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Council of Landscape Architectural Registration Boards

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# Landscape Architect Registration Examination (L.A.R.E.) Orientation Guide

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## **Preface**

This examination information booklet supersedes all information previously distributed concerning the Landscape Architect Registration Examination (L.A.R.E.). The material in this booklet is for use on the Landscape Architect Registration Examination (L.A.R.E.) only.

This booklet may not be brought into the examination.

## **Pre-exam Orientation for Candidates**

The Landscape Architect Registration Examination (L.A.R.E.) is designed to determine whether applicants for landscape architectural licensure possess sufficient knowledge, skills and abilities to provide landscape architectural services without endangering the health, safety and welfare of the public. The L.A.R.E. is prepared and scored by the Council of Landscape Architectural Registration Boards (CLARB) in accordance with all current standards for fairness and quality of licensure exams. CLARB is a non-profit association whose members are the state and provincial registration boards that regulate the profession of landscape architecture in North America.

All sections of the L.A.R.E. are administered by CLARB and all candidates register for the exam on the CLARB website. While the requirements to sit for the exam vary by jurisdiction, the exam, the administration dates and procedures and the passing standards are the same in every jurisdiction.

## **Special Accommodations**

### Registering for the Exam with Special Accommodations

CLARB follows the standards set by the Americans with Disabilities Act (ADA) for accommodations for disabled candidates. Should you require special accommodations for a disability, please contact CLARB as soon as possible to ensure that the testing environment will meet your needs.

### Scheduling a Test Appointment with Special Accommodations

Candidates who test with special accommodations cannot schedule a test appointment with Pearson VUE via the internet. Once you have registered for the L.A.R.E., please contact CLARB to obtain information on how to schedule your testing appointment.

# **The L.A.R.E. Structure**

## **Understanding the Content of the L.A.R.E.**

The Landscape Architect Registration Examination (L.A.R.E.) tests applicants for the knowledge and skill that is required to practice those aspects of landscape architecture that impact the health, safety and welfare of the public.

The exam is based on a scientific “Job Analysis” study conducted every five to seven years. The most recent study was conducted in late 2010/early 2011 in which more than 1,600 practicing landscape architects from across the United States and Canada participated. The analysis included five focus groups and one large-scale validation survey. Survey respondents were asked to rate all job tasks on three separate scales: how frequently the tasks were performed, how important the tasks were to successful performance of the job, and whether or not successful performance of each task was required at initial licensure. Overall, the tasks, and subsequent knowledge, that are performed most often are considered the most important and are required at the initial point of licensure and thus form the basis of the L.A.R.E. as of the September 2012 administration.

## **Format**

The L.A.R.E. consists of four (4) computer-based exam sections. Each section is independent of the others. Sections 1 and 2 consist of multiple-choice and multiple-response questions. Sections 3 and 4 consist of advanced item types (“drag and place” and “hot spot” items), multiple-choice and multiple-response questions. The number of items for each section is listed after the title for each section of the L.A.R.E. in this guide.

## **Exam Content**

This guide describes the content that will be tested under each section of the examination. Subsection breakdowns indicate a more detailed description of specific subject matter found on the examination as well as the percentage of items that will be included in that subsection topic.

For additional information about the exam including requirements to take the test, the registration process and the scoring process, please visit the Exam Candidates section of the CLARB website or contact CLARB.

## **Section 1 - Project and Construction Management**

(100 Items consisting of multiple-choice and multiple-response questions; 3 hours seat time, 2 ½ hours for the exam)

### Project Management (62%)

- Determine Project Scope and Client Requirements
- Establish and Monitor Project Budgets (or Statement of Probable Cost)
- Establish Scope of Services and Required Outside Expertise
- Develop Program
- Prepare and Review Contractual Agreements

- Coordinate Topographical Survey and Develop Project Base Map
- Establish Project Schedule
- Facilitate Meetings (e.g. staff, government regulators, consultants, clients)
- Coordinate Other Discipline's Documents
- Document Design Decisions and Project Communication
- Prepare Technical Memorandum and Graphics
- Obtain Input from Stakeholders Regarding Project
- Coordinate Construction Documents (internally, with clients, and with other consultants)

#### Bidding and Construction (38%)

- Respond to Bidder Requests for Information
- Issue Addenda to Construction Documents
- Participate in Construction Meetings
- Respond to Contractor Requests for Information
- Review and Respond to Submittals
- Review and Respond to Shop Drawings
- Prepare Change Orders
- Conduct Construction Site Review and Documentation
- Perform Substantial Completion Inspection
- Perform Final Inspection

## **Section 2 – Inventory and Analysis**

(80 items consisting of multiple-choice and multiple-response questions; 2 ½ hours seat time, 2 hours for the exam)

#### Site Inventory (22%)

- Determine Applicable Codes, Regulations, and Permitting Requirements
- Conduct Onsite Investigation
- Collect and Record Site Inventory
- Identify Gaps and Deficiencies

#### Analysis of Existing Conditions (78%)

- Analyze Codes and Regulations for Design Impact
- Perform Site Use Analysis
- Perform Circulation Analysis
- Interpret Utility Analysis
- Perform View Analysis
- Perform Microclimate Analysis
- Interpret Floodplain Conditions

