

CAREER SERVICES QUALITY OF CAL POLY GRADUATES

PROJECT BACKGROUND

During Summer Quarter 2003, the President's Office requested Career Services' assistance in **evaluating the quality of Cal Poly graduates from an industry perspective**. As a result, Career Services has collaborated with the Colleges of Business, Engineering and Education, creating three separate pilot programs to evaluate the quality of their graduates. Survey instruments have been developed, requiring careful tailoring to match the unique and distinctive nature of each college. Each survey also focused on student learning outcomes in alignment with accreditation sources from their respective colleges.

The following collaborative assessments have been completed or are in-process:

1. College of Business
 - CY 2003-04: Quality of Graduates & Learning Outcomes
 - CY 2005-06: Quality of Graduates & Skills and Competencies
2. College of Engineering
 - CY 2003-04: Quality of Graduates & Learning Outcomes
 - CY 2005-06: Quality of Graduates & Program Outcomes
3. College of Education
 - CY 2003-04: Quality of Graduates & Single and Multiple Subject Programs
 - CY 2004-05: Quality of Graduates & Single, Multiple, Administrative Services, Counseling & Guidance, and Special Education Programs
 - CY 2005-06: Multiple Subject Program Evaluation
 - Focus Groups (School District Representatives)
 - Focus Groups (Master Teachers)

The intent of the surveying is to secure on-going feedback from employers, encourage program review, strengthen curriculum development, and promote dialogue with administrators, faculty, staff and advisory board members. The work completed with these colleges represents Cal Poly's on-going commitment to assessment and the developmental approach taken to strengthen the academic programs.

The College of Architecture & Environmental Design committed to collaborate with Career Services in assessing the quality of their graduates and student learning outcomes for college year 2004-05. This represents the fourth college to collaborate with Career Services in evaluating the quality of Cal Poly graduates from an industry perspective and assessing learning outcomes. This report will define the major objectives of the survey and present the major findings to date.

OBJECTIVES

The following objectives were established for this report:

1. Quality of Graduates – Measure the overall quality, comparative quality, industry readiness, and productivity & supervision of CAED graduates from each of the academic departments
2. Student Learning Outcomes – Measure student learning outcomes areas of CAED graduates from each of the academic departments. Measure the importance employers place on the learning outcome areas from each of the academic departments.
3. Employer Values – Identify the specific skills, knowledge, experience and personal qualities employers' value when hiring CAED graduates.
4. Educational Experiences – Identify what educational experiences, beyond the "standard" curricular range, would best prepare students for success in industry.

5. Top Recruiting Universities – Identify the top competing universities and specific CAED departments from which employers recruit CAED entry-level graduates.
6. Salary Scale – Measure what employers pay employees with five to seven years experience.

STUDY PROFILE

An employer survey was tailored to meet the unique and specific needs of CAED. Refer to Appendix A for the CAED survey form. The Construction Management Department expanded the survey to include additional learning outcome areas (interdisciplinary awareness, professional behavior, ethics, life-long learning, and faculty engagement). Refer to Appendix B for the Construction Management survey form.

The employers surveyed have recruited and hired Cal Poly graduates through the on-campus interview program and job fairs. Surveys were collected throughout the Spring and Summer Quarters of 2005. The surveys were completed by hiring managers, supervisors and human resource representatives.

<i>Academic Program</i>	<i>Employers</i>
Architectural Engineering	17
Architecture	39
City & Regional Planning	10
Construction Management	65
Landscape Architecture	18
Total Employer Base	122

One hundred twenty-two employers participated in the study. An employer was permitted to evaluate more than one academic program. Refer to Appendix C for a detailed breakdown of overall employer participation (alphabetic listing). Refer to Appendix D for a detailed breakdown of employers by academic department.

PROGRAM DESIGN

Career Services collaborated with the Colleges of Architecture & Environmental Design to develop a survey instrument to evaluate the quality of Cal Poly graduates and learning outcome areas. The college has identified learning outcome areas consistent with standards from:

- Association of Collegiate Schools of Architecture (ACSA)
- Council of Educators in Landscape Architecture (CELA)
- Association of Collegiate Schools of Planning (ACSP)
- Associated Schools of Construction Management (ASCM)

PROJECT FINDINGS

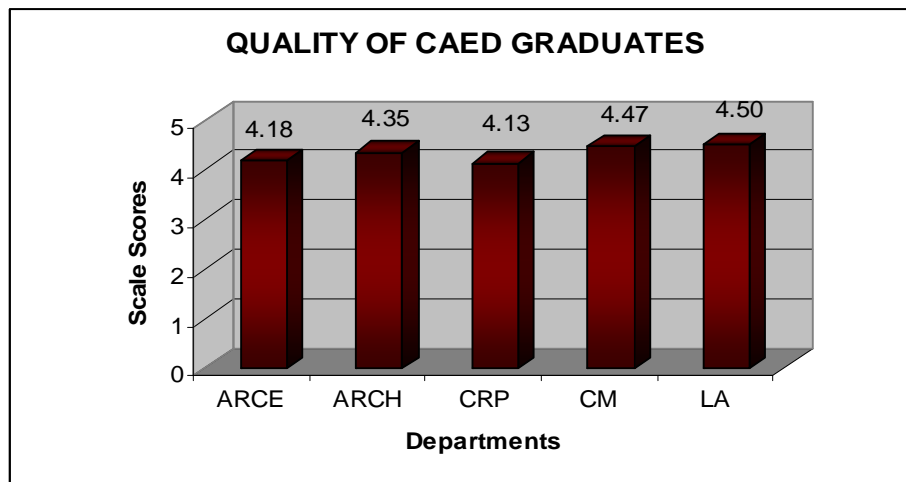
1. QUALITY OF GRADUATES

OBJECTIVE: Measure the overall quality, comparative quality, industry readiness and productivity & supervision of CAED graduates from each of the academic departments. Focus is on CAED undergraduates.

