



DEPARTMENT OF CONSUMER AFFAIRS

CALIFORNIA ARCHITECTS BOARD

LANDSCAPE ARCHITECTS TECHNICAL COMMITTEE

*Public Protection through Examination, Licensure, and Regulation*

OCCUPATIONAL ANALYSIS OF THE  
LANDSCAPE ARCHITECT PROFESSION

STATE OF CALIFORNIA



DEPARTMENT OF CONSUMER AFFAIRS



LANDSCAPE ARCHITECTS TECHNICAL COMMITTEE

# OCCUPATIONAL ANALYSIS OF THE LANDSCAPE ARCHITECT PROFESSION



August 2020

Brian Knox, Research Data Analyst II

Karen Okicich, M.A., Research Data Supervisor II



This occupational analysis report is mandated by California Business and Professions (B&P) Code § 139 and by DCA Licensure Examination Validation Policy OPES 18-02.

## EXECUTIVE SUMMARY

The Landscape Architects Technical Committee (LATC) requested that the Department of Consumer Affairs' Office of Professional Examination Services (OPES) conduct an occupational analysis (OA) of landscape architect practice in California. The purpose of the OA is to define practice for landscape architects in terms of the tasks that new landscape architects must be able to perform safely and competently at the time of licensure. The results of this OA provide a description of practice for the landscape architect profession that can be used to review the Landscape Architect Registration Examination (LARE) for continued use in California. The description can also be used to develop the California Supplemental Examination (CSE).

OPES test specialists began by researching the profession and conducting telephone interviews with licensed landscape architects working in locations throughout California. The purpose of these interviews was to identify the tasks performed by landscape architects and to specify the knowledge required to perform those tasks in a safe and competent manner. Using the information gathered from the research and the interviews, OPES test specialists developed a preliminary list of tasks performed in landscape architect practice and statements representing the knowledge needed to perform those tasks.

In January 2020, OPES convened a workshop to review and refine the preliminary lists of task and knowledge statements derived from the telephone interviews. The workshop comprised licensed landscape architects, or subject matter experts (SMEs), with diverse backgrounds in the profession (i.e., location of practice, years licensed, specialty). These SMEs identified changes and trends in landscape architect practice, determined demographic questions for the OA questionnaire, and performed a preliminary linkage of the task and knowledge statements to ensure that all tasks had a related knowledge statement and all knowledge statements had a related task. Additional task and knowledge statements were created as needed to complete the scope of the content areas of the description of practice. A second workshop was held in February 2020 with a different group of landscape architects to review and refine the results from the initial workshop.

After the second workshop, OPES test specialists developed a three-part OA questionnaire to be completed by licensed landscape architects statewide. Development of the OA questionnaire included a pilot study that was conducted using a group of licensed landscape architects. The pilot study participants' feedback was incorporated into the final questionnaire, which was administered in March 2020.

In the first part of the OA questionnaire, landscape architects were asked to provide demographic information about their work settings and practice. In the second part, landscape architects were asked to rate specific tasks in terms of frequency (i.e., how often the landscape architect performs the task in the landscape architect's current practice) and importance (i.e., how important the task is to effective performance in the landscape architect's current practice). In the third part, landscape architects were asked to rate specific knowledge statements in

terms of how important each knowledge is to effective performance in the landscape architect's current practice.

In March 2020, on behalf of the LATC, OPES emailed all licensed landscape architects who had an email address on file with the LATC (3,215 landscape architects), inviting them to complete the OA questionnaire online. A total of 958 landscape architects, or approximately 29.8% of the landscape architects invited to complete the questionnaire, responded. The final sample size included in the data analysis was 571, or 17.8% of the landscape architects invited to complete the questionnaire. This response rate reflects two adjustments. First, OPES excluded data from respondents who indicated that they were not currently licensed and practicing as landscape architects in California. Second, questionnaires containing a large volume of incomplete or unresponsive data were removed. The demographic composition of the final respondent sample appears to be representative of licensed landscape architects in California.

OPES test specialists then performed data analyses of the task and knowledge ratings obtained from the OA questionnaire respondents. The task frequency and importance ratings were combined to derive an overall criticality index for each task statement. The mean importance rating was used as the criticality index for each knowledge statement.

Once the data were analyzed, OPES conducted a third workshop with SMEs in June 2020. The SMEs evaluated the criticality indices and determined whether any task or knowledge statements should be eliminated. The SMEs in this group also established the final linkage between task statements and knowledge statements, organized the task and knowledge statements into content areas, and wrote descriptions of those content areas.

The description of practice is structured into four content areas that identify the tasks and knowledge required for safe and competent practice of landscape architecture in California at the time of licensure. This description of practice also provides a basis for evaluating the degree to which the content of any examination under consideration measures content critical to landscape architect practice in California.

At this time, California licensure as a landscape architect is granted by meeting the requisite educational and experience requirements and by passing the LARE and the CSE.

## OVERVIEW OF THE LANDSCAPE ARCHITECT DESCRIPTION OF PRACTICE

<b>Content Area</b>	<b>Content Area Description</b>
1. Scope of Project	This area assesses a candidate's ability to perform a site analysis and determine the impact of existing site conditions and characteristics on a landscape development project. This area also assesses a candidate's ability to identify applicable regulatory requirements and restrictions associated with projects.
2. Program Development	This area assesses a candidate's ability to develop program elements based on the client's goals and the site conditions and constraints. This area also assesses a candidate's ability to evaluate the feasibility and viability of the program.
3. Design Process	This area assesses the candidate's ability to develop and refine design solutions that meet client and project needs. This area also assesses the candidate's ability to develop specific design solutions to support water, energy, and environmental conservation.
4. Construction Documentation and Administration	This area assesses the candidate's ability to prepare construction documents necessary to execute the landscape design.

**TABLE OF CONTENTS**

EXECUTIVE SUMMARY..... iii

**CHAPTER 1 | INTRODUCTION..... 1**

    PURPOSE OF THE OCCUPATIONAL ANALYSIS..... 1

    CONTENT VALIDATION STRATEGY ..... 1

    PARTICIPATION OF SUBJECT MATTER EXPERTS..... 1

    ADHERENCE TO LEGAL STANDARDS AND GUIDELINES..... 1

    DESCRIPTION OF OCCUPATION..... 2

**CHAPTER 2 | OCCUPATIONAL ANALYSIS QUESTIONNAIRE..... 5**

    SUBJECT MATTER EXPERT INTERVIEWS ..... 5

    TASK AND KNOWLEDGE STATEMENTS..... 5

    QUESTIONNAIRE DEVELOPMENT ..... 6

    PILOT STUDY ..... 6

**CHAPTER 3 | RESPONSE RATE AND DEMOGRAPHICS..... 7**

    SAMPLING STRATEGY AND RESPONSE RATE ..... 7

    DEMOGRAPHIC SUMMARY..... 7

**CHAPTER 4 | DATA ANALYSIS AND RESULTS ..... 25**

    RELIABILITY OF RATINGS..... 25

    TASK CRITICALITY INDICES ..... 26

    KNOWLEDGE IMPORTANCE RATINGS ..... 27

**CHAPTER 5 | DESCRIPTION OF PRACTICE..... 29**

    TASK-KNOWLEDGE LINKAGE..... 29

**CHAPTER 6 | CONCLUSION ..... 39**

# LIST OF TABLES

TABLE 1 – YEARS LICENSED AS A LANDSCAPE ARCHITECT ..... 9

TABLE 2 – PRIMARY WORK SETTING ..... 10

TABLE 3 – OTHER LANDSCAPE ARCHITECTS IN ORGANIZATION ..... 11

TABLE 4 – OTHER EMPLOYEES IN ORGANIZATION..... 12

TABLE 5 – HOURS WORKED PER WEEK ..... 13

TABLE 6 – HIGHEST LEVEL OF EDUCATION ..... 14

TABLE 7 – TYPES OF PROJECTS ..... 15

TABLE 8 – GREEN OR SUSTAINABLE PROJECTS ..... 16

TABLE 9 – SPECIALISTS WORKED WITH..... 18

TABLE 10 – TASKS PERFORMED ..... 20

TABLE 11 – CERTIFICATES HELD..... 22

TABLE 12 – OTHER LICENSES HELD ..... 23

TABLE 13 – PRIMARY WORK LOCATION ..... 24

TABLE 14 – RESPONDENTS BY REGION..... 24

TABLE 15 – TASK SCALE RELIABILITY..... 25

TABLE 16 – KNOWLEDGE SCALE RELIABILITY ..... 26

TABLE 17 – CONTENT AREAS ..... 29

TABLE 18 – DESCRIPTION OF PRACTICE FOR THE CALIFORNIA LANDSCAPE ARCHITECT PROFESSION ..... 30

**LIST OF FIGURES**

FIGURE 1 – YEARS LICENSED AS A LANDSCAPE ARCHITECT ..... 9

FIGURE 2 – PRIMARY WORK SETTING ..... 10

FIGURE 3 – OTHER LANDSCAPE ARCHITECTS IN ORGANIZATION ..... 11

FIGURE 4 – OTHER EMPLOYEES IN ORGANIZATION ..... 12

FIGURE 5 – HOURS WORKED PER WEEK ..... 13

FIGURE 6 – HIGHEST LEVEL OF EDUCATION ..... 14

FIGURE 7 – TYPES OF PROJECTS ..... 15

FIGURE 8 – GREEN OR SUSTAINABLE PROJECTS ..... 17

FIGURE 9 – SPECIALISTS WORKED WITH ..... 19

FIGURE 10 – TASKS PERFORMED ..... 21

FIGURE 11 – CERTIFICATES HELD ..... 22

FIGURE 12 – OTHER LICENSES HELD ..... 23

**LIST OF APPENDICES**

**APPENDIX A | ADDITIONAL DEMOGRAPHICS..... 41**

**APPENDIX B | RESPONDENTS BY REGION ..... 43**

**APPENDIX C | CRITICALITY INDICES FOR ALL TASKS BY CONTENT AREA..... 47**

**APPENDIX D | KNOWLEDGE IMPORTANCE RATINGS BY CONTENT AREA..... 55**

**APPENDIX E | INVITATION TO PRACTITIONERS..... 67**

**APPENDIX F | QUESTIONNAIRE ..... 69**



# CHAPTER 1 | INTRODUCTION

## PURPOSE OF THE OCCUPATIONAL ANALYSIS

The Landscape Architects Technical Committee (LATC) requested that the Department of Consumer Affairs' Office of Professional Examination Services (OPES) conduct an occupational analysis (OA) as part of LATC's comprehensive review of landscape architect practice in California. The purpose of the OA is to identify critical activities performed by landscape architects in California. The results of this OA provide a description of practice for the landscape architect profession that can then be used to review the Landscape Architect Registration Examination (LARE) and to develop the California Supplemental Examination (CSE).

## CONTENT VALIDATION STRATEGY

OPES used a content validation strategy to ensure that the OA reflected the actual tasks performed by practicing landscape architects. OPES incorporated the technical expertise of California licensed landscape architects throughout the OA process to ensure that the identified task and knowledge statements directly reflect requirements for performance in current practice.

## PARTICIPATION OF SUBJECT MATTER EXPERTS

The LATC selected California licensed landscape architects to participate as subject matter experts (SMEs) during the phases of the OA. These SMEs were selected from a broad range of practice settings, geographic locations, and experience backgrounds. During the development phase of the OA, SMEs provided information about the different aspects of current landscape architect practice. The SMEs also provided technical expertise during the two workshops that were convened to evaluate and refine the content of task and knowledge statements before administration of the OA questionnaire. After the administration of the OA questionnaire, OPES convened an additional group of SMEs to review the results and finalize the description of practice.

## ADHERENCE TO LEGAL STANDARDS AND GUIDELINES

Licensing, certification, and registration programs in the State of California adhere strictly to federal and state laws and regulations, as well as to professional guidelines and technical standards. For the purposes of occupational analyses, the following laws and guidelines are authoritative:

- California Business and Professions Code § 139.
- 29 Code of Federal Regulations Part 1607 - Uniform Guidelines on Employee Selection Procedures (1978).
- California Fair Employment and Housing Act, Government Code § 12944.

- *Principles for the Validation and Use of Personnel Selection Procedures* (2018), Society for Industrial and Organizational Psychology (SIOP).
- *Standards for Educational and Psychological Testing* (2014), American Educational Research Association, American Psychological Association, and National Council on Measurement in Education.

For a licensure program to meet these standards, it must be solidly based upon the activities required for practice.

## DESCRIPTION OF OCCUPATION

California Business and Professions (B&P) Code § 5615 describes the occupation of landscape architect as follows:

A person who practices landscape architecture within the meaning and intent of this article is a person who offers or performs professional services, for the purpose of landscape preservation, development and enhancement, such as consultation, investigation, reconnaissance, research, planning, design, preparation of drawings, construction documents and specifications, and responsible construction observation. Landscape preservation, development and enhancement is the dominant purpose of services provided by landscape architects. Implementation of that purpose includes: (1) the preservation and aesthetic and functional enhancement of land uses and natural land features; (2) the location and construction of aesthetically pleasing and functional approaches and settings for structures and roadways; and, (3) design for trails and pedestrian walkway systems, plantings, landscape irrigation, landscape lighting, landscape grading and landscape drainage.

Landscape architects perform professional work in planning and design of land for human use and enjoyment. Based on analyses of environmental physical and social characteristics, and economic considerations, they produce overall plans and landscape project designs for integrated land use.

The practice of a landscape architect may, for the purpose of landscape preservation, development and enhancement, include: investigation, selection, and allocation of land and water resources for appropriate uses; feasibility studies; formulation of graphic and written criteria to govern the planning and design of land construction programs; preparation review, and analysis of master plans for land use and development; production of overall site plans, landscape grading and landscape drainage plans, irrigation plans, planting plans, and construction details; specifications; cost estimates and reports for land development; collaboration in the design of roads, bridges, and structures with respect to the functional and aesthetic requirements of the areas on which they are to be placed; negotiation and arrangement for execution of land area projects; field observation and inspection of land area construction, restoration, and maintenance.

This practice shall include the location, arrangement, and design of those tangible objects and features as are incidental and necessary to the purposes outlined herein. Nothing herein shall preclude a duly licensed landscape architect from planning the development of land areas and elements used thereon or from performing any of the services described in this section in connection with the settings, approaches, or environment for buildings, structures, or facilities, in accordance with the accepted public standards of health, safety, and welfare.



## CHAPTER 2 | OCCUPATIONAL ANALYSIS QUESTIONNAIRE

### SUBJECT MATTER EXPERT INTERVIEWS

The LATC provided OPES with a list of licensed landscape architects to contact for telephone interviews. During the semi-structured interviews, seven landscape architects were asked to identify the activities they perform that are specific to the landscape architect profession. The landscape architects outlined major content areas of their practice and confirmed the tasks performed in each content area. The landscape architects were also asked to identify the knowledge necessary to perform each task safely and competently.

### TASK AND KNOWLEDGE STATEMENTS

To develop task and knowledge statements, OPES test specialists integrated the information gathered from literature reviews of profession-related sources (e.g., previous OA reports, laws and regulations, articles, industry publications) and from the interviews with landscape architects.

In January 2020, OPES test specialists facilitated a workshop with seven landscape architect SMEs from diverse backgrounds (i.e., years licensed, specialty, and practice location) to evaluate the task and knowledge statements for technical accuracy and comprehensiveness.

In February 2020, OPES test specialists facilitated a second workshop with a group of six additional SMEs. OPES presented the task and knowledge statements to the SMEs, and they assigned each statement to a content area and verified that the content areas were independent and nonoverlapping. In addition, the SMEs performed a preliminary linkage of the task and knowledge statements to ensure that every task had a related knowledge statement and every knowledge statement had a related task. The SMEs also verified proposed demographic questions for the OA questionnaire, including questions about scope of practice and practice setting.