- Perform Vegetation Analysis
- Perform Solar Analysis
- Interpret Ecological Analysis (e.g. habitat, biodiversity)
- Perform a Slope Analysis
- Interpret Soil Analysis
- Interpret Geotechnical Analysis
- Perform Small-Scale Surface Hydrological Analysis
- Interpret Stakeholder Input
- Analyze On and Offsite Relationships

### **Section 3 – Design**

(100 items consisting of advanced item types, multiple-choice and multiple-response questions; 4 hours seat time, 3 ½ hour for the exam)

#### Concept Development (58%)

- Synthesize Site Opportunities and Constraints
- Refine Program
- Create Design Alternatives
- Analyze Design Alternatives
- Develop Concept Narrative
- Refine Conceptual Design(s)
- Prepare Conceptual Renderings\*

*\*The intent is to address candidates' understanding of types and uses of rendering techniques. We do not expect candidates to actually "draw."*

#### Design Development (42%)

- Develop Master Plan Documents (e.g. land-use, circulation, phasing plan, and guidelines)
- Perform Earthwork Analysis
- Refine the Preferred Design Alternative
- Develop Preliminary Site Plans, Sections, and Details
- Prepare Illustrative Graphics (e.g. perspectives, elevations, plans, sections)
- Investigate, Verify Availability, and Select Design Materials and Components

## **Section 4 – Grading, Drainage and Construction Documentation**

(120 items consisting of advanced item types, multiple-choice and multiple-response questions; 4 ½ hours seat time, 4 hours for the exam)

### Construction Documentation (100%)

- Prepare Existing Conditions Plan
- Prepare Demolition and Removal Plan
- Prepare Site Protection and Preservation Plans (e.g. soil, existing features, existing pavements, historic elements, vegetation)
- Prepare Erosion and Sediment-Control Plan
- Prepare Layout and Materials Plan
- Prepare Grading Plan
- Prepare Stormwater Management Plan
- Prepare Planting Plans
- Prepare Project Sections and Profiles
- Prepare Construction Details
- Prepare General Contract and Bidding Specifications
- Prepare Technical Specifications



## **Frequently Asked Questions about the Exam Procedure**

Q. - How do I register for the exam?

A.- All candidates will register for the exam via the CLARB website.

Q. - How do I know if I am eligible to take the L.A.R.E.?

A. - If you meet CLARB's eligibility requirements AND your licensure board does not require pre-approval, you are eligible to take the L.A.R.E.

Q. - Do I need to obtain pre-approval to take the exam?

A. - Refer to the eligibility requirements on the candidate portion of the CLARB website and/or contact the licensure board for pre-approval details.

Q. - Why is the Council Record part of the exam registration process?

A. - Starting a Council Record during the exam process ensures that CLARB is collecting, verifying and storing the information that licensure boards need from you in order to apply to take the exam and be evaluated for licensure. The licensure process is simplified when candidates and licensure boards use the Council Record. The Council Record is not just your exam application. It is the field-recognized and preferred tool for tracking all of your professional accomplishments and can be used at every step of your career.

Q. - Do I have to "complete" the Council Record during the exam registration process?

A. - Candidates who need to obtain pre-approval must start and complete the Record so they can transmit their Record to their licensure board. (Exam candidates may transmit their Record for free in support of exam application.) Candidates who do not need to obtain pre-approval only need to start the Council Record and can complete it during testing so that it can be used in support of initial licensure application.

Q. Can I take some sections in one state or province and the remainder in another?

A. You are able to take the exam at any Pearson VUE test center across North America. It is not a requirement to take the exam in the state or province where you wish to become licensed.

Q. Why can't exams be offered year round now that they are on computer?

A. CLARB has a limited bank of items and to maintain security and ensure accuracy and fairness in testing we can only offer the exam in a few windows during the year.

- Q. Am I able to take water or food into the testing center?
- A. You are not permitted to bring anything into the actual exam delivery room with you, but you are permitted to take breaks so that you can get a drink of water or a snack from your locker.
- Q. - Are practice tests available for all sections of the exam?
- A. - CLARB provides sample examinations used to inform candidates of the examination content and delivery methods. The sample examinations are available from the CLARB website. Due to the fact that CLARB produces the examination which is used by licensure Boards to determine qualifications for licensure, CLARB cannot provide preparatory information to assist candidates in passing the examination.
- Q. - When should I arrive at the test center?
- A. - Plan to arrive 30 minutes before the scheduled appointment to allow time for check-in procedures. Candidates who arrive late will NOT be allowed to take the examination.
- Q. - When will I get my exam results?
- A. - Your exam results will be posted on the CLARB website approximately 4-6 weeks following the last day of the administration. CLARB will notify candidates via email when exam results are available.
- Q. - How is my exam scored?
- A. - Each item on the exam is worth one point. Your overall score is based on the number of items you answer correctly. Once the exam has been scored we convert your raw score to a scaled score so that we have a consistent way to report exam results from one administration to the next. No matter what exam you take, or when you take it, the passing point will always be converted to 650. The scaled score is intended to help candidates better understand how close they were to the passing point
- Q. - Can I bring a handheld calculator to use during the examination?
- A. - No. The Pearson VUE test center will provide a calculator when you check-in for the exam. If you are not provided a calculator upon entry to the testing room, be sure to remind the proctor that you should have a calculator for the examination. Should the proctor indicate that you are not permitted a calculator, ask them to contact CLARB immediately.
- Q. Can I bring paper and pencil to the test center to sketch on to help me answer the questions?
- A. No. You are not permitted to bring anything into the test center. A whiteboard and erasable marker will be provided for you by the test center.

