

1/30/98

PHASE II - STRATEGY PHASE

SCOPE OF WORK SUMMARY:

Produce necessary Plans, Specifications and Cost Estimate for the following bridges:

1. Rings Creek Road Bridge (Br. No. 36C-0064) -- See Note 1
2. Larkspur Street Bridge (Br. No. 36C-0068)
3. Either Way Bridge (Br. No. 36C-0073)
4. Soquel Drive @ Aptos Bridge (Br. No. 36C-0075)
5. Soquel Drive @ Soquel Bridge (Br. No. 36C-0078)
6. Irwin Way Bridge (Br. No. 36C-0083)
7. Aptos Overhead (Br. No. 36C-0114)
8. Valencia Creek Bridge (Br. No. 36C-0116)

T. Y. Lin International - Structural

Project Management

- Overall Management
- Team Meeting
- Startup/Estimate
- Reporting / Invoice

QA/QC

Perform Design

- Field Review (Exclude Material Testing for Existing Member Strength and Steel Corrosion)
- Prepare Un-Checked Details
- Perform Independent Check
- Prepare Checked Details
- Right of Way and Utility Coordination (Exclude Traffic Engineering and Detour Plans for Construction) -- See Note 2
- Prepare Specifications
- Prepare and Check Quantities
- Response to Review Comments / Finalize PS&E

Delineate Plans: For Structural Work Only.

Others : Word Processing, etc.

Ayres Associates -- Hydrology and Hydraulics

- Preliminary Degradation Reports: For seven bridges (Excluding Two Bar Road Bridge and Aptos Overhead).
- Seismic Retrofit Hydraulic Impact: For Soquel Drive @ Aptos Bridge and Valencia Creek Bridge.

Geotechnical Consultants, Inc. -- Geotechnical Engineering

- Site Reconnaissance
- Subsurface Exploration and Laboratory Testing: At abutments of all bridges. See Note 3
- Engineering Analysis: Soquel Drive @ Aptos Creek Bridge and Valencia Road Bridge.
- Final Soil Reports for all bridges.
- Review and Consultation

Robert L. DeWitt and Associates, Inc. -- Survey and Right of Way

- Part A: Site Survey and Right of Way Investigation
- Part B (As Needed): Exhibit Map and Legal Descriptions.

Kleinfelder, Inc. -- Biological Assessment and Wetlands Delineation

- Biological Assessment: For Soquel Drive at Aptos Bridge and Valencia Creek Bridge.
- Wetlands Delineation: For Soquel Drive at Aptos Bridge Only.

Notes:

1. Santa Cruz County (or other firm retained by the County) will regularly perform necessary material testing and inspection of the existing pontoon and other steel members to verify that the extent of the steel corrosion does not adversely effect the live load rating of the bridge. T. Y. Lin International's seismic retrofit of the existing bridge will be based on the full cross sections of all existing steel members unless noted otherwise in writing by the Santa Cruz County.

2. Santa Cruz County considers partial or full closure of the bridge during construction acceptable; therefore, the need of performing traffic engineering design for temporary detour is eliminated.
3. Excludes services related to identification, verification, testing and/or remedial measures of contaminated soils and hazardous waste on or near the bridge sites. It is assumed that Santa Cruz County will take full charge of these issues.

Santa Cruz County Seismic Retrofit Project
PS&E Schedule

T.Y. Lin International

Task	Week Ending:																						
	8/20/98	8/27/98	9/3/98	9/10/98	9/17/98	9/24/98	10/1/98	10/8/98	10/15/98	10/22/98	10/29/98	11/5/98	11/12/98	11/19/98	11/26/98	12/3/98	12/10/98	12/17/98	12/24/98	12/31/98	1/7/99	1/14/99	
Field Review																							
65% PS&E Submittal																							
Subconsultants (Geotech, Hydro, Survey & Environment)																							
Independent Check																							
Caltrans Review (65%)																							
90% PS&E Submittal																							
Caltrans Review (90%)																							
Final PS&E																							

County of Santa Cruz Seismic Retrofit Design Program
T. Y. Lin International Team
Summary of Costs (Rev. 27/11/98)

PS&E Phase

Bridge Name	County Bridge Number	Structural TYLI	Geotech* GTC	Hydrolics/Hydrology* AYRES	Survey/Civil* ROBERT DEWITT	Environmental* KLEINFELDER	Subtotal
Kings Creek Road	43026-BR.0.6	\$35,512.52	\$7,093.84	\$2,737.00	\$12,096.30	\$0.00	\$57,439.66
Larkspur Street	43018-BR.0.2	\$31,870.44	\$7,093.84	\$2,737.00	\$10,181.30	\$0.00	\$51,882.58
Either Way Lane	42030-BR.0.1	\$33,958.55	\$7,093.84	\$2,737.00	\$10,181.30	\$0.00	\$53,970.69
Soquel Drive @ Aptos	02416-BR.5.9	\$104,176.55	\$11,393.70	\$13,865.00	\$12,504.06	\$7,892.00	\$149,831.31
Soquel Drive @ Soquel	02416-BR.2.5	\$34,030.87	\$7,506.88	\$2,737.00	\$9,893.18	\$0.00	\$54,167.93
Irwin Way	43030-BR.0.2	\$38,623.79	\$7,093.84	\$2,737.00	\$10,681.37	\$0.00	\$59,136.00
Aptos Overhead	02510-BR.0.8	\$35,171.83	\$7,093.84	\$0.00	\$8,208.41	\$0.00	\$50,474.08
Valencia Road	02503-BR.2.7	\$47,684.07	\$12,864.56	\$13,865.00	\$11,260.92	\$3,792.00	\$89,466.55
Labor Total		\$361,028.62	\$67,234.34	\$41,415.00	\$85,006.84	\$11,684.00	\$566,368.80
Direct Expenses		\$4,767.50	\$25,325.00	\$4,210.00	\$1,225.00	\$477.00	\$36,004.50
Subtotal		\$365,796.12	\$92,559.34	\$45,625.00	\$86,231.84	\$12,161.00	\$602,373.30

Notes:

* Refer to Fee-and-Scope Proposal from Sub-Consultant for Details.

TOTAL \$602,373.30

County of Santa Cruz Seismic Retrofit Design Program
T. Y. Lin International

Fee Schedule (Applicable through 12/31/98)

(Rev. 2, 7/1/98)

NAME	HOURLY RATE	OVERHEAD 161.94%	PROFIT 10%	LOADED RATE
Tom Ho	\$44.23	\$71.63	\$11.59	\$127.44
Rafael Manzanarez	\$56.25	\$91.09	\$14.73	\$162.08
Dennis Jang	\$44.23	\$71.63	\$11.59	\$127.44
Nhan Vo	\$29.62	\$47.97	\$7.76	\$85.35
John Chan	\$38.75	\$62.75	\$10.15	\$111.65
Mark Chen	\$37.28	\$60.37	\$9.77	\$107.42
Stephen Gee	\$31.97	\$51.77	\$8.37	\$92.12
Alex Sanjines	\$29.90	\$48.42	\$7.83	\$86.15
Chung-Hao Lee	\$29.57	\$47.89	\$7.75	\$85.20
Jian Ren Tao	\$28.70	\$46.48	\$7.52	\$82.69
Alex Lee	\$26.78	\$43.37	\$7.01	\$77.16
Ruchen Xu	\$21.20	\$34.33	\$5.55	\$61.08
King Bor Tam	\$25.75	\$41.70	\$6.74	\$74.19
Ann Lee	\$24.96	\$40.42	\$6.54	\$71.92
Amanda Barbante	\$19.47	\$31.53	\$5.10	\$56.10
Joe Tai	\$19.24	\$31.16	\$5.04	\$55.44
Perry Schacht	\$36.35	\$58.87	\$9.52	\$104.74
Roya Golchoobian	\$31.37	\$50.80	\$8.22	\$90.39
James Orie	\$32.92	\$53.31	\$8.62	\$94.85
Steven Drahota	\$24.36	\$39.45	\$6.38	\$70.19
Gregory Morris	\$16.54	\$26.78	\$4.33	\$47.66
Oscar Colcol	\$22.00	\$35.63	\$5.76	\$63.39
Andres Toledo	\$22.36	\$36.21	\$5.86	\$64.43

PS&E Phase

start Date:	20-Aug-98
Finish Date	<u>13-Jan-99</u>

[illegible]

I= _____
J= _____
K= _____
L= _____

TASK ORDER COST PROPOSAL

COMPANY: T.Y. Lin InternationalDate: 21-Jul-98

Contract No. _____

Start Date: 20-Aug-98Finish Date: 13-Jan-99

Travel			
Type	units	Unit cost	Cost
Mileage	2,500	\$ 0315	8787.50
Meals	60	\$ 1200	\$720 00
Lodging	12	\$ 80.00	\$960 00
Parking/Tolls	4	\$ 50 00	\$200 00
Total Travel			\$ 2 6 6 7 . 5 0

Other Direct Costs			
Description	Unit Cost	Units	Cost
Copies	\$0.40	3000	\$1,200.00
Fax	\$300.00	1	\$300.00
Mail	\$15.00	40	\$600.00
Total Other Direct Costs			\$2,100.00

Subconsultants	
Name	Cost
Ayres Associates	\$45,625.00
Bob DeWitt & Associates, Inc.	\$86,231.84
GTC, Inc.	\$92,559.34
Environmental	\$12,161.00
Total Subconsultant Costs	\$236,577.18

Total Cost	
Labor	\$361,028.62
Travel	\$2,667.50
Other Direct Cost	\$2,100.00
Subconsultants	\$236,577.18
Total Cost	\$602,373.30

TASK ORDER COST PROPOSAL

COMPANY: T Y Lin International Bridge Name Kings Creek Road PS&E Phase _____
 Contract No. _____ Bridge No. 43026-BR.0.6

Date: 21-Jul-98
 Start Date: 20-Aug-98
 Finish Date: 13-Jan-99

Labor																				
# Subtask Number	Description																			
		Name	Tom Ho	Rafael Manzanarez	Dennis Jang	John Chan	Mark Chen	Stephen Gee	Alex Sanjines	Nhan Vo	Chung-Hao Lee	Jian Ren Tao	Alex Lee	Ruchun Xu	Joe Tai	King Bor Tam	Ann Lee	Amanda Barbante	Total Hours	Total Cost by Subtask
		Function	A	B	C	D	D	D	D	D	D	D	D	D	m	m	T			
1	Project Management																			
	a. Overall Management	Hrs			2		1											3	\$362.30	
	b. Team Meetings	Hrs			8		3											11	\$1,341.78	
	c. Startup/Estimates	Hrs			1													1	\$127.44	
	d. Reports/Invoice	Hrs			3													3	\$382.33	
	Sub-total #1	Hrs	0	0	14	0	4	0	0	0	0	0	0	0	0	0	0	18	\$2,213.85	
2	QA/QC																			
	a. Reviews	Hrs		4														4	\$648.30	
	Sub-total #2	Hrs	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	\$648.30	
3	Perform Design																			
	a. Field Review	Hrs			2					4		2						8	\$750.59	
	b. Prepare Un-Checked Details	Hrs			2					100	20							122	\$10,493.44	
	c. Perform Independent Check	Hrs										70						70	\$5,401.36	
	d. Prepare Checked Details	Hrs			2					20								22	\$1,961.79	
	e. R/W and Utility Coordination	Hrs			8													8	\$1,019.53	
	f. Prepare Specifications	Hrs	8		2													10	\$1,274.42	
	g. Prepare and Check Quantities	Hrs			4					8		8						20	\$1,809.83	
	h. Response to Review Comments -- Final PS&	Hrs	2		12					16								30	\$3,149.71	
	Sub-total #3	Hrs	10	0	32	0	0	0	0	148	20	0	80	0	0	0	0	290	\$25,860.66	
4	Delineate Plans																			
	a. Drafting	Hrs													90			90	\$6,677.51	
	Sub-total #4	Hrs	0	0	0	0	0	0	0	0	0	0	0	0	90	0	0	90	\$6,677.51	
5	Other																			
	a. Word Processing/Spreadsheets/Filing	Hrs															2	2	\$112.20	
	Sub-total #5	Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	\$112.20	

Function Codes:	A= Project Manager	E= Technician	I= _____
	B= QA/QC	F= Administration	J= _____
	C= Project Engineer	G= _____	K= _____
	D= Engineer	H= _____	L= _____

page 9 of 69

32

233

TASK ORDER COST PROPOSAL

COMPANY: T.Y. Lin International Bridge Name Larkspur Street

PS&E Phase

Date: 21-Jul-98

Contract No. Bridge No. 4301%BR.0.2

Start Date 20-Aug-98

Finish Date 13-Jan-99

Labor

Labor																							
# Subtask Number	Description	Name	Tom Ho	Rafael Manzanarez	Dennis Jang	John Chan	Mark Chen	Stephen Gee	Alex Sanjines	Nhan Vo	Chung-Hao Lee	Jian Ren Tao	Alex Lee	Ruchun Xu	Joe Tai	King Bor Tam	Ann Lee	Amanda Barbarte	Total Hours	Total Cost by Subtask			
		Function	A	B	C	D	D	D	D	D	D	D	D	D	D	D	D	D					
1	Project Management																						
	a. Overall Management	Hrs			2		1												3	\$362.30			
	b. Team Meetings	Hrs			8		3												11	\$1,341.78			
	c. Startup/Estimates	Hrs			1														1	\$127.44			
	d. Reports/Invoice	Hrs			3														3	\$382.33			
	Sub-total #1	Hrs	0	0	14	0	4	0	0	0	0	0	0	0	0	0	0	0	18	\$2,213.85			
2	QA/QC																						
	a. Reviews	Hrs		4															4	\$648.30			
	Sub-total #2	Hrs	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	\$648.30			
3	Perform Design																						
	a. Field Review	Hrs			2					6			2						10	\$921.28			
	b. Prepare Un-Checked Details	Hrs			2					60				20					82	\$6,597.29			
	c. Perform Independent Check	Hrs											70						70	\$5,401.36			
	d. Prepare Checked Details	Hrs			2					30									32	\$2,815.24			
	e. RW and Utility Coordination	Hrs			8					8									16	\$1,702.30			
	f. Prepare Specifications	Hrs	8		2														10	\$1,274.42			
	g. Prepare and Check Quantities	Hrs			2					12			12						26	\$2,204.97			
	h. Response to Review Comments -- Final PS&	Hrs	2		6					12									20	\$2,043.68			
	Sub-total #3	Hrs	10	0	24	0	0	0	0	128	0	0	84	20	0	0	0	0	266	\$22,960.53			
4	Delineate Plans																						
	a. Drafting	Hrs														80			80	\$5,935.56			
	Sub-total #4	Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0	0	80	\$5,935.56			
5	Other																						
	a. Word Processing/Spreadsheets/Filing	Hrs																2	2	\$112.20			
	Sub-total #5	Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	\$112.20			
Total Hours by Employee			10	4	38	0	4	0	0	128	0	0	84	20	0	80	0	2	370				
Loaded Hourly Rate			127.44	162.08	127.44	111.65	107.42	92.12	86.15	85.35	85.20	82.69	77.16	61.08	55.44	74.19	71.92	56.10					
Total Labor Cost																				\$31,870.44			

Function Codes:

A= Project Manager
 B= QA/QC
 C= Project Engineer
 D= Engineer

E= Technician

F= Administration

G=

H=

I=

J=

K=

L=

TASK ORDER COST PROPOSAL

COMPANY: T.Y. Lin International Bridge Name Either Way Lane PS&E Phase _____
 Contract No. _____ Bridge No. 42030-BR.0.1