After SMEs verified the lists of task and knowledge statements and the demographic questions, OPES used this information to develop an online OA questionnaire.

## QUESTIONNAIRE DEVELOPMENT

OPES test specialists developed an online OA questionnaire designed to solicit landscape architect's ratings of the task and knowledge statements. The surveyed landscape architects were instructed to rate how often each task is performed in their current practice (Frequency) and how important each task is to effective performance of their practice (Importance). In addition, they were instructed to rate how important each knowledge statement is to effective performance in their current practice (Importance). The OA questionnaire also included a demographic section for purposes of developing an accurate profile of the respondents. The OA questionnaire can be found in Appendix F.

## PILOT STUDY

Before administering the final questionnaire, OPES conducted a pilot study of the online questionnaire. The pilot questionnaire was reviewed by the LATC and then sent to SMEs who had participated in the task and knowledge statement development workshops. OPES received feedback from 17 respondents. The respondents reviewed the online questionnaire, provided the estimated time for completion, and evaluated the online navigation and ease of use of the questionnaire. OPES used this feedback to develop the final questionnaire.

## CHAPTER 3 | RESPONSE RATE AND DEMOGRAPHICS

### SAMPLING STRATEGY AND RESPONSE RATE

In March 2020, on behalf of the LATC, OPES emailed all licensed landscape architects who had an email address on file with the LATC (3,215), inviting them to complete the OA questionnaire online. The invitation can be found in Appendix E.

Of the 3,215 landscape architects who received the invitation, 958 landscape architects (29.8%) responded. The final sample size included in the data analysis was 571, or 17.8% of the sample that was invited to complete the questionnaire. This response rate reflects two adjustments. First, OPES excluded data from respondents who indicated they were not currently licensed and practicing as landscape architects in California. Second, questionnaires containing a large volume of missing or unresponsive data were also excluded. The final respondent sample appears to be representative of California landscape architects based on the sample's demographic composition.

### DEMOGRAPHIC SUMMARY

As shown in Table 1 and Figure 1, more than half of the respondents (51.2%) reported that they had been practicing as a landscape architect for 20 years or more, 21.9% reported that they had been practicing between 11 and 20 years, 10.8% reported that they had been practicing for 6 to 10 years, and 15.8% reported that they had been practicing fewer than 5 years.

Table 2 and Figure 2 show that the majority of respondents reported working in either a landscape architecture firm (59.7%), a multidisciplinary firm (17.5%), or a governmental agency (14.2%). When asked how many other landscape architects work in their organization, 41.9% of the respondents reported that they were the only landscape architect, 42.9% reported that they worked with fewer than 10 other landscape architects, and 14.7% reported that there were more than 10 other landscape architects in their organization (see Table 3 and Figure 3). Most respondents reported that there were fewer than 10 other employees in their office who were not landscape architects (59.5%), while 32.7% reported that more than 20 employees were not landscape architects (see Table 4 and Figure 4).

Table 5 and Figure 5 show that 41.7% of respondents reported working more than 40 hours per week, while 37.5% reported working between 21 and 40 hours per week. Approximately 20.5% of the respondents indicated that they worked 20 hours or fewer per week.

When asked to describe their highest level of education, 65.3% of the respondents reported a bachelor's degree, and 29.8% reported a master's degree. Some respondents reported a certificate (2.3%), an associate degree (1.1%), a doctoral degree (0.3%), or a high school degree or GED (0.3%) (see Table 6 and Figure 6).

Table 7 and Figure 7 show the breakdown of the types of projects respondents reported working on over the previous two years. Respondents were asked to select all that applied. Most respondents indicated that they had worked on residential projects (70.9%), projects related to

parks and recreation facilities (57.8%), and transportation projects (50.1%). In addition, a large number of respondents reported that they had worked on mixed-use projects (43.1%), commercial projects (42.4%), schools (34.5%), or projects related to corporate design (29.9%). Several respondents also indicated that they had worked on projects related to medical or health care facilities (23.5%), infrastructure (21%), and historical preservation (18.9%).

When asked about green or sustainable projects worked on over the previous two years, 87.9% reported working on water conservation projects, 74.6% on stormwater management projects, and 48.3% on water reuse/recycling projects. In addition, a majority of respondents also indicated that they had worked on projects involving erosion control (63.9%) or slope protection (55.9%). Approximately 71.1% of respondents reported that they had worked on permeable paving projects, and 49.4% indicated that they had worked on low impact development projects (see Table 8 and Figure 8). Most of the green or sustainable project work was performed on projects in California with governmental agencies or private companies, and the landscape architect practiced in a lead capacity (see Appendix A).

Survey respondents indicated that they worked with a variety of specialists during the previous two years. They most commonly indicated that they worked with arborists (70.1%), geotechnical engineers (66.9%), and traffic engineers (41%). Table 9 and Figure 9 provide a breakdown of these and other specialists that respondents indicated they had worked with in the previous two years. Table 10 and Figure 10 provide a breakdown of specific tasks performed in their landscape architect practice.

Some survey respondents indicated that they held a specialized certificate or license other than a California landscape architect license. The most common certificate held was as a LEED Accredited Professional (see Table 11 and Figure 11). Just over a quarter of respondents (25.9%) indicated that they held a landscape architect license in another state, and 7% indicated that they held a contractor's license (see Table 12 and Figure 12).

More detailed demographic information from respondents can be found in Tables 1 through 14, Figures 1 through 12, and Appendix A.

TABLE 1 – YEARS LICENSED AS A LANDSCAPE ARCHITECT

YEARS	NUMBER (N)	PERCENT
0 to 5 years	90	15.8
6 to 10 years	62	10.8
11 to 20 years	125	21.9
20 or more years	292	51.2
Missing	2	0.3
Total	571	100

FIGURE 1 – YEARS LICENSED AS A LANDSCAPE ARCHITECT

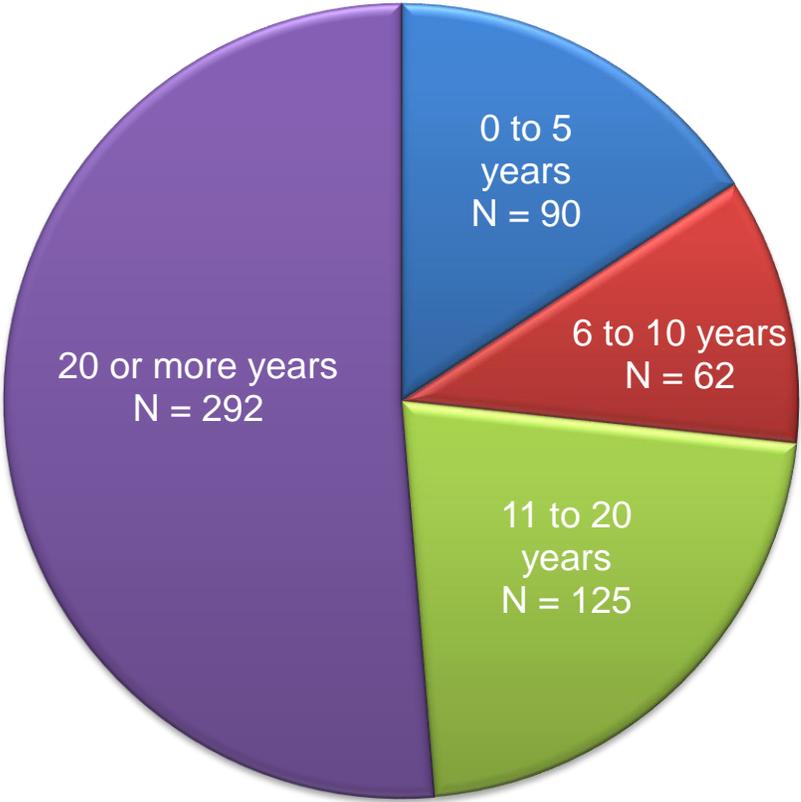
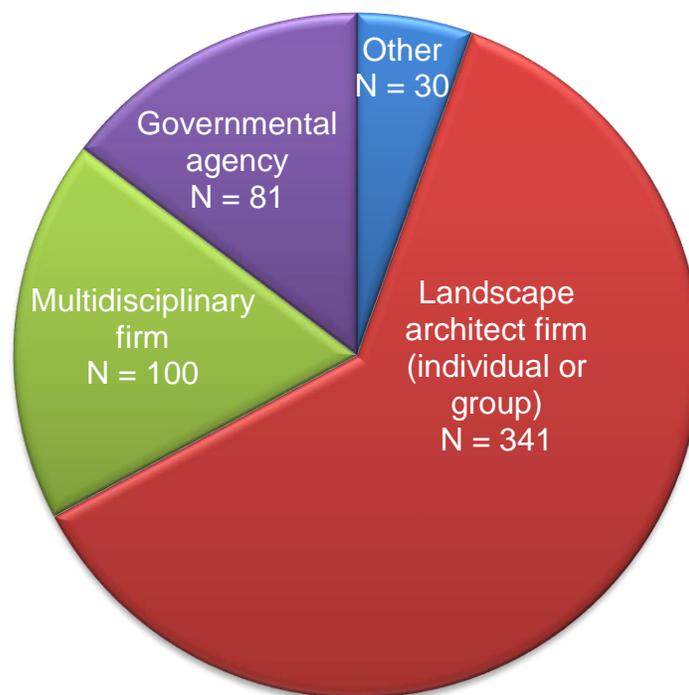


TABLE 2 – PRIMARY WORK SETTING

SETTING	NUMBER (N)	PERCENT
Landscape architecture firm	341	59.7
Multidisciplinary firm	100	17.5
Governmental agency	81	14.2
Institution (e.g., hospital, school, etc.)	5	0.9
Construction firm	12	2.1
Other	30	5.3
Missing	2	0.3
Total	571	100

FIGURE 2 – PRIMARY WORK SETTING\*



\*Note: Low-numbered responses are not included in the figure.

TABLE 3 – OTHER LANDSCAPE ARCHITECTS IN ORGANIZATION

SUBJECT	NUMBER (N)	PERCENT
None	239	41.9
1 to 5	194	34.0
6 to 10	51	8.9
More than 10	84	14.7
Missing	3	0.5
<b>Total</b>	<b>571</b>	<b>100</b>

FIGURE 3 – OTHER LANDSCAPE ARCHITECTS IN ORGANIZATION

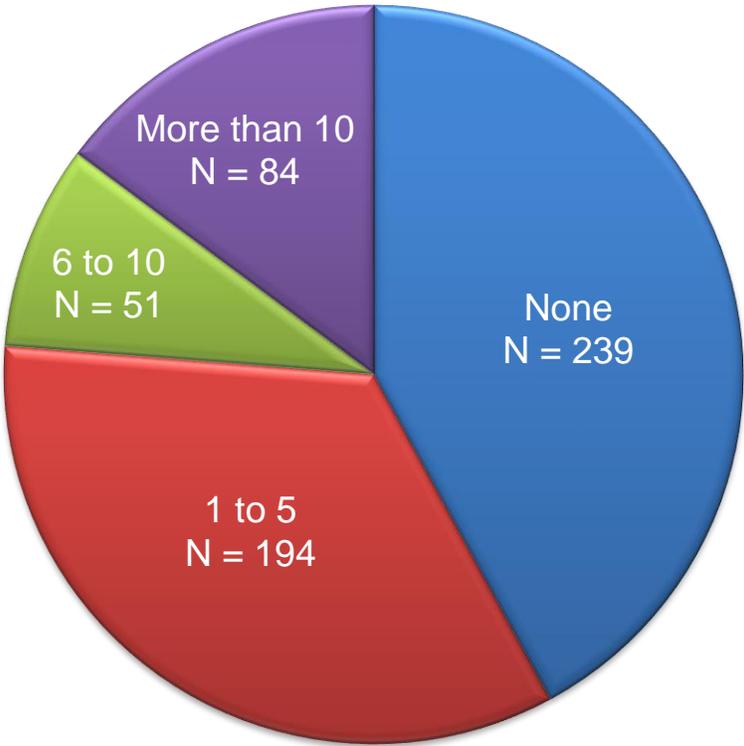


TABLE 4 – OTHER EMPLOYEES IN ORGANIZATION

SETTING	NUMBER (N)	PERCENT
None	165	28.9
1 to 10	175	30.6
11 to 20	40	7.0
More than 20	187	32.7
Missing	4	0.7
Total	571	100*

\*NOTE: Percentages do not add to 100 due to rounding.

FIGURE 4 – OTHER EMPLOYEES IN ORGANIZATION

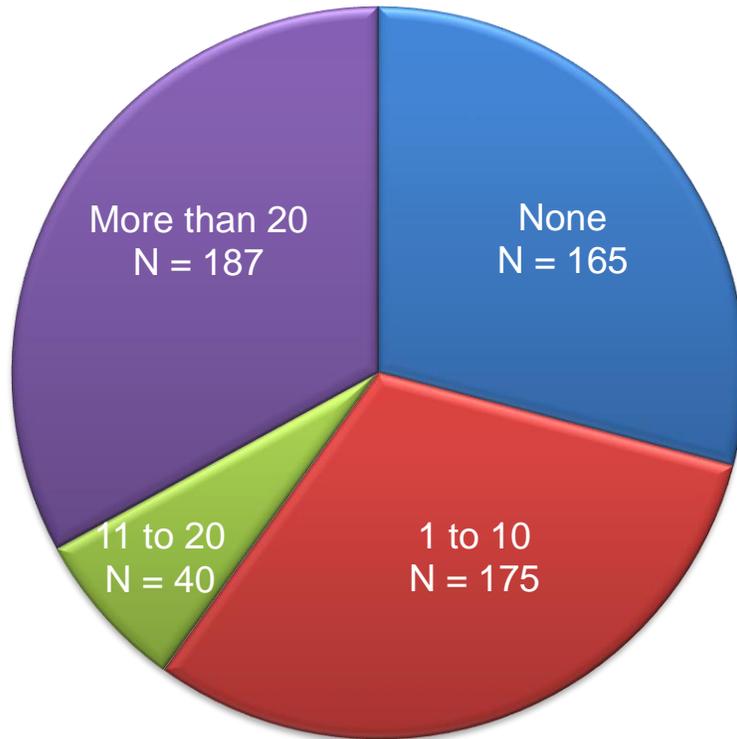


TABLE 5 – HOURS WORKED PER WEEK

HOURS	NUMBER (N)	PERCENT
0 to 10 hours	61	10.7
11 to 20 hours	56	9.8
21 to 40 hours	214	37.5
More than 40 hours	238	41.7
Missing	2	0.3
Total	571	100

FIGURE 5 – HOURS WORKED PER WEEK

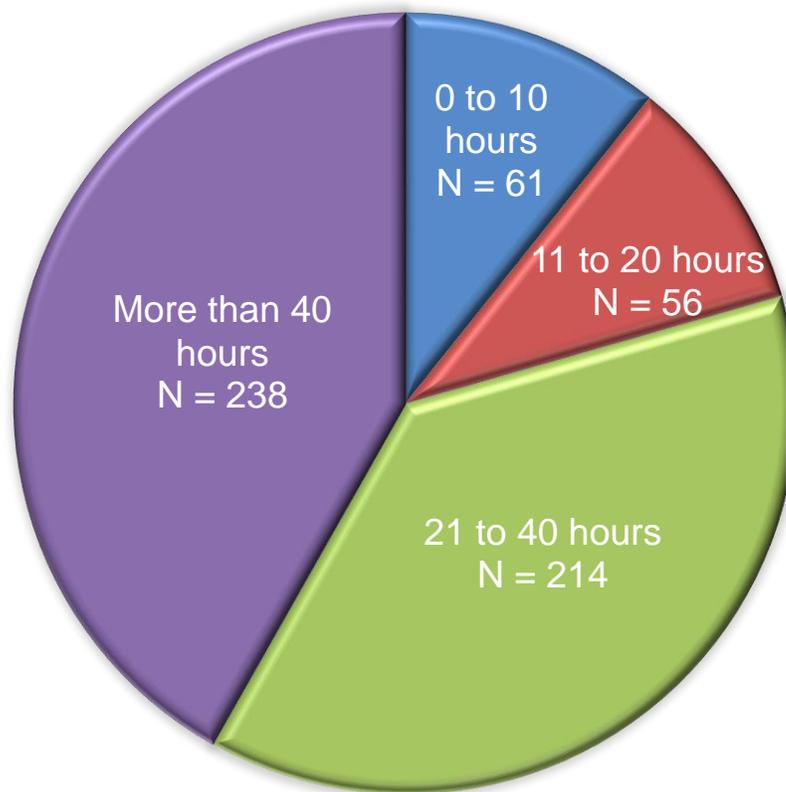


TABLE 6 – HIGHEST LEVEL OF EDUCATION

HOURS	NUMBER (N)	PERCENT
High School or GED	2	0.3
Certificate program	13	2.3
Associate degree	6	1.1
Bachelor's degree	373	65.3
Master's degree	170	29.8
Doctoral degree	2	0.3
Missing	5	0.8
Total	571	100*

\*NOTE: Percentages do not add to 100 due to rounding.