- Q. - Can I cancel the exam?
- A. - CLARB has a Cancellation policy that requires candidates to cancel their exam prior to the posted cancellation deadline. For details on the CLARB Cancellation policy, please visit the Exam Candidates section of the CLARB website.
- Q. - What happens if I miss my examination due to a family emergency?
- A. - Candidates can apply for a refund under the CLARB Good Cause policy. Details regarding the Good Cause policy can be found in the Exam Candidates section of the CLARB website.
- Q. - What do I do if I am not permitted to test by Pearson VUE employees for any reason?
- A. - Immediately contact the CLARB office and explain your situation. CLARB staff may be able to remedy the situation if contacted immediately.
- Q. - What do I do if I experience an issue such as a computer software problem that does not allow me to complete the exam?
- A. - Immediately contact the CLARB office and explain your situation. CLARB staff may be able to remedy the situation if contacted immediately.

### **Q&As about exam items**

- Q. How will I be tested on orientation of elements in a drag and place item?
- A. The elements in a drag and place item cannot be manipulated in any way. To test on orientation, you would have multiple elements in different orientation and would need to select the appropriate element and place it on the site (i.e., one tennis court oriented N/S and one oriented E/W).
- Q. On a drag and place question, if I am required to place two elements, but only get one correct how will I be scored?
- A. Each question is worth one point and you need to get the entirety of the question correct to achieve a point. If you placed only one of the two elements correctly, you would receive no point for that question.
- Q. Are there multiple correct answers for the advanced item types?
- A. The item writer creates a scoring “area” for the element that relates to the appropriate location for that element. The location can be very specific (only one correct location) or very generic like anywhere in soil type A.
- Q. If my drag and place element is 75% or so within the scoring area, will I get a point for that item?
- A. Any margin for error is already built into the scoring area by the item writer. The entire element must fit fully within the scoring area to receive credit.

- Q. Are all questions on the test of the same value?
- A. All questions, no matter the type, are worth one point each. For example, a drag and place item that requires you to locate six elements is the same value as a multiple-choice item that requires one answer choice – one point.
- Q. How are multiple response items graded? If I select three items correctly and there are supposed to be four, do I get any credit?
- A. In all item types, including the multiple response, you must get all of the answers correct to get one point. There is no partial credit given if a portion of the answers are correct.
- Q. How are wood sizing questions going to be handled? Are you going to include the wood sizing chart within the problem?
- A. All supporting material needed to answer an item will be included either on the item screen itself or within a pop-up “exhibit” window accessible through the “Show Exhibit” button found in the upper left portion of the item.
- Q. I understand that measurement in feet or meters will be replaced with “units” in the advanced item types. Will units be used in all of the items?
- A. Some of the multiple-choice items and multiple response items that test on codes like accessibility codes may have measurement in Imperial and metric. The item will include Imperial measurement (i.e., feet, inches) and metric measurement in brackets (e.g., [2.3 m]).
- Q. What if I drag a contour in a drag and place item and it does not match up exactly with the existing contours?
- A. Contour locations need to be fairly accurate, but the item writer does provide some room for error due to the nature of placing the element with a computer mouse.
- Q. Will the L.A.R.E. Reference Manual be used on the exam?
- A. Any local zoning code, formula or other supporting material will be provided directly in the item or within the exhibit information pop-up window for that item. Some of the information that was previously presented in the Reference Manual to help you prepare for the exam is now in this document.

## **The L.A.R.E. in Canada**

The L.A.R.E. became international in scope with the participation of the Canadian provinces in the examination process. With this event came the responsibility of producing the examination in the metric scale as well as using the Imperial system. A standard set of construction codes were also required to simplify the requirements of the examination. In the examination, Imperial values will be followed by metric values in square brackets ([ ]). References to Canadian standards will also be presented in this fashion. Since the metric equivalents may not be exact conversions, you are warned that converting or switching units within a question to check answers may result in an incorrect answer.

### Sample exam item with Canadian reference and metric conversions:

According to U.S. [Canadian] standards, the minimum width of a handicapped parking space is

- A. 8' [ 2.5m]
- B. 10' [3.0m]
- C. 12' [3.8m]
- D. 15' [4.5m]

## **Exam Methodology**

The L.A.R.E. consists of four computer-based exam sections. Each section is independent of the others. Sections 1 and 2 consist of multiple-choice and multiple-response questions and Sections 3 and 4 consist of advanced item types ("drag and place" and "hot spot" items), multiple-choice and multiple-response questions. A demonstration video of the four item types can be found in the candidate preparation section of the CLARB website.

L.A.R.E. resources from CLARB (i.e. this guide and "Exam Specifications") detail the knowledge areas and total number of items for each section. The score for each of the exam sections is determined by the number of questions answered correctly. Items left blank are counted as incorrect. Each item addresses one of the areas of knowledge described in the content of the exam and is worth one point each.

