



MARK THOMAS

May 11, 2021

Jeff Hart
City of Beaumont
550 E. 6th Street
Beaumont, CA 92223

Project No.: IR-18109

RE: Proposal to Study the Phasing of Construction of the SR-60/Potrero Blvd. Direct On-Ramps to a future year

Dear Jeff:

At your request, Mark Thomas has prepared this proposal to study potential phasing of the construction of the SR-60/Potrero Blvd. Direct On-Ramps to a future year. Final design is currently being completed for Phase 2 of the SR-60/Potrero Blvd. Interchange. This proposal would create an interim alternative concept that would replace the currently proposed 2-lane slip on-ramps to EB SR-60 and WB SR-60 with dual left turn lanes on Potrero Blvd. to allow traffic to enter the freeway via the loop on-ramps for each direction. A failure year analysis would be conducted for the modified interchange design and would supplement the Draft Supplemental Traffic Impact Analysis (TIA) that was completed in March 2019. The 2019 TIA was intended to update the SR-60/Potrero Interchange Traffic Impact Analysis (Revised) dated March 29, 2010.

Thank you for the opportunity to provide this proposal for this project. Please call me at 805-701-9427 or email at djohnson@markthomas.com if you need any additional information or have any questions regarding this proposal.

Sincerely,

Darin Johnson, PE
Division Manager / Project Manager

MARK THOMAS

Enclosures: Exhibit A - Scope of Services
Exhibit B - Compensation
Mark Thomas Billable T&M Rates



EXHIBIT A

SCOPE OF SERVICES

TASK 1 – EXHIBIT

Mark Thomas will prepare one plan view exhibit showing schematically what will be constructed as part of Phase 2 and what project elements can wait to be constructed at a future time.

TASK 2 – ROUGH ORDER OF MAGNITUDE COST ESTIMATE

Mark Thomas will provide a rough order of magnitude cost estimate showing the difference between what was originally planned to be constructed during Phase 2 versus what will be constructed without the direct on-ramps.

TASK 3 – VOLUME DEVELOPMENT AND ANALYSIS METHODOLOGY

Iteris will follow Caltrans District 8's *Guidance for Traffic Forecasting and Operation Assessment Methodology and Assumption Memorandum* dated October 29, 2020 for the development of this Supplemental Traffic Impact Study.

Iteris will utilize the latest Riverside County Transportation Analysis Model (RivTAM) to develop the Buildout Year traffic volume forecast. Iteris will run the existing and horizon year models with and without the proposed revised interchange improvements.

An annual growth rate will be developed based on the model results to generate traffic volumes for Opening Year and two (2) intermediate years beyond opening year (15-year plus either 10-year or 20-year) to be used in the failure year traffic analysis. The Opening Year analysis will be used to establish a baseline condition.

The initial analysis will be the 15-year scenario. If it is determined that failure year is less than 15-years beyond opening year, traffic volumes for a 10-year scenario would be developed. If failure year is greater than 15-years beyond opening year, volumes for the horizon year (20 years) will be developed to assess if the failure year is between 15 and 20 years or if the interim alternative can become the ultimate alternative.

Iteris will utilize Caltrans PeMS counts or other Caltrans published historic counts, where available, to develop post-processed volumes for freeway mainline, ramp, and ramp intersection analysis. No new counts will be collected in the field as part of this scope.

Iteris will prepare a draft volume development memorandum documenting the methodologies and projected traffic volume to be submitted to Mark Thomas and City for review and will be revised, as appropriate, for submission to Caltrans for review. Iteris will respond up to two (2) sets of consolidated comments from Caltrans and prepare a final memorandum.



Study Scenarios

- i. Opening Year With Interim Alternative
- ii. Interim Year (15 years post-opening year) With Interim Alternative
- iii. Interim Year (10 years post-opening Year) With Interim Alternative or Horizon Year (20 years post-opening Year)
- iv. Failure Year With Interim Alternative

The failure year will be determined by interpolating/extrapolating between the 15-year scenario and either the 10-year or 20-year scenario depending on whether the failure year is before or after 15-years. This will be an iterative process. If the failure year is beyond 20-years it is not necessary to determine the failure year.