METHODOLOGY: Surveys were conducted by employers to evaluate the quality of Cal Poly graduates using a 5-point scale (*1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree*).

FINDINGS: Employers reported the following findings:

OVERALL QUALITY – The survey assessed overall quality (*my firm/agency is satisfied with the overall quality of CAED graduates*). The chart below is a graphical presentation of scale score averages for each of the academic departments.



Firms and agencies agreed and strongly agreed that they are satisfied with the quality of CAED graduates from Cal Poly.

The following chart indicates the percentages reported on each of the scale score categories as it relates to overall quality of CAED graduates.

OVERALL QUALITY	Employer's Responses	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Scale Scores
<i>Scale Scores</i>		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>Average</i>
Architectural Engineering	17	0%	0%	18%	47%	35%	4.18
Architecture	39	0%	3%	8%	40%	49%	4.35
City & Regional Planning	10	0%	0%	24%	38%	38%	4.13
Construction Management	65	0%	2%	8%	32%	58%	4.47
Landscape Architecture	18	0%	0%	11%	28%	61%	4.50
Overall Quality of Graduates	149						4.24

COMPARATIVE QUALITY - The survey assessed quality of CAED graduates compared to the quality of their counterparts from other universities (*CAED graduates are better prepared for the*

work place when compared to graduates from other universities). The following chart reflects the scale score averages and category percentages:

COMPARATIVE QUALITY	Employers Responses	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Scale Scores
<i>Scale Scores</i>		1	2	3	4	5	Average
Architectural Engineering	17	0%	6%	12%	23%	59%	4.35
Architecture	35	0%	3%	11%	46%	40%	4.23
City & Regional Planning	7	0%	0%	42%	29%	29%	3.86
Construction Management	52	2%	2%	15%	46%	35%	4.10
Landscape Architecture	17	0%	0%	35%	6%	59%	4.24
Overall Comparative Quality	128						4.17

INDUSTRY READINESS - The survey assessed industry readiness (*CAED graduates are able to make a positive contribution to the work place as a result of their education*). The following chart reflects the scale score averages and category percentages:

INDUSTRY READINESS	Employers Responses	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Scale Scores
<i>Scale Scores</i>		1	2	3	4	5	Average
Architectural Engineering	16	0%	0%	13%	50%	37%	4.25
Architecture	37	0%	3%	8%	51%	38%	4.24
City & Regional Planning	10	0%	0%	10%	50%	40%	4.30
Construction Management	57	0%	0%	9%	49%	42%	4.32
Landscape Architecture	18	6%	0%	22%	28%	44%	4.06
Overall Industry Readiness	138						4.25

PRODUCTIVITY & SUPERVISION - The survey assessed productivity and supervision (*CAED graduates are productive in the work place with minimal supervision*). The following chart reflects the scale score averages and category percentages:

PRODUCTIVITY & SUPV	Employers Responses	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Scale Scores
<i>Scale Scores</i>		1	2	3	4	5	Average
Architectural Engineering	16	0%	7%	31%	31%	31%	3.88
Architecture	36	0%	6%	6%	63%	25%	4.08
City & Regional Planning	9	0%	0%	22%	33%	45%	4.22
Construction Management	55	2%	11%	15%	45%	27%	3.95
Landscape Architecture	17	0%	6%	24%	53%	17%	3.82
Overall Productivity & Supv	133						3.98

Although the numeric scale score average reflects overall strength, it is important to note the breakdown of responses, specifically in the neutral areas. Future assessment may be used to

secure more specific information as to why there is less agreement in some areas. This information may be beneficial and helpful for program planning and curriculum development.

2. STUDENT LEARNING OUTCOMES

OBJECTIVE: Measure student learning outcomes areas of CAED graduates from each of the academic departments. Measure the importance employers place on the learning outcome areas from each of the academic departments.

STANDARDS: CAED identified the student learning outcomes that may be applied across a broad range of majors. Each area was fully defined within the survey instrument to assist employers in the scoring process. One exception should be noted. The Construction Management Department expanded the survey to include some additional measures that are not reflected in the other four departments.

METHODOLOGY: Surveys were conducted by employers to evaluate the student learning outcomes of Cal Poly graduates using a 5-point scale (*1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree*).

FINDINGS: The following charts are by department and indicate the scale score averages and category percentages reported on each of the learning outcome areas.

Employers also evaluated the importance they place on each of the learning outcome areas (For employer value, the important factor is the ranking of the scale score averages, not necessarily the scale score average itself). The departments identified the top learning outcome areas (highlighted in dark red) to determine how well CAED graduates fared in these top areas.

Employers reported the following findings on scale score averages, categories percentages and importance:

ARCHITECTURAL ENGINEERING	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Scale Scores	Employer Importance
<i>Scale Scores</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	Average	Average
Graphic Skills	0%	0%	18%	41%	41%	4.24	4.29
Computer Skills	0%	0%	12%	47%	41%	4.29	4.47
Oral Communication Skills	0%	12%	23%	47%	18%	3.71	4.59
Written Communication	0%	18%	35%	35%	12%	3.41	4.35
Problem Solving Skills	0%	6%	0%	29%	65%	4.53	4.88
Critical Thinking Skills	0%	6%	12%	59%	23%	4.00	4.41
Leadership Skills	6%	0%	19%	69%	6%	3.69	4.25
Collaborative Skills	0%	0%	18%	47%	35%	4.18	4.65
System Coordination	0%	6%	40%	27%	27%	3.73	4.13
Design Knowledge	0%	0%	31%	50%	19%	3.88	4.06
Detail Knowledge	0%	6%	6%	63%	25%	4.06	4.50
Public & Stakeholder Repres	0%	7%	51%	21%	21%	3.57	3.80
Professional Foundation	0%	0%	25%	44%	31%	4.06	3.82

■ Areas of noted less agreement
 Areas reflecting program strength
 Top Dept identified learning outcome areas