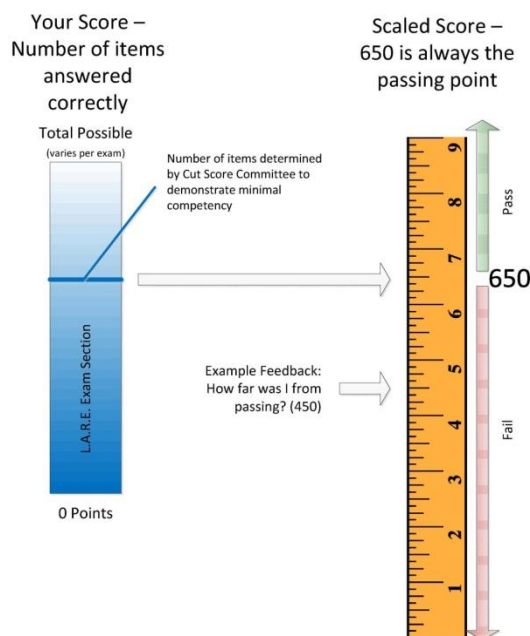
During and immediately following the exam administration we collect candidate feedback on exam questions. We also review the item statistics to ensure the items all performed properly. Both candidate feedback and item statistics are reviewed and any adjustments made to the items such as removing the item from scoring are made prior to the score calculations. The exam data and scoring are then thoroughly run through quality control procedures by psychometric professionals.

## Exam Results Reporting

Exam results for all sections of the L.A.R.E. are not reported immediately after completing the exam due to the analysis performed on the items to ensure that the items are correct, fair and accurately address the subject matter being tested. CLARB's testing experts look at the difficulty of the items, the response patterns by candidates and the ability of the items to discriminate between candidates of differing ability levels.

Exam results for all sections of the L.A.R.E. will be available on the CLARB website approximately 4-6 weeks after the last day of the exam administration.

Exam results are reported as pass or fail. If a "Fail" result is received, a number representing a scaled score will also be received. The scaled score provides candidates with a performance indicator demonstrating how close they were to the passing point. For each section, candidates must obtain a scaled score of at least 650 to pass. A scaled score of 640, for example, would indicate that a candidate was close to passing.



CLARB utilizes scaled scoring for two key reasons:

1. To report performance on the L.A.R.E. in a consistent way even though the number of items in each section varies, and;
2. It is a "best practice" of the testing industry.

## **Validity of Scores**

The CLARB program assures the validity of scores reported for CLARB examinations by every means available. Your scores may be classified as indeterminate if the scores are at or above the passing level and the CLARB program cannot certify that they represent a valid measure of your knowledge or competence as sampled by the examination. The CLARB program may make such a determination when aberrancies in performance are detected for which there is no reasonable and satisfactory explanation. A classification of indeterminate may result from exam impropriety (see following section) or from other factors, such as unexplained inconsistency in performance.

The performance of all examinees is monitored and may be analyzed statistically to detect aberrancies indicating that your scores may be indeterminate. In addition, evidence of exam impropriety may suggest that your scores do not represent a valid measure of your knowledge or competence as sampled by the examination. In these circumstances, your score report may be delayed, pending completion of further analysis and investigation. If your score report is delayed, you will be notified. You will have an opportunity to provide information that you consider relevant. After review and analysis of all available information, scores will be classified as valid and will be reported, or scores will be classified as indeterminate. If the scores are classified as indeterminate, you will be advised of the options for retaking the examination. Scores classified as indeterminate do not appear on your record; rather, an annotation indicates that the scores were classified as indeterminate. Scores classified as indeterminate will not be reported to anyone. Anyone who has received a report of scores that are later classified as indeterminate will be notified of the indeterminate classification. If exam impropriety appears to have contributed to a decision that your scores are indeterminate, action will also be taken as described in the Examples of Exam Impropriety section.

## **Completing the L.A.R.E.**

If a candidate fails any section of the exam, he/she needs to retake that section in future administration(s) in an attempt to obtain a passing score. A candidate may usually retake a section of the exam as many times as necessary in order to achieve a passing score; however, some jurisdictions limit the number of retakes, so this information should be verified with the registration board in the jurisdiction where you are seeking initial licensure.

## **L.A.R.E. Rules of Conduct**

If a candidate knowingly violates or attempts to circumvent the rules and procedures of the exam as established by CLARB, the results of that exam may not be scored or accepted. CLARB reserves the right to take remedial action—including, but not limited to, barring the candidate from future testing, canceling the candidate's exam scores, or filing of civil or criminal charges. If a candidate's scores are canceled, they will not be reported and the associated fees will not be refunded. The candidate will be notified of the alleged violation(s) and be given an opportunity to provide evidence to the contrary and reasons that the exam score(s) should not be canceled or withheld.

Exam impropriety includes any action by applicants, examiners, potential applicants or others when solicited by an applicant and/or examinee that subverts or attempts to subvert the examination process.

Although tests are administered under strict supervision and security measures, testing irregularities may sometimes occur. Candidates are encouraged to contact CLARB as soon as possible to report any behavior that violates exam standards and may lead to an invalid score. All information will be held in strict confidence. • E-mail: [info@clarb.org](mailto:info@clarb.org)

## **Examples of Exam Impropriety**

The following are examples of exam improprieties. This list is not meant to be exhaustive and CLARB reserves the right to take action on other items considered to be an attempt to gain unfair advantage or circumvent the intent of the exam.