FIGURE 6 – HIGHEST LEVEL OF EDUCATION

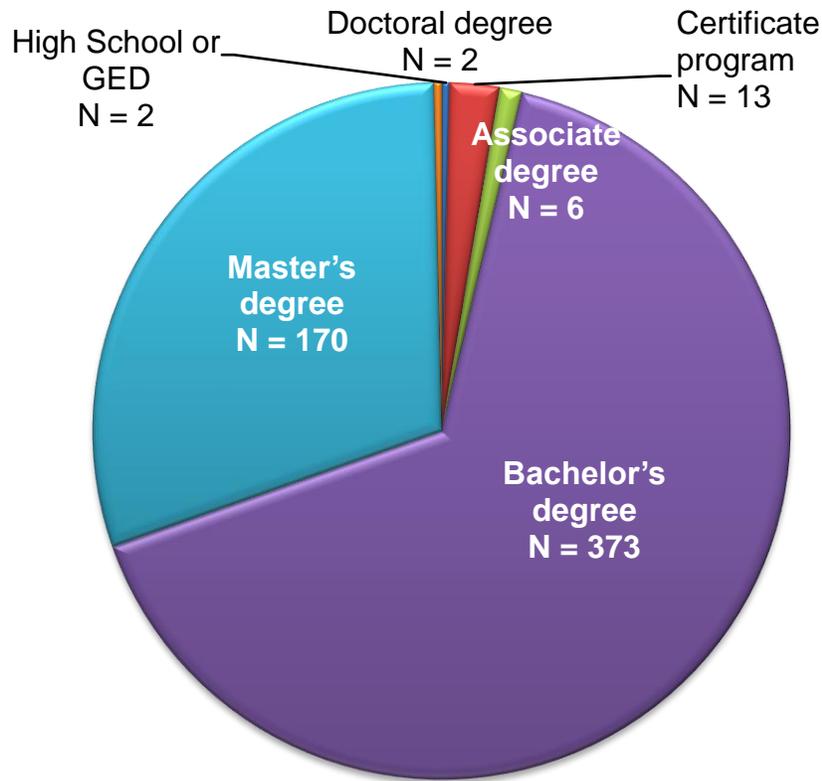


TABLE 7 – TYPES OF PROJECTS

PROJECT	NUMBER (N)	PERCENT*
Transportation	286	50.1
Community planning	159	27.8
Residential	405	70.9
Commercial	242	42.4
Parks and recreation facilities	330	57.8
Corporate design	171	29.9
Schools	197	34.5
Mixed use	246	43.1
Historical preservation	108	18.9
Medical / health care	134	23.5
Infrastructure	120	21.0

\*NOTE: Respondents were asked to select all that apply.

FIGURE 7 – TYPES OF PROJECTS

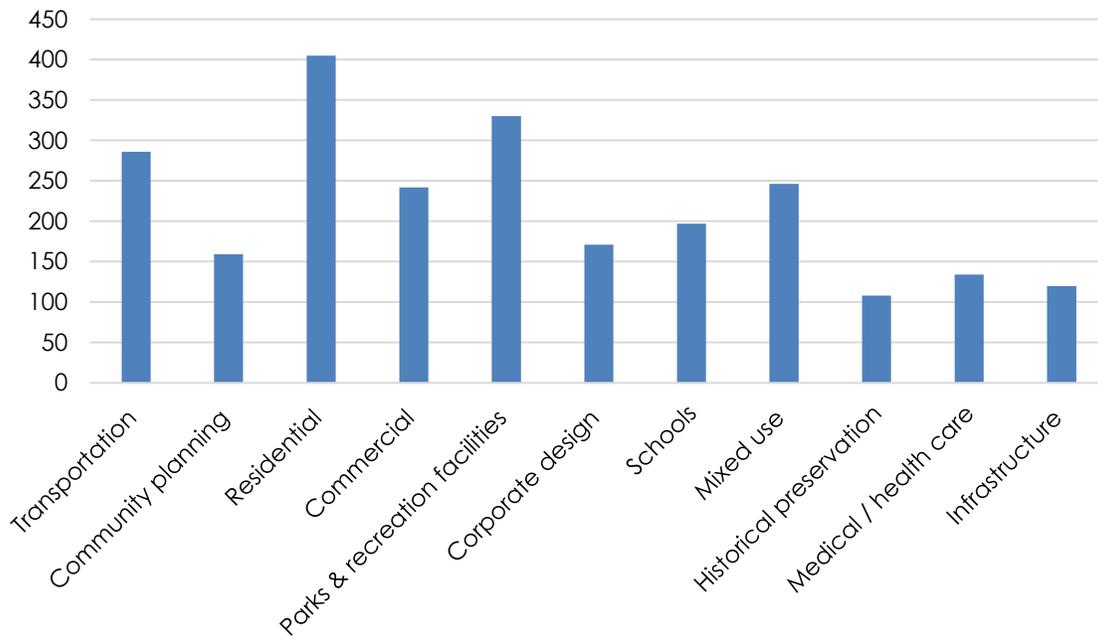


TABLE 8 – GREEN OR SUSTAINABLE PROJECTS

PROJECT	NUMBER (N)	PERCENT*
Light pollution reduction	234	41.0
Heat island mitigation	241	42.2
Green roofs	183	32.0
Urban/community gardens	205	35.9
Native habitat re-establishment	304	53.2
Soil reclamation	101	17.7
Water conservation	502	87.9
Water reuse/recycling	276	48.3
Stormwater management	426	74.6
Erosion control	365	63.9
Low impact development (LID)	282	49.4
Slope protection	319	55.9
Energy conservation	140	24.5
Indoor air quality	25	4.4
Adaptation for changing climate	151	26.4
Permeable paving	406	71.1

*\*NOTE: Respondents were asked to select all that apply.*

FIGURE 8 – GREEN OR SUSTAINABLE PROJECTS

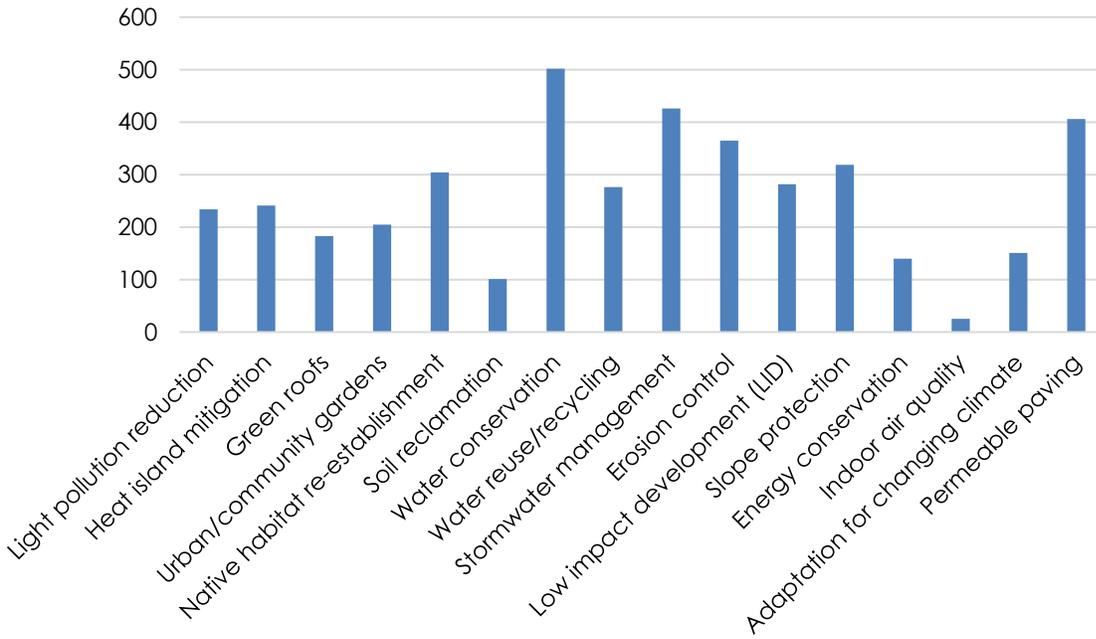


TABLE 9 – SPECIALISTS WORKED WITH

LICENSE	NUMBER (N)	PERCENT*
Arborist	400	70.1
Geotechnical engineer	382	66.9
Soil scientist	211	37.0
Environmental engineer	147	25.7
Artist	161	28.2
Biologist	213	37.3
Public outreach facilitator	101	17.7
Economist	37	6.5
Traffic engineer	234	41.0
Grant writer	58	10.2
Ecologist	126	22.1
Historian	69	12.1
LEED-credentialed professional	180	31.5
Academic (educator/researcher)	81	14.2
Horticulturist	144	25.2
Product specialist	175	30.6

*\*NOTE: Respondents were asked to select all that apply.*

FIGURE 9 – SPECIALISTS WORKED WITH

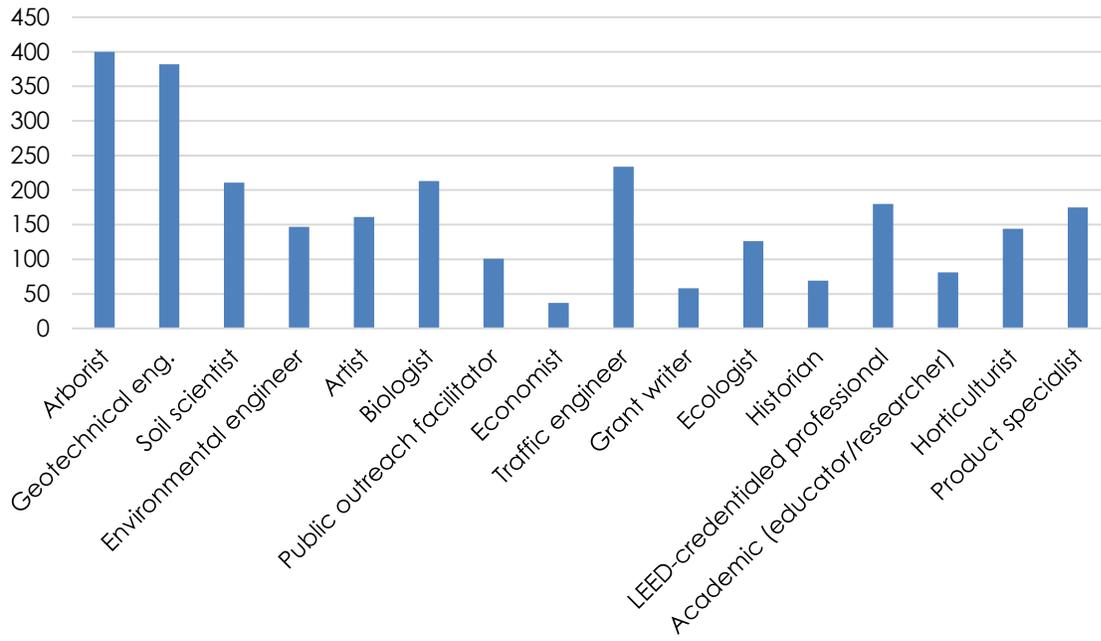


TABLE 10 – TASKS PERFORMED

LICENSE	NUMBER (N)	PERCENT*
Master planning	294	51.5
Construction document writing	403	70.6
Construction administration	443	77.6
Specification writing	345	60.4
Permit coordination	337	59.0
Maintenance and operations planning	226	39.6
Irrigation auditing	114	20.0
Environmental reviews	101	17.7
Plan check and plan review	389	68.1
Workshop facilitation	174	30.5
Product and academic research	197	34.5
Cost estimation	430	75.3
Administration	447	78.3

*\*NOTE: Respondents were asked to select all that apply.*

FIGURE 10 – TASKS PERFORMED

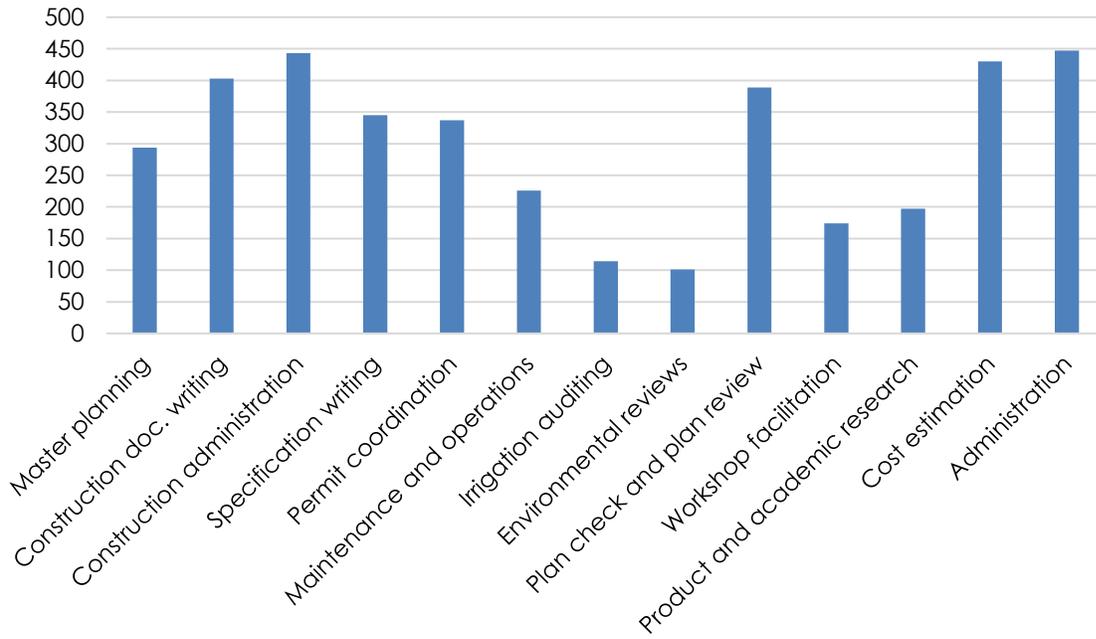


TABLE 11 – CERTIFICATES HELD

CERTIFICATE	NUMBER (N)	PERCENT*
AICP Certified Planner	9	1.6
Arborist	37	6.5
LEED Accredited Professional	84	14.7
LEED Green Associate	17	3.0
Playground Safety (CPSI)	15	2.6
Certified Landscape Irrigation Auditor	29	5.1
Qualified SWPPP Practitioner	24	4.2
Qualified SWPPP Developer	27	4.7
Green Roof Professional	11	1.9
Certified Access Specialist	2	1.9
Evidence-Based Design	4	0.7

\*NOTE: Respondents were asked to select all that apply.