ARCHITECTURE	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Scale Scores	Employer Importance
<i>Scale Scores</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	Average	Average
Graphic Skills	0%	5%	20%	44%	31%	4.00	4.64
Computer Skills	0%	3%	25%	44%	28%	3.97	4.64
Oral Communication Skills	0%	0%	20%	44%	36%	4.15	4.56
Written Communication	0%	6%	37%	34%	23%	3.74	4.32
Problem Solving Skills	0%	3%	19%	54%	24%	4.00	4.57
Critical Thinking Skills	0%	3%	21%	46%	30%	4.03	4.46
Leadership Skills	6%	11%	22%	58%	6%	3.53	4.03
Collaborative Skills	0%	3%	25%	47%	25%	3.94	4.58
System Coordination	6%	8%	36%	33%	17%	3.47	4.14
Design Knowledge	0%	6%	14%	57%	23%	3.97	4.79
Detail Knowledge	3%	19%	24%	35%	19%	3.49	4.17
Public & Stakeholder Repres	6%	6%	42%	43%	3%	3.30	3.74
Professional Foundation	3%	0%	29%	59%	9%	3.71	3.68

CITY & REGIONAL PLANNING	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Scale Scores	Employer Importance
<i>Scale Scores</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	Average	Average
Graphic Skills	0%	10%	40%	30%	20%	3.60	4.00
Computer Skills	0%	0%	20%	60%	20%	4.00	4.60
Oral Communication Skills	0%	10%	20%	50%	20%	3.80	4.80
Written Communication	0%	0%	45%	22%	33%	3.89	4.90
Problem Solving Skills	0%	0%	20%	60%	20%	4.00	4.70
Critical Thinking Skills	0%	0%	40%	30%	30%	3.90	4.90
Leadership Skills	0%	40%	30%	10%	20%	3.10	3.80
Collaborative Skills	0%	10%	10%	60%	20%	3.90	4.78
System Coordination	0%	14%	58%	14%	14%	3.29	4.25
Design Knowledge	0%	13%	13%	49%	25%	3.88	4.63
Detail Knowledge	0%	10%	40%	40%	10%	3.50	4.40
Public & Stakeholder Repres	13%	0%	25%	50%	12%	3.50	4.00
Professional Foundation	0%	0%	22%	44%	34%	4.11	4.11

■ Areas of noted less agreement
■ Areas reflecting program strength
■ Top Dept identified learning outcome areas

CONSTRUCTION MANAGEMENT	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Scale Scores	Employer Importance
<i>Scale Scores</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	Average	Average
Graphic Skills	4%	2%	25%	56%	13%	3.88	3.78
Computer Skills	0%	0%	7%	61%	32%	4.25	4.46
Oral Communication Skills	0%	2%	15%	51%	32%	4.13	4.79
Written Communication	0%	9%	26%	36%	29%	3.86	4.71
Problem Solving Skills	0%	3%	7%	52%	38%	4.23	4.77
Critical Thinking Skills	0%	5%	19%	49%	27%	3.96	4.33
Leadership Skills	0%	7%	32%	33%	28%	3.82	4.38
Collaborative Skills	0%	2%	17%	53%	28%	4.07	4.45
System Coordination	2%	6%	42%	41%	9%	3.50	4.11
Design Knowledge	2%	7%	32%	40%	19%	3.66	3.76
Detail Knowledge	0%	5%	26%	55%	14%	3.77	4.24
Public & Stakeholder Repres	2%	13%	51%	30%	4%	3.21	3.61
Professional Foundation	4%	13%	41%	34%	8%	3.28	3.15
Interdisciplinary Awareness	2%	5%	24%	55%	14%	3.74	4.20
Professional Behavior	0%	2%	22%	48%	28%	4.02	4.47
Ethical Standards	0%	4%	11%	44%	41%	4.22	4.76
Life Long Learning & Svs.	2%	2%	22%	43%	31%	3.98	4.21
Faculty Engagement	13%	2%	26%	37%	22%	3.52	4.24

LANDSCAPE ARCHITECTURE	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Scale Scores	Employer Importance
<i>Scale Scores</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	Average	Average
Graphic Skills	0%	0%	11%	78%	11%	4.00	4.29
Computer Skills	0%	6%	17%	60%	17%	3.89	4.39
Oral Communication Skills	0%	0%	22%	56%	22%	4.00	4.50
Written Communication	0%	0%	56%	19%	25%	3.69	4.44
Problem Solving Skills	0%	0%	17%	33%	50%	4.33	4.67
Critical Thinking Skills	0%	0%	28%	44%	28%	4.00	4.50
Leadership Skills	0%	28%	28%	33%	11%	3.28	3.94
Collaborative Skills	0%	6%	22%	50%	22%	3.89	4.33
System Coordination	6%	6%	27%	44%	17%	3.61	4.12
Design Knowledge	0%	6%	22%	44%	28%	3.94	4.41
Detail Knowledge	0%	11%	17%	44%	28%	3.89	4.56
Public & Stakeholder Repres	13%	33%	7%	34%	13%	3.00	3.29
Professional Foundation	0%	6%	41%	29%	24%	3.71	3.69

■ Areas of noted less agreement
■ Areas reflecting program strength
■ Top Dept identified learning outcome areas

Each department showed several areas of strength. However, there were two areas that consistently reflected lower scale score averages for all departments. This included system coordination and public shareholder presentation. The data prompts further investigation to determine in what ways these learning outcomes could be better addressed in the curriculum.

3. EMPLOYER VALUES

OBJECTIVE: Identify the specific skills, knowledge, experience and personal qualities employers’ value when hiring Cal Poly graduates.

METHODOLOGY: Employers were requested to list the specific skills, knowledge, experience and personal qualities employers’ value. The data is based on those employers who provided specific skills, knowledge, experience and/or personal qualities.