- attempting to take the exam for someone else or having someone else take the exam or any portion of the exam for you
- failing to provide acceptable identification
- obtaining improper access to the exam, a part of the exam or information about the exam
- using a telephone or cellular phone during the exam session or during breaks
- using any aids in connection with the exam other than those provided at the exam site; for example: pagers, beepers, calculators, watch calculators, books, pamphlets, notes, stereos or radios with headphones, telephones, cell phones, watch alarms (including those with flashing lights or alarm sounds), stop watches, dictionaries, translators and any hand-held electronic or photographic devices
- creating a disturbance (disruptive behavior in any form will not be tolerated; the exam administrator/supervisor has sole discretion in determining what constitutes disruptive behavior)
- attempting to give or receive assistance or otherwise communicate in any manner with another person about the content of the exam during the administration, during breaks or after the exam
- removing or attempting to remove exam content from the test center; under no circumstances may exam content or any part of the exam content be removed, reproduced and/or disclosed by any means (e.g., hard copy, verbally, electronically) to any person or entity
- tampering with a computer
- attempting to remove scratch paper from the exam room
- bringing a weapon or firearm into the computer laboratory
- leaving the exam center vicinity during the exam session or during breaks



- leaving the exam room without permission
- taking excessive or extended unscheduled breaks during the test session; exam center administrator supervisors are required to strictly monitor unscheduled breaks and report examinees that take excessive or extended breaks
- failing to follow any of the exam administration regulations contained in any examination orientation guides, given by the exam administrator/supervisor, or specified in any exam materials
- seeking and/or obtaining unauthorized access to examination material
- providing false information or making false statements on or in connection with application forms, or other CLARB related documents
- taking an examination without being eligible for it or attempting to do so
- making notes of any kind while in the secure areas of the test center except on the writing material provided at the test center for this purpose
- failing to adhere to any CLARB policy, procedure or rule, including instructions of the test center staff
- verbal or physical harassment of test center staff or other disruptive or unprofessional behavior at the test center (the exam administrator/supervisor has the sole discretion in determining what constitutes disruptive and/or unprofessional behavior)
- possessing any unauthorized material, including but not limited to, photographic equipment, communication or recording devices, electronic paging devices, cellular telephones, dictionaries, translators, books, notes, calculators, watch alarms, stereos or radios with or without headphones or stop watches
- altering or misrepresenting examination scores
- any unauthorized reproduction by any means, including reconstruction through memorization, and/or dissemination of copyrighted examination materials by any means, including the Internet
- communicating or attempting to communicate about specific test items, cases, and/or answers with another examinee, potential examinee, or formal or informal test preparation group at any time before, during or after an examination
- revealing examination content to anyone during, or after the exam administration, including but not limited to social networking sites and other online forums

NOTE: Looking in the direction of another examinee's computer monitor or talking to another examinee during the examination may be reported as evidence of giving, receiving or obtaining unauthorized assistance. The report may result in a determination of exam impropriety. Discussion of examination content or answers on the Internet may also result in a determination of exam impropriety.

If information received suggests that exam impropriety has occurred, statistical analyses may be conducted and additional information may be gathered.

You will be advised of the alleged exam impropriety, and you will have an opportunity to provide information that you consider relevant to the evaluation of the allegation. Your scores may be withheld, if they have not been reported previously. Applications may not be processed, and you may not be permitted to take subsequent examinations until a final decision regarding exam impropriety is made. If it is determined that you engaged in exam impropriety, information regarding this determination becomes part of your CLARB

record. Your score report (if applicable) and CLARB record will contain a notation regarding the exam impropriety. Information about the exam impropriety will be provided to third parties that receive or have received your CLARB record. If it is determined that the exam impropriety is egregious and/or threatens the integrity of the examination system, you may be barred from future CLARB examinations and/or special administrative procedures may be implemented for your future examinations. The CLARB program also reserves the right to take such actions when information regarding behavior of examinees on predecessor examinations indicates such actions may be necessary to ensure the security of the L.A.R.E.

## **Examination Materials and What to Expect at the Testing Center**

### **Security:**

[Learn more about Pearson VUE's security procedures.](#)

### **Required:**

You must present two forms of valid identification when arriving at the testing center. At least one must be an Official ID with a photograph and the other may be a Secondary ID. The name on the ID must match the name under which you registered for the exam. If you have had a name change between exam registration and administration, you must contact CLARB prior to arriving at the test center. You will be required to bring validation of your name change with you to the test center.

Acceptable forms of Official ID with photograph:

- Driver's license
- Military ID card
- Valid passport
- State ID card

Acceptable forms of Secondary ID:

- Credit card
- Check, ATM or Debit card

### **Provided:**

- A calculator will be provided by the test center. Please request a calculator if you are not provided one upon check-in to the testing room.
- The test proctor will provide a white board and erasable marker to use as scratch paper.

**Prohibited:**

- No items including reference material, calculators, pencils, pens, paper, drafting supplies, etc. will be allowed in the testing room.
- No personal items (including purses, fanny packs, food items) will be allowed in the testing room. Personal items must be left in a locker in the test center for test security purposes, so please limit what you bring to the examination center.
- You may not bring cellular phones, pagers, devices with a computer memory chip or any device with an alphanumeric keyboard (e.g., a language translation tool) to the test site.

**Additional Reference Information****Rules of Professional Conduct****Competence**

(A) In engaging in the practice of landscape architecture, a registered landscape architect shall act with reasonable care and competence and shall apply the technical knowledge and skill which are ordinarily applied by registered landscape architects of good standing, practicing in the same locality.

(B) In designing a project, a registered landscape architect shall take into account all applicable state and municipal building laws and regulations. While a registered landscape architect may rely on the advice of other professionals, (e.g., attorneys, engineers and other qualified persons) as to the intent and meaning of such regulations, once having obtained such advice, a registered landscape architect shall not knowingly design a project in violation of such laws and regulations.

(C) A registered landscape architect shall undertake to perform professional services only when he or she, together with those whom the registered landscape architect may engage as consultants, is qualified by education, training and experience in the specific technical areas involved.

(D) No individual shall be permitted to engage in the practice of landscape architecture if, in the Board's judgment, such individual's professional competence is substantially impaired by physical or mental disabilities.

**Conflict of Interest**

(A) A registered landscape architect shall not accept compensation for his or her services from more than one party on a project unless the circumstances are fully disclosed to and agreed to by (such disclosure and agreement to be in writing) all interested parties.

(B) If a registered landscape architect has any business association or direct or indirect financial interest which is substantial enough to influence his or her judgment in connection with his or her performance of professional services, the registered landscape architect shall fully disclose in writing to his or her client or employer the nature of the business association or financial interest, and, if the client of the employer

objects to such association or financial interest, the registered landscape architect will either terminate such association or interest or offer to give up the commission or employment.

(C) A registered landscape architect shall not solicit or accept compensation from material or equipment suppliers in return for specifying or endorsing their products.

(D) When acting as the interpreter of building contract documents and the judge of contract performance, a registered landscape architect shall render decisions impartially, favoring neither party to the contract.

#### Full Disclosure

(A) A registered landscape architect, making public statements on landscape architectural questions, shall disclose when he or she is being compensated for making such statements.

(B) A registered landscape architect shall accurately represent to a prospective or existing client or employer his or her qualifications and the scope of his or her responsibility in connection with work for which he or she is claiming credit.

(C) If, in the course of his or her work on a project, a registered landscape architect becomes aware of a decision taken by his or her employer or client, against such registered landscape architect's advice, which violates applicable state or municipal building laws and regulations and which will, in the registered landscape architect's judgment, materially and adversely affect the safety to the public of the finished project, the registered landscape architect shall:

1. report the decision to the local building inspector or other public official charged with the enforcement of the applicable state, provincial or municipal building laws and regulations;
2. refuse to consent to the decision; and
3. in circumstances where the registered landscape architect reasonably believes that other such decisions will be taken, notwithstanding his or her objections, terminate his or her services with respect to the project. In the case of a termination in accordance with this clause (3), the registered landscape architect shall have no liability to his or her client or employer on account of such termination.

(D) A registered landscape architect shall not deliberately make a materially false statement or deliberately fail to disclose a material fact requested in connection with his or her application for a registration or renewal thereof.

(E) A registered landscape architect shall not assist the application for a registration of an individual known by the registered landscape architect to be unqualified in respect to education, training, experience or character.

(F) A registered landscape architect possessing knowledge of a violation of the provisions set forth in these regulations by another registered landscape architect shall report such knowledge to the Board.

## Compliance with Laws

- (A) A registered landscape architect shall not, while engaging in the practice of landscape architecture, knowingly violate any state, provincial or federal criminal law.
- (B) A registered landscape architect shall neither offer nor make any payment or gift to a government official (whether elected or appointed) with the intent of influencing the official's judgment in connection with a prospective or existing project in which the registered landscape architect is interested.
- (C) A registered landscape architect shall comply with the registration laws and regulations governing his or her professional practice in any jurisdiction.

## Professional Conduct

- (A) Each office in a jurisdiction maintained for the preparation of drawings, specifications, reports or other professional landscape architectural work shall have a registered landscape architect resident and regularly employed in that office having direct supervision of such work.
- (B) A registered landscape architect shall not sign or seal drawings, specifications, reports or other professional work for which he or she does not have direct professional knowledge and direct supervisory control; provided, however, that in the case of the portions of such professional work prepared by the registered landscape architect's consultants, registered in this jurisdiction, the registered landscape architect may sign or seal that portion of the professional work if the registered landscape architect has reviewed such portion, has coordinated its preparation, and intends to be responsible for its adequacy.
- (C) A registered landscape architect shall neither offer nor make any gifts, other than gifts of nominal value (including, for example, reasonable entertainment and hospitality), with the intent of influencing the judgment of an existing or prospective client in connection with a project in which the registered landscape architect is interested.
- (D) A registered landscape architect shall not engage in conduct involving fraud or wanton disregard of the rights of others.

## **Fasteners and Reinforcing List (for Section 4)**

The following is a list of fasteners and reinforcing materials that may appear in questions in Section 4 of the L.A.R.E. This list has been prepared by the CLARB Examination Committee. While the committee believes that this list will be of assistance to you in preparing for the L.A.R.E., no representation is made that a complete understanding of the materials on this list will ensure a passing grade on the examination, and no representation is made that the examination questions will be limited in scope to the list shown.

### **BOLTS:**

- Carriage Bolt Assembly
- Eye Bolt
- J-Bolt Assembly
- L-shaped Anchor Bolt Assembly
- Lag Bolt
- Lag Bolt with Expansion Shield
- Lag Bolt with Fiber Plug
- Lag Bolt with Lead Shield
- Machine Bolt Assembly
- Machine Bolt with Expansion Shield
- Threaded Rod Assembly
- Toggle Bolt Assembly

### **SCREWS AND NAILS:**

- Cement Nail
- Common Nail
- Finish Nail
- Hook Nail
- Machine Screw
- Masonry Nail
- Spike
- Wood Screw

### **METAL BRACKETS:**

- Joist Hanger
- Post Anchor
- Post Cap Tie Plate
- Strap Hanger
- Plate Anchor

### **MISCELLANEOUS FASTENERS:**

- Construction Adhesive
- Drive Anchor
- Duct Tape
- Epoxy
- Masonry Wall Tie
- Mastic
- Mortar
- Rivet
- Snap Tie
- Solder
- Staple
- Z-anchor

### **REINFORCEMENT:**

- #3 Rebar
- #4 Rebar
- #6 Rebar
- #8 Rebar
- Cavity Wall Tie
- Fiber Mesh
- Geosynthetic Reinforcing Grid
- Steel Dowel
- Truss Design Reinforcement
- Welded Wire Mesh (WWM)

## Materials List (for Section 3 and 4)

The following is a list of materials that may appear in questions in Section 3 and/or 4 of the L.A.R.E. This list has been prepared by the CLARB Examination Committee. While the committee believes that this list will be of assistance to you in preparing for the L.A.R.E., no representation is made that a complete understanding of the materials on this list will ensure a passing grade on the examination, and no representation is made that the examination questions will be limited in scope to the list shown.

Angle Iron	Joint Sealing Compound
Asphalt (Bituminous Concrete)	Mastic
Brass Pipe	Metal Sleeve
Brick	Mortar
Butt Hinge	Mulch
Caulk	Perforated PVC Pipe
Ceramic Tile	Polyethylene Pipe
Concrete	Porcelain Enamel
Concrete Masonry Units (CMU)	Portland Cement
Concrete Pavers	Prefabricated Wall Drain
Copper Pipe	PVC Pipe
Epoxy Sealer	Sand
Expansion Joint Material	Soil
Filter Fabric	Soil Cement
Flagstone	Steel Tubing - Round
Flashing	Steel Tubing - Square
Flat Steel	Steel Washers
Floor Drain	Stone
Foam Insulation	Stone Dust (Fines)
Galvanized Electrical Conduit	Strap Hinge
Gate Latch Assembly	Stucco
Geotextile grid	Tar
Granite	Wall Reinforcement
Gravel (crushed stone, granular material, aggregate, peagravel)	Waterproofing (Bituminous)
Grout (non-shrink)	Waterstop
	Wood (Lumber)
	Wrought Iron

### **Lumber/Timber List (for Section 4)**

The following is a list of lumber/timber that may appear in questions in Section 4 of the L.A.R.E. This list has been prepared by the CLARB Examination Committee. While the committee believes that this list will be of assistance to you in preparing for the L.A.R.E., no representation is made that a complete understanding of the materials on this list will ensure a passing grade on the examination, and no representation is made that the examination questions will be limited in scope to the list shown.

1x4 [25x100]  
1x6 [25x150]  
1x8 [25x200]  
1x10 [25x250]  
1x12 [25x300]  
5/4x6 [30x150]  
2x2 [50x50]  
2x4 [50x100]  
2x6 [50x150]  
2x8 [50x200]  
2x10 [50x250]  
2x12 [50x300]  
4x4 [100x100]  
4x6 [100x150]  
4x8 [100x200]  
4x10 [100x250]  
4x12 [100x300]  
6x6 [150x150]  
6x8 [150x200]  
8x8 [200x200]



## Wood Member Sizing Chart (for Section 4)

The following are charts that may appear in questions in Section 4 of the L.A.R.E. This material will be imbedded within any question that requires use of the chart.

For external wood structures with uniform joist and beam spacing.

### Maximum Allowable Spans for Spaced Boards

	Laid Flat			
	1 x 4 [25 x 100]	5/4 x 6 [30 x 150]	2 x 4 [50 x 100]	2 x 6 [50 x 150]
For Decking	12" [30cm]	16" [40cm]	24" [60cm]	24" [60cm]
For Benches	NA	NA	36" [100cm]	36" [100cm]

### Maximum Allowable Spans for Joists

Joist Size	Joist Spacing		
	16" [40cm]	24" [60cm]	32" [80cm]
2 x 6 [50 x 150]	10' [3.0m]	8' [2.4m]	6' [1.8m]
2 x 8 [50 x 200]	12' [3.6m]	10' [3.0m]	8' [2.4m]
2 x 10 [50 x 250]	16' [4.8m]	14' [4.2m]	10' [3.0m]