FIGURE 11 – CERTIFICATES HELD

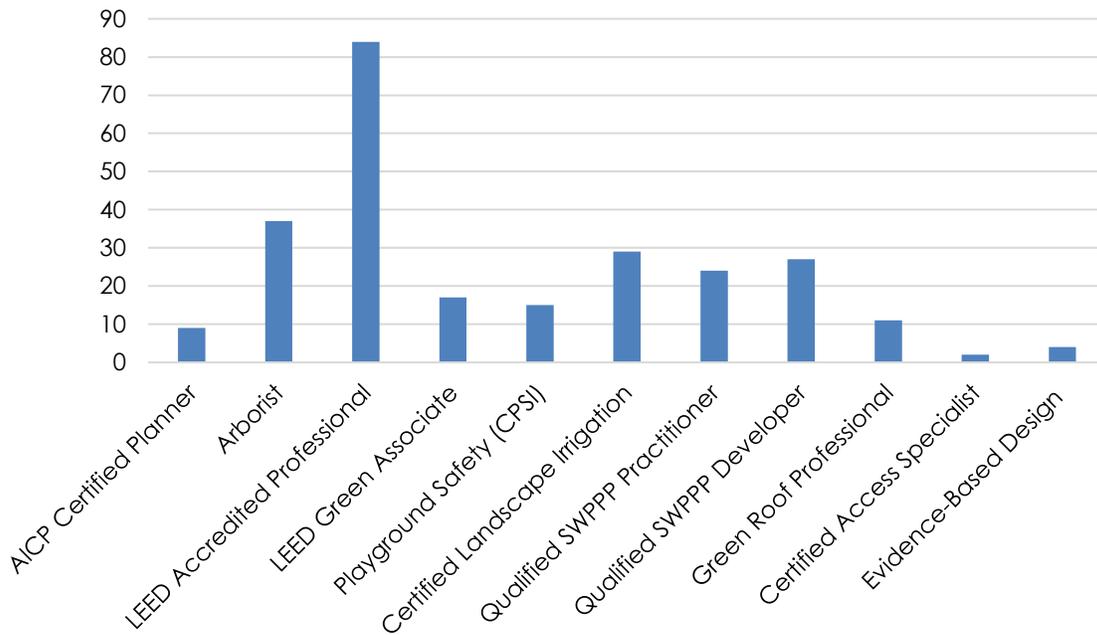


TABLE 12 – OTHER LICENSES HELD

LICENSE	NUMBER (N)	PERCENT*
Contractor	40	7.0
Architect	9	1.6
Engineer	2	0.4
Landscape architect (another state)	148	25.9

\*NOTE: Respondents were asked to select all that apply.

FIGURE 12 – OTHER LICENSES HELD

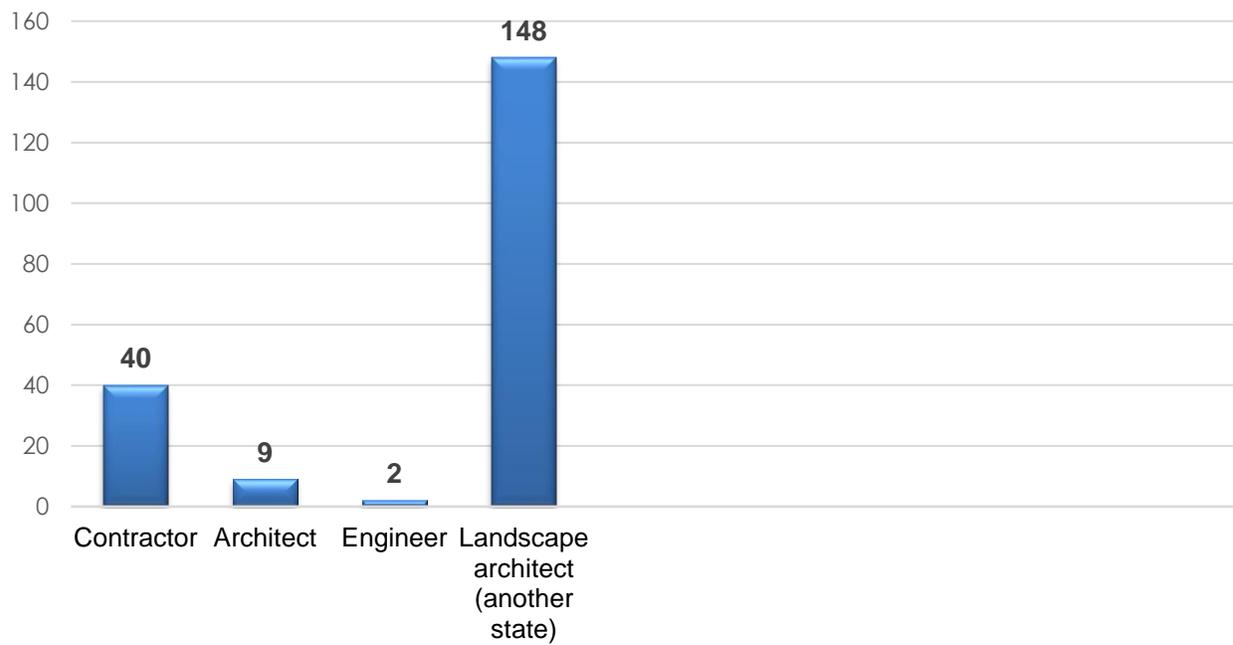


TABLE 13 – PRIMARY WORK LOCATION

LOCATION	NUMBER (N)	PERCENT
Urban (greater than 50,000 people)	517	90.5
Rural (fewer than 50,000 people)	65	11.3
Missing	2	0.3
Total	571	100*

*\*Note: Sixty-seven respondents selected both urban and rural as their primary work location. Therefore, totals will not add to 100.*

TABLE 14 – RESPONDENTS BY REGION

REGION	NUMBER (N)	PERCENT
Los Angeles County and Vicinity	151	26.4
North Coast	19	3.3
Riverside and Vicinity	30	5.3
Sacramento Valley	52	9.1
San Diego County and Vicinity	59	10.3
San Francisco Bay Area	163	28.5
San Joaquin Valley	17	3.0
Shasta - Cascade	1	0.2
Sierra Mountain Valley	19	3.3
South Coast and Central Coast	39	3.5
Missing	21	7.1
Total	550	100

Appendix B shows a more detailed breakdown of the frequencies by region.

## CHAPTER 4 | DATA ANALYSIS AND RESULTS

### RELIABILITY OF RATINGS

OPES evaluated the task and knowledge statement ratings obtained from responses to the questionnaire with a standard index of reliability, coefficient alpha ( $\alpha$ ), which ranges from 0 to 1. Coefficient alpha is an estimate of the internal consistency of the respondents' ratings of the task and knowledge statements. A higher coefficient value indicates more consistency between respondent ratings. Coefficients were calculated for all respondent ratings.

Table 15 displays the reliability coefficients for the task statement rating scale in each content area. The overall ratings of task frequency and task importance across content areas were highly reliable ( $\alpha$  frequency = .949;  $\alpha$  importance = .952). Table 16 displays the reliability coefficients for the knowledge statement rating scale in each content area. The overall ratings of knowledge importance across content areas were highly reliable ( $\alpha$  = .986). These results indicate that the responding landscape architects rated the task and knowledge statements consistently throughout the questionnaire.

TABLE 15 – TASK SCALE RELIABILITY

CONTENT AREA	NUMBER OF TASKS	$\alpha$ FREQUENCY	$\alpha$ IMPORTANCE
1. Scope of Project	16	.914	.908
2. Program Development	4	.751	.775
3. Design Process	12	.875	.883
4. Construction Documentation and Administration	7	.846	.848
Total	39	.949	.952

TABLE 16 – KNOWLEDGE SCALE RELIABILITY

CONTENT AREA	NUMBER OF STATEMENTS	α IMPORTANCE
1. Scope of Project	47	.969
2. Program Development	10	.917
3. Design Process	59	.971
4. Construction Documentation and Administration	27	.949
Total	143	.986

### TASK CRITICALITY INDICES

OPES convened a workshop of seven SMEs in June 2020. The purpose of this workshop was to identify the essential tasks and knowledge required for safe and competent landscape architect practice at the time of licensure. The SMEs reviewed the mean frequency, mean importance, and criticality index for each task. They also reviewed the mean importance ratings for each knowledge statement.

To calculate the criticality indices of the task statements, OPES test specialists used the following formula. For each respondent, OPES first multiplied the frequency rating (Fi) and the importance rating (Ii) for each task statement. Next, OPES averaged the multiplication products across respondents as shown below:

$$\text{Task criticality index} = \text{mean} [(Fi) \times (Ii)]$$

The task statements were sorted in descending order by criticality index and by content area. The task statements, their mean frequency and importance ratings, and their associated criticality indices are presented in Appendix C.

The SMEs who participated in the June 2020 workshop evaluated the task criticality indices derived from the questionnaire results. OPES test specialists instructed the SMEs to identify a cutoff value to determine if any of the tasks did not have a high enough criticality index to be retained. The SMEs determined that all tasks were important to safe and competent practice and should be retained.

SMEs made minor wording changes to four task statements to increase clarity. In T2, “Evaluate topography to determine the implications of landform on project development,” the word “site” and the words “and geology” were added, and the task now reads: “Evaluate **site topography and geology** to determine the implications of landform on project development.” In T33, “Develop measures to mitigate or remediate or reclaim environmental impacts associated with site development” the words “or reclaim” were removed, and the task now reads, “Develop measures to mitigate or remediate, ~~or reclaim~~ environmental impacts associated with site development.” In T35, “Prepare specifications to communicate information about the means and

methods for constructing the project design,” the words “means and methods for” were removed because the SMEs determined they were too limiting. The task now reads, “Prepare specifications to communicate information about ~~the means and methods for~~ constructing the project design. In T38, the word “Approve” was changed to “Evaluate,” and the task now reads: “~~Approve~~ **Evaluate** submittals, change orders, and Requests for Information to facilitate project implementation.”<sup>1</sup>

## KNOWLEDGE IMPORTANCE RATINGS

To determine the criticality of each knowledge statement, the mean importance (K Imp) rating for each knowledge statement was calculated. The knowledge statements and their mean importance ratings, sorted by descending order and content area, are presented in Appendix D.

The SMEs who participated in the June 2020 workshop and who evaluated the task criticality indices also reviewed the knowledge statement mean importance ratings. The SMEs determined that knowledge statement K23 was subsumed under other knowledge statements and should be eliminated. Similarly, the SMEs determined that K107 was subsumed under K106 and should also be eliminated. All other knowledge statements were retained.

The SMEs made wording changes to four knowledge statements to increase clarity. K6 was changed from “Knowledge of topographic, geologic, and geotechnical conditions that present a risk to landscape design” to “Knowledge of topographic, geologic, and geotechnical conditions that present a risk **or constraint** to ~~landscape design~~ **project development**.” In K101, the words “and climatological” were removed, and the statement now reads, “Knowledge of design solutions to mitigate fire ~~and climatological~~ hazards.” In K102, the word “meteorological” was changed to “climate-associated,” and the statement now reads, “Knowledge of design solutions to mitigate weather and **climate-associated** hazards.” K126 was determined to be too narrow, and was changed from “Knowledge of methods for conforming to CSI MasterFormat,” to “Knowledge of methods for preparing **and formatting construction specifications**.” These knowledge statements and corresponding changes are highlighted in Appendix D.<sup>2</sup>

---

<sup>1</sup> Note: There were 39 tasks in the survey. Inadvertently, task number 28 was followed by task number 30 in the survey, so it appears that there were 40 tasks listed. The description of practice (Table 18) includes corrected task numbering. Appendix C maintains the original task numbering of the survey for comparison purposes.

<sup>2</sup> Note: Knowledge statements have been renumbered in the description of practice (Table 18). K101 becomes K97, K102 becomes K98, and K126 becomes K125. Appendix D maintains the original knowledge numbering of the survey for comparison purposes.



## CHAPTER 5 | DESCRIPTION OF PRACTICE

### TASK-KNOWLEDGE LINKAGE

The SMEs who participated in the June 2020 workshop reviewed the preliminary assignments of the task and knowledge statements to content areas from the January 2020 and February 2020 workshops. The SMEs established the final linkage of knowledge statements to task statements. The SMEs reviewed the content areas and wrote descriptions for each content area. The SMEs also developed subareas for each content area.

A summary of the content areas and subareas for the landscape architect description of practice is presented in Table 17.

TABLE 17 – CONTENT AREAS

CONTENT AREA	NUMBER OF TASKS
1. Scope of Project	<b>16</b>
A. Inventory and Analysis	12
B. Regulatory Implications for Project Development	4
2. Program Development	<b>4</b>
3. Design Process	<b>12</b>
A. Site Design	8
B. Design Solutions: Water, Energy, Environmental Conservation	4
4. Construction Documentation and Administration	<b>7</b>
A. Construction Documentation	3
B. Construction Administration	4
<b>TOTAL</b>	<b>39</b>

The description of practice for the landscape architect profession is presented in Table 18. The final examination outline for the California Supplemental Examination (CSE) will be developed with SMEs after OPES completes the review of the Landscape Architect Registration Examination (LARE).

TABLE 18 – DESCRIPTION OF PRACTICE FOR THE CALIFORNIA LANDSCAPE ARCHITECT PROFESSION

CONTENT AREA 1: SCOPE OF PROJECT		
Section	Tasks	Associated Knowledge Statements
1A. Inventory and Analysis	T1. Conduct site visit to Identify on- and off-site conditions that could impact project development.	K1. K of methods for evaluating the impact of site conditions on project development. K2. K of methods for identifying the impact of site resources on project development.
	T2. Evaluate site topography and geology to determine the implications of landform on project development.	K3. K of methods for performing topographical analyses. K4. K of methods for interpreting information from geotechnical or geological reports. K5. K of the effects of topographic, geotechnical, and geologic characteristics on landscape design. K6. K of topographic, geologic, and geotechnical conditions that present a risk or constraint to project development.
	T3. Assess hydrologic conditions to determine implications of water storage and movement on project development.	K7. K of methods for conducting hydrologic analyses. K8. K of methods for interpreting information from hydrologic reports. K9. K of the effects of surface and subsurface hydrologic characteristics on landscape design. K10. K of hydrologic conditions that present a risk to landscape structure or design.
	T4. Evaluate soil characteristics to determine the effects of composition, condition, or contamination on project development.	K11. K of methods for obtaining soil analyses. K12. K of methods for interpreting information from soil analysis reports. K13. K of the effects of soil conditions on landscape design. K14. K of the relationship between soil, hydrology, and vegetation. K15. K of the relationship between environment, climate, and soil conditions or contamination.
	T5. Analyze environmental factors to identify conditions that influence site.	K16. K of methods for evaluating the impact of climate and microclimate conditions. K17. K of methods for evaluating site ecology and habitats. K18. K of methods for interpreting the results of environmental studies. K19. K of the effects of climate and environmental factors on landscape design.

CONTENT AREA 1: SCOPE OF PROJECT

Section	Tasks	Associated Knowledge Statements
1A. Inventory and Analysis (Continued)	T6. Perform a vegetation analysis to identify benefits and limitations on the proposed project.	K14. K of the relationship between soil, hydrology, and vegetation. K20. K of the effects of climate and environmental factors on landscape design. K21. K of vegetation species suitable to geographic regions. K22. K of methods for evaluating condition and utility of existing vegetation. K23. K of vegetation conditions that present risks for landscape development.
	T7. Evaluate existing site structures and infrastructure to identify potential benefits and limitations for proposed project.	K24. K of methods for evaluating the impact of utilities on site development. K25. K of methods for evaluating structures and other constructed site features on site development.
	T8. Evaluate potential fire risk or other natural hazards associated with site conditions to determine need for mitigation.	K26. K of methods for identifying fire risk or hazardous conditions that impact project development. K27. K of methods for interpreting information about wildland urban interface zones.
	T9. Evaluate information about social, cultural, and historical factors to determine implications for proposed development.	K28. K of methods for determining social, cultural, and historical factors that influence site development.
	T10. Evaluate impacts of project development to determine effects on surrounding areas or neighboring properties.	K29. K of methods for evaluating the impact of proposed site development on adjacent sites, structures, or facilities.
	T11. Seek consultations to address unique or unexpected findings during site analyses.	K30. K of sources of technical information and expertise for clarifying site findings.
	T12. Engage with stakeholders to obtain information related to proposed program.	K31. K of techniques for engaging stakeholders in the information-gathering process. K32. K of methods for analyzing stakeholder input about proposed development processes.

