highway Institute Training:

- Geosynthetics Engineering Workshop
- Geotechnical Instrumentation
- Micropile Design and Construction
- Mechanically Stabilized Earth Walls and Soil Slopes
- Anchored Earth Retention
- Driven Pile Foundations
- Soils and Foundations Workshop
- Stream Stability and Scour at Highway Structures
- Drilled Shafts
- Rock Slopes

YEARS WITH YEH
8 years

Mike joined Yeh and Associates following a 26-year career with Caltrans, where he served as the Branch Chief of Geotechnical Design–North. His experience includes all aspects of conducting geotechnical investigations, including engineering analyses for bridge foundations, earth retaining structures, and preparing reports, estimates and technical specifications for geotechnical structures and materials. He has extensive experience and familiarity with Caltrans design methods, LRFD, and the AASHTO design guidelines. Mike serves as a senior project specialist assisting with technical review and support on various infrastructure projects for Yeh.

Select Project Experience

PRADO ROAD BRIDGE, San Luis Obispo, CA; *Senior Project Specialist.* Mike has served as technical specialist for the design of the Prado Road Bridge replacement at San Luis Obispo Creek. Preliminary work included subsurface exploration and development of pile design recommendations for the bridge. Other aspects of the project include tiered soldier pile tie-back walls to address scour potential and deep-seated abutments for the proposed structure. Mike is continuing work on the bridge replacement project with Yeh.

HIGHWAY 101 NORTHBOUND/SR46 EAST RAMP IMPROVEMENTS, Paso Robles, CA; *Senior Project Specialist.* The preliminary phase of the project includes a study for the widening of Highway 101 from Paso Robles Street to the existing SR 46 East Ramp. The project will likely involve the widening of the existing ramp bridge and possibly the Salinas River Bridge. Retaining walls and embankments are also planned for the project. Mike is providing technical assistance and oversight for the project including the preparation of a Preliminary Geotechnical Design Report for the project in accordance with Caltrans guidelines.

HIGHWAY 46 CORRIDOR IMPROVEMENT, San Luis Obispo County, CA; *Supervisor-in-Charge.* The widening of State Route 46 from a 2-lane highway to a 4-lane expressway in eastern San Luis Obispo County has been under construction for the past 15 years. Mike was responsible for the geotechnical design of the 4.5-mile-long Whitley 1 segment which included the new 6-span Estrella River bridge supported on130-foot long, 96-inch diameter cast in drilled hole (CIDH) piles constructed under slurry. A pile load test was conducted using the Osterberg Method on a full scale pile. The 5.3 mile long Whitley 2A segment included retaining walls on spread footings and the new McMillan Canyon Creek Bridge.

US 101/AVILA BEACH DRIVE INTERCHANGE IMPROVEMENTS, San Luis Obispo County, CA; *Senior Project Specialist.* The project includes the design of a roundabout at the intersection of Shell Beach Road with Avila Beach Drive and rerouting southbound on and off-ramps from the highway. Design features include retaining walls, embankments, drainage improvements, stormwater infiltration, and pavement. Retaining walls will provide grade separation under the overcrossing and along the southbound on-ramp. Mike performed QC/ QA review of a Preliminary Geotechnical Design Report, Geotechnical Design Report, and a Foundation Report for the project in accordance with Caltrans guidelines.

TRAFFIC WAY BRIDGE REPLACEMENT, Arroyo Grande, CA; *Senior Project Specialist.* Traffic Way Bridge is a multi-span bridge with a total length of approximately 210 feet that spans Arroyo Grande Creek. Scour and structure degradation has led to the need to replace the bridge that serves as a main arterial for the city. The new bridge will be a single span structure supported on CIDH pile abutments. Prefabricated girders are planned to support the new bridge structure. Mike has performed QC/QA checks of project documents including pile calculations and foundation report in accordance with Caltrans guidelines.

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