FINDINGS: Employers reported the following values, which were compiled in numerical order based on frequency. The important factor is the frequency by which multiple employers identified the same values.

Values	Freq
Work Experience	12
Energy / Enthusiasm / Passion	10
Communication (Oral & Written)	9
Attitude	8
Commitment	7
Work Ethic	7
AutoCad / Computer Drafting	6
Drive / Motivation	6
Interpersonal Skills	6
Teamwork	5
Drawing/Hand Rendering/Diagram	3
Presentations/Public Speaking	3
Critical Thinking	3
Aptitude	3
Multi-Tasking	2
Time Management Skills	2
Leadership Skills	2

The top areas include: work experience, energy/enthusiasm/passion, communication, attitude, commitment, work ethic, autocad/computer drafting, drive/motivation, and interpersonal skills.

4. EMPLOYER INPUT

OBJECTIVE: Identify what educational experiences, beyond the “standard” curricular range, would best prepare students for success in industry.

METHODOLOGY: Employers were provided a checklist of educational experiences that includes: Co-op, internship, off-campus experience, inter-disciplinary experience, community-based projects, travel experience, and study abroad.

FINDINGS: Employers results were compiled in numerical order based on frequency.

EDUCATIONAL EXPERIENCES	Freq
Internship	103
Co-op	51
Inter-Disciplinary Experience	48
Off-Campus Experience	42
Community Based Projects	29
Travel Experience	12
Study Abroad	9

Internships and Co-ops are both pre-career experiences that provide students with professional level work experience prior to graduation. 52% of employers placed the greatest value on these types of pre-career experiences. Inter-disciplinary, off-campus and community based project experiences were also valued by employers.

5. TOP RECRUITING UNIVERSITIES

OBJECTIVE: Identify the top competing universities from which employers recruit for CAED graduates.

METHODOLOGY: Employers were requested to list the top universities from which they recruit and hire.

FINDINGS: Employers reported by department the top universities from which employers recruit and hire. The numeric value corresponds to those employers who reported they actively recruit at these universities.

ARCE	ARCH	CRP	CM	LA
Berkeley (4)	Cal Poly Pomona (11)	Cal Poly Pomona (4)	Chico State (28)	Cal Poly Pomona (8)
Cal Poly Pomona (3)	Berkeley (10)	USC (3)	Cal Poly Pomona (8)	Berkeley (2)
Chico State (3)	USC (9)	University of Arizona (3)	Arizona State University (10)	UC Davis (2)
Stanford (3)	University of Arizona (6)		Purdue (10)	University of Texas (2)
Washington State (2)	Arizona State University (5)		Long Beach State (7)	Iowa State (2)
Sacramento State (2)	University of Oregon (3)		Berkeley (7)	
Purdue (2)	University of Texas (3)		Oregon State (6)	
USC (2)	Iowa State (3)		Stanford (5)	
UC Davis (2)	Cornell (3)		Fresno State (5)	

6. SALARY SCALE

OBJECTIVE: Measure what employers pay employees with five to seven years experience.

METHODOLOGY: Employers were provide a salary scale chart to identify what employers pay employees with 5 to 7 years experience.

FINDINGS: Employers reported the following salary average by department after 5 to 7 years experience. For comparative purposes, the median salary for CAED graduates for AY 2003-04 has been provided through the most recent Graduate Status Report.

SALARY SCALE	Median Salary AY 2003-04	5-7 years experience
Architectural Engineering	\$ 45,000	\$ 63,000
Architecture	\$ 36,200	\$ 59,000
City & Regional Planning	\$ 47,000	\$ 63,000
Construction Management	\$ 52,500	\$ 67,500
Landscape Architecture	\$ 38,250	\$ 58,500

EXECUTIVE SUMMARY

- ◆ **Survey Design** - A college-wide survey instrument was developed to evaluate the quality of CAED graduates and assess student learning outcomes in accordance with accreditation criteria. One hundred twenty-two firms/agencies participated in the survey during Spring and Summer Quarters of 2005.
- ◆ **Graduate Assessment** - Firms and agencies agreed or strongly agreed that they were satisfied with CAED graduates in following assessment areas (using a 1 to 5 scale score):

Quality of CAED Graduates	4.24
Comparative Quality	4.17
Industry Readiness	4.25
Productivity & Supervision	3.98

- ◆ **Learning Outcome Areas: Defined** - Firms/agencies assessed learning outcomes related to graphics, computer, oral communication, written communication, problem solving, critical thinking, leadership, collaboration, system coordination, design knowledge, detail knowledge, public stakeholder representation and professional foundation. Refer to the employer surveys (Appendix A and B) for detail description of the learning outcome areas.
- ◆ **Learning Outcome Areas: Findings** - The scale score averages and category percentages varied by learning outcome areas and department. Firms/agencies reported the top five learning outcome areas (skill level) for CAED graduates as:

<i>Dept</i>	<i>Learning Outcomes Areas – Skill Level</i>
ARCE	Problem Solving Skills, Computer Skills, Graphic Skills, Collaborative Skills, Detail Knowledge
ARCH	Critical Thinking Skills, Graphic Skills, Problem Solving Skills, Design Knowledge, Computer Skills
CRP	Professional Foundation, Computer Skills, Problem Solving Skills, Critical Thinking, Collaborative Skills
CM	Computer Skills, Problem Solving Skills, Ethical Standards, Collaborative Skills, Professional Behavior
LA	Problem Solving Skills, Graphic Skills, Oral Communication Skills, Critical Thinking Skills, Design Knowledge

However, system coordination and public shareholder presentation consistently reflected lower scale score averages for all departments. Firms/agencies also identified other lower scale score averages which were specific to each department. Future assessment may be used to secure more specific information as to why there is less agreement in these areas.

- ◆ **Learning Outcome Areas: Importance** - Firms/agencies assessed the importance they place on the learning outcome areas for each of the academic departments. This was evaluated against the top learning outcome areas identified by the departments. The learning outcome areas the department's value coincided with what employers value in CAED graduates.
- ◆ **Personal Qualities** – Firms/agencies identified the following skills, knowledge, experience and/or personal qualities most valued when hiring CAED graduates:

1	Work Experience	6	Work Ethic
2	Energy/Enthusiasm	7	Computer Drafting
3	Communication	8	Drive/Motivation
4	Attitude	9	Interpersonal Skills
5	Commitment		

- ◆ **Educational Experiences** – Firms/agencies identified the following educational experiences, beyond the standard curriculum range, would best prepare students for success in industry:

1	Internship	4	Off-Campus Experience
2	Cooperative Education	5	Community-Based Projects
3	Inter-Disciplinary Exp.		

- ◆ **Top Recruiting Universities** – Firms/agencies identified the top competing universities from which they recruit and hire.

ARCE	ARCH	CRP	CM	LA
Berkeley	CP Pomona	CP Pomona	Chico State	CP Pomona
CP Pomona	Berkeley	USC	CP Pomona	Berkeley
Stanford	USC	Univ of AZ	Arizona State	UC Davis
Chico State	Univ of AZ		Purdue	Univ of Texas

- ◆ **Salary Information** - Firms/agencies report the following salary average for employees with 5 to 7 years experience.

Department	Medium Salary AY 2003-04	5-7 years experience
Architectural Engineering	\$45,000	\$63,000
Architecture	\$36,200	\$59,000
City & Regional Planning	\$47,000	\$63,000
Construction Management	\$52,500	\$67,500
Landscape Architecture	\$38,250	\$58,500

7. FUTURE PLANS

FUTURE PLANS: This final report provides valuable and useful information to the college and departments that may be shared with faculty, staff, administrators, students, industrial advisory boards and others within the academic community. This can be used in meaningful ways to strengthen the curriculum, support accreditation efforts, promote on-going dialogue, communicate industry values and assist in assessing institutional effectiveness and performance.

The college can build upon the strengths and weaknesses of the instrument design and assessment process. This may include creating a 2nd generation instrument that better defines the outcome areas, establishes a broader scale scoring system, and facilitates qualitative employer feedback where there is not full agreement.

APPENDIX A



COLLEGE OF ARCHITECTURE & ENVIRONMENTAL DESIGN (CAED) SURVEY

Your thoughts and opinions are important to us in evaluating the quality of our programs and effectiveness of our recent graduates. Your responses will be treated confidentially. Thank you for your participation.

College of Architecture & Environmental Design and Career Services

Name:	Firm/Agency:
Telephone:	Email Address:

Please indicate the primary focus of your firm/agency

Architectural Engineering
 Architecture
 City & Regional Planning
 Construction Management
 Landscape Architecture

Are you a Cal Poly Alumni Yes No

Agreement: Indicate the level to which you agree or disagree with the following questions:
 NA = not applicable, 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

Importance: Please rate how important the following standards are to your firm/agency:
 NA = not applicable, 1 = low value, 2 = little value, 3 = neutral, 4 = some value, and 5 = high value

Survey Standards	Agreement					Importance						
	NA	1	2	3	4	5	NA	1	2	3	4	5
1. Graphic Skills – CAED graduates are able to employ appropriate representational media for their discipline, including freehand sketching and drafting, to convey concepts and essential formal elements at each stage of the programming, planning, design or construction process.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Computer Skills – CAED graduates are able to employ appropriate computer based representational media and software programs to analyze and/or convey written, 2-D and 3-D digital modeling, financial, business or other information expected of their profession.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Oral Communication Skills – CAED graduates are able to speak effectively on subject matter and in presentation situations expected of their profession.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Written Communication Skills – CAED graduates are able to write effectively on subject matter and in report situations expected of their profession.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Problem Solving Skills – CAED graduates are able to employ basic methods of problem identification, data collection, analysis, and articulation of conclusions and recommendations as required by their profession.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<p>6. Critical Thinking Skills – CAED graduates are able to make a comprehensive analysis and evaluation of an existing or proposed urban plan, building, landscape, or other physical improvement and convey a supported judgment or opinion about the physical, environmental, financial, social, or aesthetic qualities and impacts, as appropriate to their profession.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>Survey Standards (continued)</p>	<p style="text-align: center;">Agreement</p> <p style="text-align: center;">NA 1 2 3 4 5</p>	<p style="text-align: center;">Importance</p> <p style="text-align: center;">NA 1 2 3 4 5</p>
<p>7. Leadership Skills – CAED graduates are able to assume project management responsibilities when expected (e.g. coordinating communications among parties, managing personnel and budgets, controlling schedules and administering contractual agreements).</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>8. Collaborative Skills – CAED graduates are able to interact effectively with other professionals when working as members of a professional team.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>9. Systems Coordination – CAED graduates are able to coordinate and integrate architectural systems with structural systems and mechanical, electrical, and plumbing systems, at the design, construction document, and construction phases of a project, as expected of their profession.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>10. Design Knowledge – CAED graduates are able to understand and apply basic organizational, spatial, structural, and constructional principles related to building and landscape elements, as expected of their profession.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>11. Detail Knowledge – CAED graduates are able to provide and interpret details and specifications related to the planning, design, or construction of buildings, landscapes, or infrastructure, as expected of their profession, and are familiar with appropriate building and landscape materials, systems, and construction techniques.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>12. Public & Stakeholder Representation – CAED graduates are effective in making client, stakeholder group, and public presentations.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>13. Professional Foundation – CAED graduates are knowledgeable of the general principles, history, achievements, and responsibilities of their profession, and are familiar with significant projects and role models that are part of the common knowledge base of their field.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>14. Industry Readiness – CAED graduates are able to make a positive contribution to the workplace as a result of their education.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>15. Productivity & Supervision – CAED graduates are productive in the workplace with minimal supervision.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

APPENDIX B



COLLEGE OF ARCHITECTURE & ENVIRONMENTAL DESIGN (CAED) SURVEY

Your thoughts and opinions are important to us in evaluating the quality of our programs and effectiveness of our recent graduates. Your responses will be treated confidentially. Thank you for your participation.