Date: 21-Jul-98
 Start Date: 20-Aug-98
 Finish Date: 13-Jan-99

Labor

# Subtask Number	Description	Name	Tom Ho	Rafael Manzanarez	Dennis Jang	John Chan	Mark Chen	Stephen Gee	Alex Sanjines	Nhan Vo	Chung-Hao Lee	Jian Ren Tao	Alex Lee	Ruchun Xu	Joe Tai	King Bor Tam	Ann Lee	Amanda Barbante	Total Hours	Total Cost by Subtask
		Function	A	B	C	D	D	D	D	D	D	D	D	D	D	D	D	D		
1	Project Management																			
	a. Overall Management	Hrs			2		1												3	\$362.30
	b. Team Meetings	Hrs			8		3												11	\$1,341.78
	c. Startup/Estimates	Hrs			1														1	\$127.44
	d. Reports/Invoice	Hrs			3														3	\$382.33
	Sub-total #1	Hrs	0	0	14	0	4	0	0	0	0	0	0	0	0	0	0	0	18	\$2,213.85
2	QA/QC																			
	a. Reviews	Hrs		4															4	\$648.30
	Sub-total #2	Hrs	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	\$648.30
3	Perform Design																			
	a. Field Review	Hrs			2					8									10	\$832.65
	b. Prepare Un-Checked Details	Hrs			2					70				30					102	\$8,061.59
	c. Perform Independent Check	Hrs									70								70	\$5,964.09
	d. Prepare Checked Details	Hrs			6					20									26	\$2,471.56
	e. R/W and Utility Coordination	Hrs			8					8									16	\$1,702.30
	f. Prepare Specifications	Hrs	8		2														10	\$1,274.42
	g. Prepare and Check Quantities	Hrs			2					12	8								22	\$1,960.64
	h. Response to Review Comments -- Final PS&	Hrs	2		2					8									12	\$1,192.53
	Sub-total #3	Hrs	10	0	24	0	0	0	0	126	78	0	0	30	0	0	0	0	268	\$23,564.75
4	Delineate Plans																			
	a. Drafting	Hrs														100			100	\$7,419.45
	Sub-total #4	Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	100	\$7,419.45
5	Other																			
	a. Word Processing/Spreadsheets/Filing	Hrs																	2	\$112.20
	Sub-total #5	Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	\$112.20
Total Hours by Employee																			392	
Loaded Hourly Rate																				
Total Labor Cost																				\$33,958.55

Function Codes:

A= Project Manager
 B= QA/QC
 C= Project Engineer
 D= Engineer

E= Technician
 F= Administration
 G= _____
 H= _____

I= _____
 J= _____
 K= _____
 L= _____

Page 11 of 69

32

TASK ORDER COST PROPOSAL

COMPANY: T Y Lin International

Bridge Name Soquel Drive @ Aptos

PS&E Phase

Date: 21-Jul-98

contract NO

Bridge No: 02416-BR.5.9

Start Date: 20-Aug-98

Finish Date: 13-Jan-99

Labor

# Subtask Number	Description	Name Function	Tom Ho A	Rafael Manzanarez B	Dennis Jang C	John Chan D	Mark Chen D	Stephen Gee D	Alex Sanjines D	Nhan Vo D	Chung-Hao Lee D	Jian Ren Tao D	Alex Lee D	Ruchun Xu D	Joe Tai D	King Bor Tam m	Ann Lee m	Amanda Barbante m	Total Hours	Total Cost by Subtask	
1	Project Management																				
	a. Overall Management	Hrs			6		1												7	\$872.07	
	b. Team Meetings	Hrs			14		5												19	\$2,321.27	
	c. Startup/Estimates	Hrs			1		1												2	\$234.86	
	d. Reports/Invoice	Hrs			5		1												6	\$744.62	
	Sub-total #1	Hrs	0	0	26	0	8	0	0	0	0	0	0	0	0	0	0	0	34	\$4,172.81	
2	QA/QC																				
	a. Reviews	Hrs		4															4	\$648.30	
	Sub-total #2	Hrs	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	\$648.30	
3	Perform Design																				
	a. Field Review	Hrs	2		6		4	4			4								20	\$2,158.47	
	b. Prepare Un-Checked Details	Hrs			20		160	120						80					380	\$35,676.18	
	c. Perform Independent Check	Hrs									160			20					180	\$14,853.88	
	d. Prepare Checked Details	Hrs			8		40	40						20					108	\$10,222.53	
	e. R/W and Utility Coordination	Hrs			8		36		20										64	\$6,609.56	
	f. Prepare Specifications	Hrs	16		3														19	\$2,421.39	
	g. Prepare and Check Quantities	Hrs			6		8	30			24								68	\$6,432.30	
	h. Response to Review Comments -- Final PS&	Hrs	2		16		8												26	\$3,153.28	
	Sub-total #3	Hrs	20	0	67	0	256	194	20	0	188	0	0	120	0	0	0	0	865	\$81,527.60	
4	Delineate Plans																				
	a. Drafting	Hrs														200	40		240	\$17,715.63	
	Sub-total #4	Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0	200	40	0	240	\$17,715.63	
5	Other																				
	a. Word Processing/Spreadsheets/filing																	2	2	\$112.20	
	Sub-total #5	Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	\$112.20	
Total Hours by Employee																				1145	
Loaded Hourly Rate																					
Total Labor Cost																					\$104,176.55

Function Codes:

A= Project Manager
 B= cwc?c
 C= Project Engineer
 D= Engineer

E= Technician

F = Administration

G=

H=

I=

J=

K=

L=

TASK ORDER COST PROPOSAL

COMPANY: T Y. Lin International

Bridge Name: Soquel Drive @ Soquel

PS&E Phase

Date: 21-Jul-98

Contract No. _____

Bridge No.: 02416-BR.2.5

Start Date: 20-Aug-98

Finish Date: 13-Jan-99

Labor

# Subtask Number	Description	Name	Tom Ho	Rafael Manzanarez	Dennis Jang	John Chan	Mark Chen	Stephen Gee	Alex Sanjines	Nhan Vo	Chung-Hao Lee	Jian Ren Tao	Alex Lee	Ruchun Xu	Joe Tai	King Bor Tam	Ann Lee	Amanda Barbante	Total Hours	Total Cost by Subtask
		Function	A	B	C	D	D	D	D	D	D	D	D	D	D	D	D	D		
1	Project Management																			
	a. Overall Management	Hrs			2		1												3	\$362.30
	b. Team Meetings	Hrs			4		3												7	\$832.02
	c. Startup/Estimates	Hrs			1														1	\$127.44
	d. Reports/Invoice	Hrs			3														3	\$382.33
	Sub-total #1	Hrs	0	0	10	0	4	0	0	0	0	0	0	0	0	0	0	0	14	\$1,704.08
2	QA/QC																			
	a. Reviews	Hrs		4															4	\$648.30
	Sub-total #2	Hrs	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	\$648.30
3	Perform Design																			
	a. Field Review	Hrs					2	2											4	\$399.07
	b. Prepare Un-Checked Details	Hrs	1		6		16	50											73	\$7,216.58
	c. Perform Independent Check	Hrs							80										80	\$6,892.17
	d. Prepare Checked Details	Hrs	1				10	20											31	\$3,043.93
	e. RW and Utility Coordination	Hrs			8		8												16	\$1,878.86
	f. Prepare Specifications	Hrs	8		2														10	\$1,274.42
	g. Prepare and Check Quantities	Hrs			2		2	10	8										22	\$2,080.10
	h. Response to Review Comments -- Final PS&	Hrs	2		6		12												20	\$2,308.53
	Sub-total #3	Hrs	12	0	24	0	50	82	88	0	0	0	0	0	0	0	0	0	256	\$25,093.65
4	Delineate Plans																			
	a. Drafting	Hrs															90		90	\$6,472.64
	Sub-total #4	Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0	90	\$6,472.64
5	Other																			
	a. Word Processing/Spreadsheets/Filing	Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	\$112.20
	Sub-total #5	Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	\$112.20
Total Hours by Employee																			366	
Loaded Hourly Rate																				
Total Labor Cost																				\$34,030.87

Function Codes:

A= Project Manager
 B= CWQC
 C= Project Engineer
 D= Engineer

E= Technician

F= Administration

G= _____

H= _____

I= _____

J= _____

K= _____

L= _____

page 13 of 69

237

32

TASK ORDER COST PROPOSAL

COMPANY: T Y Lin International Bridge Name Irwin Way

PS&E Phase

Date: 21-Jul-98Contract No. Bridge No.: 43030-BR.0.2Start Date: 20-Aug-98Finish Date: 13-Jan-99

Labor

# Subtask Number	Description	Name Function	Tom Ho A	Rafael Manzanarez B	Dennis Jang C	John Chan D	Mark Chen D	Stephen Gee D	Alex Sanjines D	Nhan Vo D	Chung-Hao Lee D	Jian Ren Tao D	Alex Lee D	Ruchun Xu D	Joe Tai D	King Bor Tam E	Ann Lee E	Amanda Barbante E	Total Hours	Total Cost by Subtask
1	Project Management																			
a	Overall Management	Hrs			2		1												3	\$362.30
b	Team Meetings	Hrs			8		3												11	\$1,341.78
c	Startup/Estimates	Hrs			1														1	\$127.44
d	Reports/Invoice	Hrs			3														3	\$382.33
	Sub-total #1	Hrs	0	0	14	0	4	0	0	0	0	0	0	0	0	0	0	0	18	\$2,213.85
2	QA/QC																			
a	Reviews	Hrs		4															4	\$648.30
	Sub-total #2	Hrs	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	\$648.30
3	Perform Design																			
a	Field Review	Hrs			2		2												4	\$469.72
b	Prepare Un-Checked Details	Hrs			2		60							40					102	\$9,143.24
c	Perform Independent Check	Hrs			12			70											82	\$7,977.45
d	Prepare Checked Details	Hrs			2		20							20					42	\$3,624.90
e	R/W and Utility Coordination	Hrs			8		4												12	\$1,449.20
f	Prepare Specifications	Hrs	8		2														10	\$1,274.42
g	Prepare and Check Quantities	Hrs			3		12	10											25	\$2,592.49
h	Response to Review Comments -- Final PS&	Hrs	2		3		12												17	\$1,926.20
	Sub-total #3	Hrs	10	0	34	0	110	80	0	0	0	0	0	60	0	0	0	0	294	\$28,457.61
4	Delineate Plans																			
a	Drafting	Hrs															100		100	\$7,191.82
	Sub-total #4	Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	100	\$7,191.82
5	Other																			
a	Word Processing/Spreadsheets/Filing	Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	\$112.20
	Sub-total #5	Hrs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	\$112.20
Total Hours by Employee																			418	
Loaded Hourly Rate																				
Total Labor Cost																				\$38,623.79

Function Codes:

A= Project Manager
B= QA/QC
C= Project Engineer
D= Engineer

E= Technician
F= Administration
G=
H=

I=
J=
K=
L=

Page 14 of 69

238

32

Bridge Name Valencia Road

PS&E Phase

Date: 21-Jul-98

Bridge No.: 02503-BR.2.7

Start Date: 20-Aug-98

Finish Date: 13-Jan-99

Labor

[illegible]

Function Codes:

A=	<u>Project Manager</u>
B=	<u>QA/QC</u>
C=	<u>Project Engineer</u>
D=	<u>Engineer</u>

E= Technician

$$F = \frac{\text{Administration}}{\text{Administration}}$$
 $H =$

1=

J=

K -

$$I =$$

page 16 of 69

240



GEOTECHNICAL CONSULTANTS, INC.

Mr. Dennis Jang
T.Y. Lin International
825 Battery Street
San Francisco, CA 94111

February 4, 1998
(revised 6/24/98)

M97028

Subject: Proposed Geotechnical Services
Seismic Retrofit Program – Phase 2
Santa Cruz County

Dear Dennis:

The following scope of work is proposed for providing Phase 2 geotechnical services for the seismic retrofit design of eight bridges in Santa Cruz County. The bridges addressed by this study include the following:

<u>Bridge Name</u>	<u>State Number</u>	<u>County Number</u>
Kings Creek Road	36C-0064	43026-BR.0.6
Larkspur Street	36C-0068	43018-BR.0.2
Either Way Lane	36C-0073	42030-BR.0.1
Soquel Drive @ Aptos	36C-0075	02416-BR.5.9
Soquel Drive @ Soquel	36C-0078	02416-BR.2.5
Irwin Way	36C-0083	43030-BR.0.1
Aptos Overhead	36C-0114	02510-BR.0.8
Valencia Road	36C-0116	02530-BR.2.7

- **Subsurface Exploration.** Subsurface exploration is proposed for all eight bridges. Two borings are proposed for each bridge; one boring behind each abutment. Valencia Road bridge is the only bridge where new, below-grade foundation work is proposed (new CIDH piles at abutments 1 and 4). Boring depths of 70 to 100 feet are proposed for the Valencia Road bridge. Borings at all other bridge locations are intended to confirm ultimate passive resistance values of the abutment soils. Boring depths of 20 to 30 feet are proposed at these locations. Boring locations will be marked in the field and checked for utilities by means of Underground Service Alert.

The majority of our borings will be located along the roadway shoulder areas to avoid blocking the flow of traffic. However, we anticipate providing a traffic lane closure with flagmen for our borings located at the Aptos Creek bridge. Encroachment and other permits required for all our field operations should be provided by the County.

Mr. Dennis Jang
Page 2

February 4, 1998
(revised 6/24/98)

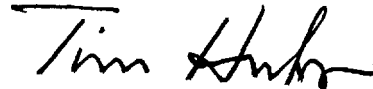
Drill holes will be logged in the field by our field geologist/engineer. Sampling methods will include standard penetration tests and modified California split spoons. Exploratory borings will be backfilled with soil cuttings mixed with cement grout. For the safety of the drilling crew, soil samples will be tested in the field for organic vapors using a photo-ionization detector. Although we do not anticipate the presence of contaminated soil, should any be encountered, the boring will be terminated.

- **Geologic Field Mapping.** Geologic field mapping is proposed for the Soquel Drive @ Aptos Creek bridge. Geologic mapping will primarily focus on identifying bedrock characteristics and strength parameters.
- **Laboratory Testing.** Laboratory tests will be performed on soil samples obtained during subsurface exploration to measure pertinent index and engineering properties. Tests will evaluate moisture content and dry density, shear strength, compressibility, Atterberg limits and grain-size distribution, as appropriate.
- **Engineering Analysis.** Design-level recommendations for proposed foundation retrofit will be prepared using new subsurface exploration and geologic field data. For the Valencia Road bridge, analysis will evaluate the ultimate foundation capacities for the new CIDH piles. Analysis will also evaluate ultimate passive resistance values of the abutments soils for all eight bridges.
- **Reports.** Supplemental foundation design reports will be prepared for the bridges. The reports will contain new Log of Test Boring sheets and laboratory test data.

Our estimated costs for completing the Phase 2 geotechnical work outlined above is \$92,559. A breakdown of our estimate and labor rate summary are presented on the attached spreadsheets. Actual costs will be billed on a time and expense basis.

Sincerely,

GEOTECHNICAL CONSULTANTS, INC.



Tim Huber
Vice President

TH/ip
Attachments

✓ Cc: Patrice Johnson

COST ESTIMATE FOR GEOTECHNICAL SERVICES, GEOTECHNICAL CONSULTANTS, INC.