Study Area

The study area of for the failure year analysis will be limited to the following locations:

- i. Two (2) Intersections:
 - Potrero Boulevard and SR-60 EB Ramps
 - Potrero Boulevard and SR-60 WB Ramps
- ii. SR-60 Mainline and Ramps at Potrero Blvd Interchange

Deliverables

- Draft/Final Traffic Volume Development Memorandum
- Up to two (2) meetings with City and/or Caltrans on Volume Development

TASK 4 – FUTURE YEAR OPERATIONAL ANALYSIS

Intersection delay, LOS and queue lengths by movements will be calculated for the two (2) freeway ramp intersections. Freeway mainline and ramp corridor operations will be analyzed for the project interchange. Analysis will be completed based on HCM 6th Edition methodology.

All analysis results will be summarized in a tabular format to be included in the report and Synchro and HCS 7 calculation worksheets will be included as appendices.

Conceptual improvement recommendations will be provided for the analysis scenarios based on traffic operational analysis to be considered for design feasibility.

TASK 5 – VEHICLE MILES TRAVELED (VMT) ANALYSIS

Iteris will coordinate with Caltrans and address and document the implications for removing the direct on-ramps at the Potrero Boulevard interchange under SB 743 compared to the full project. The full Project has been already approved and does not



require SB 743 analysis. The proposed project alternative removes capacity compared to the approved Project, therefore it is not anticipated that induced travel demand analysis will be required. If required by Caltrans, vehicle-miles travelled (VMT) will be calculated for the full interchange and for the project alternative.

TASK 6 – DOCUMENTATION AND RESPONSE TO COMMENTS

Iteris will prepare a draft traffic study memorandum documenting the methodologies and summary of results to be submitted to Mark Thomas for review and will be revised, as appropriate, for submission to Caltrans for review. Iteris will respond to two (2) sets of consolidated comments from Caltrans and prepare a final memorandum.

DELIVERABLES

- Exhibit
- Rough Order of Magnitude Cost Estimate
- Draft/Final Traffic Volume Development Memorandum
- Up to two meetings with City and/or Caltrans on Volume Development
- Draft/Final Failure Year Analysis Memorandum



EXHIBIT B

COMPENSATION

Mark Thomas proposed to provide the following services on a Time and Materials (T&M) basis. Billable T&M Rates (see attached)

TOTAL NOT-TO-EXCEED \$67,344

COST PROPOSAL FOR PROJECT SCOPE: Beaumont - SR-60/Potrero Blvd Direct On-Ramps - Phasing of Construction Study


								Subconsultant	TOTAL COST		
		Sr. Engineering Manager	Technical Lead	Design Engineer II	Sr. Technician	Project Coordinator	Sr. Graphic Designer	Total Hours		Total MT Cost	Items (Traffic)
		\$355	\$230	\$140	\$140	\$110	\$150			Non-DBE	
1.0	PHASING OF CONSTRUCTION STUDY										
1.1	Plan View Exhibit	2	8	8	6	2	2	28	\$5,030	-	\$5,030
1.2	Rough Order of Magnitude Cost Estimate	2	8	16				26	\$4,790	-	\$4,790
1.3	Volume Development/Analysis Methodology		12					12	\$2,760	19,624	\$22,384
1.4	Future Years Traffic Analysis		4					4	\$920	16,599	\$17,519
1.5	Vehicle Miles Traveled (VMT) Analysis		4					4	\$920	9,240	\$10,160
1.6	Documentation/Response to Comments		8					8	\$1,840	5,621	\$7,461
1.7								0	\$0	-	\$0
1.8								0	\$0	-	\$0
1.9								0	\$0	-	\$0
1.10								0	\$0	-	\$0
Subtotal Phase 1		4	44	24	6	2	2	82	\$16,260	\$51,084	\$67,344
TOTAL HOURS		4	44	24	6	2	2	82			
OTHER DIRECT COSTS									\$0	\$0	\$0
TOTAL COST		\$1,420	\$10,120	\$3,360	\$840	\$220	\$300		\$16,260	\$51,084	\$67,344