College of Architecture & Environmental Design and Career Services

Name:	Firm/Agency:
Telephone:	Email Address:

Please indicate the primary focus of your firm/agency

Architectural Engineering
 Architecture
 City & Regional Planning
 Construction Management
 Landscape Architecture

Are you a Cal Poly Alumni Yes No

Agreement: Indicate the level to which you agree or disagree with the following questions:
 NA = not applicable, 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

Importance: Please rate how important the following standards are to your firm/agency:
 NA = not applicable, 1 = low value, 2 = little value, 3 = neutral, 4 = some value, and 5 = high value

Survey Standards	Agreement					Importance						
	NA	1	2	3	4	5	NA	1	2	3	4	5
1. Graphic Skills – CAED graduates are able to employ appropriate representational media for their discipline, including freehand sketching and drafting, to convey concepts and essential formal elements at each stage of the programming, planning, design or construction process.	□	□	□	□	□	□	□	□	□	□	□	□
2. Computer Skills – CAED graduates are able to employ appropriate computer based representational media and software programs to analyze and/or convey written, 2-D and 3-D digital modeling, financial, business or other information expected of their profession.	□	□	□	□	□	□	□	□	□	□	□	□
3. Oral Communication Skills – CAED graduates are able to speak effectively on subject matter and in presentation situations expected of their profession.	□	□	□	□	□	□	□	□	□	□	□	□
4. Written Communication Skills – CAED graduates are able to write effectively on subject matter and in report situations expected of their profession.	□	□	□	□	□	□	□	□	□	□	□	□
5. Problem Solving Skills – CAED graduates are able to employ basic methods of problem identification, data collection, analysis, and articulation of conclusions and recommendations as required by their profession.	□	□	□	□	□	□	□	□	□	□	□	□

<p>6. Critical Thinking Skills – CAED graduates are able to make a comprehensive analysis and evaluation of an existing or proposed urban plan, building, landscape, or other physical improvement and convey a supported judgment or opinion about the physical, environmental, financial, social, or aesthetic qualities and impacts, as appropriate to their profession.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>Survey Standards (continued)</p>	<p style="text-align: center;">Agreement</p> <p style="text-align: center;">NA 1 2 3 4 5</p>	<p style="text-align: center;">Importance</p> <p style="text-align: center;">NA 1 2 3 4 5</p>
<p>7. Leadership Skills – CAED graduates are able to assume project management responsibilities when expected (e.g. coordinating communications among parties, managing personnel and budgets, controlling schedules and administering contractual agreements).</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>8. Collaborative Skills – CAED graduates are able to interact effectively with other professionals when working as members of a professional team.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>9. Systems Coordination – CAED graduates are able to coordinate and integrate architectural systems with structural systems and mechanical, electrical, and plumbing systems, at the design, construction document, and construction phases of a project, as expected of their profession.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>10. Design Knowledge – CAED graduates are able to understand and apply basic organizational, spatial, structural, and constructional principles related to building and landscape elements, as expected of their profession.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>11. Detail Knowledge – CAED graduates are able to provide and interpret details and specifications related to the planning, design, or construction of buildings, landscapes, or infrastructure, as expected of their profession, and are familiar with appropriate building and landscape materials, systems, and construction techniques.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>12. Public & Stakeholder Representation – CAED graduates are effective in making client, stakeholder group, and public presentations.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>13. Professional Foundation – CAED graduates are knowledgeable of the general principles, history, achievements, and responsibilities of their profession, and are familiar with significant projects and role models that are part of the common knowledge base of their field.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>14. Industry Readiness – CAED graduates are able to make a positive contribution to the workplace as a result of their education.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>15. Productivity & Supervision – CAED graduates are productive in the workplace with minimal supervision.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

<p>16. Interdisciplinary Awareness, Understanding & Appreciation – CAED graduates are aware of the interdisciplinary nature of the design and construction industry and understand and appreciate the various discipline roles required to plan, design, construct and maintain projects in the built environment.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>17. Professional Behavior – CAED graduates understand the professional standards set forth within their respective discipline areas and demonstrate professional behavior within the context of their position.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>18. Ethical Standards – CAED graduates understand and exhibit the ethical standards expected of their professions.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>19. Life Long Learning & Service – CAED graduates possess an eagerness to learn and a propensity for life long learning, growth, and service to the industry and community at large.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>20. Overall Quality - My firm/agency is satisfied with the overall quality of CAED graduates.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>21. Comparative Quality - Overall, CAED graduates are better prepared for the work place when compared to graduates from other universities.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>22. Faculty Engagement – CAED Faculty and administration maintain a close working relationship with our firm by participating in field trips and site visit, inviting company representatives to participate in their classrooms by conducting guest lectures, workshops, or crits, and by providing active support for our recruiting efforts.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Please list additional skills, knowledge, experience and personal qualities your firm/agency values when hiring CAED graduates.

Please list the top five universities and specific CAED departments from which your company recruits entry-level graduates.

What educational experiences, beyond a “standard” curricular range, would best prepare students for your firm/agency? Check those that apply

- 1) co-op
- 2) internship
- 3) off-campus experience
- 4) inter-disciplinary experience
- 5) community based projects
- 6) travel experience
- 7) study abroad

Specify any others below:

Recruitment Activity – Over the past year, how many CAED students did you offer employment or Co-op opportunities to:

Internship/Co-op offers:

Number of students accepting offers:

Permanent offers:

Number of students accepting offers:

Using the salary scales below, please indicate what you pay employees with **five to seven years** ce. Check only the disciplines that apply.

Disciplines	\$30-35K	\$35-40K	\$40-45K	\$45-50k	\$50-55K	\$55-60K	\$60-65K	\$65+
Architectural Engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Architecture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
City & Regional Planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction Mgmt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landscape Architecture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please note below any suggestions that you believe would improve our academic program (e.g. types of computer skills or specify other).

We appreciate your honest opinion. A Final Report is expected in August 2005. As a participant in this CAED survey, a copy of the Final Report will be sent to you.

APPENDIX C
EMPLOYER PARTICIPATION

CAED EMPLOYERS

	Department Breakdown	<i>ARCE</i>	<i>ARCH</i>	<i>CRP</i>	<i>CM</i>	<i>LA</i>	<i>Alum</i>
1	AEDIS Architecture		1				
2	Anson Industries				1		
3	Applied Architecture		1				
4	Bassenian/Lagoni Architects		1				
5	Beauchamp Engineering	1					1
6	Bergelectric Corporation				1		1
7	Bill Gould Design		1				
8	Blach Contruccion Company				1		
9	Brereton Architects		1				1
10	C. Overaa & Company				1		1
11	C. Overaa & Company	1			1		
12	C. W. Driver				1		1
13	Callander Associates					1	1
14	Calpo Hom & Dong Architects		1				1
15	Carollo Engineers				1		1
16	CAS Architects		1				1
17	CDPC					1	1
18	Centex Homes				1		1
19	City of Huntington Park			1			
20	Clark Pacific	1					
21	Coastland Civil Engineering	1			1		1
22	Colombo Construction				1		1
23	Craig Smith Architecture & Assoc		1				1
24	Cushman Contracting Corporation				1		1
25	D. D. Ford Construction				1		
26	DES Architects & Engineers	1	1				1
27	DeSilva Gates Construction				1		
28	Douglas E. Barnhart, Inc.				1		1
29	DPR Construction, Inc.				1		1
30	Edwin S. Darden Associates		1				1
31	EwingCole	1					
32	Ficcadenti & Waggoner Consult.	1					1
33	Field Paoli Architects		1				1
34	Gary Binger, Self Employed			1	1		1
35	George Reed, Inc.				1		
36	Giffin & Crane				1		
37	Gilbane Building Company				1		
38	Golba Architecture		1				1
39	Gothic Landscape				1	1	
40	Granite Construction				1		
41	Hathaway Dinwiddie Construction				1		
42	Helsel Phelps Construction Co.				1		1
43	HGA, Inc.	1	1				1
44	HKS Architects		1				1
45	HOK		1				
46	HRP Landesign					1	1

47	Huff Construction Company				1		1
48	ILA/Zammit Engineering	1					
49	ISEC, Inc.				1		
50	Jacob Facilities Inc		1		1		1
51	JBE Enineering	1					1
52	JMA Architecture		1				
53	JZMK Partners		1	1			1
54	Kiewit Pacific Company				1		
55	Klassen Corporation		1		1		
56	KTU+A					1	1
57	Landscape Development					1	1
58	LGA Architecture		1				
59	Lionakis Beaumont Design Group		1				
60	Lowe Destination Development				1		1
61	LPA Sacramento		1			1	
62	LPA, Inc.		1	1		1	1
63	LR Design Associates		1				
64	Lusardi Construction Company				1		
65	MacKay & Somps			1			1
66	Matt Construction				1		1
67	McCall Design Group		1				
68	McCarthy Building Companies				1		
69	Michael Buccino						1
70	Morley Builders				1		1
71	MSA Consulting, Inc.			1	1		
72	Nelson/Daniels				1		
73	Nibbi Brothers Construction				1		
74	Opus West	1	1		1		
75	Parsons	1		1	1		1
76	PCL Construction Services	1			1		
77	Perkowitz & Ruth		1				1
78	PJHM Architects		1				
79	Preston Pipelines				1		
80	R & Stavares Associates	1					
81	RGW Construction				1		1
82	Robson Homes				1		
83	ROEL Construction				1		
84	RRM Design Group		1	1		1	1
85	Rudolph and Sletten, Inc.				1		1
86	S. J. Amoroso Construction				1		
87	S. J. Amoroso Construction				1		
88	Schwartz Design Associates	1					1
89	SD Deacon				1		
90	SDG Architects		1				
91	Shanska				1		
92	Shea Homes				1		
93	Shimmick Construction				1		
94	Simpson Strong-Tie Company	1					1
95	SSA Landscape Architects					1	
96	Standard Pacific Homes				1		1
97	Suding Design Landscape Arch					1	1
98	T2 Architects		1				

99	Taisei Construction				1		1
100	TCA Architects		1				1
101	The Carey Group		1		1		1
102	The Design Consortium					1	1
103	The Haskell Company		1		1	1	
104	The Office Of Katie O'Reilly Rogers					1	
105	The Warner Group		1				
106	TICO				1		
107	Turner Construction Company				1		
108	Urata & Sons Concrete				1		1
109	Uuvis					1	1
110	Valley Crest				1	1	1
111	VanderToolen Associates					1	1
112	W. L. Butler Construction, Inc.				1		
113	Walters & Wolf Precast				1		1
114	Watry Design	1					1
115	WD Partners		1	1	1	1	
116	West Builders				1		1
117	Western Construction Group				1		1
118	WHA		1	1			1
119	Wimberley Allison Tong & Goo		1				1
120	WRNS Studio, LLP		1				1
121	XL Construction				1		1
122	XL Construction				1		1
122	CAED EMPLOYERS	17	39	10	65	18	65