243

Project No.: M97028

Client: T.Y. Lin International

Project: Santa Cruz County Bridge Seismic Retrofit Project

Phase: PS&E Preparation (Phase 2) - EIGHT BRIDGE SUMMARY

Date: 24-Jun-98

File: C:\123R5WWORK\97028.WK4

LABOR

PERSONNEL -->	J. Gonzalez	Tim Huber	Neal Mace	G. Neelakantan	Susan Zoya	J. Hulse
	Prin. Geologist	Proj. Manager	Sr. Geologist	Sr. Engineer	Proj. Coordinator	CAD
HOURLY RATE -->	\$162.62	\$129.00	\$103.26	\$115.86	\$104.12	\$59.40
TASKS						
PHASE 1 - STRATEGY						
PHASE 2 - PS&E PREPARATION						
Locate Borings		16		16		
Locate Utilities			36			
Field Exploration/Mapping			110			
Engineering Analysis		18	24	128		
Report + LOTB		18	18	64		172
QA/QC	3	18				
Project Management		18			16	

Subtotal (Hours)	3	88	188	208	16	172
Subtotal (Dollars)	\$487.86	\$11,352.00	\$19,412.88	\$24,098.88	\$1,665.92	\$10,216.80

Total Labor Charges	\$67,234.34
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SUBCONTRACTS AND OTHER COSTS

ITEM	UNITS	RATE	AMOUNT
Drill Rig	82	\$185.00	\$15,170.00
Field Supplies/Grout	620	\$2.00	\$1,240.00
Traffic Control	1	\$1,660.00	\$1,660.00
Laboratory	620	\$9.00	\$5,580.00
Mileage	2500	\$0.31	\$775.00
Repro./Misc.	1	\$900.00	\$900.00
			\$0.00
			\$0.00

Subcontracts & Other Charges	\$25,325.00
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Estimated Total Cost of Geotechnical Services	\$92,559.34
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COST ESTIMATE FOR GEOTECHNICAL SERVICES, GEOTECHNICAL CONSULTANTS, INC.	
Project No.: M97028	Client: T.Y. Lin International
Project: Santa Cruz County Bridge Seismic Retrofit Project	
Phase: PS&E Preparation (Phase 2) - Kings Creek Road Bridge (36C-0064)	
Date: 24-Jun-98	File: C:\123R5W\WORK\97028A.WK4

LABOR

PERSONNEL -->	J. Gonzalez	Tim Huber	Neal Mace	G. Neelakantan	Susan Zoya	J. Hulse
	Prin. Geologist	Proj. Manager	Sr. Geologist	Sr. Engineer	Proj. Coordinator	CAD
HOURLY RATE -->	\$162.62	\$129.00	\$103.26	\$115.86	\$104.12	\$59.40
TASKS						
PHASE 1 - STRATEGY						
PHASE 2 - PS&E PREPARATION						
Locate Borings		2		2		
Locate Utilities			4			
Field Exploration			10			
Engineering Analysis		2	2	12		
Geotech Report + LOTB		2	2	8		20
QA/QC		2				
Project Management		2			2	

Subtotal (Hours)	0	10	18	22	2	20
Subtotal (Dollars)	\$0.00	\$1,290.00	\$1,858.68	\$2,548.92	\$208.24	\$1,188.00

Total Labor Charges	\$7,093.84
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SUBCONTRACTS AND OTHER COSTS

ITEM	UNITS	RATE	AMOUNT
Drill Rig	8	\$185.00	\$1,480.00
Field Supplies/Grout	60	\$2.00	\$120.00
Traffic Control (Shoulder Closure)	1	\$45.00	\$45.00
Laboratory	60	\$9.00	\$540.00
Mileage	300	\$0.31	\$93.00
Repro./Misc.	1	\$100.00	\$100.00
			\$0.00
			\$0.00

Subcontracts & Other Charges	\$2,378.00
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Estimated Total Cost of Geotechnical Services	\$9,471.84
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COST ESTIMATE FOR GEOTECHNICAL SERVICES, GEOTECHNICAL CONSULTANTS, INC.			
Project No.: M97028	Client: T.Y. Lin International		
Project: Santa Cruz County Bridge Seismic Retrofit Project			
Phase: PS&E Preparation (Phase 2) - Larkspur Street Bridge (36C-0068)			
Date: 24-Jun-98	File: C:\123R5W\WORK\97028B.WK4		

LABOR

PERSONNEL -->	J. Gonzalez	Tim Huber	Neal Mace	G. Neelakantan	Susan Zoya	J. Hulse
	Prin. Geologist	Proj. Manager	Sr. Geologist	Sr. Engineer	Proj. Coordinator	CAD
HOURLY RATE -->	\$162.62	\$129.00	\$103.26	\$115.86	\$104.12	\$59.40
TASKS						
PHASE 1 - STRATEGY						
PHASE 2 - PS&E PREPARATION						
Locate Borings		2		2		
Locate Utilities			4			
Field Exploration			10			
Engineering Analysis		2	2	12		
Geotech Report + LOTB		2	2	8		20
QA/QC		2				
Project Management		2			2	

Subtotal (Hours)	0	10	18	22	2	20
Subtotal (Dollars)	\$0.00	\$1,290.00	\$1,858.68	\$2,548.92	\$208.24	\$1,188.00

Total Labor Charges	\$7,093.84
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SUBCONTRACTS AND OTHER COSTS

ITEM	UNITS	RATE	AMOUNT
Drill Rig	8	\$185.00	\$1,480.00
Field Supplies/Grout	60	\$2.00	\$120.00
Traffic Control (Shoulder Closure)	1	\$45.00	\$45.00
Laboratory	60	\$9.00	\$540.00
Mileage	300	\$0.31	\$93.00
Repro./Misc.	1	\$100.00	\$100.00
			\$0.00
			\$0.00

Subcontracts & Other Charges	\$2,378.00
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Estimated Total Cost of Geotechnical Services	\$9,471.84
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COST ESTIMATE FOR GEOTECHNICAL SERVICES, GEOTECHNICAL CONSULTANTS, INC.			
Project No.:	M97028	Client:	T.Y. Lin International
Project:	Santa Cruz County Bridge Seismic Retrofit Project		
Phase:	PS&E Preparation (Phase 2) - Either Way Lane Bridge (36C-0073)		
Date:	24-Jun-98	File:	C:\123R5W\WORK\97028C.WK4

LABOR

PERSONNEL -->	J. Gonzalez	Tim Huber	Neal Mace	G. Neelakantan	Susan Zoya	J. Hulse
	Prin. Geologist	Proj. Manager	Sr. Geologist	Sr. Engineer	Proj. Coordinator	CAD
HOURLY RATE -->	\$162.62	\$129.00	\$103.26	\$115.86	\$104.12	\$59.40
TASKS						
PHASE 1 - STRATEGY						
PHASE 2 - PS&E PREPARATION						
Locate Borings		2		2		
Locate Utilities			4			
Field Exploration			10			
Engineering Analysis		2	2	12		
Geotech Report + LOTB		2	2	8		20
QA/QC		2				
Project Management		2			2	
Subtotal (Hours)	0	10	18	22	2	20
Subtotal (Dollars)	\$0.00	\$1,290.00	\$1,858.68	\$2,548.92	\$208.24	\$1,188.00

Total Labor Charges	\$7,093.84
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SUBCONTRACTS AND OTHER COSTS

ITEM	UNITS	RATE	AMOUNT
Drill Rig	8	\$185.00	\$1,480.00
Field Supplies/Grout	60	\$2.00	\$120.00
Traffic Control (Shoulder Closure)	1	\$45.00	\$45.00
Laboratory	60	\$9.00	\$540.00
Mileage	300	\$0.31	\$93.00
Repro./Misc.	1	\$100.00	\$100.00
			\$0.00
			\$0.00

Subcontracts & Other Charges	\$2,378.00
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Estimated Total Cost of Geotechnical Services	\$9,471.84
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COST ESTIMATE FOR GEOTECHNICAL SERVICES, GEOTECHNICAL CONSULTANTS, INC.	
Project No.: <u>M97028</u>	Client: <u>T.Y. Lin International</u>
Project: <u>Santa Cruz County Bridge Seismic Retrofit Project</u>	
Phase: <u>PS&E Preparation (Phase 2) - Soquel Drive @ Aptos Creek Bridge (36C-0075)</u>	
Date: <u>24-Jun-98</u>	File: <u>C:\123R5W\WORK\97028D.WK4</u>

LABOR

PERSONNEL -->	J. Gonzalez	Tim Huber	Neal Mace	G. Neelakantan	Susan Zoya	J. Hulse
	Prin. Geologist	Proj. Manager	Sr. Geologist	Sr. Engineer	Proj. Coordinator	CAD
HOURLY RATE -->	\$162.62	\$129.00	\$103.26	\$115.86	\$104.12	\$59.40
TASKS						
PHASE 1 - STRATEGY						
PHASE 2 - PS&E PREPARATION						
Locate Borings		2		2		
Locate Utilities			6			
Field Exploration (Drilling)			12			
Field Exploration (Mapping)			12			
Engineering Analysis		2	8	24		
Geotech Report + LOTB		2	2	8		28
QA/QC	1	2				
Project Management		2			2	

Subtotal (Hours)	1	10	40	34	2	28
Subtotal (Dollars)	\$162.62	\$1,290.00	\$4,130.40	\$3,939.24	\$208.24	\$1,663.20

Total Labor Charges	\$11,393.70
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SUBCONTRACTS AND OTHER COSTS

ITEM	UNITS	RATE	AMOUNT
Drill Rig	10	\$185.00	\$1,850.00
Field Supplies/Grout	60	\$2.00	\$120.00
Traffic Control (T13 Lane Closure)	1	\$1,345.00	\$1,345.00
Laboratory	60	\$9.00	\$540.00
Mileage	300	\$0.31	\$93.00
Repro./Misc.	1	\$150.00	\$150.00
			\$0.00
			\$0.00

Subcontracts & Other Charges	\$4,098.00
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Estimated Total Cost of Geotechnical Services	\$15,491.70
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COST ESTIMATE FOR GEOTECHNICAL SERVICES, GEOTECHNICAL CONSULTANTS, INC.			
Project No.:	M97028	Client:	T.Y. Lin International
Project:	Santa Cruz County Bridge Seismic Retrofit Project		
Phase:	PS&E Preparation (Phase 2) - Soquel Drive @ Soquel Creek Bridge (36C-0078)		
Date:	24-Jun-98	File:	C:\123R5W\WORK\97028E.WK4

LABOR

PERSONNEL -->	J. Gonzalez	Tim Huber	Neal Mace	G. Neelakantan	Susan Zoya	J. Hulse
	Prin. Geologist	Proj. Manager	Sr. Geologist	Sr. Engineer	Proj. Coordinator	CAD
HOURLY RATE -->	\$162.62	\$129.00	\$103.26	\$115.86	\$104.12	\$59.40
TASKS						
PHASE 1 - STRATEGY						
PHASE 2 - PS&E PREPARATION						
Locate Borings		2		2		
Locate Utilities			6			
Field Exploration			12			
Engineering Analysis		2	2	12		
Geotech Report + LOTB		2	2	8		20
QA/QC		2				
Project Management		2			2	

Subtotal (Hours)	0	10	22	22	2	20
Subtotal (Dollars)	\$0.00	\$1,290.00	\$2,271.72	\$2,548.92	\$208.24	\$1,188.00

Total Labor Charges	\$7,506.88
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SUBCONTRACTS AND OTHER COSTS

ITEM	UNITS	RATE	AMOUNT
Drill Rig	10	\$185.00	\$1,850.00
Field Supplies/Grout	60	\$2.00	\$120.00
Traffic Control (Shoulder Closure)	1	\$45.00	\$45.00
Laboratory	60	\$9.00	\$540.00
Mileage	300	\$0.31	\$93.00
Repro./Misc.	1	\$100.00	\$100.00
			\$0.00
			\$0.00

Subcontracts & Other Charges	\$2,748.00
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Estimated Total Cost of Geotechnical Services	\$10,254.88
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COST ESTIMATE FOR GEOTECHNICAL SERVICES, GEOTECHNICAL CONSULTANTS, INC.	
Project No.: M97028	Client: T.Y. Lin International
Project: Santa Cruz County Bridge Seismic Retrofit Project	
Phase: PS&E Preparation (Phase 2) - Irwin Way Bridge (36C-0083)	
Date: 24-Jun-98	File: C:\123R5WWORK\97028F.WK4

LABOR

PERSONNEL -->	J. Gonzalez	Tim Huber	Neal Mace	G. Neelakantan	Susan Zoya	J. Hulse
	Prin. Geologist	Proj. Manager	Sr. Geologist	Sr. Engineer	Proj. Coordinator	CAD
HOURLY RATE -->	\$162.62	\$129.00	\$103.26	\$115.86	\$104.12	\$59.40
TASKS						
PHASE 1 - STRATEGY						
PHASE 2 - PS&E PREPARATION						
Locate Borings		2		2		
Locate Utilities			4			
Field Exploration			10			
Engineering Analysis		2	2	12		
Geotech Report + LOTB		2	2	8		20
QA/QC		2				
Project Management		2			2	
Subtotal (Hours)	0	10	18	22	2	20
Subtotal (Dollars)	\$0.00	\$1,290.00	\$1,858.68	\$2,548.92	\$208.24	\$1,188.00
Total Labor Charges	\$7,093.84					

SUBCONTRACTS AND OTHER COSTS

ITEM	UNITS	RATE	AMOUNT
Drill Rig	8	\$185.00	\$1,480.00
Field Supplies/Grout	60	\$2.00	\$120.00
Traffic Control (Shoulder Closure)	1	\$45.00	\$45.00
Laboratory	60	\$9.00	\$540.00
Mileage	300	\$0.31	\$93.00
Repro./Misc.	1	\$100.00	\$100.00
			\$0.00
			\$0.00
Subcontracts & Other Charges	\$2,378.00		

Estimated Total Cost of Geotechnical Services	\$9,471.84
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COST ESTIMATE FOR GEOTECHNICAL SERVICES, GEOTECHNICAL CONSULTANTS, INC.			
Project No.: M97028		Client: T.Y. Lin International	
Project: Santa Cruz County Bridge Seismic Retrofit Project			
Phase: PS&E Preparation (Phase 2) - Aptos Overhead Bridge (36C-0114)			
Date: 24-Jun-98		File: C:\123R5W\WORK\97028G.WK4	

250

LABOR

PERSONNEL -->	J. Gonzalez	Tim Huber	Neal Mace	G. Neelakantan	Susan Zoya	J. Hulse
	Prin. Geologist	Proj. Manager	Sr. Geologist	Sr. Engineer	Proj. Coordinator	CAD
HOURLY RATE -->	\$162.62	\$129.00	\$103.26	\$115.86	\$104.12	\$59.40
TASKS						
PHASE 1 - STRATEGY						
PHASE 2 - PS&E PREPARATION						
Locate Borings		2		2		
Locate Utilities			4			
Field Exploration			10			
Engineering Analysis		2	2	12		
Geotech Report + LOTB		2	2	8		20
QA/QC		2				
Project Management		2			2	

Subtotal (Hours)	0	10	18	22	2	20
Subtotal (Dollars)	\$0.00	\$1,290.00	\$1,858.68	\$2,548.92	\$208.24	\$1,188.00

Total Labor Charges	\$7,093.84
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SUBCONTRACTS AND OTHER COSTS

ITEM	UNITS	RATE	AMOUNT
Drill Rig	8	\$185.00	\$1,480.00
Field Supplies/Grout	60	\$2.00	\$120.00
Traffic Control (Shoulder Closure)	1	\$45.00	\$45.00
Laboratory	60	\$9.00	\$540.00
Mileage	300	\$0.31	\$93.00
Repro./Misc.	1	\$100.00	\$100.00
			\$0.00
			\$0.00