CONTENT AREA 1: SCOPE OF PROJECT

Section	Tasks	Associated Knowledge Statements
1B: Regulatory Implications for Project Development	T13. Develop design services contract to comply with legal requirements for professional practice.	K33. K of laws and regulations pertaining to consumer protections. K34. K of laws and regulations related to development of professional services contracts. K35. K of laws related to California Landscape Architects Practice Act. K36. K of professional and ethical standards related to practice of landscape architecture.
	T14. Identify laws, regulations, and codes related to the project development to comply with statutory requirements.	K37. K of laws, regulations, and codes associated with project site development. K38. K of CEQA requirements for site design and development.
	T15. Identify regulatory agency requirements to comply with permitting and approval processes.	K39. K of regulatory agencies governing phases or processes involved in project development. K40. K of regulatory agency requirements associated with elements of project development. K41. K of laws and regulations associated with permitting processes. K42. K of methods for coordinating with technical consultants regarding regulatory, zoning, or property requirements.
	T16. Identify site features that are legally protected to comply with statutory restrictions or development parameters.	K43. K of laws related to site development and the preservation of heritage, endangered, or protected plant species. K44. K of laws related to the preservation or maintenance of cultural or historical sites. K45. K of laws related to site development and wildlife protections. K46. K of laws related to site development near riparian, coastal, or freshwater bodies. K47. K of laws related to site development subject to stormwater management requirements.

CONTENT AREA 2: PROGRAM DEVELOPMENT

Section	Tasks	Associated Knowledge Statements
	T17. Develop feasibility studies to determine the viability of proposed program.	K48. K of factors that impact program feasibility. K49. K of processes involved in evaluating regulatory, site, and cost constraints that impact program feasibility.
	T18. Develop program to meet project requirements of clients and users.	K50. K of methods for integrating information from site analysis into program development. K51. K of methods for determining the program scope and parameters. K52. K of techniques for determining sequence of program components. K53. K of program alternatives for addressing unique site characteristics, budget, or other site considerations.
	T19. Prepare presentation drawings and materials to communicate program information to stakeholders and the public.	K54. K of graphic design and presentation media for conveying information regarding program and alternatives.
	T20. Engage with stakeholders and public regarding program to increase involvement and address potential issues.	K55. K of techniques for stakeholder and public outreach. K56. K of techniques for communicating project concepts to stakeholders and public. K57. K of methods for addressing stakeholder or public feedback regarding program.

CONTENT AREA 3: DESIGN PROCESS

Section	Tasks	Associated Knowledge Statements
3A: Site Design	T21. Design site plan to define the scale and scope of the project.	K58. K of regulatory requirements associated with site development. K59. K of strategies for integrating site analyses and program objectives into site design. K60. K of methods for evaluating design options based on program, cost, and constraints. K61. Knowledge of methods for selecting site structures, features, or amenities that conform to program objectives.
	T22. Design vehicular and non-vehicular circulation plan to provide access and accessibility consistent with program objectives.	K62. K of laws and regulations regarding site accessibility design. K63. K of methods for designing vehicular and non-vehicular circulation systems. K64. K of methods for designing for emergency vehicle access. K65. K of strategies for designing multimodal transportation alternatives. K66. K of strategies of designing landscapes for bicycle and vehicle parking areas. K67. K of methods for collaborating with consultants on vehicular and non-vehicular circulation systems.
	T23. Design site grading and drainage plan to address elevation issues and direct the flow of surface water.	K68. K of laws and regulations regarding on-site stormwater management. K69. K of laws and regulations associated with site grading and drainage design. K70. K of strategies for designing grading and drainage systems. K71. K of calculations used in grading and drainage design. K72. K of strategies for collaborating with other consultants in grading and drainage design.
	T24. Design planting plan to identify types and locations of vegetation based on program, suitability, and sustainability.	K73. K of landscape strategies that support California's ecological communities and regions. K74. K of methods for selecting vegetation species consistent with site location. K75. K of methods for selecting vegetation consistent with water management practices. K76. K of methods for addressing geographic and ecological characteristics that impact vegetation. K77. K of strategies for managing invasive or noxious vegetation in landscape design. K78. K of planting strategies that mitigate fire or other site hazards. K79. K of strategies for mitigating or remediating the effects of toxicity on soil. K80. K of planting strategies for use with reclaimed water. K81. K of planting strategies for mitigating risks associated with landscape design.

CONTENT AREA 3: DESIGN PROCESS

Section	Tasks	Associated Knowledge Statements
3A: Site Design (Continued)	T25. Design irrigation plan to facilitate water management and efficient distribution of water.	K82. K of laws and regulations regarding water management and conservation. K83. K of strategies for designing irrigation distribution systems. K84. K of types of irrigation equipment and their function. K85. K of methods of hydraulic design for irrigation systems. K86. K of methods for determining irrigation requirements associated with plant hydrozones. K87. K of MWELo requirements and other irrigation design practices.
	T26. Design lighting layout plan to address outdoor illumination of the project site.	K88. K of laws and regulations regarding lighting design requirements. K89. K of strategies for designing site lighting. K90. K of types of lighting fixtures and equipment. K91. K of strategies for collaborating with other consultants in lighting design.
	T27. Design layout of site elements to promote user safety and security.	K92. K of laws and regulations related to site safety and security. K93. K of design strategies for increased user safety, security, and crime prevention. K94. K of types of equipment and materials used in site design for safety and security.
	T28. Develop design solutions to mitigate potential hazards.	K95. K of design solutions to mitigate geophysical hazards. K96. K of design solutions to mitigate hydrological hazards. K97. K of design solutions to mitigate fire hazards. K98. K of design solutions to mitigate weather and climate-associated hazards. K99. K of design solutions to mitigate biological hazards.

CONTENT AREA 3: DESIGN PROCESS

Section	Tasks	Associated Knowledge Statements
3B: Design Solutions for Water, Energy, and Environmental Conservation	T29. Develop design solutions for water conservation and management to support resource preservation.	K100. K of laws and regulations regarding water management and conservation. K101. K of strategies for incorporating water conservation solutions into landscape design. K102. K of strategies for incorporating alternative water sources into landscape design. K103. K of strategies for collaborating with other consultants in the design of water conservation management systems.
	T30. Develop design solutions for energy conservation to promote site sustainability.	K104. K of laws and regulations related to sustainable development. K105. K of strategies for landscape design that promote energy conservation. K106. K of methods for incorporating alternative or renewable energy into landscape design.
	T31. Develop environmentally responsive design solutions to support natural resource preservation.	K107. K of laws and regulations regarding environmental protection. K108. K of requirements of low impact development (LID). K109. K of strategies to promote environmental preservation in landscape design. K110. K of strategies for landscape design restoring or preserving natural resources. K111. K of strategies for building soil health and sustainability. K112. K of strategies for landscape design that increase ecological function and biodiversity.
	T32. Develop measures to mitigate or remediate environmental impacts associated with site development.	K113. K of methods for mitigating the effects of development and construction on natural, cultural, and historical resources. K114. K of methods for mitigating the environmental impacts of site development on adjacent sites. K115. K of strategies for collaborating with other consultants in mitigating the impacts of site development.

CONTENT AREA 4: CONSTRUCTION DOCUMENTATION AND ADMINISTRATION

Section	Tasks	Associated Knowledge Statements
4A: Construction Documentation	T33. Prepare drawings to communicate the construction of project design.	K116. K of methods for preparing project site plan. K117. K of methods for preparing demolition plans that specify protection, retention, and removal of site materials. K118. K of methods for preparing grading and drainage plans. K119. K of methods for preparing hardscape layout plan and material schedules. K120. K of methods for preparing soil plan and schedules. K121. K of methods for preparing planting layout plan and schedules. K122. K of methods for preparing irrigation layout plan and schedules. K123. K of methods for preparing landscape lighting plan and schedules. K124. K of methods for preparing construction details.
	T34. Prepare specifications to communicate information about constructing the project design.	K125. K of methods for preparing and formatting construction specifications. K126. K of strategies for developing project phasing for project construction. K127. K of procedures for verifying consistency between specifications and construction drawings.
	T35. Prepare opinion of probable costs to assist clients in decision making.	K128. K of methods for determining construction costs.

CONTENT AREA 4: CONSTRUCTION DOCUMENTATION AND ADMINISTRATION

Section	Tasks	Associated Knowledge Statements
4B: Construction Administration	T36. Assist in bidding processes to help clients obtain construction contracts.	K129. K of procedures for preparing construction bid documents. K130. K of procedures for responding to RFIs. K131. K of procedures for recommending contractors based on bid evaluations.
	T37. Evaluate submittals, change orders, and RFIs to facilitate project implementation.	K132. K of procedures for evaluating submittals, change orders, and RFIs. K133. K of methods for evaluating regulatory implications of plan revisions.
	T38. Perform site observations during construction to evaluate conformance of work to construction documents.	K134. K of laws and regulations related to landscape design and construction. K135. K of methods for evaluating installations of landscape components for compliance with construction documents. K136. K of procedures for evaluating project work conformance.
	T39. Prepare closeout documents to verify project completion.	K137. K of elements to include in post-construction observation and maintenance. K138. K of requirements for certification of installation compliance. K139. K of procedures for completing contract closeout. K140. K of requirements for preparing record drawings. K141. K of procedures for performing post-occupancy site evaluations.

## CHAPTER 6 | CONCLUSION

The OA of the landscape architect profession described in this report provides a comprehensive description of current practice in California. The procedures employed to perform the OA were based upon a content validation strategy to ensure that the results accurately represent landscape architect practice. Results of this OA provide information regarding current practice that can be used to review the LARE and to develop the CSE.

By adopting the landscape architect description of practice contained in this report, the LATC ensures that its landscape architect licensure examination program reflects current practice.

This report provides all documentation necessary to verify that the analysis has been completed in accordance with legal, professional, and technical standards.



**APPENDIX A | ADDITIONAL DEMOGRAPHICS**

## LOCATION OF WORK PROJECTS

LOCATION	NUMBER (N)	MEAN	PERCENT
California	565	87.54	86.92
Other states	199	30.42	10.64
International	106	13.09	2.44
Total	870	131.05	100

## CLIENT TYPE

TYPE	NUMBER (N)	MEAN	PERCENT
Governmental agencies	359	53.46	33.85
Private companies	406	48.17	34.49
Nonprofit organizations	186	13.87	4.55
Individual homeowners	344	44.69	27.11
Total	1295	331.46	100

## PROJECT ROLE

ROLE	NUMBER (N)	MEAN	PERCENT
Project lead	530	68.50	64.60
Subcontractor	404	49.25	35.40
Total	934	117.75	100

**APPENDIX B | RESPONDENTS BY REGION**

## LOS ANGELES COUNTY AND VICINITY

County of Practice	Frequency
Los Angeles	85
Orange	66
TOTAL	151

## NORTH COAST

County of Practice	Frequency
Humboldt	2
Mendocino	1
Sonoma	16
TOTAL	19

## RIVERSIDE AND VICINITY

County of Practice	Frequency
Riverside	19
San Bernardino	11
TOTAL	30

## SACRAMENTO VALLEY

County of Practice	Frequency
Butte	4
Sacramento	46
Yolo	2
TOTAL	52

## SAN DIEGO COUNTY AND VICINITY

County of Practice	Frequency
San Diego	59
TOTAL	59

## SAN FRANCISCO BAY AREA

County of Practice	Frequency
Alameda	45
Contra Costa	13
Marin	13
Napa	3
San Francisco	41
San Mateo	11
Santa Clara	27
Santa Cruz	9
Solano	1
TOTAL	163

## SAN JOAQUIN VALLEY

County of Practice	Frequency
Fresno	8
Kern	3
San Joaquin	1
Stanislaus	4
Tulare	1
TOTAL	17

## SHASTA - CASCADE

County of Practice	Frequency
Shasta	1
TOTAL	1

## SIERRA MOUNTAIN VALLEY

County of Practice	Frequency
El Dorado	5
Inyo	1
Nevada	4
Placer	9
TOTAL	19

## SOUTH COAST AND CENTRAL COAST

County of Practice	Frequency
Monterey	7
San Luis Obispo	16
Santa Barbara	7
Ventura	9
TOTAL	39

**APPENDIX C | CRITICALITY INDICES FOR ALL TASKS BY CONTENT  
AREA**

### Content Area 1: Scope of Project

Task Number	Task Statement	Mean Importance	Mean Frequency	Task Criticality Index
T14.	Identify laws, regulations, and codes related to the project development to comply with statutory requirements.	4.23	3.88	17.63
T15.	Identify regulatory agency requirements to comply with permitting and approval processes.	4.19	3.89	17.46
T1.	Conduct site visit to identify on- and off-site conditions that could impact project development.	4.26	3.78	16.90
T2.	Evaluate <b>site</b> topography <b>and geology</b> to determine the implications of landform on project development.	4.09	3.68	16.17
T5.	Analyze environmental factors to identify conditions that influence site.	3.78	3.55	14.80
T13.	Develop design services contract to comply with legal requirements for professional practice.	3.75	3.30	14.65
T6.	Perform analysis of existing vegetation to identify benefits and limitations on the proposed project.	3.53	3.46	13.44
T12.	Engage with stakeholders to obtain information related to proposed program.	3.54	3.21	13.32
T7.	Evaluate existing site structures and infrastructure to identify potential benefits and limitations for proposed project.	3.47	3.30	12.90
T16.	Identify site features that are legally protected to comply with statutory restrictions or development parameters.	3.61	2.94	12.20
T8.	Evaluate potential fire risk or other natural hazards associated with site conditions to determine need for mitigation.	3.33	2.69	10.68
T3.	Assess hydrologic conditions to determine implications of water storage and movement on project development.	3.22	2.69	10.48
T10.	Evaluate impact of project development on surrounding areas or neighboring properties.	3.09	2.84	10.35

T4.	Evaluate soil characteristics to determine the effects of composition, condition, or contamination on project development.	3.25	2.69	10.31
T11.	Seek consultations to address unique or unexpected findings during site analyses.	2.97	2.45	8.70
T9.	Evaluate information about social, cultural, and historical factors to determine implications for proposed development.	2.73	2.43	8.41

## Content Area 2: Program Development

<b>Task Number</b>	<b>Task Statement</b>	<b>Mean Importance</b>	<b>Mean Frequency</b>	<b>Task Criticality Index</b>
T18.	Develop program to meet project requirements of clients and users.	3.80	3.54	15.27
T19.	Prepare presentation drawings and materials to communicate program information to stakeholders and the public.	3.77	3.48	14.85
T20.	Engage with stakeholders and public regarding program to increase involvement and address potential issues.	3.14	2.55	9.97
T17.	Develop feasibility studies to determine the viability of proposed program.	2.50	2.02	6.97

### Content Area 3: Design Process

Task Number	Task Statement	Mean Importance	Mean Frequency	Task Criticality Index
T24.	Design planting plan to identify types and locations of vegetation based on program, suitability, and sustainability.	4.14	4.19	18.23
T21.	Design site plan to define the scale and scope of the project.	4.04	3.79	16.91
T27.	Design layout of site elements to promote user safety and security.	3.83	3.49	14.67
T25.	Design irrigation plan to facilitate water management and efficient distribution of water.	3.76	3.28	14.03
T23.	Design site grading and drainage plan to address elevation issues and direct the flow of surface water.	3.87	3.13	13.49
T28.	Develop design solutions for water conservation and management to support resource preservation.	3.67	3.20	13.25
T22.	Design vehicular and non-vehicular circulation plan to provide access and accessibility consistent with program objectives.	3.49	3.00	12.56
T30.	Develop design solutions to mitigate potential hazards.	3.51	2.91	11.94
T32.	Develop environmentally responsive design solutions to support natural resource preservation.	3.38	2.89	11.31
T31.	Develop design solutions for energy conservation to promote site sustainability.	3.02	2.49	9.06
T33.	Develop measures to mitigate or remediate, <del>or reclaim</del> environmental impacts associated with site development.	2.98	2.31	8.64