### Minimum Beam Sizes and Allowable Beam Spans

Spacing Between Beams	4' [1.2m]	6' [1.8m]	8' [2.4m]	10' [3.0m]	12' [3.6m]	
	—	—	—	—	—	Beam Size*
	6' [1.8m]	6' [1.8m]	—	—	—	4 x 6 [100 x 150]
	10' [3.0m]	8' [2.4m]	6' [1.8m]	6' [1.8m]	—	4 x 8 [100 x 200]
	12' [3.6m]	10' [3.0m]	8' [2.4m]	8' [2.4m]	6' [1.8m]	4 x 10 [100 x 250]
	12' [3.6m]	12' [3.6m]	10' [3.0m]	10' [3.0m]	8' [2.4m]	4 x 12 [100 x 300]
	Maximum Distance Between Posts (o.c.)					

\* - Two (2) 2 by's [50's] are acceptable.

NOTE: Maximum cantilever for joists and beams is 24" [60cm].

## Subsurface Drainage

The following information may appear in questions used on the L.A.R.E. in order to answer items pertaining to site drainage systems.

Rational Method formula:

$$q = CiA \text{ [} q = CiA/360 \text{]}$$

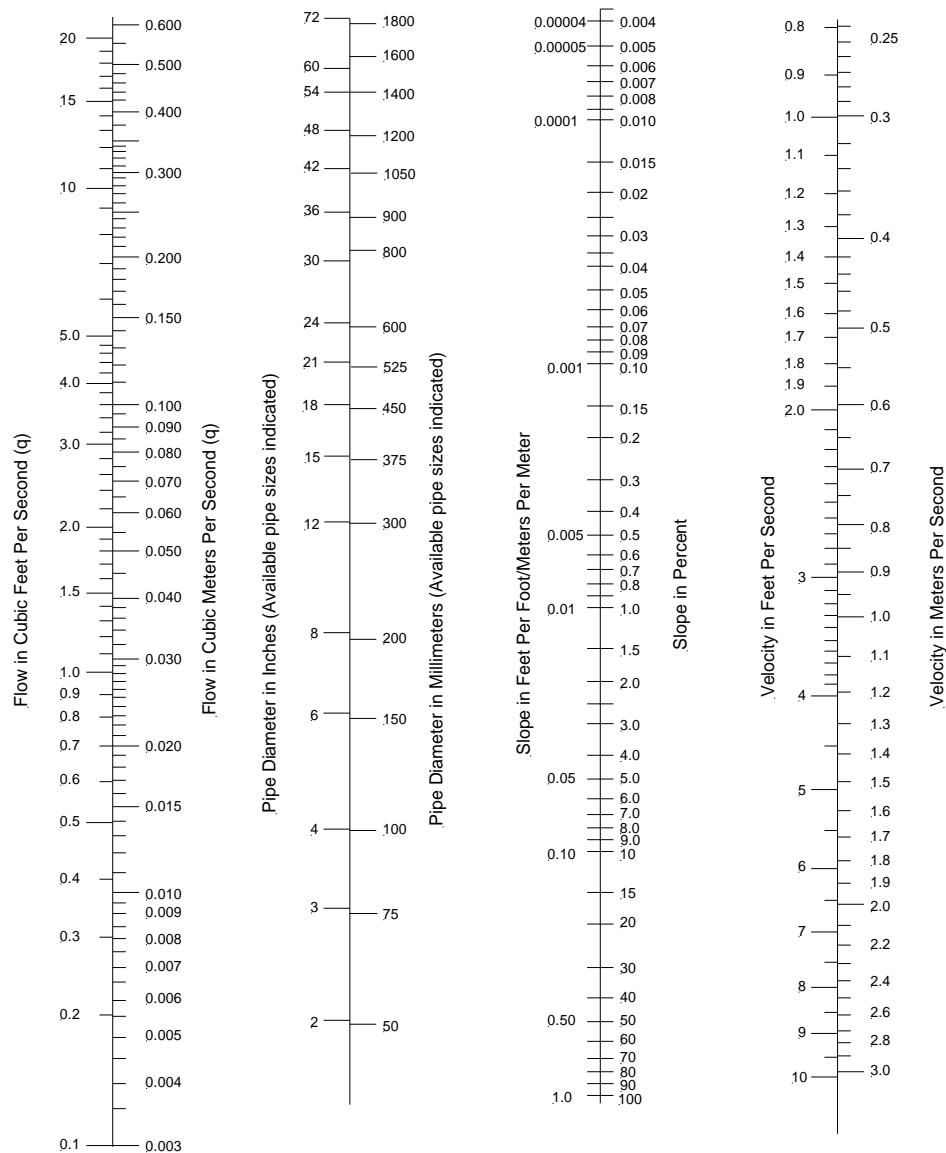
q = Quantity of runoff in cubic feet per second [cubic metres per second].

C = Runoff coefficient.

i = Intensity of rainfall in inches per hour [millimetres per hour].

A = Area in acres [hectares].

Nomograph for Circular Pipes Flowing Full (Manning's Equation - Concrete Pipe  $n=0.013$ ) (for Section 4)



## **L.A.R.E. Administration Dates, Section Fees, Deadlines, Information about Registering, Etc.**

Please visit the Exam Candidates section of the CLARB website for all of this information.