Subcontracts & Other Charges	\$2,378.00
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Estimated Total Cost of Geotechnical Services	\$9,471.84
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COST ESTIMATE FOR GEOTECHNICAL SERVICES, GEOTECHNICAL CONSULTANTS, INC.			
Project No.:	M97028	Client:	T.Y. Lin International
Project:	Santa Cruz County Bridge Seismic Retrofit Project		251
Phase:	PS&E Preparation (Phase 2) - Valencia Road Bridge (36C-0116)		
Date:	24-Jun-98	File:	C:\123R5W\WORK\97028H.WK4

LABOR

PERSONNEL -->	J. Gonzalez	Tim Huber	Neal Mace	G. Neelakantan	Susan Zoya	J. Hulse
	Prin. Geologist	Proj. Manager	Sr. Geologist	Sr. Engineer	Proj. Coordinator	CAD
HOURLY RATE -->	\$162.62	\$129.00	\$103.26	\$115.86	\$104.12	\$59.40
TASKS						
PHASE 1 - STRATEGY						
PHASE 2 - PS&E PREPARATION						
Locate Borings		2		2		
Locate Utilities			4			
Field Exploration			24			
Engineering Analysis		4	4	32		
Geotech Report + LOTB		4	4	8		24
QA/QC	2	4				
Project Management		4			2	
Subtotal (Hours)	2	18	36	42	2	24
Subtotal (Dollars)	\$325.24	\$2,322.00	\$3,717.36	\$4,866.12	\$208.24	\$1,425.60

Total Labor Charges \$12,864.56

SUBCONTRACTS AND OTHER COSTS

ITEM	UNITS	RATE	AMOUNT
Drill Rig	22	\$185.00	\$4,070.00
Field Supplies/Grout	200	\$2.00	\$400.00
Traffic Control (Shoulder Closure)	1	\$45.00	\$45.00
Laboratory	200	\$9.00	\$1,800.00
Mileage	400	\$0.31	\$124.00
Repro./Misc.	1	\$150.00	\$150.00
			\$0.00
			\$0.00

Subcontracts & Other Charges \$6,589.00

Estimated Total Cost of Geotechnical Services \$19,453.56

LABOR RATE SUMMARY, GEOTECHNICAL CONSULTANTS, INC.	
Project No.: M97028A	Client: T.Y. Lin International
Project: Santa Cruz County Bridge Seismic Retrofit Project	
Phase: PS&E Preparation (Phase 2)	
Date: 24-Jun-98	File: C:\123R5V\WORK\97028LR.WK4

NAME	TITLE	LABOR RATE*
Joe Gonzalez	Principal Geologist	\$162.62
Tim Huber	Project Manager	\$129.00
G. Neelakantan	Associate Engineer	\$115.86
Jim Thurber	Associate Geologist	\$107.38
Susan Zova	Project Coordinator	\$104.12
Neal Mace	Senior Geologist	\$103.26
Ted Powers	Project Geoloaist	\$85.17
Apostolos Kozompolis	Staff Engineer	\$66.63
Aurie Patterson	Staff Geologist	\$66.56
Julie Hulse	CAD Technician	\$59.40
Terek Naward	Junior Engineer	\$57.19

. NOTE: Labor rates calculated with indirect cost rate @ 200% and profit @ 10%.

page 29 of 69



January 15, 1998

253

Mr. Dennis J. Jang, S.E.
Principal
T.Y. Lin International
825 Battery Street
San Francisco, CA 94111

Re: Santa Cruz County, Seismic Retrofit Program, Revised Cost Proposal

Dear Mr. Jang:

Ayres Associates is pleased to support T.Y. Lin International on the hydrology, hydraulics and scour portions of this design project. Attached is our revised cost proposal for the 7 bridges that cross over flowing creeks or rivers. This revision uses our fully burdened rates as per Department of Defense audits and our 1998 basic wage rates. We have also shown a specific QA/QC role for a senior specialist.

We have separated the costs for each structure as per our summary show below:

Bridge Name	Preliminary Degradation Report	Seismic Retrofit Hydraulic Impact Report	Totals
Kings Creek Road Bridge	\$3,217	N/A	\$ 3,217
Larkspur Street Bridge	\$3,217	N/A	\$3,217
Elmer Way Bridge	\$3,217	N/A	\$3,217
Soquel Drive @ Aptos Creek	\$3,217	\$11,553	\$14,770
Soquel Drive @ Soquel Creek	\$3,217	N/A	\$3,217
Irwin Way Bridge	\$3,217	N/A	\$3,217
Valencia Creek Bridge	\$3,217	\$11,553	<u>\$14,770</u>
TOTAL			\$45,625

Our hydraulic impacts report will require field surveyed cross sections for each site and we have not included that cost in our estimate. This need has been discussed with George Smiley of Robert DeWitt and Associates and they will include the survey cost in their proposal.

Please call me directly if there are any questions or further details are needed.

Sincerely,
Owen Ayres and Associates, Inc.

Thomas W. Smith, P.E., G.E.
Water Resources/Geotechnical Engineer

Owen Ayres & Associates, Inc.
Engineers/Scientists/Surveyors
2151 River Plaza Drive, Suite 170, Sacramento, CA 95833, (916) 563-7700, FAX (916) 563-6972.
Printed on recycled paper

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page 30 of 69

254

January 7, 1998

Santa Cruz County Bridge Retrofit Project
Hydrology and Hydraulics

BASIS OF COST PROPOSAL

I. GENERAL

The basis of this cost proposal consists of completing the following two groups of reports:

- a. Preliminary Degradation Report
- b. Seismic Retrofit Hydraulic Impact Report

Preliminary Degradation Reports will be performed on the following sites in provide ; A assessment of the existing and anticipated channel bed aggradation/degradation and to estimate the probable bed elevation change over the life of the bridge.

- | | |
|--------------------------------|---------------------|
| a. Kings Creek Road Bridge | Bridge No. 36C-0064 |
| b. Larkspur Street Bridge | Bridge No. 36C-0068 |
| c. Either Way Bridge | Bridge No. 36C-0073 |
| d. Soquel Drive @ Aptos Creek | Bridge No. 36C-0075 |
| a. Soquel Drive @ Soquel Creek | Bridge No. 36C-0078 |
| f. Irwin Way Bridge | Bridge No. 36C-0083 |
| g. Valencia Creek Bridge | Bridge No. 36C-0116 |

Seismic Retrofit Hydraulic Impact Reports will be prepared for only the following two sites to evaluate any hydraulic or scour related impacts of the proposed seismic retrofit measures and to define appropriate countermeasures as required.

- | | |
|-------------------------------|---------------------|
| 6. Soquel Drive @ Aptos Creek | Bridge No. 36C-0075 |
| b. Valencia Creek Bridge | Bridge No. 36C-0116 |

page 31 of 69

255

II. PRELIMINARY DEGRADATION REPORT

The Preliminary Degradation Report will assess the existing and anticipated channel bed aggradation/degradation and estimate the probable bed elevation change over the life of the bridge. Our approach will consist of the following.

- ✓ Review as-built plans and existing conditions based on existing reports.
- ✓ Perform a field visit to verify and photograph existing conditions including measurements of thalweg elevation from known bridge deck elevation
- ✓ Plot spot elevations of channel elevations from past data and compare to existing values
- ✓ In the absence of data for profile analysis, review watershed history and changes in land use condition and estimate potential channel response based on simplified geomorphic relationships. Review available aerial photographs to define potential lateral instability and relationship to vertical instability.
- ✓ Describe scour potential of existing bridge configuration, considering factors such as bridge location relative to channel planform, bed and bank sediment conditions, vegetation conditions, pier alignment, degree of constriction, existing countermeasures, debris potential and any documented previous problems
- ✓ Prepare a Preliminary Degradation Report summarizing all information reviewed and findings. Estimated length, 3 pages.

111. SEISMIC RETROFIT HYDRAULIC IMPACT REPORT

The Seismic Retrofit Hydraulic Impact Report will evaluate the hydraulic and scour related impacts of the proposed seismic retrofit measures and define appropriate countermeasures as required. Our approach will consist of the following tasks:

- ✓ It is assumed that any existing hydrology would be of only general information since most of the structures were constructed in the 1950's or before. New hydrology will be computed using the Corps of Engineers computer program HEC-1, using Soil Conservation Service curve number procedures for the smaller watersheds and by stream gage analysis for those with that data. The 50- and 100-year peak discharges will be computed for each site. The hydrology for each site will be checked by using the USGS regional regression equations for computation of peak flows.
- ✓ Bridge hydraulics will be performed using the Corps of Engineers computer program, HEC-RAS. For each flood frequency, a clear water analysis will be performed without any special consideration for sediment or debris. If a qualitative analysis of the upper watershed indicates a significant potential for mass wasting of sediment or debris, additional analyses will be performed to simulate bulked flow conditions, channel deposition conditions or debris build up conditions (or all three). The results of multiple simulations will be plotted graphically and tabulated for comparison. The worst case scenario will be used in plotting the 100-year water surface levels.
- ✓ Evaluate change in channel hydraulics resulting from retrofit measures using the same procedures and data as in the section above. Compare changes in velocities and water surface elevation levels.

page 32 of 69

256

- Evaluate changes in local scour as a result of pier or abutment modifications considering factors such as changes in pier shape and size.
- Evaluate change in contraction scour as a result of any increased constriction cause by the retrofit modifications.
- Evaluate appropriate counter measures to mitigate hydraulic and scour related issues.
- Prepare final Seismic Retrofit Hydraulic Impact Report summarizing watershed hydrology (both existing and updated), potential hydraulic and scour related issues with the proposed retrofit strategy.

page 33 of 69

257

January 15, 1998

Santa Cruz County Bridge Retrofit Project

ESTIMATE OF EFFORT PER SITE
FOR
PRELIMINARY DEGRADATION REPORT

Tasks	Project Manager	Senior Engineer	Engineer	CADD	Clerical	QA/QC Specialist
a. Review Existing Records	2	4				
b. Site Review and Data Collection	6	6				
c. Data Reduction		2	4			
d. Report Preparation	4	6		4	2	2
Subtotal	12	18	4	4	2	2
Hourly Rate	\$56.41	\$60.35	\$47.18	\$37.43	\$35.93	\$101.49
Total Cost by for Personnel	\$1,037	\$1,086	\$189	\$150	\$72	\$203
Miscellaneous Expenses	\$480					
TOTAL per Report	\$3,317					

page 34 of 69
258

January 15, 1998

Santa Cruz County Bridge Retrofit Project

ESTIMATE OF EFFORT PER SITE
FOR
SEISMIC RETROFIT HYDRAULIC IMPACT REPORT

Task	Project Manager	Senior Engineer	Engineer	CADD	Clerical	QA/QC Specialist
Watershed Hydrology	4	24	12			
Existing Bridge Hydraulics	4	12	12			
Retrofit Bridge Hydraulics	2	8	4			
scour Analysis	4	6	6			
Design Counter Measures	2	12	8			2
Final Report	12	24	16	4	4	4
Subtotal	28	84	58	4	4	a
Hourly Rate	\$88.41	560.35	\$47.18	\$37.44	\$35.83	\$101.49
Total Cost by Personnel	\$2,419	\$5,069	\$2,738	\$150	\$144	\$609
Miscellaneous Expenses	\$425					
TOTAL per Report	\$11,553					

page 35 of 69

259

County of Santa Cruz Seismic Retrofit Design program
Ayres Associates

Name	Raw Hourly Rate	Direct Labor Overhead 149.35%	Fee 10%	Fully Burdened Rate
Tom Smith	\$ 31.50	\$ 47.05	\$ 7.86	\$ 86.41
Jim Schall	\$ 37.00	\$ 55.26	\$ 9.23	\$ 101.49
Dan Tibbatts	\$ 22.00	\$ 32.86	\$ 5.49	\$ 60.35
Morgan Byars	\$ 17.20	\$ 25.69	\$ 4.29	\$
Chris Kulick	\$ 13.65	\$ 20.39	\$ 3.40	\$ 47.18 37.41
Stacey Murphy	\$ 9.05	\$ 13.52	\$ 2.26	\$ 24.83
Sandy Powell	\$ 13.10	\$ 10.66	\$ 3.27	\$ 35.93

AYRES
ASSOCIATES

FEE PROPOSAL TO

T. Y. LIN INTERNATIONAL, INC.

FOR SURVEYING, MAPPING, AND RIGHT-OF-WAY DETERMINATIONS
FOR THE
COUNTY OF SANTA CRUZ
1996-1997 SEISMIC RETROFIT PROGRAM

SUMMARY OF FEE ESTIMATES:

<u>JOB NO.</u>	<u>BRIDGE SITE</u>	<u>PART "A"</u> <u>SITE SURVEY AND R/W</u> <u>INVESTIGATION</u>	<u>PART "B"</u> <u>EXHIBIT MAP AND</u> <u>LEGAL DESCRIPTIONS</u>	<u>TOTAL</u> <u>FEE</u> <u>ESTIMATE</u>
R97030-A	IRWIN WAY	\$8,174.71	\$2,641.66	\$10,816.36
R97030-B	SOQUEL DRIVE @APTOS CREEK	\$9,995.31	\$2,708.75	\$12,704.06
R97030-C	SOQUEL DRIVE @ SOQUEL CREEK	\$7,386.52	\$2,641.66	\$10,028.18
R97030-D	APTOS O'HEAD (R.D.M. BLVD. @ RR)	\$6,328.27	\$2,030.14	\$8,358.41
R97030-E	VALENCIA ROAD	\$8'752.17 ,	\$2,708.75	\$11,460.92
R97030-F	TWO BAR ROAD	---- (DELETED FROM PROPOSAL) -----		
R97030-G	KING'S CREEK RD.	\$9,430.39	\$2,800.91	\$12,231.30
R97030-H	LARKSPUR ST.	\$7,622.55	\$2,693.75	\$10,316.30
R97030-I	EITHER WAY LANE	\$7,622.55	\$2,693.75	\$10,316.30
ESTIMATED TOTAL FEES		\$65,312.47	\$20,919.36	\$86,231.83

NOTE: Fees are charged on a time and materials basis at the firm's audited hourly rates for the services provided. The estimated fees are based upon the estimated time to complete the professional tasks as outlined in the attached estimates. Actual fees will be based upon the time and materials charged to the work.

Prepared by:

Robert L. DeWitt & Associates, Inc.
Civil Engineers and Land Surveyors
1607 Ocean Street, Suite 1
Santa Cruz, CA 95060

Phone: (408) 425-1617
Fax: (408) 425-0224

Job No.: R97030

Rev: July 14, 1998

Rev.: 7/14/98

COUNTY OF SANTA CRUZ SEISMIC RETROFIT DESIGN PROGRAM

Survey Sub-Consultant: Robert L. DeWitt & Assoc., Inc.

Fee Schedule based upon CALTRANS pre-award audit performed 11197

Fee schedule revised 7/6/98 per memo to Al Raymond dated June 18, 1998, Page

<u>Employee</u>	<u>Classification</u>	Hourly Wage <u>Rate</u>	Audited Overhead <u>Rate</u>	Approved Billing <u>Fee</u> <u>Rate</u>	
			170.67%	10.00%	
R. DeWitt	Prin. Engineer	\$35.00	\$59.72	\$9.47	\$104.19
G. Smiley	Survey Manager	\$21.12	\$36.03	\$5.72	\$62.87
D. Darling	Draft/Computing	\$18.00	\$30.71	\$4.87	\$53.58
P. Murphy	Party Chief	\$17.00	\$29.03	\$4.60	\$50.63
M. Weld	Field Assistant	\$15.00	\$25.62	\$4.06	\$44.68
M. Diola	Clerical	\$12.00	\$20.48	\$3.25	\$35.73

R97030-A IRWIN WAY
REV 7/14/98

State Bridge Number 36C-0083
County Bridge No. 43030-BR.0.2

262

PART "A" SITE SURVEY AND RIGHT OF WAY INVESTIGATION

1. SITE SURVEY

a. Research for horizontal and vertical control. Prepare data for use in field.
Mobilize field crew. Project coordination and supervision.