---

T26.	Design lighting layout plan to address outdoor illumination of the project site.	2.69	2.25	7.65
------	--	------	------	------

---

#### Content Area 4: Construction Documentation and Administration

Task Number	Task Statement	Mean Importance	Mean Frequency	Task Criticality Index
T34.	Prepare drawings to communicate the construction of project design.	4.35	4.14	19.11
T35.	Prepare specifications to communicate information about the means and methods for constructing the project design.	3.90	3.41	14.61
T39.	Perform site observations during construction to evaluate conformance of work to construction documents.	3.99	3.41	14.55
T38.	<b>Evaluate</b> Approve submittals, change orders, and Requests for Information to facilitate project implementation.	3.56	3.20	12.85
T36.	Prepare opinion of probable costs to assist clients in decision making.	3.46	3.05	11.81
T37.	Assist in bidding processes to help clients obtain construction contracts.	3.03	2.63	9.51
T40.	Prepare closeout documents to verify project completion.	3.03	2.52	9.08



**APPENDIX D | KNOWLEDGE IMPORTANCE RATINGS BY CONTENT  
AREA**

### Content Area 1: Scope of Project

Number	Knowledge Statement	Mean Importance
K20.	Knowledge of vegetation species suitable to geographic regions.	4.23
K37.	Knowledge of laws, regulations, and codes associated with project site development.	4.09
K23.	Knowledge of methods for evaluating the impact of easements and setbacks on site development. <b>Subsumed under other statements – Removed.</b>	4.00
K36.	Knowledge of professional and ethical standards related to practice of landscape architecture.	3.94
K24.	Knowledge of methods for evaluating the impact of utilities on site development.	3.93
K1.	Knowledge of methods for evaluating the impact of site conditions on project development.	3.84
K6.	Knowledge of topographic, geologic, and geotechnical conditions that present a risk <b>or constraint</b> to <del>landscape design</del> <b>project development.</b>	3.82
K13.	Knowledge of the effects of soil conditions on landscape design.	3.80
K14.	Knowledge of the relationship between soil, hydrology, and vegetation.	3.79
K5.	Knowledge of the effects of topographic, geotechnical, and geologic characteristics on landscape design.	3.76
K41.	Knowledge of laws and regulations associated with permitting processes.	3.74
K40.	Knowledge of regulatory agency requirements associated with elements of project development.	3.73
K35.	Knowledge of laws related to California Landscape Architects Practice Act.	3.68
K39.	Knowledge of regulatory agencies governing phases or processes involved in project development.	3.66
K21.	Knowledge of methods for evaluating condition and utility of existing vegetation.	3.60
K22.	Knowledge of vegetation conditions that present risks for landscape development.	3.60
K19.	Knowledge of the effects of climate and environmental factors on landscape design.	3.56
K25.	Knowledge of methods for evaluating structures and other constructed site features on site development.	3.55

K3.	Knowledge of methods for performing topographical analyses.	3.53
K26.	Knowledge of methods for identifying fire risk or hazardous conditions that impact project development.	3.52
K15.	Knowledge of the relationship between environment, climate, and soil condition or contamination.	3.50
K46.	Knowledge of laws related to site development near riparian, coastal, or freshwater bodies.	3.47
K34.	Knowledge of laws and regulations related to development of professional services contracts.	3.46
K12.	Knowledge of methods for interpreting information from soil analysis reports.	3.44
K16.	Knowledge of methods for evaluating the impact of climate and microclimate conditions.	3.44
K2.	Knowledge of methods for identifying the impact of site resources on project development.	3.42
K10.	Knowledge of hydrologic conditions that present a risk to landscape structure or design.	3.42
K42.	Knowledge of methods for coordinating with technical consultants regarding regulatory, zoning, or property requirements.	3.37
K43.	Knowledge of laws related to site development and the preservation of heritage, endangered, or protected plant species.	3.34
K30.	Knowledge of sources of technical information and expertise for clarifying site findings.	3.23
K11.	Knowledge of methods for obtaining soil analyses.	3.19
K29.	Knowledge of methods for evaluating the impact of proposed site development on adjacent sites, structures, or facilities.	3.18
K4.	Knowledge of methods for interpreting information from geotechnical or geological reports.	3.16
K27.	Knowledge of methods for interpreting information about wildland urban interface zones.	3.12
K31.	Knowledge of techniques for engaging stakeholders in the information-gathering process.	3.08
K32.	Knowledge of methods for analyzing stakeholder input about proposed development processes.	3.08

K38.	Knowledge of CEQA requirements for site design and development.	3.08
K9.	Knowledge of the effects of surface and subsurface hydrologic characteristics on landscape design.	3.06
K45.	Knowledge of laws related to site development and wildlife protections.	3.00
K17.	Knowledge of methods for evaluating site ecology and habitats.	2.95
K18.	Knowledge of methods for interpreting the results of environmental studies.	2.95
K33.	Knowledge of laws and regulations pertaining to consumer protections.	2.85
K44.	Knowledge of laws related to the preservation or maintenance of cultural or historical sites.	2.81
K28.	Knowledge of methods for determining social, cultural, and historical factors that influence site development.	2.79
K8.	Knowledge of methods for interpreting information from hydrologic reports.	2.48
K7.	Knowledge of methods for conducting hydrologic analyses.	2.24

## Content Area 2: Program Development

Number	Knowledge Statement	Mean Importance
K47.	Knowledge of laws related to site development subject to stormwater management requirements.	3.74
K50.	Knowledge of methods for integrating information from site analysis into program development.	3.63
K51.	Knowledge of methods for determining the program scope and parameters.	3.57
K54.	Knowledge of graphic design and presentation media for conveying information regarding program and alternatives.	3.56
K53.	Knowledge of program alternatives for addressing unique site characteristics, budget, or other site considerations.	3.51
K56.	Knowledge of techniques for communicating project concepts to stakeholders and public.	3.32
K52.	Knowledge of techniques for determining sequence of program components.	3.28
K48.	Knowledge of factors that impact program feasibility.	3.25
K49.	Knowledge of processes involved in evaluating regulatory, site, and cost constraints that impact program feasibility.	3.20
K57.	Knowledge of methods for addressing stakeholder or public feedback regarding program.	3.00
K55.	Knowledge of techniques for stakeholder and public outreach.	2.82

### Content Area 3: Design Process

Number	Knowledge Statement	Mean Importance
K74.	Knowledge of methods for selecting vegetation species consistent with site location.	4.12
K75.	Knowledge of methods for selecting vegetation consistent with water management practices.	4.11
K62.	Knowledge of laws and regulations regarding site accessibility design.	3.89
K96.	Knowledge of strategies for incorporating water conservation solutions into landscape design.	3.85
K60.	Knowledge of methods for evaluating design options based on program, cost, and constraints.	3.80
K69.	Knowledge of laws and regulations associated with site grading and drainage design.	3.78
K72.	Knowledge of strategies for collaborating with other consultants in grading and drainage design.	3.78
K59.	Knowledge of strategies for integrating site analyses and program objectives into site design.	3.76
K70.	Knowledge of strategies for designing grading and drainage systems.	3.73
K58.	Knowledge of regulatory requirements associated with site development.	3.72
K82.	Knowledge of laws and regulations regarding water management and conservation.	3.72
K87.	Knowledge of MWELo requirements and other irrigation design practices.	3.71
K95.	Knowledge of laws and regulations regarding water management and conservation.	3.65
K86.	Knowledge of methods for determining irrigation requirements associated with plant hydrozones.	3.63
K68.	Knowledge of laws and regulations regarding on-site stormwater management.	3.59
K61.	Knowledge of methods for selecting site structures, features, or amenities to conform to program objectives.	3.57
K78.	Knowledge of planting strategies that mitigate fire or other site hazards.	3.56
K83.	Knowledge of strategies for designing irrigation distribution systems.	3.51

K84.	Knowledge of types of irrigation equipment and their function.	3.49
K63.	Knowledge of methods for designing vehicular and non-vehicular circulation systems.	3.47
K81.	Knowledge of planting strategies for mitigating risks associated with landscape design.	3.38
K73.	Knowledge of landscape strategies that support California's ecological communities and regions.	3.23
K101.	Knowledge of design solutions to mitigate fire and climatological hazards.	3.22
K71.	Knowledge of calculations used in grading and drainage design.	3.21
K92.	Knowledge of laws and regulations related to site safety and security.	3.19
K64.	Knowledge of methods for designing for emergency vehicle access.	3.16
K93.	Knowledge of design strategies for increased user safety, security, and crime prevention.	3.13
K116.	Knowledge of strategies for collaborating with other consultants in mitigating the impacts of site development.	3.13
K112.	Knowledge of strategies for building soil health and sustainability.	3.11
K77.	Knowledge of strategies for managing invasive or noxious vegetation in landscape design.	3.05
K91.	Knowledge of strategies for collaborating with other consultants in lighting design.	3.04
K98.	Knowledge of strategies for collaborating with other consultants in the design of water conservation management systems.	3.04
K76.	Knowledge of methods for addressing geographic and ecological characteristics that impact vegetation.	3.03
K85.	Knowledge of methods of hydraulic design for irrigation systems.	3.01
K104.	Knowledge of laws and regulations related to sustainable development.	3.01
K110.	Knowledge of strategies to promote environmental preservation in landscape design.	3.01
K111.	Knowledge of strategies for landscape design restoring or preserving natural resources.	3.01

K67.	Knowledge of methods for collaborating with consultants on vehicular and non-vehicular circulation systems.	2.96
K113.	Knowledge of strategies for landscape design that increase ecological function and biodiversity.	2.94
K97.	Knowledge of strategies for incorporating alternative water sources into landscape design.	2.92
K108.	Knowledge of laws and regulations regarding environmental protection.	2.91
K66.	Knowledge of strategies of designing landscapes for bicycle and vehicle parking areas.	2.90
K109.	Knowledge of requirements of low impact development (LID).	2.90
K80.	Knowledge of planting strategies for use with reclaimed water.	2.88
K94.	Knowledge of types of equipment and materials used in site design for safety and security.	2.88
K115.	Knowledge of methods for mitigating the environmental impacts of site development on adjacent sites.	2.86
K105.	Knowledge of strategies for landscape design that promote energy conservation.	2.85
K114.	Knowledge of methods for mitigating the effects of development and construction on natural, cultural, and historical resources.	2.65
K89.	Knowledge of strategies for designing site lighting.	2.53
K90.	Knowledge of types of lighting fixtures and equipment.	2.52
K88.	Knowledge of laws and regulations regarding lighting design requirements.	2.50
K79.	Knowledge of strategies for mitigating or remediating the effects of toxicity on soil.	2.37
K100.	Knowledge of design solutions to mitigate hydrological hazards.	2.36
K106.	Knowledge of methods for incorporating alternative or renewable energy into landscape design.	2.33
K107.	Knowledge of techniques for mitigating visual impacts associated with renewable energy sources. <b>Subsumed under K106 – Removed.</b>	2.17
K99.	Knowledge of design solutions to mitigate geophysical hazards.	2.15

K65.	Knowledge of strategies for designing multimodal transportation alternatives.	2.07
K103.	Knowledge of design solutions to mitigate biological hazards.	1.76
K102.	Knowledge of design solutions to mitigate weather and <b>climate-associated</b> meteorological hazards.	1.71

#### Content Area 4: Construction Documentation and Administration

Number	Knowledge Statement	Mean Importance
K125.	Knowledge of methods for preparing construction details.	4.33
K122.	Knowledge of methods for preparing planting layout plan and schedules.	4.26
K117.	Knowledge of methods for preparing project site plan.	4.24
K120.	Knowledge of methods for preparing hardscape layout plan and material schedules.	4.20
K135.	Knowledge of laws and regulations related to landscape design and construction.	4.07
K136.	Knowledge of methods for evaluating installations of landscape components for compliance with construction documents.	3.91
K119.	Knowledge of methods for preparing grading and drainage plans.	3.77
K128.	Knowledge of procedures for verifying consistency between specifications and construction drawings.	3.71
K130.	Knowledge of procedures for preparing construction bid documents.	3.68
K123.	Knowledge of methods for preparing irrigation layout plan and schedules.	3.55
K131.	Knowledge of procedures for responding to Requests For Information (RFI).	3.48
K133.	Knowledge of procedures for evaluating submittals, change orders, and Requests for Information (RFIs).	3.46
K137.	Knowledge of procedures for evaluating project work conformance.	3.45
K118.	Knowledge of methods for preparing demolition plans that specify protection, retention, and removal of site materials.	3.39
K134.	Knowledge of methods for evaluating regulatory implications of plan revisions.	3.36
K138.	Knowledge of elements to include in post-construction observation and maintenance.	3.17
K129.	Knowledge of methods for determining construction costs.	3.16
K139.	Knowledge of elements to include in post-construction observation and maintenance.	3.11
K142.	Knowledge of requirements for preparing record drawings.	2.96
K140.	Knowledge of requirements for certification of installation compliance.	2.92

K132.	Knowledge of procedures for recommending contractors based on bid evaluations.	2.84
K141.	Knowledge of procedures for completing contract closeout.	2.79
K127.	Knowledge of strategies for developing project phasing for project construction.	2.73
K121.	Knowledge of methods for preparing soil plan and schedules.	2.58
K124.	Knowledge of methods for preparing landscape lighting plan and schedules.	2.53
K126.	Knowledge of methods for preparing <b>and formatting construction specifications</b> to CSI MasterFormat.	2.36
K143.	Knowledge of procedures for performing post-occupancy site evaluations.	2.08



**APPENDIX E | INVITATION TO PRACTITIONERS**

# Landscape Architects Occupational Analysis Questionnaire

We're conducting an occupational analysis for the landscape architect profession and your input would be appreciated. Click the button below to start the questionnaire. Thank you for your participation!

[Begin Survey](#)

Please do not forward this email as its survey link is unique to you.  
[Privacy](#) | [Unsubscribe](#)

Powered by  SurveyMonkey®

# APPENDIX F | QUESTIONNAIRE

## Landscape Architects Occupational Analysis Questionnaire

### 1. Introduction

Dear Licensee:

The Landscape Architects Technical Committee (Committee) is conducting an occupational analysis of the landscape architect profession. The purpose of the occupational analysis is to identify the important tasks performed by landscape architects and the knowledge required to perform those tasks. Results of the occupational analysis will be used to update and improve the Landscape Architect Licensure Examination.

The Committee requests your assistance in this process. Please take the time to complete the survey questionnaire as it relates to your current job. Your participation ensures that all aspects of the profession are covered and is essential to the success of this project.

**Your individual responses will be kept confidential.** Your responses will be combined with responses of other landscape architects and only group trends will be reported. Your personal information will not be tied to your responses.

To progress through this survey, please click the following navigation buttons:

- **Next** to continue to the next page.
- **Prev** to return to the previous page.
- **Exit this survey** to exit the survey and return to it at a later time.
- **Done/Submit** to submit your survey when you have finished.

Any questions marked with an asterisk (\*) require an answer before you can progress through the survey questionnaire.

**Please Note:** Once you have started the survey, you can exit at any time and return to it later without losing your responses as long as you are accessing the survey from the same computer. The survey automatically saves fully completed pages, but will not save responses to questions on pages that were partially completed when the survey was exited. For your convenience, the weblink is available 24 hours a day 7 days a week.