APPENDIX D
EMPLOYER PARTICIPATION BY DEPARTMENT

	Architectural Engineering	<i>ARCE</i>	<i>Alum</i>
1	Beauchamp Engineering	1	1
2	Clark Pacific	1	
3	C. Overaa & Company	1	
4	Coastland Civil Engineering	1	1
5	DES Architects & Engineers	1	1
6	EwingCole	1	
7	Ficcadenti & Waggoner Consult.	1	1
8	HGA, Inc.	1	1
9	ILA/Zammit Engineering	1	
10	JBE Enineering	1	1
11	Opus West	1	
12	Parsons	1	1
13	PCL Construction Services	1	
14	R & Stavares Associates	1	
15	Schwartz Design Associates	1	1
16	Simpson Strong-Tie Company	1	1
17	Watry Design	1	1
	TOTAL EMPLOYERS/ALUMNI	17	10

	City & Regional Planning	<i>CRP</i>	<i>Alum</i>
1	City of Huntington Park	1	
2	Gary Binger	1	1
3	JZMK Partners	1	1
4	LPA, Inc.	1	1
5	MacKay & Somps	1	1
6	MSA Consulting, Inc.	1	
7	Parsons	1	1
8	RRM Design Group	1	1
9	WD Partners	1	
10	WHA	1	1
	TOTAL EMPLOYERS/ALUMNI	10	7

	Architecture	<i>ARCH</i>	<i>Alum</i>
1	AEDIS Architecture	1	
2	Applied Architecture	1	
3	Bassenian/Lagoni Architects	1	
4	Bill Gould Design	1	
5	Brereton Architects	1	1
6	Calpo Hom & Dong Architects	1	1
7	CAS Architects	1	1
8	Craig Smith Architecture & Assoc	1	1
9	DES Architects & Engineers	1	1
10	Edwin S. Darden Associates	1	1
11	Field Paoli Architects	1	1
12	Golba Architecture	1	1
13	HGA, Inc.	1	1
14	HKS Architects	1	1
15	HOK	1	
16	Jacob Facilities Inc	1	1
17	JMA Architecture	1	
18	JZMK Partners	1	1
19	Klassen Corporation	1	
20	LGA Architecture	1	
21	Lionakis Beaumont Design Group	1	
22	LPA Sacramento	1	
23	LPA, Inc.	1	1
24	LR Design Associates	1	
25	McCall Design Group	1	
26	Opus West	1	
27	Perkowitz & Ruth	1	1
28	PJHM Architects	1	
29	RRM Design Group	1	1
30	SDG Architects	1	
31	T2 Architects	1	
32	TCA Architects	1	1
33	The Carey Group	1	1
34	The Haskell Company	1	
35	The Warner Group	1	
36	WD Partners	1	
37	WHA	1	1
38	Wimberley Allison Tong & Goo	1	1
39	WRNS Studio, LLP	1	1
	TOTAL EMPLOYERS/ALUMNI	39	20

	Construction Management	<i>CM</i>	<i>Alum</i>
1	Anson Industries	1	
2	Bergelectric Corporation	1	1
3	Blach Construction Company	1	
4	C. Overaa & Company	1	1
5	C. Overaa & Company	1	
6	C. W. Driver	1	1
7	Carollo Engineers	1	1
8	Centex Homes	1	1
9	Coastland Civil Engineering	1	1
10	Colombo Construction	1	1
11	Cushman Contracting Corporation	1	1
12	D. D. Ford Construction	1	
13	DeSilva Gates Construction	1	
14	Douglas E. Barnhart, Inc.	1	1
15	DPR Construction, Inc.	1	1
16	Gary Binger, Self Employed	1	1
17	George Reed, Inc.	1	
18	Giffin & Crane	1	
19	Gilbane Building Company	1	
20	Gothic Landscape	1	
21	Granite Construction	1	
22	Hathaway Dinwiddie Construction	1	
23	Helsel Phelps Construction Co.	1	1
24	Huff Construction Company	1	1
25	ISEC, Inc.	1	
26	Jacob Facilities Inc	1	1
27	Kiewit Pacific Company	1	
28	Klassen Corporation	1	
29	Lowe Destination Development	1	1
30	Lusardi Construction Company	1	
31	Matt Construction	1	1
32	McCarthy Building Companies	1	
33	Morley Builders	1	1
34	MSA Consulting, Inc.	1	
35	Nelson/Daniels	1	
36	Nibbi Brothers Construction	1	
37	Opus West	1	
38	Parsons	1	1
39	PCL Construction Services	1	
40	Preston Pipelines	1	
41	RGW Construction	1	1
42	Robson Homes	1	
43	ROEL Construction	1	
44	Rudolph and Sletten, Inc.	1	1
45	S. J. Amoroso Construction	1	
46	S. J. Amoroso Construction	1	
47	SD Deacon	1	
48	Shanska	1	
49	Shea Homes	1	

50	Shimmick Construction	1	
51	Standard Pacific Homes	1	1
52	Taisei Construction	1	1
53	The Carey Group	1	1
54	The Haskell Company	1	
55	TICO	1	
56	Turner Construction Company	1	
57	Urata & Sons Concrete	1	1
58	Valley Crest	1	1
59	W. L. Butler Construction, Inc.	1	
60	Walters & Wolf Precast	1	1
61	WD Partners	1	
62	West Builders	1	1
63	Western Construction Group	1	1
64	XL Construction	1	1
65	XL Construction	1	1
	TOTAL EMPLOYERS/ALUMNI	65	30

	Landscape Architecture	<i>LA</i>	<i>Alum</i>
1	Callander Associates	1	1
2	CDPC	1	1
3	Gothic Landscape	1	
4	HRP Landesign	1	1
5	KTU+A	1	1
6	Landscape Development	1	1
7	LPA Sacramento	1	
8	LPA, Inc.	1	1
9	RRM Design Group	1	1
10	SSA Landscape Architects	1	
11	Suding Design Landscape Arch	1	1
12	The Design Consortium	1	1
13	The Haskell Company	1	
14	The Office Of Katie O'Reilly Rogers	1	
15	Uuvis	1	1
16	Valley Crest	1	1
17	VanderToolen Associates	1	1
18	WD Partners	1	
	TOTAL EMPLOYERS/ALUMNI	18	12