Survey Manager:	6 hrs. @	\$62.87	\$377.22
Principal Engineer:	4 hrs. @	\$104.19	\$416.76
		Subtotal:	\$793.98

b. Field search and recovery of existing bench mark. Bring elevations to site and establish project bench marks. If no County bench marks within 1/8 mile of project, elevations to be established by GPS methods (estimated tolerance = 0.5'). Establish project base line based on California Coordinates.

2-Man field Crew:

Party Chief:	5 hrs. @	\$50.63	\$253.15
Field Assistant:	5 hrs. @	\$44.68	\$223.40
G.P.S. Subconsultant			\$300.00
		Subtotal:	\$776.55

c. Field measurements sufficient to develop cross section views at upstream and downstream faces of bridge; survey measurements for preparation of bridge site plan; measurements of elevation of soffits and foundation elements, including abutments and wingwalls.

2-Man field Crew:

Party Chief:	12 hrs. @	\$50.63	\$607.56
Field Assistant:	12 hrs. @	\$44.68	\$536.16
		Subtotal:	\$1,143.72

d. Download and edit field data. Prepare plan and elevation sketch of bridge structure, including vertical and horizontal dimensions of deck, railings, pier, abutments, foundations and any exposed footings.

Drafting/Computing:	24 hrs. @	\$53.58	\$1,285.92
Principal Engineer:	1 hrs. @	\$104.19	\$104.19
Survey Manager:	1 hrs. @	\$62.87	\$62.87
		Subtotal:	\$1,452.98

e. Miscellaneous expenses allowance \$50.00
Photos, reproduction costs, etc.

Subtotal Site Survey: \$4,217.23

2. RIGHT OF WAY INVESTIGATION

a. Field search for existing property corners or right of way monuments, if any. Take measurements to same. Download and edit field data. Compare field data to title report (to be furnished by County) and other record data. Make

necessary calculations to determine right of way location. Add R/W limits to site plan of bridge. Consultation with project engineer and County staff to determine necessity of additional right of way needed, if any.

263

Drafting/Computing:	24 hrs. @	\$ 53.58	\$1,285.92
Survey Manager:	2 hrs. @	\$62.87	\$125.74
Principal Engineer:	2 hrs. @	\$104.19	\$208.38
2-Man field Crew:			
Party Chief:	24 hrs. @	\$50.63	\$1,215.12
Field Assistant:	24 hrs. @	\$44.68	\$1,072.32
		Subtotal:	\$3,907.48

b. Miscellaneous expenses allowance

Reproduction costs, etc.	\$50.00
Title Report(s) (furnished by County)	\$0.00

Subtotal, Right of Way Investigation: **\$3,957.48**

Subtotal, Part "A":

\$8,174.71

PART "B"

EXHIBIT MAP AND LEGAL DESCRIPTIONS

1. EXHIBIT MAP (Access / Temporary Easements)
(AS NEEDED)

a. Preparation of Exhibit Map for acquisition of right of way and/or temporary easements as required.

Survey Manager:	2 hrs. @	\$62.87	\$125.74
Principal Engineer:	0.5 hrs. @	\$104.19	\$52.10
Drafting/Computing:	20 hrs. @	\$53.58	\$1,071.60
		Subtotal:	\$1,249.44

b. Misc. expenses (reproduction costs, etc.) \$35.00

Subtotal, Exhibit Map **\$1,284.44**

2. LEGAL DESCRIPTIONS
(AS NEEDED)

a. Preparation of legal descriptions for acquisition of right of way and temporary easements. \$339.31 each

For Each Description:

Survey Manager:	4 hrs. @	\$62.87	\$251.48
Principal Engineer:	0.5 hrs. @	\$104.19	\$52.10
Cleric-al:	1 hrs. @	\$35.73	\$35.73
		Subtotal:	\$339.31

Allowance for site: 4 ea. @ \$339.31 **\$1,357.22**

Subtotal, Part "B":

\$2,641.66

TOTAL FEE ESTIMATE, PART "A" AND PART "B"

\$10,816.36

R97030-B SOQUEL DRIVE
REV: 7/14/98 @APTOS CREEK

State Bridge Number 36C-0075
County Bridge No. 02416-BR.5.9

PART "A" SITE SURVEY AND RIGHT OF WAY INVESTIGATION

1. SITE SURVEY

- a. Research for horizontal and vertical control. Prepare data for use in field.
Mobilize field crew. Project coordination and supervision.

Survey Manager:	8 hrs. @	\$62.87	\$502.96
Principal Engineer:	4 hrs. @	\$104.19	\$416.76
		Subtotal:	\$919.72

- b. Field search and recovery of existing bench mark. Bring elevations to site and establish project bench marks. If no County bench marks within 1/8 mile of project, elevations to be established by GPS methods (estimated tolerance = 0.5'). Establish project base line based on California Coordinates.

2-Man field Crew:

Party Chief:	4 hrs. @	\$50.63	\$202.52
Field Assistant:	4 hrs. @	\$44.68	\$178.72
		Subtotal:	\$381.24

- c. Field measurements sufficient to develop cross section views at upstream and downstream faces of bridge; survey measurements for preparation of bridge site plan; measurements of elevation of soffits and foundation elements, including abutments and wingwalls. Additional cross sections at approximately one floodplain width upstream, one floodplain width downstream, and two floodplain widths downstream.

2-Man field Crew:

Party Chief	42 hrs. @	\$50.63	\$2,126.46
Field Assistant:	42 hrs. @	\$44.68	\$1,876.56
		Subtotal:	\$4,003.02

- d. Download and edit field data. Prepare plan and elevation sketch of bridge structure, including vertical and horizontal dimensions of deck, railings, pier, abutments, foundations and any exposed footings.

Drafting/Computing:	48 hrs. @	\$53.58	\$2,571.84
Principal Engineer:	1 hrs. @	\$104.19	\$104.19
Survey Manager:	2 hrs. @	\$62.87	\$125.74
		Subtotal:	\$2,801.77

- e. Miscellaneous expenses allowance \$100.00
Photos, reproduction costs, etc.

Subtotal Site Survey: \$8,205.75

2. RIGHT OF WAY INVESTIGATION

- a. Field search for existing property corners or right of way monuments, if any.
Take measurements to same. Download and edit field data. Compare field data

265

to title report (to be furnished by County) and other record data. Make necessary calculations to determine right of way location. Add R/W limits to site plan of bridge. Consultation with project engineer and County staff to determine necessity of additional right of way needed, if any.

Drafting/Computing:	12 hrs. @	\$53.58	\$642.96
Survey Manager:	2 hrs. @	\$62.87	\$125.74
Principal Engineer:	2 hrs. @	\$104.19	\$208.38
2-Man field Crew:			
Party Chief:	8 hrs. @	\$50.63	\$405.04
Field Assistant:	8 hrs. @	\$44.68	\$357.44
		Subtotal:	\$1,739.56

b. Miscellaneous expenses allowance	
Reproduction costs, etc.	\$50.00
Title Report(s) (furnished by County)	\$0.00
Subtotal, Right of Way Investigation:	\$1,789.56

Subtotal, Part "A": **\$9,995.31**

PART "B" EXHIBIT MAP AND LEGAL DESCRIPTIONS

1. EXHIBIT MAP (Access / Temporary Easements) (AS NEEDED)

a. Preparation of Exhibit Map for acquisition of right of way and/or temporary easements as required.

Survey Manager:	2 hrs. @	\$62.87	\$125.74
Principal Engineer:	1 hrs. @	\$104.19	\$104.19
Drafting/Computing:	20 hrs. @	\$53.58	\$1,071.60
		Subtotal:	\$1,301.53

b. Misc. expenses (reproduction costs, etc.)	\$50.00
Subtotal, Exhibit Map	\$1,351.53

2. LEGAL DESCRIPTIONS (AS NEEDED)

a. Preparation of legal descriptions for acquisition of right of way and temporary easements. \$339.31 each

For Each Description:

Survey Manager:	4 hrs. @	\$62.87	\$251.48
Principal Engineer:	0.5 hrs. @	\$104.19	\$52.10
Clerical:	1 hrs. @	\$35.73	\$35.73
		Subtotal:	\$339.31

Allowance for site:	4 ea. @	\$339.31	\$1,357.22
----------------------------	----------------	-----------------	-------------------

Subtotal, Part "B": **\$2,708.75**

TOTAL FEE ESTIMATE, PART "A" AND PART "B" **\$12,704.06**

R97030-C SOQUEL DRIVE State Bridge Number 36C-0078
 REV: 7/14/98 @ SOQUEL CREEK County Bridge No. 02416-BR.2.5

266

PART "A" SITE SURVEY AND RIGHT OF WAY INVESTIGATION

1. SITE SURVEY

a. Research for horizontal and vertical control. Prepare data for use in field.

Mobilize field crew. Project coordination and supervision.

Survey Manager. 6 hrs. @ \$62.87 \$377.22

Principal Engineer: 4 hrs. @ \$104.19 \$416.76

Subtotal: \$793.98

b. Field search and recovery of existing bench mark. Bring elevations to site and establish project bench marks. If no County bench marks within 1/8 mile of project, elevations to be established by GPS methods (estimated tolerance = 0.5'). Establish project base line based on California Coordinates.

2-Man field Crew:

Party Chief: 5 hrs. @ \$50.63 \$253.15

Field Assistant: 5 hrs. @ \$44.68 \$223.40

G.P.S. Subconsultant \$300.00

Subtotal: \$776.55

c. Field measurements sufficient to develop cross section views at upstream and downstream faces of bridge; survey measurements for preparation of bridge site plan; measurements of elevation of soffits and foundation elements, including abutments and wingwalls.

2-Man field Crew:

Party Chief: 16 hrs. @ \$50.63 \$810.08

Field Assistant: 16 hrs. @ \$44.68 \$714.88

Subtotal: \$1,524.96

d. Download and edit field data. Prepare plan and elevation sketch of bridge structure, including vertical and horizontal dimensions of deck, railings, pier, abutments, foundations and any exposed footings.

Drafting/Computing: 24 hrs. @ \$53.58 \$1,285.92

Principal Engineer: 1 hrs. @ \$104.19 \$104.19

Survey Manager: 2 hrs. @ \$62.87 \$125.74

Subtotal: \$1,515.85

e. Miscellaneous expenses allowance \$50.00

Photos, reproduction costs, etc.

Subtotal Site Survey: \$4,661.34

2. RIGHT OF WAY INVESTIGATION

a. Field search for existing property corners or right of way monuments, if any. Take measurements to same. Download and edit field data. Compare field data to title report (to be furnished by County) and other record data. Make

necessary calculations to determine right of way location. Add R/W limits to site plan of bridge. Consultation with project engineer and County staff to determine necessity of additional right of way needed, if any.

Drafting/Computing:	20 hrs. @	\$53.58	\$1,071.60
Survey Manager:	4 hrs. @	\$62.87	\$251.48
Principal Engineer:	2 hrs. @	\$104.19	\$208.38
2-Man field Crew:			
Party Chief:	12 hrs. @	\$50.63	\$607.56
Field Assistant:	12 hrs. @	\$44.68	\$536.16
	Subtotal:		\$2,675.18

b. Miscellaneous expenses allowance

Reproduction costs, etc.	\$50.00
Title Report(s) (furnished by County)	\$0.00

Subtotal, Right of Way Investigation: \$2,725.18

Subtotal, Part "A":

\$7,386.52

PART "B" EXHIBIT MAP AND LEGAL DESCRIPTIONS

1. EXHIBIT MAP (Access / Temporary Easements)
(AS NEEDED)

a. Preparation of Exhibit Map for acquisition of right of way and/or temporary easements as required.

Survey Manager:	2 hrs. @	\$62.87	\$125.74
Principal Engineer:	0.5 hrs. @	\$104.19	\$52.10
Drafting/Computing:	20 hrs. @	\$53.58	\$1,071.60
	Subtotal:		\$1,249.44

b. Misc. expenses (reproduction costs, etc.) \$35.00

Subtotal, Exhibit Map \$1,284.44

2. LEGAL DESCRIPTIONS
(AS NEEDED)

a. Preparation of legal descriptions for acquisition of right of way and temporary easements. \$339.31 each

For Each Description:

Survey Manager:	4 hrs. @	\$62.87	\$251.48
Principal Engineer:	0.5 hrs. @	\$104.19	\$52.10
Clerical:	1 hrs. @	\$35.73	\$35.73
	Subtotal:		\$339.31

Allowance for site: 4 ea. @ \$339.31 \$1,357.22

Subtotal, Part "B":

\$2,641.66

TOTAL FEE ESTIMATE, PART "A" AND PART "B"

\$10,028.18

R97030-D APTOS O'HEAD
REV: 7/14/9 (R.D.M. BLVD. @ RR)

State Bridge Number 36C-0083
County Bridge No. 43030-BR.0.2

268

[PART "A"] SITE SURVEY AND RIGHT OF WAY INVESTIGATION

1. SITE SURVEY

- a. Research for horizontal and vertical control. Prepare data for use in field.
Mobilize field crew. Project coordination and supervision.

Survey Manager:	6 hrs. @	\$62.87	\$377.22
Principal Engineer:	4 hrs. @	\$104.19	\$416.76
Subtotal:			\$793.98

- b. Field search and recovery of existing bench mark. Bring elevations to site and establish project bench marks. If no County bench marks within 1/8 mile of project elevations to be established by GPS methods (estimated tolerance = 0.5'). Establish project base line based on California Coordinates.

2-Man field Crew:

Party Chief:	5 hrs. @	\$50.63	\$253.15
Field Assistant:	5 hrs. @	\$44.68	\$223.40
G.P.S. Subconsultant			\$300.00
Subtotal:			\$776.55

- c. Field measurements sufficient to develop cross section views at northerly and southerly faces of bridge; survey measurements for preparation of bridge site plan; measurements of elevation of soffitts and foundation elements, including abutments and wingwalls.

2-Man field Crew:

Party Chief:	8 hrs. @	\$50.63	\$405.04
Field Assistant:	8 hrs. @	\$44.68	\$357.44
Subtotal:			\$762.48

- d. Download and edit field data. Prepare plan and elevation sketch of bridge structure, including vertical and horizontal dimensions of deck, railings, rails, abutments, foundations and any exposed footings.

Drafting/Computing:	20 hrs. @	\$53.58	\$1,071.60
Principal Engineer:	1 hrs. @	\$104.19	\$104.19
Survey Manager:	1 hrs. @	\$62.87	\$62.87
Subtotal:			\$1,238.66

- e. Miscellaneous expenses allowance \$50.00

Photos, reproduction costs, etc.

Subtotal Site Survey: \$3,621.67

2. RIGHT OF WAY INVESTIGATION

- a. Field search for existing property corners or right of way monuments, if any. Take measurements to same. Download and edit field data. Compare field data to title report (to be furnished by County) and other record data. Make



necessary calculations to determine right of way location. Add R/W limits to site plan of bridge. Consultation with project engineer and County staff to determine necessity of additional right of way needed, if any.

Drafting/Computing:	22 hrs. @	\$53.58	\$1,178.76	
Survey Manager:	2 hrs. @	\$62.87	\$125.74	
Principal Engineer:	2 hrs. @	\$104.19	\$208.38	
2-Man field Crew:				
Party Chief	12 hrs. @	\$50.63	\$607.56	
Field Assistant:	12 hrs. @	\$44.68	\$536.16	
			Subtotal:	\$2,656.60

b. Miscellaneous expenses allowance

Reproduction costs, etc.	\$50.00
Title Report(s) (furnished by County)	\$0.00

Subtotal, Right of Way Investigation: \$2,706.60

Subtotal, Part "A":

\$6,328.27

PART "B" EXHIBIT MAP AND LEGAL DESCRIPTIONS

1. EXHIBIT MAP (Access / Temporary Easements)
(AS NEEDED)

a. Preparation of Exhibit Map for acquisition of right of way and/or temporary easements as required.

Survey Manager:	2 hrs. @	\$62.87	\$125.74	
Principal Engineer:	1 hrs. @	\$104.19	\$104.19	
Drafting/Computing:	20 hrs. @	\$53.58	\$1,071.60	
			Subtotal:	\$1,301.53

b. Misc. expenses (reproduction costs, etc.) \$50.00

Subtotal, Exhibit Map \$1,351.53

2. LEGAL DESCRIPTIONS
(AS NEEDED)

a. Preparation of legal descriptions for acquisition of right of way and temporary easements. \$339.31 each

For Each Description:

Survey Manager:	4 hrs. @	\$62.87	\$251.48	
Principal Engineer:	0.5 hrs. @	\$104.19	\$52.10	
Clerical:	1 hrs. @	\$35.73	\$35.73	
			Subtotal:	\$339.31

Allowance for site: 2 ea. @ \$339.31 \$678.61

Subtotal, Part "B":

\$2,030.14

TOTAL FEE ESTIMATE, PART "A" AND PART "B"

\$8,358.41

R97030-E
REV: 7/14/98

VALENCIA ROAD

State Bridge Number 36C-0116
County Bridge No. 02503-BR.2.7

270

PART "A" SITE SURVEY AND RIGHT OF WAY INVESTIGATION

1. SITE SURVEY

a. Research for horizontal and vertical control. Prepare data for use in field.
Mobilize field crew. Project coordination and supervision.

Survey Manager:	6 hrs. @	\$62.87	\$377.22
Principal Engineer:	4 hrs. @	\$104.19	\$416.76
Subtotal:			\$793.98

b. Field search and recovery of existing bench mark. Bring elevations to site and establish project bench marks. If no County bench marks within 1/8 mile of project, elevations to be established by GPS methods (estimated tolerance = 0.5'). Establish project base line based on California Coordinates.

2-Man field Crew:

Party Chief:	5 hrs. @	\$50.63	\$253.15
Field Assistant:	5 hrs. @	\$44.68	\$223.40
G.P.S. Subconsultant			\$300.00
Subtotal:			\$776.55

c. Field measurements sufficient to develop cross section views at upstream and downstream faces of bridge; survey measurements for preparation of bridge site plan; measurements of elevation of soffits and foundation elements, including abutments and wingwalls. Additional cross sections at approximately one floodplain width upstream, one floodplain width downstream, and two floodplain widths downstream.

2-Man field Crew:

Party Chief	30 hrs. @	\$50.63	\$1,518.90
Field Assistant:	30 hrs. @	\$44.68	\$1,340.40
Subtotal:			\$2,859.30

d. Download and edit field data. Prepare plan and elevation sketch of bridge structure, including vertical and horizontal dimensions of deck, railings, pier, abutments, foundations and any exposed footings.

Drafting/Computing:	30 hrs. @	\$53.58	\$1,607.40
Principal Engineer:	2 hrs. @	\$104.19	\$208.38
Survey Manager:	4 hrs. @	\$62.87	\$251.48
Subtotal:			\$2,067.26

e. Miscellaneous expenses allowance \$100.00
Photos, reproduction costs, etc.

Subtotal Site Survey: \$6,597.09

2. RIGHT OF WAY INVESTIGATION

a. Field search for existing property corners or right of way monuments, if any

Take measurements to same. Download and edit field data. Compare field data to title report (to be furnished by County) and other record data. Make necessary calculations to determine right of way location. Add R/W limits to site plan of bridge. Consultation with project engineer and County staff to determine necessity of additional right of way needed, if any.

Drafting/Computing:	12 hrs. @	\$55.34	\$664.08
Survey Manager:	2 hrs. @	\$62.87	\$125.74
Principal Engineer:	2 hrs. @	\$104.19	\$208.38
2-Man field Crew:			
Party Chief:	12 hrs. @	\$52.27	\$627.24
Field Assistant:	12 hrs. @	\$39.97	\$479.64
		Subtotal:	\$2,105.08

b. Miscellaneous expenses allowance

Reproduction costs, etc.	\$50.00
Title Report(s) (furnished by County)	\$0.00

Subtotal, Right of Way Investigation: \$2,155.08

Subtotal, Part "A":

\$8,752.17

PART "B" EXHIBIT MAP AND LEGAL DESCRIPTIONS

1. EXHIBIT MAP (Access / Temporary Easements)
(AS NEEDED)

a. Preparation of Exhibit Map for acquisition of right of way and/or temporary easements as required.

Survey Manager:	2 hrs. @	\$62.87	\$125.74
Principal Engineer:	1 hrs. @	\$104.19	\$104.19
Drafting/Computing:	20 hrs. @	\$53.58	\$1,071.60
		Subtotal:	\$1,301.53

b. Misc. expenses (reproduction costs, etc.) \$50.00

Subtotal, Exhibit Map \$1,351.53

2. LEGAL DESCRIPTIONS
(AS NEEDED)

a. Preparation of legal descriptions for acquisition of right of way and temporary easements. \$339.31 each

For Each Description:

Survey Manager:	4 hrs. @	\$62.87	\$251.48
Principal Engineer:	0.5 hrs. @	\$104.19	\$52.10
Clerical:	1 hrs. @	\$35.73	\$35.73
		Subtotal:	\$339.31

Allowance for site: 4 ea. @ \$339.31 \$1,357.22

Subtotal, Part "B":

\$2,708.75

TOTAL FEE ESTIMATE, PART "A" AND PART "B"

\$11,460.92

R97030-G KING'S CREEK RD. State Bridge Number 36C-0064
REV: 7/14/98 County Bridge No. 43026-BR.0.6

PART "A" SITE SURVEY AND RIGHT OF WAY INVESTIGATION

1. SITE SURVEY

a. Research for horizontal and vertical control. Prepare data for use in field.

Mobilize field crew. Project coordination and supervision.

Survey Manager: 6 hrs. @ \$62.87 \$377.22

Principal Engineer: 4 hrs. @ \$104.19 \$416.76

Subtotal: \$793.98

b. Field search and recovery of existing bench mark. Bring elevations to site and establish project bench marks. If no County bench marks within 1/8 mile of project, elevations to be established by GPS methods (estimated tolerance = 0.5'). Establish project base line based on

California Coordinates.

2-Man field Crew:

Party Chief: 6 hrs. @ \$50.63 \$303.78

Field Assistant: 6 hrs. @ \$44.68 \$268.08

G.P.S. Subconsultant \$300.00

Subtotal: \$871.a6

c. Field measurements sufficient to develop cross section views at upstream and downstream faces of bridge; survey measurements for preparation of bridge site plan; measurements of elevation of soffits and foundation elements, including abutments and wingwalls.

2-Man field Crew:

Party Chief: 12 hrs. @ \$50.63 \$607.56

Field Assistant: 12 hrs. @ \$44.68 \$536.16

Subtotal: \$1,143.72

d. Download and edit field data. Prepare plan and elevation sketch of bridge structure, including vertical and horizontal dimensions of deck, railings, pier, abutments, foundations and any exposed footings.

Drafting/Computing: 20 hrs. @ \$53.58 \$1,071.60

Principal Engineer: 1 hrs. @ \$104.19 \$104.19

Survey Manager: 2 hrs. @ \$62.87 \$125.74

Subtotal: \$1,301.53

e. Miscellaneous expenses allowance \$50.00

Photos, reproduction costs, etc.

Subtotal Site Survey: \$4,161.09

2. RIGHT OF WAY INVESTIGATION

a. Field search for existing property comers or right of way monuments, if any. Take measurements to same. Download and edit field data. Compare field data to title report (to be furnished by County) and other record data. Make necessary calculations to determine right of way location. Add R/W limits to site plan of bridge. Consultation with project engineer and County staff to

determine necessity of additional right of way needed, if any.

Drafting/Computing:	36 hrs. @	\$55.34	\$1,992.24
Survey Manager:	4 hrs. @	\$62.87	\$251.48
Principal Engineer:	2 hrs. @	\$104.19	\$208.38
2-Man field Crew:			
Party Chief:	30 hrs. @	\$52.27	\$1,568.10
Field Assistant:	30 hrs. @	\$39.97	\$1,199.10
	Subtotal:		\$5,219.30

b. Miscellaneous expenses allowance

Reproduction costs, etc.	\$50.00
Title Report(s) (furnished by County)	\$0.00

Subtotal, Right of Way Investigation: \$5,269.30

Subtotal, Part "A":

\$9,430.39

PART "B" EXHIBIT MAP AND LEGAL DESCRIPTIONS

1. EXHIBIT MAP (Access / Temporary Easements)
(AS NEEDED)

a. Preparation of Exhibit Map for acquisition of right of way and/or temporary easements as required.

Survey Manager:	2 hrs. @	\$62.87	\$125.74
Principal Engineer:	1 hrs. @	\$104.19	\$104.19
Drafting/Computing:	22 hrs. @	\$53.58	\$1,178.76
	Subtotal:		\$1,408.69

b. Misc. expenses (reproduction costs, etc.) \$35.00

Subtotal, Exhibit Map \$1,443.69

2. LEGAL DESCRIPTIONS
(AS NEEDED)

a. Preparation of legal descriptions for acquisition of right of way and temporary easements. \$339.31 each

For Each Description:

Survey Manager:	4 hrs. @	\$62.87	\$251.48
Principal Engineer:	0.5 hrs. @	\$104.19	\$52.10
Clerical:	1 hrs. @	\$35.73	\$35.73
	Subtotal:		\$339.31

Allowance for site: 4 ea. @ \$339.31 \$1,357.22

Subtotal, Part "B":

\$2,800.91

TOTAL FEE ESTIMATE, PART "A" AND PART "B"

\$12,231.30

R97030-H LARKSPUR ST. State Bridge Number 36C-0068
REV: 7/14/98 County Bridge No. 43018-BR.0.2

PART "A" SITE SURVEY AND RIGHT OF WAY INVESTIGATION

1. SITE SURVEY

a. Research for horizontal and vertical control. Prepare data for use in field Mobilize field crew. Project coordination and supervision.

Survey Manager:	6 hrs. @	\$62.87	\$377.22
Principal Engineer:	4 hrs. @	\$104.19	\$416.76
Subtotal:			\$793.98

b. Field search and recovery of existing bench mark. Bring elevations to site **and** establish project bench marks. If no County bench marks within 1/8 mile of project, elevations to be established by GPS methods (estimated tolerance = 0.5'). Establish project base line based on California Coordinates.

2-Man field Crew:

Party Chief:	6 hrs. @	\$50.63	\$303.78
Field Assistant:	6 hrs. @	\$44.68	\$268.08
G.P.S. Subconsultant			\$300.00
Subtotal:			\$871.86

c. Field measurements sufficient to develop cross section views at upstream and downstream faces of bridge; survey measurements for preparation of bridge site plan; measurements of elevation of soffits and foundation elements, including abutments and wingwalls.

2-Man field Crew:

Party Chief:	12 hrs. @	\$50.63	\$607.56
Field Assistant:	12 hrs. @	\$44.68	\$536.16
Subtotal:			\$1,143.72

d. Download and edit field data. Prepare plan and elevation sketch of bridge structure, including vertical and horizontal dimensions of deck, railings, pier, abutments, foundations and any exposed footings.

Drafting/Computing:	20 hrs. @	\$53.58	\$1,071.60
Principal Engineer:	1 hrs. @	\$104.19	\$104.19
Survey Manager:	2 hrs. @	\$62.87	\$125.74
Subtotal:			\$1,301.53

e. Miscellaneous expenses allowance \$50.00
Photos, reproduction costs, etc.

Subtotal Site Survey: \$4,161.09

2. RIGHT OF WAY INVESTIGATION

a. Field search for existing property corners or right of way monuments, if any. Take measurements to same. Download and edit field data. Compare field data to title report (to be furnished by County) and other record data. Make necessary calculations to determine right of way location. Add R/W limits to site plan of bridge. Consultation with project engineer and County staff to

275

determine necessity of additional right of way needed, if any.

Drafting/Computing:	20 hrs. @	\$55.34	\$1,106.80
Survey Manager:	4 hrs. @	\$62.87	\$251.48
Principal Engineer:	2 hrs. @	\$104.19	\$208.38
2-Man field Crew:			
Party Chief:	20 hrs. @	\$52.27	\$1,045.40
Field Assistant:	20 hrs. @	\$39.97	\$799.40
	Subtotal:		\$3,411.46

b. Miscellaneous expenses allowance

Reproduction costs, etc.	\$50.00
Title Report(s) (furnished by County)	\$0.00

Subtotal, Right of Way Investigation: \$3,461.46

Subtotal, Part "A": \$7,622.55

PART B MAP AND LEGAL DESCRIPTIONS

1. EXHIBIT MAP (Access / Temporary Easements)
(AS NEEDED)

a. Preparation of Exhibit Map for acquisition of right of way and/or temporary easements as required.

Survey Manager:	2 hrs. @	\$62.87	\$125.74
Principal Engineer:	1 hrs. @	\$104.19	\$104.19
Drafting/Computing:	20 hrs. @	\$53.58	\$1,071.60
	Subtotal:		\$1,301.53

b. Misc. expenses (reproduction costs, etc.) \$35.00

Subtotal, Exhibit Map \$1,336.53

2. LEGAL DESCRIPTIONS
(AS NEEDED)

a. Preparation of legal descriptions for acquisition of right of way and temporary easements. \$339.31 each

For Each Description:

Survey Manager:	4 hrs. @	\$62.87	\$251.48
Principal Engineer:	0.5 hrs. @	\$104.19	\$52.10
Clerical:	1 hrs. @	\$35.73	\$35.73
	Subtotal:		\$339.31

Allowance for site: 4 ea. @ \$339.31 \$1,357.22

Subtotal, Part "B": \$2,693.75

TOTAL FEE ESTIMATE, PART "A" AND PART "B" \$10,316.30

R97030-I EITHER WAY LANE State Bridge Number 36C-0073
 REV: 7/14/98 County Bridge No. 42030-BR.0.1

PART "A" SITE SURVEY AND RIGHT OF WAY INVESTIGATION

1. SITE SURVEY

a. Research for horizontal and vertical control. Prepare data for use in field.

Mobilize field crew. Project coordination and supervision.

Survey Manager: 6 hrs. @ \$62.87 \$377.22

Principal Engineer: 4 hrs. @ \$104.19 \$416.76

Subtotal: \$793.98

b. Field search and recovery of existing bench mark. Bring elevations to site and establish project bench marks. If no County bench marks within 1/8 mile of project, elevations to be established by GPS methods (estimated tolerance = 0.5'). Establish project base line based on California Coordinates.

2-Man field Crew:

Party Chief: 6 hrs. @ \$50.63 \$303.78

Field Assistant: 6 hrs. @ \$44.68 \$268.08

G.P.S. Subconsultant \$300.00

Subtotal: \$871.a6

c. Field measurements sufficient to develop cross section views at upstream and downstream faces of bridge; survey measurements for preparation of bridge site plan; measurements of elevation of soffits and foundation elements, including abutments and wingwalls.

2-Man field Crew:

Party Chief: 12 hrs. @ \$50.63 \$607.56

Field Assistant: 12 hrs. @ \$44.68 \$536.16

Subtotal: \$1,143.72

d. Download and edit field data. Prepare plan and elevation sketch of bridge structure, including vertical and horizontal dimensions of deck, railings, pier, abutments, foundations and any exposed footings.

Drafting/Computing: 20 hrs. @ \$53.58 \$1,071.60

Principal Engineer: 1 hrs. @ \$104.19 \$104.19

Survey Manager: 2 hrs. @ \$62.87 \$125.74

Subtotal: \$1,301.53

e. Miscellaneous expenses allowance \$50.00

Photos, reproduction costs, etc.

Subtotal Site Survey: \$4,161.09

2. RIGHT OF WAY INVESTIGATION

a. Field search for existing property corners or right of way monuments, if any.

Take measurements to same. Download and edit field data. Compare field data to title report (to be furnished by County) and other record data. Make necessary calculations to determine right of way location. Add R/W limits to site plan of bridge. Consultation with project engineer and County staff to

determine necessity of additional right of way needed, if any.

Drafting/Computing:	20 hrs. @	\$55.34	\$1,106.80
Survey Manager:	4 hrs. @	\$62.87	\$251.48
Principal Engineer:	2 hrs. @	\$104.19	\$208.38
2-Man field Crew:			
Party Chief:	20 hrs. @	\$52.27	\$1,045.40
Field Assistant:	20 hrs. @	\$39.97	\$799.40
		Subtotal:	\$3,411.46

b. Miscellaneous expenses allowance

Reproduction costs, etc.	\$50.00
Title Report(s) (furnished by County)	\$0.00

Subtotal, Right of Way Investigation: \$3,461.46

Subtotal, Part "A": \$7,622.55

PART "B" EXHIBIT MAP AND LEGAL DESCRIPTIONS

**1. EXHIBIT MAP (Access / Temporary Easements1
(AS NEEDED))**

a. Preparation of Exhibit Map for acquisition of right of way and/or temporary easements as required.

Survey Manager:	2 hrs. @	\$62.87	\$125.74
Principal Engineer:	1 hrs. @	\$104.19	\$104.19
Drafting/Computing:	20 hrs. @	\$53.58	\$1,071.60
		Subtotal:	\$1,301.53

b. Misc. expenses (reproduction costs, etc.) \$35.00

Subtotal, Exhibit Map \$1,336.53

**2. LEGAL DESCRIPTIONS
(AS NEEDED)**

a. Preparation of legal descriptions for acquisition of right of way and temporary easements. \$339.31 each

For Each Description:

Survey Manager:	4 hrs. @	\$62.87	\$251.46
Principal Engineer:	0.5 hrs. @	\$104.19	\$52.10
Clerical:	1 hrs. @	\$35.73	\$35.73
		Subtotal:	\$339.31

Allowance for site: 4 ea. @ \$339.31 \$1,357.22

Subtotal, Part "B": \$2,693.75

TOTAL FEE ESTIMATE, PART "A" AND PART "B" \$10,316.30

Project: Santa Cruz County Seismic Retrofit

1. Aptos Creek Bridge
2. Valencia Creek Bridge

Tasks: Biological and Wetland Assessment

Reference for Development of SOW: Caltrans Procedure Manual for completing Preliminary Environmental Study (PES) form (July, 1996)

Biological Assessment (Per Site)

Task 1.0 Document Review

California Department of Fish and Game (California Natural Diversity Data Base), and U.S. Fish and Wildlife Service will be contacted for information on state or federal listed, proposed, and/or candidate endangered and/or threatened plant or animal species **and/or** their critical habitat which may occur in the area. The local agencies will be contacted to review any available documents or data for the site and surrounding habitat. No deliverables are anticipated for this task. Task will be completed within 2 weeks for Notice to Proceed.

Task 2.0 Field Survey

An on-site biological assessment will be conducted to assess the site's biological value including habitat value, vegetative cover, and specie diversity. An assessment will also be made of the potential of the retrofit project to impact the site's habitat, and endangered and/or threatened species or species of concern. During the site visit, the site will be surveyed for state or federal listed, proposed or candidate endangered and/or threatened species and suitable habitat for these species. In the event that the site or the immediately adjacent area is assessed **to** be potential habitat for protected species, further studies may be required that are not covered within this scope of work.

No deliverables are anticipated for this task. Task will be completed within 2 weeks for completion of Task 1.

Task 3.0 Report

A letter report will be prepared describing the results of the field surveys including recommendations for next steps if necessary. Documentation collected during the work will be included as appendices. Three copies of the report will be prepared. Draft and Final versions of the report are anticipated. Kleinfelder has assumed **upto** 3 hour of the

Senior Biologist time will be required to revise the report to the Final version. Additional charges will be billed on a time and materials basis.

279

Wetland Delineation (Per Site)

Task 1.0 Document Review

As the first step of the wetland delineation, the following documents will be reviewed for information on wetlands in the project area:

- National Wetlands Inventory Map from the United States Fish and Wildlife Service
- Recent Aerial Photographs
- Soil Surveys and Hydric Soil Lists from the Natural Resources Conservation Service

No deliverables are anticipated for this task. Task will be completed within 2 weeks for Notice to Proceed concurrent with the Biological Assessment.

Task 2.0 Field Survey

A routine wetland delineation field survey and report of jurisdictional wetlands within the areas of potential concern will be completed in accordance with the United States Army Corps of Engineers (USACOE) 1987 Guidelines under Section 404 of the Clean Water Act.

The site will be walked in transects (perpendicular to the watercourse) at suitable site specific intervals and visually scanned for hydrophytic vegetation, standing water, topographical depressions, surface scour, sediment deposition, fence line debris, seeps, and evidence of ditching to assess the site's wetland potential (USACOE, 1987). Areas that appear to meet the three required wetland criteria as defined in the USACOE 1987 Corps of Engineers Wetland Delineation Manual of (1) hydric soil, (2) wetland hydrology and (3) hydrophytic vegetation will be further characterized for hydrophytic vegetative dominance (Reed, 1988), wetland hydrology, and hydric soil. Hydric soil will be determined based on field indicators established by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (USDA, 1996), using descriptions according to **Munsell** Soil Color Charts (1994). Hydrophytic vegetation will be identified according to wetland indicator status, as defined for the region by the United States Fish and Wildlife Service (**USFWS**) *National List of Plant Species that Occur in Wetlands: California (Region 0)* (Reed, 1988). Hydrologic indicators will be determined by observing soil saturation in test pits and soil borings and evidence of standing water e.g. water scouring marks, cracked soils, and sediment deposition.

The areas that meet the USACOE wetland criteria will be further surveyed to quantitatively assess the site's wetland boundaries. These wetland boundaries will then be staked with PVC pipes. All data points will be photographed and staked. Wetland data sheets will be developed to support the observed wetland boundaries. These data sheets will contain the information necessary on vegetation, hydrology and soils to meet the USACOE 1987 requirements for wetland delineation. The observed wetland areas on site will be sketched and mapped as part of the wetland delineation report. This scope of services does not include land surveying, data reduction and preparation of a scaled map.

No deliverables are anticipated for this task. Task will be completed within 2 weeks for completion of Task 1 concurrent with the Biological Assessment.

Task 3.0 Report

A letter report will be prepared in accordance with USACOE standards including the preparation of data sheets. The sketch map and data collected during the tasks will be included in the report as appendices. Three copies of the report will be prepared. **Draft** and Final versions of the report are anticipated. **Kleinfelder** has assumed **upto** 3 hour of the Senior Biologist time will be required to revise the **report** to the Final version.

NO.	ROUTE DATA	COPY	ATT.
1	DIRECTOR	✓	
	ASST. DIR. OPR		
	CSA/CLAIMS		
	OPR. PROJ/PKG		
	PERMITS/ENCR		
	RDS/DRAIN/EOP		
	SANIT/LANDF		
	ASST DIR. PS.		
	CONSTRUCTION		
	DRAINAGE		
	SANIT. ENG		
	SOLID WASTE		
2	ASST. DIR. RE	✓	
3	DESIGN	✓	✓
	R.D.A.		
	RD. PLAN/TRAFF		
	SURVEY		
	CHIEF ADM. SVC		
	REAL PROPERTY		

Summary of Project Costs Aptos Creek Bridge					
Task No.	Description	Total Labor	Laboratory	Expenses	Total
Task 1	Biological Assessment - Document Review	\$959	so	\$106	\$1,065
Task 2	Biological Assessment - Field Survey	\$1,193	\$0	\$51	\$1,244
Task 3	Biological Assessment - Report	\$1,602	\$0	\$0	\$1,602
Task 4	Wetlands Delineation - Document Review	\$959	so	\$58	\$1,017
Task 5	Wetlands Delineation - Field Survey	\$1,343	\$0	\$53	\$1,397
Task 6	Wetlands Delineation - Report	\$1,835	so	\$52	\$1,887
	Totals	\$7,892	\$0	\$320	\$8,212

Cost Estimate				
Task <u>1</u> :		<u>Biological Assessment - Document Review</u>		
	Position	Wage Rate (hourly)	Proposed Hours	Total Dollars
	Senior Consultant	\$0.00	0	\$0.00
	Senior Biologist	\$150.11	4	\$600.44
	Senior Project Manager	\$132.40	0.5	\$66.20
	Senior Professional	\$0.00	0	\$0.00
	Project Manager	\$82.91	2	\$165.82
	Project Professional	\$0.00	0	\$0.00
	Staff Professional	\$0.00	0	\$0.00
	Assistant Professional	\$0.00	0	\$0.00
	Senior Tech	\$0.00	0	\$0.00
	Technician	\$0.00	0	\$0.00
	Draftsman	\$0.00	0	\$0.00
	Clerical	\$42.19	3	\$126.57
	total		9.5	
Total Direct Salary				\$959.03
Overhead Factor				1.00
TOTAL LABOR COST				\$959.03
Auto Use:				
<u>1</u>	Trips of	<u>60</u>	miles @	\$0.31 per mile
				\$18.60
Other Costs:				
	Quantity	Unit Cost	Unit Measure	
USGS Maps	1	10.00	each	\$10
Data Base	1	50.00	each	\$50
Supplies, communication, etc. (per direct hour)		9.5	\$2.90	\$27.55
TOTAL OTHER COSTS				\$87.55
Date of Cost Estimate: Jul. 13, 1998			TOTAL COST \$1,065.18	

Cost Estimate				
Task <u>2</u> : <u>Biological Assessment - Field Survey</u>				
Position	Wage Rate (hourly)	Proposed Hours	Total Dollars	
Senior Consultant	\$0.00	0	\$0.00	
Senior Biologist	\$150.11	6	\$900.66	
Senior Project Manager	\$132.40	0	\$0.00	
Senior Professional	\$0.00	0	\$0.00	
Project Manager	\$82.91	2	\$165.82	
Project Professional	\$0.00	0	\$0.00	
Staff Professional	\$0.00	0	\$0.00	
Assistant Professional	\$0.00	0	\$0.00	
Senior Tech	\$0.00	0	\$0.00	
Technician	\$0.00	0	\$0.00	
Draftsman	\$0.00	0	\$0.00	
Clerical	\$42.19	3	\$126.57	
		11		
Total Direct Salary			\$1,193.05	
Overhead Factor			1.00	
TOTAL LABOR COST			\$1,193.05	
Auto Use:				
<u>1</u>	Trips of	<u>60</u>	miles @	<u>\$0.31</u> per mile \$18.60
Other Costs:				
Equipment	Quantity	Unit Cost	Unit Measure	\$0
Laboratory				\$0
Supplies, communication, etc. (per direct hour)	11.0	\$2.90		\$31.90
TOTAL OTHER COSTS				\$31.90
Date of Cost Estimate: Jul. 13, 1998				TOTAL COST \$1,243.55

Cost Estimate				
Task <u>3</u>		: <u>Biological Assessment - Report</u>		
	Position	Wage Rate (hourly)	Proposed Hours	Total Dollars
	Senior Consultant	\$0.00	0	\$0.00
	Senior Biologist	\$150.11	7	\$1,050.77
	Senior Project Manager	\$132.40	1	\$132.40
	Senior Professional	\$0.00	0	\$0.00
	Project Manager	\$82.91	2	\$165.82
	Project Professional	\$0.00	0	\$0.00
	Staff Professional	\$0.00	0	\$0.00
	Assistant Professional	\$0.00	0	\$0.00
	Senior Tech	\$0.00	0	\$0.00
	Technician	\$0.00	0	\$0.00
	Draftsman	\$0.00	0	\$0.00
	Clerical	\$42.19	6	\$253.14
total I			16	
Total Direct Salary				\$1,602.13
Overhead Factor				1.00
TOTAL LABOR COST				\$1,602.13
Auto Use:				
<u>0</u>	Trips of	<u>60</u>	miles @	\$0.31 per mile
				\$0.00
Other Costs:				
	Q u a n t i t y	Unit Cost	Unit Measure	
Equipment				\$0
Laboratory				\$0
				\$0
TOTAL OTHER COSTS				\$0.00
Date of Cost Estimate: Jul. 13, 1998				TOTAL COST \$1,602.13

Cost Estimate				
Task <u>4</u> : <u>Wetlands Delineation - Document Review</u>				
Position	Wage Rate (hourly)	Proposed Hours	Total Dollars	
Senior Consultant	\$0.00	0	\$0.00	
Senior Biologist	\$150.11	4	\$600.44	
Senior Project Manager	\$132.40	0.5	\$66.20	
Senior Professional	\$0.00	0	\$0.00	
Project Manager	\$82.91	2	\$165.82	
Project Professional	\$0.00	0	\$0.00	
Staff Professional	\$0.00	0	\$0.00	
Assistant Professional	\$0.00	0	\$0.00	
Senior Tech	\$0.00	0	\$0.00	
Technician	\$0.00	0	\$0.00	
Draftsman	\$0.00	0	\$0.00	
Clerical	\$42.19	3	\$126.57	
total		9.5		
Total Direct Salary			\$959.03	
Overhead Factor			1.00	
TOTAL LABOR COST			\$959.03	
Auto Use:				
1	Trips of	60	miles @	\$0.31 per mile
				\$18.60
Other Costs:				
	Quantity	Unit Cost	Unit Measure	
Wetlands Maps	1	12.00	each	\$12
Supplies, communication, etc. (per direct hour)		9.5	\$2.90	\$27.55
TOTAL OTHER COSTS				\$39.55
Date of Cost Estimate: Jul. 13, 1998			TOTAL COST \$1,017.18	

Cost Estimate			
Task <u>5</u> :		<u>Wetlands Delineation - Field Survey</u>	
Position	Wage Rate (hourly)	Proposed Hours	Total Dollars
Senior Consultant	\$0.00	0	\$0.00
Senior Biologist	\$150.11	7	\$1,050.77
Senior Project Manager	\$132.40	0	\$0.00
Senior Professional	\$0.00	0	\$0.00
Project Manager	\$82.91	2	\$165.82
Project Professional	\$0.00	0	\$0.00
Staff Professional	\$0.00	0	\$0.00
Assistant Professional	\$0.00	0	\$0.00
Senior Tech	\$0.00	0	\$0.00
Technician	\$0.00	0	\$0.00
Draftsman	\$0.00	0	\$0.00
Clerical	\$42.19	3	\$126.57
total		12	
Total Direct Salary			\$1,343.16
Overhead Factor			1.00
TOTAL LABOR COST			\$1,343.16
Auto Use:			
<u>1</u>	Trips of <u>60</u> miles @	\$0.31 per mile	\$18.60
Other Costs:			
Equipment	Quantity	Unit Cost	Unit Measure
Laboratory			\$0
			\$0
Supplies, communication, etc. (per direct hour)	12.01	\$2.90	\$34.80
TOTAL OTHER COSTS			\$34.80
Date of Cost Estimate: Jul. 13, 1998			TOTAL COST \$1396.56