**Please submit the completed questionnaire by April 30, 2020.**

If you have any questions about completing this survey, please contact Brian Knox at [Brian.knox@dca.ca.gov](mailto:Brian.knox@dca.ca.gov). The Committee welcomes your participation in this project and thanks you for your time.

#### INSTRUCTIONS FOR COMPLETING THE DEMOGRAPHIC ITEMS

This part of the questionnaire contains an assortment of demographic items, the responses to which will be used to describe landscape architects as represented by the respondents to the questionnaire. Please note

the instructions for each item before marking your response as several permit multiple responses.

#### **INSTRUCTIONS FOR RATING TASK AND KNOWLEDGE STATEMENTS**

This part of the questionnaire contains a list of tasks and knowledge descriptive of landscape architecture practice in a variety of settings. Please note that some of the tasks or knowledge may not apply to your setting.

For each task, you will be asked to answer two questions: how often you perform the task (**Frequency**) and how important the task is in the performance of your current job (**Importance**). For each knowledge statement, you will be asked to answer one question: how important the knowledge is in the performance of your current job (**Importance**).

Please rate each task and knowledge as it relates to your current job as a licensed landscape architect. **Do not respond based on what you believe all landscape architects should be expected to know or be able to do.**

## Landscape Architects Occupational Analysis Questionnaire

### 2. OCCUPATIONAL ANALYSIS OF LANDSCAPE ARCHITECT

The Committee recognizes that every landscape architect may not perform all of the tasks or use all of the knowledge covered in this questionnaire. However, your participation is essential to the success of this project, and your contributions will help establish standards for safe and effective landscape architect practice in the state of California.

Complete this questionnaire only if you are currently licensed and working as a landscape architect in California.

## Landscape Architects Occupational Analysis Questionnaire

### 3. PART I: Demographic Questions

The information you provide here is voluntary and confidential. It will be treated as personal information subject to the Information Practices Act (Civil Code section 1798 et seq.) and will be used only for the purposes of:

- A) Analyzing the information from this questionnaire to generate a demographic profile of landscape architects; or
- B) aiding in interpreting the task and knowledge ratings that are requested in Parts II and III.

## Landscape Architects Occupational Analysis Questionnaire

### 4. PART I: Demographic Questions

\* 1. Are you currently practicing in California as a licensed landscape architect?

Yes

No

## Landscape Architects Occupational Analysis Questionnaire

### 5. PART I: Demographic Questions

**1. How many years have you been licensed and working as a landscape architect in California?**

- 0 to 5 years
- 6 to 10 years
- 11 to 20 years
- More than 20 years

**2. How would describe your primary work setting?**

- Landscape architecture firm (as individual or group)
- Multidisciplinary Firm
- Governmental agency
- Institution (e.g., hospital, school, etc.)
- Non-design company (e.g., hotel, utility company, etc.)
- Construction firm
- Other (please specify)

**3. How many licensed landscape architects other than yourself work in your organization?**

- None
- 1 to 5
- 6 to 10
- More than 10

**4. How many other employees other than landscape architects work in your organization?**

- None
- 1 to 10
- 11 to 20
- More than 20

**5. How many hours per week do you work as a landscape architect?**

- 0 to 10 hours
- 11 to 20 hours
- 21 to 40 hours
- More than 40 hours

**6. What is your highest level of education?**

- High School or GED
- Certificate program
- Associate degree
- Bachelor's degree
- Master's degree
- Doctoral degree

**7. What major field of study did you receive your certificate or degree in?**

Certificate Program	<input type="text"/>
AA Degree	<input type="text"/>
BA/BS	<input type="text"/>
MA/MS	<input type="text"/>
Ph.D.	<input type="text"/>

**8. Which of the following types of projects have you worked on over the past 24 months?  
(Check all that apply)**

- Transportation (streetscapes, bike paths)
- Community planning (General Plans, specific plans, GU permits)
- Commercial (shopping centers, strip malls)
- Residential (single family, multi-family, subdivision)
- Parks & Recreation facilities (open spaces, community parks, play spaces, complexes)
- Corporate design (corporate business parks)
- Schools (public or private schools, colleges, universities)
- Mixed use (residential/retail/office)
- Historical preservation (historical buildings, gardens, landscapes)
- Medical/health care (hospitals, clinics, care facilities, senior facilities)
- Infrastructure (utilities, energy, water treatment plant, pipelines)

**9.**

**Which of the following green/sustainable designs have been included in the projects you have worked on over the past 24 months? (Check all that apply)**

- Light pollution reduction
- Heat island mitigation
- Green Roofs
- Urban/community gardens
- Native habitat re-establishment
- Soil reclamation
- Preserving/encouraging biodiversity
- Water conservation
- Water reuse/water recycling
- Stormwater management
- Erosion control
- Low-Impact Development
- Slope protection
- Energy conservation
- Indoor air quality
- Adaptation for changing climate
- Permeable paving

**10. In the past 24 months, what percent of your work was performed in each of the following three areas? (Enter whole numbers only. Numbers should add up to 100)**

California

Other states

Internationally

**11. In the past 24 months, what percent of your work was performed for each of the following project clients? (Enter whole numbers only. Numbers should add up to 100)**

Governmental agencies

Private companies

Nonprofit organizations

Individual homeowners

**12. In the past 24 months, what percent of your work did you perform as the project lead or as a subcontractor? (Enter whole numbers only. Numbers should add up to 100)**

Project Lead

Subcontractor

**13. In the past 24 months, which of the following specialty consultants have you teamed with? (check all that apply)**

- Arborist
- Geotechnical engineer
- Soil scientist
- Environmental engineer
- Artist
- Biologist
- Public outreach facilitator
- Economist
- Traffic engineer
- Grant writer
- Ecologist
- Historian
- LEED-credentialed Professional or Green Associate
- Academic (educator/researcher)
- Horticulturist
- Product specialist

**14. In the past 24 months, which of the following tasks have you performed in the course of your work? (check all that apply)**

- Master Planning
- Construction document writing
- Construction administration
- Specification writing
- Permit coordination
- Maintenance and operations planning
- Irrigation auditing
- Environmental reviews
- Plan check and plan review
- Workshop facilitation
- Product and academic research
- Cost estimation
- Administration

**15. Which of the following certificates do you possess? (check all that apply)**

- American Institute of Certified Planners Certified Planner
- Arborist
- Leadership in Energy and Environmental Design Accredited Professional
- Leadership in Energy and Environmental Design Green Associate
- Certified Playground Safety Inspector
- Certified Landscape Irrigation Auditor
- Construction General Permit Qualified Stormwater Pollution Prevention Plan Practitioner
- Qualified Stormwater Pollution Prevention Plan Developer
- Green Roof Professional
- Certified Access Specialist
- Evidence Based Design Accreditation and Certification

**16. Which of the following licenses do you possess in addition to CA Landscape Architect?  
(Check all that apply)**

- Contractor
- Architect
- Engineer
- Landscape Architect (out of State)

**17. Which type of setting best describes your primary work location?**

- Urban (greater than 50,000 people)
- Rural (fewer than 50,000 people)

**18. In what California county is your primary practice located?**

- |                                    |                                       |                                     |
|------------------------------------|---------------------------------------|-------------------------------------|
| <input type="radio"/> Alameda      | <input type="radio"/> Marin           | <input type="radio"/> San Mateo     |
| <input type="radio"/> Alpine       | <input type="radio"/> Mariposa        | <input type="radio"/> Santa Barbara |
| <input type="radio"/> Amador       | <input type="radio"/> Mendocino       | <input type="radio"/> Santa Clara   |
| <input type="radio"/> Butte        | <input type="radio"/> Merced          | <input type="radio"/> Santa Cruz    |
| <input type="radio"/> Calaveras    | <input type="radio"/> Modoc           | <input type="radio"/> Shasta        |
| <input type="radio"/> Colusa       | <input type="radio"/> Mono            | <input type="radio"/> Sierra        |
| <input type="radio"/> Contra Costa | <input type="radio"/> Monterey        | <input type="radio"/> Siskiyou      |
| <input type="radio"/> Del Norte    | <input type="radio"/> Napa            | <input type="radio"/> Solano        |
| <input type="radio"/> El Dorado    | <input type="radio"/> Nevada          | <input type="radio"/> Sonoma        |
| <input type="radio"/> Fresno       | <input type="radio"/> Orange          | <input type="radio"/> Stanislaus    |
| <input type="radio"/> Glenn        | <input type="radio"/> Placer          | <input type="radio"/> Sutter        |
| <input type="radio"/> Humboldt     | <input type="radio"/> Plumas          | <input type="radio"/> Tehama        |
| <input type="radio"/> Imperial     | <input type="radio"/> Riverside       | <input type="radio"/> Trinity       |
| <input type="radio"/> Inyo         | <input type="radio"/> Sacramento      | <input type="radio"/> Tulare        |
| <input type="radio"/> Kern         | <input type="radio"/> San Benito      | <input type="radio"/> Tuolumne      |
| <input type="radio"/> Kings        | <input type="radio"/> San Bernardino  | <input type="radio"/> Ventura       |
| <input type="radio"/> Lake         | <input type="radio"/> San Diego       | <input type="radio"/> Yolo          |
| <input type="radio"/> Lassen       | <input type="radio"/> San Francisco   | <input type="radio"/> Yuba          |
| <input type="radio"/> Los Angeles  | <input type="radio"/> San Joaquin     |                                     |
| <input type="radio"/> Madera       | <input type="radio"/> San Luis Obispo |                                     |

## Landscape Architects Occupational Analysis Questionnaire

### 6. PART II RATING TASKS

In this part of the questionnaire, please rate each task as it relates to your current job as a landscape architect. Your Frequency and Importance ratings should be separate and independent ratings. Therefore, the ratings that you assign from one rating scale should not influence the ratings that you assign from the other rating scale.

If the task is NOT part of your current job, rate the task "0" (zero) Frequency and "0" (zero) Importance.

The boxes for rating the Frequency and Importance of each task have drop-down lists. Click on the "down" arrow for each list to see the ratings and then select the option based on your current job.

#### FREQUENCY RATING

How often are these tasks performed in your current job?

Use the following scale to make your rating.

- 0 - DOES NOT APPLY TO MY JOB. I do not perform this task in my job.
- 1 - RARELY. This task is one of the tasks I perform least often in my practice relative to other tasks I perform.
- 2 - SELDOM. This task is performed less often relative to other tasks I perform in my job.
- 3 - REGULARLY. This task is performed as often as other tasks I perform in my job.
- 4 - OFTEN. This task is performed more often than most other tasks I perform in my job.
- 5 - VERY OFTEN. This task is one of the tasks I perform most often in my job relative to other tasks I perform.

#### IMPORTANCE RATING

HOW IMPORTANT are these tasks in the performance of your current job?

Use the following scale to make your ratings.

- 0 - NOT IMPORTANT; DOES NOT APPLY TO MY JOB. I do not perform this task in my job.
- 1 - OF MINOR IMPORTANCE. This task is not important for effective performance in my current job.

2 - FAIRLY IMPORTANT. This task is somewhat important for effective performance in my current job.

3 - MODERATELY IMPORTANT. This task is moderately important for effective performance in my current job.

4 - VERY IMPORTANT. This task is very important for performance in my current job.

5 - CRITICALLY IMPORTANT. This task is extremely important for effective performance in my current job.

**1. TASK STATEMENTS**

	Frequency	Importance
T1. Conduct site visit to identify on- and off-site conditions that could impact project development.	<input type="text"/>	<input type="text"/>
T2. Evaluate topography to determine the implications of landform on project development.	<input type="text"/>	<input type="text"/>
T3. Assess hydrologic conditions to determine implications of water storage and movement on project development.	<input type="text"/>	<input type="text"/>
T4. Evaluate soil characteristics to determine the effects of composition, condition, or contamination on project development.	<input type="text"/>	<input type="text"/>
T5. Analyze environmental factors to identify conditions that influence site.	<input type="text"/>	<input type="text"/>
T6. Perform analysis of existing vegetation to identify benefits and limitations on the proposed project.	<input type="text"/>	<input type="text"/>
T7. Evaluate existing site structures and infrastructure to identify potential benefits and limitations for proposed project.	<input type="text"/>	<input type="text"/>
T8. Evaluate potential fire risk or other natural hazards associated with site conditions to determine need for mitigation.	<input type="text"/>	<input type="text"/>
T9. Evaluate information about social, cultural, and historical factors to determine implications for proposed development.	<input type="text"/>	<input type="text"/>
T10. Evaluate impact of project development on surrounding areas or neighboring properties.	<input type="text"/>	<input type="text"/>
T11. Seek consultations to address unique or unexpected findings during site analyses.	<input type="text"/>	<input type="text"/>
T12. Engage with stakeholders to obtain information related to proposed program.	<input type="text"/>	<input type="text"/>
T13. Develop design services contract to comply with legal requirements for professional practice.	<input type="text"/>	<input type="text"/>
T14. Identify laws, regulations, and codes related to the project development to comply with statutory requirements.	<input type="text"/>	<input type="text"/>
T15. Identify regulatory agency requirements to comply with permitting and approval processes.	<input type="text"/>	<input type="text"/>
T16. Identify site features that are legally protected to comply with statutory restrictions or development parameters.	<input type="text"/>	<input type="text"/>
T17. Develop feasibility studies to determine the viability of proposed program.	<input type="text"/>	<input type="text"/>

	Frequency	Importance
T18. Develop program to meet project requirements of clients and users.	<input type="text"/>	<input type="text"/>
T19. Prepare presentation drawings and materials to communicate program information to stakeholders and the public.	<input type="text"/>	<input type="text"/>
T20. Engage with stakeholders and public regarding program to increase involvement and address potential issues	<input type="text"/>	<input type="text"/>
T21. Design site plan to define the scale and scope of the project.	<input type="text"/>	<input type="text"/>
T22. Design vehicular and non-vehicular circulation plan to provide access and accessibility consistent with program objectives.	<input type="text"/>	<input type="text"/>
T23. Design site grading and drainage plan to address elevation issues and direct the flow of surface water.	<input type="text"/>	<input type="text"/>
T24. Design planting plan to identify types and locations of vegetation based on program, suitability, and sustainability.	<input type="text"/>	<input type="text"/>
T25. Design irrigation plan to facilitate water management and efficient distribution of water.	<input type="text"/>	<input type="text"/>

**2. TASK STATEMENTS (continued)**

	Frequency	Importance
T26. Design lighting layout plan to address outdoor illumination of the project site.	<input type="text"/>	<input type="text"/>
T27. Design layout of site elements to promote user safety and security.	<input type="text"/>	<input type="text"/>
T28. Develop design solutions for water conservation and management to support resource preservation.	<input type="text"/>	<input type="text"/>
T30. Develop design solutions to mitigate potential hazards.	<input type="text"/>	<input type="text"/>
T31. Develop design solutions for energy conservation to promote site sustainability.	<input type="text"/>	<input type="text"/>
T32. Develop environmentally responsive design solutions to support natural resource preservation.	<input type="text"/>	<input type="text"/>
T33. Develop measures to mitigate, remediate, or reclaim environmental impacts associated with site development.	<input type="text"/>	<input type="text"/>
T34. Prepare drawings to communicate the construction of project design.	<input type="text"/>	<input type="text"/>
T35. Prepare specifications to communicate information about the means and methods for constructing the project design.	<input type="text"/>	<input type="text"/>
T36. Prepare opinion of probable costs to assist clients in decision making.	<input type="text"/>	<input type="text"/>
T37. Assist in bidding processes to help clients obtain construction contracts.	<input type="text"/>	<input type="text"/>
T38. Approve submittals, change orders, and Requests For Information to facilitate project implementation.	<input type="text"/>	<input type="text"/>
T39. Perform site observations during construction to evaluate conformance of work to construction documents.	<input type="text"/>	<input type="text"/>
T40. Prepare closeout documents to verify project completion.	<input type="text"/>	<input type="text"/>

## Landscape Architects Occupational Analysis Questionnaire

### 7. PART III. RATING JOB KNOWLEDGE

In this part of the questionnaire, rate each of the knowledge statements based on how important the knowledge is to effective performance in your job. If a knowledge statement is NOT part of your job, then rate it "0" (zero) for Importance.