EXHIBIT A

Mark Thomas & Company, Inc. Rate Schedule

Expires June 30, 2021*

HOURLY CHARGE RATE RANGES
Engineering Services

Intern	\$48 - \$85
Technician	\$78 - \$128
Design Engineer I	\$97 - \$138
Sr. Technician	\$116 - \$163
Design Engineer II	\$125 - \$162
Project Engineer	\$147 - \$180
Sr. Project Engineer	\$164 - \$213
Sr. Technical Engineer	\$164 - \$213
Project Manager	\$194 - \$243
Technical Lead	\$194 - \$243
Sr. Project Manager	\$221 - \$314
Sr. Technical Lead	\$221 - \$314
Engineering Manager	\$286 - \$352
Practice Area Leader	\$286 - \$352
Sr. Engineering Manager	\$320 - \$430
Principal	\$404 - \$480

Construction Management Services

Office Technician	\$80
Office Engineer	\$150
** Asst. Resident Engineer	\$200
** Inspector - CM	\$200
Project Manager - CM	\$250
RE/Structural Representative	\$250
Sr. Project Manager - CM	\$260
Division Manager - CM	\$310
Sr. Division/Area Manager	\$355

District Management Services

** Inspector - Apprentice	\$65 - \$100
** Inspector	\$97 - \$135
** Sr. Inspector	\$123 - \$156
Assistant Sanitary Engineer	\$142 - \$171
Associate Sanitary Engineer	\$155 - \$206
Sanitary Project Engineer	\$160 - \$220
Operations Manager	\$221 - \$314
Deputy District Manager	\$275 - \$338
District Manager-Engineer	\$307 - \$359

Grant Writing Services

Funding Specialist	\$150
Sr. Funding Specialist	\$250

Survey Services

Survey Intern	\$56 - \$103
Survey Technician	\$85 - \$137
Sr. Survey Technician	\$95 - \$170
Surveyor	\$118 - \$145
Sr. Surveyor	\$130 - \$187
Lead Survey Technician	\$153 - \$183
Project Surveyor	\$161 - \$197
Sr. Project Surveyor	\$183 - \$216
Survey Manager	\$195 - \$248
Sr. Survey Manager	\$217 - \$289
Survey Division Manager	\$274 - \$348
** Single Chief	\$152 - \$172
** Single Instrumentman	\$142 - \$150
** Single Chainman	\$133 - \$140
** Apprentice	\$66 - \$145
** 1 Person Field Crew	\$152 - \$192
** 2 Person Field Crew	\$265 - \$345
** 3 Person Field Crew	\$351 - \$482
Drone Pilot	\$210

Project Support/Coordination Services

Project Assistant	\$65 - \$99
Technical Writer	\$65 - \$103
Sr. Project Assistant	\$90 - \$124
Project Coordinator	\$90 - \$128
Graphic Designer	\$100 - \$131
Sr. Technical Writer	\$94 - \$149
Project Accountant	\$103 - \$142
Sr. Project Coordinator	\$116 - \$160
Sr. Graphic Designer	\$120 - \$167
Sr. Project Accountant	\$129 - \$174
Sr. Graphic Manager	\$152 - \$178

Urban Planning/Landscape Architecture Services

Landscape Intern	\$48 - \$85
Landscape Designer	\$81 - \$160
Landscape Architect	\$113 - \$203
LAUD Division Manager	\$233 - \$284
LAUD Project Manager	\$184 - \$217
Sr. LAUD Project Manager	\$197 - \$256
Sr. LAUD Division Manager	\$259 - \$302

Special Services

Expert Witness	\$420
Strategic Consulting	\$420

Note: Additional Promotional Steps Exist within Various Rate Categories
OTHER DIRECT COSTS
Reimbursables including, but not limited to:

Reproductions, Delivery and Filing Fees	Cost Plus 5%	Outside Consultant Fees	Cost Plus 5%
Mileage	Per IRS Rate	Survey Field Expenses	Cost Plus 5%

*Rates subject to escalation with new hourly rate schedule as of July 1, 2021

**These charge rates are subject to Prevailing Wage laws and Union contract.