Cost Estimate				
Task <u>6</u>		: <u>Wetlands Delineation - Report</u>		
Position	Wage Rate (hourly)	Proposed Hours	Total Dollars	
Senior Consultant	\$0.00	0	\$0.00	
Senior Biologist	\$150.11	8	\$1,200.88	
Senior Project Manager	\$132.40	1	\$132.40	
Senior Professional	\$0.00	0	\$0.00	
Project Manager	\$82.91	3	\$248.73	
Project Professional	\$0.00	0	\$0.00	
Staff Professional	\$0.00	0	\$0.00	
Assistant Professional	\$0.00	0	\$0.00	
Senior Tech	\$0.00	0	\$0.00	
Technician	\$0.00	0	\$0.00	
Draftsman	\$0.00	0	\$0.00	
Clerical	\$42.19	6	\$253.14	
total		18		
Total Direct Salary			\$1,835.15	
Overhead Factor			1.00	
TOTAL LABOR COST			\$1,835.15	
Auto Use:				
<u>0</u>	Trips of	<u>60</u>	miles @	\$0.31 per mile <u>\$0.00</u>
Other Costs:				
Equipment	Quantity	Unit Cost	Unit Measure	\$0
Laboratory				\$0
Supplies, communication, etc. (per direct hour)	18.0	\$2.90		\$52.20
TOTAL OTHER COSTS				\$52.20
Date of Cost Estimate: Jul. 13, 1998				TOTAL COST <u>\$1,887.35</u>

Summary of Project Costs Valencia Creek Bridge					
Task No.	Description	Total Labor	Laboratory	Expenses	Total
Task 1	Biological Assessment - Document Review	\$971	so	\$106	\$1,077
Task 2	Biological Assessment - Field Survey	\$1,206	so	\$51	\$1,257
Task 3	Biological Assessment - Report	\$1,615	\$0	\$0	\$1,615
	Totals	\$3,792	so	\$157	\$3,949

Cost Estimate			
Task <u>1</u> : <u>Biological Assessment - Document Review</u>			
Position	Wage Rate	Proposed	Total Dollars
Senior Consultant	\$0.00	0	\$0.00
Senior Biologist	\$150.11	4	\$600.44
Senior Project Manager	\$130.70	0.5	\$65.35
Senior Professional	\$0.00	0	\$0.00
Project Manager	\$88.74	2	\$177.48
Project Professional	\$66.62	0	\$0.00
Staff Professional	\$56.51	0	\$0.00
Assistant Professional	\$52.20	0	\$0.00
Senior Tech	\$0.00	0	\$0.00
Technician	\$0.00	0	\$0.00
Draftsman	\$56.47	0	\$0.00
Clerical	\$42.65	3	\$127.95
total		9.5	
Total Direct Salary			\$971.22
Overhead Factor			1.00
TOTAL LABOR COST			\$971.22
Auto Use:			
<u>1</u> Trips of <u>60</u> miles @ <u>\$0.31</u> per mile	\$18.60		
Other Costs:			
	Quantity	Unit Cost	Unit Measure
JSGS Maps	1	10.00	each
Data Base	1	50.00	each
Supplies, communication, etc. (per direct hour)	9.5	\$2.90	\$27.55
TOTAL OTHER COSTS			\$87.55
Date of Cost Estimate: Jul. 13, 1998			TOTAL COST \$1,077.37

Cost Estimate				
Task <u>2</u>		:	<u>Biological Assessment - Field Survey</u>	
Position	Wage Rate (hourly)	Proposed Hours	Total Dollars	
Senior Consultant	\$0.00	0	\$0.00	
Senior Biologist	\$150.11	6	\$900.66	
Senior Project Manager	\$130.70	0	\$0.00	
Senior Professional	\$0.00	0	\$0.00	
Project Manager	\$88.74	2	\$177.48	
Project Professional	\$66.62	0	\$0.00	
Staff Professional	\$56.51	0	\$0.00	
Assistant Professional	\$52.20	0	\$0.00	
Senior Tech	\$0.00	0	\$0.00	
Technician	\$0.00	0	\$0.00	
Draftsman	\$56.47	0	\$0.00	
Clerical	\$42.65	3	\$127.95	
		11		
Total Direct Salary			\$1,206.09	
Overhead Factor			1.00	
TOTAL LABOR COST			\$1,206.09	
Auto Use:				
<u>1</u>	Trips of	60	miles @	\$0.31 per mile \$18.60
Other Costs:				
	Quantity	Unit Cost	Unit Measure	
Equipment				\$0
Laboratory				\$0
Supplies, communication, etc. (per direct hour)	11	.0	\$2.90	\$31.90
TOTAL OTHER COSTS				\$31.90
Date of Cost Estimate: Jul. 13, 1998				
TOTAL COST				\$1,256.59

Cost Estimate				
Task <u>3</u>		: <u>Biological Assessment - Report</u>		
Position	Wage Rate (hourly)	Proposed Hours	Total Dollars	
Senior Consultant	\$0.00	0	\$0.00	
Senior Biologist	\$150.11	7	\$1,050.77	
Senior Project Manager	\$130.70	1	\$130.70	
Senior Professional	\$0.00	0	\$0.00	
Project Manager	\$88.74	2	\$177.48	
Project Professional	\$66.62	0	\$0.00	
Staff Professional	\$56.51	0	\$0.00	
Assistant Professional	\$52.20	0	\$0.00	
Senior Tech	\$0.00	0	\$0.00	
Technician	\$0.00	0	\$0.00	
Draftsman	\$56.47	0	\$0.00	
Clerical	-- \$42.65	6	\$255.90	
total		16		
Total Direct Salary			\$1,614.85	
Overhead Factor			1.00	
TOTAL LABOR COST			\$1,614.85	
Auto Use:				
<u>0</u>	Trips of	<u>60</u>	miles @	\$0.31 per mile
				\$0.00
Other Costs:				
	Quantity	Unit Cost	Unit Measure	
Equipment				\$0
Laboratory				\$0
				\$ 0
TOTAL OTHER COSTS			\$0.00	
Date of Cost Estimate: Jul. 13, 1998			TOTAL COST \$1,614.85	



KLEINFELDER

An employee-owned company

July 14 1998

File No: 1 O-Y 10002

Mr. Dermis Jang
T.YLin International
825 Battery Street
San Francisco, California 94111

Subject: Santa Cruz County Bridge Seismic Retrofit

Dear Mr. Jang:

The purpose of this letter is to respectfully request the addition of two Kleinfelder, Inc. (Kleinfelder) personnel to the approved staff list for the subject project. Kleinfelder is providing the California Department of Transportation (Caltrans) with technical support concerning potential legal issues associated with the project.

The two personnel that we request be added to our project team are:

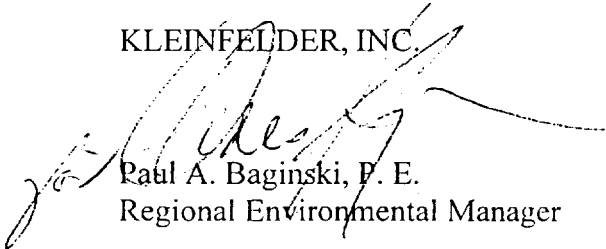
- Mr. William Theyskens Senior Geologist/Project Manager \$127.92 per hour
- Ms. Christina Kennedy Senior Client Manager \$119.42 per hour

Mr. Theyskens is a senior professional, who has extensive experience in managing projects with respect to environmental issues. He will serve as a senior technical resource on this project. Ms. Kennedy is a senior professional who has extensive experience in managing projects with respect to environmental issues and in the Santa Cruz Mountains. She will provide research support on this project. Their resumes are attached for your review.

Should this request be approved by Caltrans, we request that you provide us with written confirmation. Should you require any additional information and/or clarifications, please call.

Very truly yours,

KLEINFELDER, INC.



Paul A. Baginski, P. E.
Regional Environmental Manager

STATE OF CALIFORNIA

PERSONNEL REQUEST

BUSINESS, TRANSPORTATION AND HOUSING AGENCY

SEISMIC RETROFIT PROJECT
COST PROPOSAL

Date: July 6, 1998

TO: TYLIN

Contract No.
Expiration Date:
File No.

FROM: Kleinfelder, Inc.

	<u>Fringe Benefits</u>	<u>Overhead %</u>	<u>General Administration %</u>	<u>Combined %</u>
Normal	34 %	111%	50%	195%
Premium Portion of Overtime	0%	111%	50%	161%

Name	Function	Initial Wage (\$/Hr.)	% Wage Incr. (After 1/27/99)	scheduled wage (\$/Hr.)	Comb. Fringe. Overhead and General Admin. %			Hourly Rate				
					Normal	Premium Portion of OT	Fee %	Normal	OT 1.5x	OT 2x	From	TO
Paul Baginski	Senior Project Manager	44.34	5.00	44.34	195	161	10.00	143.90	N/A	N/A	1/27/98	1/27/99
Lita Freeman	Project Manager	27.06	5.00	27.03	195	161	10.00	87.88	N/A	N/A	1/27/98	1/27/99
Roxy Barnett	Senior Biologist	46.26	5.00	46.26	195	161	10.00	150.11	N/A	N/A	1/27/98	1/27/99
Sandra Hope	Clerical	13.65	5.00	13.65	195	161	10.00	44.29	N/A	N/A	1/27/98	1/27/99
William Theyskens	Senior Geologist	39.42	5.00	39.42	195	161	10.00	127.92	N/A	N/A	1/27/98	1/27/99
Christina Kennedy	Senior Client Manager	36.60	5.00	36.80	195	161	10.00	119.42		N/A	1/27/98	1/27/99

The above consultant hereby requests CALTRANS approval for the additional staff listed above.

Reason:

DATE: _____

DATE: July 1, 1998

Approval: _____

REQUEST: Paul A. Baginski

STATE CONTRACT MANAGER

SUBCONTRACTOR PROJECT MANAGER

PRIME PROJECT MANAGER

**DISADVANTAGED BUSINESS ENTERPRISE (DBE)
CONSULTANT CONTRACT REQUIREMENTS**

The provisions of Title 49, Part 23, Code of Federal Regulations (49CFR 23) and Santa Cruz County's adopted DBE Program require that Disadvantaged Business Enterprises (DBEs) have the opportunity to participate in federally funded, transportation projects.

In order to meet these requirements, the following criteria have been established:

1. Participation by CALTRANS' certified DBEs as prime consultants or subconsultants in this contract or
2. A good faith effort by the prime consultant in trying to secure participation by DBEs prior to award of this contract. Documentation of a good faith effort will be submitted in writing and will consist of the following:
 - a) A list of CALTRANS' certified DBEs solicited.
 - b) Description of efforts to use the services of available minority community organizations; minority contractor groups; women contractor groups; and local, state, and federal minority business assistance centers in the recruitment and placement of DBEs including name of contact, date of contact, and information they provided.
 - c) Identification of the portions of the work to be performed by DBEs including type of work and dollar value.
 - d) Documentation of good faith negotiations between subcontractors and interested DBEs, including names and dollar values of all bids.

CERTIFICATION OF CONSULTANT

I HEREBY CERTIFY that I am the engineer and duly authorized representative of the firm of T.Y. Lin International, whose address is 825 Battery Street, San Francisco, CA 94111, and that, except as hereby expressly stated, neither I nor the above firm that I represent have:

- (a) employed or retained for a commission, percentage, brokerage, contingent fee, or other consideration, any firm or person (other than a bona fide employee working solely for me or the above consultant) to solicit or secure this agreement; nor
- (b) agreed, as an express or implied condition for obtaining this contract, to employ or retain the services of any firm or person in connection with carrying out the agreement; nor
- (c) paid, or agreed to pay, to any firm, organization or person (other than a bona fide employee working solely for me or the above consultant) any fee, contribution, donation, or consideration of any kind for, or in connection with, procuring or carrying out this agreement.

I acknowledge that this Certificate is to be made available to the California Department of Transportation (CALTRANS) in connection with this agreement involving participation of federal aid highway funds, and is subject to applicable state and federal laws, both criminal and civil.

7/20/98

(Date)

William H. Hall

(SIGNATURE OF CONSULTANT)

ATTACHMENT NO. 3

CERTIFICATION OF LOCAL AGENCY

296

I HEREBY CERTIFY that I am the Director of the Santa Cruz County Department of Public Works and that the consulting firm of T.Y. Lin International or its representative has not been required (except as herein expressly stated), directly or indirectly, as an express or implied condition in connection with obtaining or carrying out this Agreement to:

- (a) employ, retain, agree to employ or retain, any firm or person; or
- (b) pay or agree to pay, to any firm, person or organization, any fee, contribution, donation, or consideration of any kind.

I acknowledge that this Certificate is to be made available to the California Department of Transportation (CALTRANS) in connection with this Agreement involving participation of federal aid highway funds, and is subject to applicable state and federal laws, both criminal and civil.

July 23, 1998
(Date)

John Fantham *BATES*
JOHN A. FANTHAM, DIRECTOR
DEPARTMENT OF PUBLIC WORKS

ATTACHMENT NO. 4

COUNTY OF SANTA CRUZ
REQUEST FOR APPROVAL OF AGREEMENT

297

TO: Board of Supervisors
County Administrative Officer
County Counsel
Auditor-Controller

FROM:

PUBLIC WORKS

(Dept.)

JMS (Signature) 7/31/98 (Date)

The Board of Supervisors is hereby requested to approve the attached agreement and authorize the execution of the same.

1. Said agreement is between the COUNTY OF SANTA CRUZ (Agency)
and T. Y. Lin International, 825 Battery St., San Francisco, CA (Name & Address)
94111
2. The agreement will provide engineering design services for eight bridges of the
Seismic Retrofit Program
3. The agreement is needed because the work can be done most expeditiously by contract.
4. Period of the agreement is from Board Approval to June 30, 1999
decrease
5. Anticipated cost is \$ 1 0 . 8 9 2 . 7 2 (Fixed amount; Monthly rate; Not to exceed)
6. Remarks: Contract \$602,273.30; 6% Overhead \$36,142.40; Total \$638,515.70
7. Appropriations are budgeted in 951046-3590-POO247 (621100) (Index#) 3590 (Subobject)

NOTE: IF APPROPRIATIONS ARE INSUFFICIENT, ATTACH COMPLETED FORM AUD-74 ,

Appropriations are available and have been encumbered. Contract No. 81594 Date 7/31/98
are not will be

GARY A. KNUTSON, Auditor - Controller
By Jicia Deputy.

Proposal reviewed and approved. It is recommended that the Board of Supervisors approve the agreement and authorize the
Director of Public Works to execute the same on behalf of the Department of
Public Works (Agency).

Remarks: BW (Analyst)
County Administrative Officer
By Bolw Date 7-31-98

Agreement approved as to form. Date _____

PTJ:bbs

Distribution:

Bd. of Supv. - White
Auditor-Controller - Blue
County Counsel - AD
Co. Admin. Officer - Canary
Auditor-Controller - Pink
Originating Dept. - Goldenrod

*To Orig. Dept. if rejected.

State of California)
County of Santa Cruz) SS

I _____ ex-officio Clerk of the Board of Supervisors of the County of Santa Cruz,
State of California, do hereby certify that the foregoing request for approval of agreement was approved by
said Board of Supervisors as recommended by the County Administrative Officer by an order duly entered
in the minutes of said Board on _____ 19 _____
County Administrative Officer
By _____ Deputy Clerk