The boxes for rating the Importance of each knowledge statement have a drop-down list. Click on the "down" arrow for each list to see the ratings. Then select the rating based on your current job.

#### IMPORTANCE RATING

HOW IMPORTANT is this knowledge in the effective performance of your current job?  
Use the following scale to make your ratings.

0 DOES NOT APPLY TO MY JOB; NOT REQUIRED; this knowledge is not required to perform my job.

1 OF MINOR IMPORTANCE; this knowledge is of minor importance for effective performance of my current job.

2 FAIRLY IMPORTANT; this knowledge is fairly important for effective performance of my current job.

3 MODERATELY IMPORTANT; this knowledge is moderately important for effective performance of my current job.

4 VERY IMPORTANT; this knowledge is very important for effective performance of my current job.

5 CRITICALLY IMPORTANT; this knowledge is essential for effective performance of my current job.

#### 1. KNOWLEDGE STATEMENTS

	Importance
1. Knowledge of methods for evaluating the impact of site conditions on project development.	<input type="text"/>
2. Knowledge of methods for identifying the impact of site resources on project development.	<input type="text"/>
3. Knowledge of methods for performing topographical analyses.	<input type="text"/>

	Importance
4. Knowledge of methods for interpreting information from geotechnical or geological reports.	<input type="text"/>
5. Knowledge of the effects of topographic, geotechnical, and geologic characteristics on landscape design.	<input type="text"/>
6. Knowledge of topographic, geologic, and geotechnical conditions that present a risk to landscape design.	<input type="text"/>
7. Knowledge of methods for conducting hydrologic analyses.	<input type="text"/>
8. Knowledge of methods for interpreting information from hydrologic reports.	<input type="text"/>
9. Knowledge of the effects of surface and subsurface hydrologic characteristics on landscape design.	<input type="text"/>
10. Knowledge of hydrologic conditions that present a risk to landscape structure or design.	<input type="text"/>
11. Knowledge of methods for obtaining soil analyses.	<input type="text"/>
12. Knowledge of methods for interpreting information from soil analysis reports.	<input type="text"/>
13. Knowledge of the effects of soil conditions on landscape design.	<input type="text"/>
14. Knowledge of the relationship between soil, hydrology, and vegetation.	<input type="text"/>
15. Knowledge of the relationship between environment, climate, and soil condition or contamination.	<input type="text"/>
16. Knowledge of methods for evaluating the impact of climate and microclimate conditions.	<input type="text"/>
17. Knowledge of methods for evaluating site ecology and habitats.	<input type="text"/>
18. Knowledge of methods for interpreting the results of environmental studies.	<input type="text"/>
19. Knowledge of the effects of climate and environmental factors on landscape design.	<input type="text"/>
20. Knowledge of vegetation species suitable to geographic regions.	<input type="text"/>
21. Knowledge of methods for evaluating condition and utility of existing vegetation.	<input type="text"/>
22. Knowledge of vegetation conditions that present risks for landscape development.	<input type="text"/>
23. Knowledge of methods for evaluating the impact of easements and setbacks on site development.	<input type="text"/>
24. Knowledge of methods for evaluating the impact of utilities on site development.	<input type="text"/>
25. Knowledge of methods for evaluating structures and other constructed site features on site development.	<input type="text"/>
<b>2. KNOWLEDGE STATEMENTS (continued)</b>	

	Importance
26. Knowledge of methods for identifying fire risk or hazardous conditions that impact project development.	<input type="text"/>
27. Knowledge of methods for interpreting information about wildland urban interface zones.	<input type="text"/>
28. Knowledge of methods for determining social, cultural, and historical factors that influence site development.	<input type="text"/>
29. Knowledge of methods for evaluating the impact of proposed site development on adjacent sites, structures, or facilities.	<input type="text"/>
30. Knowledge of sources of technical information and expertise for clarifying site findings.	<input type="text"/>
31. Knowledge of techniques for engaging stakeholders in the information-gathering process.	<input type="text"/>
32. Knowledge of methods for analyzing stakeholder input about proposed development processes.	<input type="text"/>
33. Knowledge of laws and regulations pertaining to consumer protections.	<input type="text"/>
34. Knowledge of laws and regulations related to development of professional services contracts.	<input type="text"/>
35. Knowledge of laws related to California Landscape Architects Practice Act.	<input type="text"/>
36. Knowledge of professional and ethical standards related to practice of landscape architecture	<input type="text"/>
37. Knowledge of laws, regulations, and codes associated with project site development.	<input type="text"/>
38. Knowledge of CEQA requirements for site design and development.	<input type="text"/>
39. Knowledge of regulatory agencies governing phases or processes involved in project development.	<input type="text"/>
40. Knowledge of regulatory agency requirements associated with elements of project development.	<input type="text"/>
41. Knowledge of laws and regulations associated with permitting processes.	<input type="text"/>
42. Knowledge of methods for coordinating with technical consultants regarding regulatory, zoning, or property requirements.	<input type="text"/>
43. Knowledge of laws related to site development and the preservation of heritage, endangered, or protected plant species.	<input type="text"/>
44. Knowledge of laws related to the preservation or maintenance of cultural or historical sites.	<input type="text"/>
45. Knowledge of laws related to site development and wildlife protections.	<input type="text"/>
46. Knowledge of laws related to site development near riparian, coastal, or freshwater bodies.	<input type="text"/>
47. Knowledge of laws related to site development subject to stormwater management requirements.	<input type="text"/>
48. Knowledge of factors that impact program feasibility.	<input type="text"/>

	Importance
49. Knowledge of processes involved in evaluating regulatory, site, and cost constraints that impact program feasibility.	<input type="text"/>
50. Knowledge of methods for integrating information from site analysis into program development.	<input type="text"/>
<b>3. KNOWLEDGE STATEMENTS (continued)</b>	
	Importance
51. Knowledge of methods for determining the program scope and parameters.	<input type="text"/>
52. Knowledge of techniques for determining sequence of program components.	<input type="text"/>
53. Knowledge of program alternatives for addressing unique site characteristics, budget, or other site considerations.	<input type="text"/>
54. Knowledge of graphic design and presentation media for conveying information regarding program and alternatives.	<input type="text"/>
55. Knowledge of techniques for stakeholder and public outreach.	<input type="text"/>
56. Knowledge of techniques for communicating project concepts to stakeholders and public.	<input type="text"/>
57. Knowledge of methods for addressing stakeholder or public feedback regarding program.	<input type="text"/>
58. Knowledge of regulatory requirements associated with site development.	<input type="text"/>
59. Knowledge of strategies for integrating site analyses and program objectives into site design.	<input type="text"/>
60. Knowledge of methods for evaluating design options based on program, cost, and constraints.	<input type="text"/>
61. Knowledge of methods for selecting site structures, features, or amenities to conform to program objectives.	<input type="text"/>
62. Knowledge of laws and regulations regarding site accessibility design.	<input type="text"/>
63. Knowledge of methods for designing vehicular and non-vehicular circulation systems.	<input type="text"/>
64. Knowledge of methods for designing for emergency vehicle access.	<input type="text"/>
65. Knowledge of strategies for designing multimodal transportation alternatives.	<input type="text"/>
66. Knowledge of strategies of designing landscapes for bicycle and vehicle parking areas.	<input type="text"/>
67. Knowledge of methods for collaborating with consultants on vehicular and non-vehicular circulation systems.	<input type="text"/>
68. Knowledge of laws and regulations regarding on-site stormwater management.	<input type="text"/>
69. Knowledge of laws and regulations associated with site grading and drainage design.	<input type="text"/>
70. Knowledge of strategies for designing grading and drainage systems.	<input type="text"/>

	Importance
71. Knowledge of calculations used in grading and drainage design.	<input type="text"/>
72. Knowledge of strategies for collaborating with other consultants in grading and drainage design.	<input type="text"/>
73. Knowledge of landscape strategies that support California's ecological communities and regions.	<input type="text"/>
74. Knowledge of methods for selecting vegetation species consistent with site location.	<input type="text"/>
75. Knowledge of methods for selecting vegetation consistent with water management practices.	<input type="text"/>

## Landscape Architects Occupational Analysis Questionnaire

### 8. Copy of page: PART III. RATING JOB KNOWLEDGE

In this part of the questionnaire, rate each of the knowledge statements based on how important the knowledge is to successful performance in your practice. If a knowledge statement is NOT part of your job, then rate it "0" (zero) for Importance.

The boxes for rating the Importance of each knowledge statement have a drop-down list. Click on the "down" arrow for each list to see the ratings. Then select the rating based on your current practice.

#### IMPORTANCE RATING

HOW IMPORTANT is this knowledge in the performance of your current practice?

Use the following scale to make your ratings.

0 DOES NOT APPLY TO MY PRACTICE; NOT REQUIRED; this knowledge is not required to perform in my practice.

1 OF MINOR IMPORTANCE; this knowledge is of minor importance for performance of my practice relative to all other knowledge.

2 FAIRLY IMPORTANT; this knowledge is fairly important for performance of my practice relative to all other knowledge.

3 MODERATELY IMPORTANT; this knowledge is moderately important for performance of my practice relative to all other knowledge.

4 VERY IMPORTANT; this knowledge is very important for performance of my practice relative to all other knowledge.

5 CRITICALLY IMPORTANT; this knowledge is essential for performance of my practice relative to all other knowledge.

#### 1. KNOWLEDGE STATEMENTS

76. Knowledge of methods for addressing geographic and ecological characteristics that impact vegetation.

Importance

	Importance
77. Knowledge of strategies for managing invasive or noxious vegetation in landscape design.	<input type="text"/>
78. Knowledge of planting strategies that mitigate fire or other site hazards.	<input type="text"/>
79. Knowledge of strategies for mitigating or remediating the effects of toxicity on soil.	<input type="text"/>
80. Knowledge of planting strategies for use with reclaimed water.	<input type="text"/>
81. Knowledge of planting strategies for mitigating risks associated with landscape design.	<input type="text"/>
82. Knowledge of laws and regulations regarding water management and conservation.	<input type="text"/>
83. Knowledge of strategies for designing irrigation distribution systems.	<input type="text"/>
84. Knowledge of types of irrigation equipment and their function.	<input type="text"/>
85. Knowledge of methods of hydraulic design for irrigation systems.	<input type="text"/>
86. Knowledge of methods for determining irrigation requirements associated with plant hydrozones.	<input type="text"/>
87. Knowledge of MWELC requirements and other irrigation design practices.	<input type="text"/>
88. Knowledge of laws and regulations regarding lighting design requirements.	<input type="text"/>
89. Knowledge of strategies for designing site lighting.	<input type="text"/>
90. Knowledge of types of lighting fixtures and equipment.	<input type="text"/>
91. Knowledge of strategies for collaborating with other consultants in lighting design.	<input type="text"/>
92. Knowledge of laws and regulations related to site safety and security.	<input type="text"/>
93. Knowledge of design strategies for increase user safety, security, and crime prevention.	<input type="text"/>
94. Knowledge of types of equipment and materials used in site design for safety and security.	<input type="text"/>
95. Knowledge of laws and regulations regarding water management and conservation.	<input type="text"/>
96. Knowledge of strategies for incorporating water conservation solutions into landscape design.	<input type="text"/>
97. Knowledge of strategies for incorporating alternative water sources into landscape design.	<input type="text"/>
98. Knowledge of strategies for collaborating with other consultants in the design of water conservation management systems.	<input type="text"/>
99. Knowledge of design solutions to mitigate geophysical hazards.	<input type="text"/>
100. Knowledge of design solutions to mitigate hydrological hazards.	<input type="text"/>
<b>2. KNOWLEDGE STATEMENTS (continued)</b>	

	Importance
101. Knowledge of design solutions to mitigate fire and climatological hazards.	<input type="text"/>
102. Knowledge of design solutions to mitigate meteorological hazards.	<input type="text"/>
103. Knowledge of design solutions to mitigate biological hazards.	<input type="text"/>
104. Knowledge of laws and regulations related to sustainable development.	<input type="text"/>
105. Knowledge of strategies for landscape design that promote energy conservation.	<input type="text"/>
106. Knowledge of methods for incorporating alternative or renewable energy into landscape design.	<input type="text"/>
107. Knowledge of techniques for mitigating visual impacts associated with renewable energy sources.	<input type="text"/>
108. Knowledge of laws and regulations regarding environmental protection.	<input type="text"/>
109. Knowledge of requirements of Low Impact Development (LID).	<input type="text"/>
110. Knowledge of strategies to promote environmental preservation in landscape design.	<input type="text"/>
111. Knowledge of strategies for landscape design restoring or preserving natural resources.	<input type="text"/>
112. Knowledge of strategies for building soil health and sustainability.	<input type="text"/>
113. Knowledge of strategies for landscape design that increase ecological function and biodiversity.	<input type="text"/>
114. Knowledge of methods for mitigating the effects of development and construction on natural, cultural, and historical resources.	<input type="text"/>
115. Knowledge of methods for mitigating the environmental impacts of site development on adjacent sites.	<input type="text"/>
116. Knowledge of strategies for collaborating with other consultants in mitigating the impacts of site development.	<input type="text"/>
117. Knowledge of methods for preparing project site plan.	<input type="text"/>
118. Knowledge of methods for preparing demolition plans that specify protection, retention, and removal of site materials.	<input type="text"/>
119. Knowledge of methods for preparing grading and drainage plans.	<input type="text"/>
120. Knowledge of methods for preparing hardscape layout plan and material schedules.	<input type="text"/>
121. Knowledge of methods for preparing soil plan and schedules.	<input type="text"/>
122. Knowledge of methods for preparing planting layout plan and schedules.	<input type="text"/>
123. Knowledge of methods for preparing irrigation layout plan and schedules.	<input type="text"/>
124. Knowledge of methods for preparing landscape lighting plan and schedules.	<input type="text"/>
125. Knowledge of methods for preparing construction details.	<input type="text"/>

**3. KNOWLEDGE STATEMENTS (continued)**

	Importance
126. Knowledge of methods for conforming to CSI MasterFormat.	<input type="text"/>
127. Knowledge of strategies for developing project phasing for project construction.	<input type="text"/>
128. Knowledge of procedures for verifying consistency between specifications and construction drawings.	<input type="text"/>
129. Knowledge of methods for determining construction costs.	<input type="text"/>
130. Knowledge of procedures for preparing construction bid documents.	<input type="text"/>
131. Knowledge of procedures for responding to Requests For Information.	<input type="text"/>
132. Knowledge of procedures for recommending contractors based on bid evaluations.	<input type="text"/>
133. Knowledge of procedures for evaluating submittals, change orders, and Requests for Information.	<input type="text"/>
134. Knowledge of methods for evaluating regulatory implications of plan revisions.	<input type="text"/>
135. Knowledge of laws and regulations related to landscape design and construction.	<input type="text"/>
136. Knowledge of methods for evaluating installations of landscape components for compliance with construction documents.	<input type="text"/>
137. Knowledge of procedures for evaluating project work conformance.	<input type="text"/>
138. Knowledge of elements to include in post-construction observation and maintenance.	<input type="text"/>
139. Knowledge of elements to include in post-construction observation and maintenance.	<input type="text"/>
140. Knowledge of requirements for certification of installation compliance.	<input type="text"/>
141. Knowledge of procedures for completing contract closeout.	<input type="text"/>
142. Knowledge of requirements for preparing record drawings.	<input type="text"/>
143. Knowledge of procedures for performing post-occupancy site evaluations.	<input type="text"/>

## Landscape Architects Occupational Analysis Questionnaire

### 9. FINISHED

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE.