

Application for Preliminary Sunrise Review Assessment
Landscape Architects
Vermont Secretary of State
Office of Professional Regulation

Submitted by the Vermont Chapter of the American Society of Landscape Architects



June 30, 2008



Table of Contents

INTRODUCTION STATEMENT.....	2
1 <u>PROFESSION / OCCUPATION SEEKING REGULATION.....</u>	<u>2</u>
2 <u>PERSON / ORGAINZATION SUBMITTING APPLICATION.....</u>	<u>2</u>
3 <u>VERMONT SOCIETY / ASSOCIATION.....</u>	<u>2</u>
4 <u>national society / association.....</u>	<u>2</u>
5 <u>does the national orgainzation have a license or certification process?</u>	<u>2</u>
6 <u>list other states currently regulating this profession / occupation.....</u>	<u>2</u>
7 <u>define the services provided by this profession / occupation. What is the scope of practice?.....</u>	<u>2</u>
8 <u>what harm or danger to the health, safety, or welfare of the public can be demonstrated if the practice of this profession / occupation were to remain unregulated? (Note: The potential harm must be recognizable and not remote or speculative). 2</u>	<u>2</u>
9 <u>what benefit can the public resonably expect if this profession / occupation is regulated and how would it be measured?.....</u>	<u>2</u>
10 <u>why isn't the public protected from unprofessional practitioners through means other than regulation? (For example, criminal penalties, consumer fraud laws, small claims court, civil litigation, etc)?.....</u>	<u>2</u>
11 <u>are you seeking licensure, certification or registration?.....</u>	<u>2</u>
12 <u>What other regulated professions / occupations perform similar services to those of this profession / occupation?.....</u>	<u>2</u>
12.1 <u>How will the program distinguish between or among respective scopes of practice?.....</u>	<u>2</u>
13 <u>how many practitioners of this profession / occupation do you estimate are practicing in vermont?.....</u>	<u>2</u>
14 <u>estimate the percentage of practitioner practicing in the following settings?2</u>	<u>2</u>



15 is formal education required?..... 2

16 is supervised experience required in addition to, or instead of, formal education? 2

17 is there a national examination?..... 2

18 does this profession / occupation need continuing education?..... 2

19 based on the criteria you propose as a requirement to become licensed / certified / registered, estimate how many of the current practitioners will qualify?..... 2

20 what transitional provisions / “grandfather provisions” do you propose for current practitioners to obtain licensure / certification / registration?..... 2

21 Appendices..... 2

Appendix A: American Society of Landscape Architects (ASLA) Code of Professional Ethics, April 27, 2007.. 2

Appendix B: American Society of Landscape Architects (ASLA) Code of Environmental Ethics. _____ 2

Appendix C: An Act of the Colorado law for Landscape Architecture..... 2

Appendix D: Position Classification Standard for Landscape Architecture Series, GS-0807 2

Appendix E: Vermont Sunrise Proposed Law..... 2

Appendix F: Landscape Architectural Education and Accredited Programs.. .. 2

Appendix G: State by State Analysis of Continuing Education Requirements, April 15, 2008.2

Appendix H: Impact of Landscape Architecture on the Health, Safety and Welfare, How Licensure Protects the Public, June 21, 2008.. 2

Appendix I (Question 22): List of all interested persons or groups in favor of, or opposed to, this request. Have they been consulted?..... 2

Appendix J Question 23): Statistical data on disciplinary actions for this profession / occupation in other states..... 2



INTRODUCTION STATEMENT

0.

PROFESSION / OCCUPATION SEEKING REGULATION

1

Landscape Architects

PERSON / ORGAINZATION SUBMITTING APPLICATION

2

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VERMONT SOCIETY / ASSOCIATION

3

(Attach copies of standards of practice and code of ethics)

The Chapter members are bound by the standards of the national society (see Question 4)

Name: Vermont Chapter, American Society of Landscape Architects (VTASLA)
Contact Person: Patrick McLean, CLARB, ASLA

See Question 2 for contact information

As stated in the second sunrise application of 2006, Non members of VTASLA are not bound by any standards of practice or code of ethics. Actions against members of VTASLA for ethics violations can only be brought by another member of ASLA (including those outside of Vermont), and the maximum penalty is revocation of Society membership. The general public cannot bring actions against members of VTASLA for potential violations of the ASLA Code of Ethics.

NATIONAL SOCIETY / ASSOCIATION

4

(Attach copies of standards of practice and code of ethics)

See **Appendix A** for the *American Society of Landscape Architects (ASLA) Code of Professional Ethics, April 27, 2007*. See **Appendix B** for the ASLA Code of Environmental Ethics, however remains unchanged, from the Second Sunrise Application of 2006.

Name: American Society of Landscape Architects

Application for Preliminary Sunrise Review Assessment

LANDSCAPE ARCHITECTS

June 30, 2008



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DOES THE NATIONAL ORGANIZATION HAVE A LICENSE OR CERTIFICATION PROCESS?

5

(If yes, attach supporting documentation.)

No

LIST OTHER STATES CURRENTLY REGULATING THIS PROFESSION / OCCUPATION.

6

(For each state attach copies of the laws and rules.)

See Attachment B (Volumes 1-6) of the first Sunrise submission of 2003, and the second Sunrise submission of 2006, for the licensing of landscape architects for the following state laws and regulations (except as noted with *):

Alabama	Louisiana	North Dakota
Alaska	Maine	Ohio
Arizona	Maryland	Oklahoma
Arkansas	Massachusetts	Oregon
California	Michigan	Pennsylvania
Connecticut	Minnesota	Rhode Island
Colorado *	Mississippi	South Carolina
Delaware	Missouri	South Dakota
Florida	Montana	Tennessee
Georgia	Nebraska	Texas
Hawaii	Nevada	Utah
Idaho	New Hampshire	Virginia
Illinois	New Jersey	Washington
Indiana	New Mexico	West Virginia*
Iowa	New York	Wisconsin
Kansas	North Carolina	Wyoming
Kentucky		

* Colorado enacted a new licensure law in 2007. A copy of each of this law is included in **Appendix C** of this submission.



7
DEFINE THE SERVICES PROVIDED BY THIS PROFESSION / OCCUPATION. WHAT IS THE SCOPE OF PRACTICE?

Referring to the response provided in the second Sunrise submission of 2006, below are additional descriptions of services and clarifications to further define the services provided by landscape architects:

Landscape Architects mission is to create constructive change that balances the natural, economic, political, and social environments. They promote citizen participation programs to create broad public support for a project early in the planning and design phases. This helps move the project through the regulatory process quickly and with a minimum of controversy. Managing land resources is a more complex process today than ever before. Cities have become less centralized, farmland and open space are threatened by suburban development, and older neighborhoods struggle to thrive. In this challenging climate, landscape architects have been involved with all facets of land management. Such as:

Waterfront Development

Waterfronts are increasingly being transformed into exciting and vibrant community assets that offer promenades, parks, mixed use developments, and other recreational and economic benefits. Landscape architects have been partnering with communities throughout Vermont on waterfront projects of diverse scale and throughout all stages of development.

Parks and Recreation

An essential component of livable communities is a system of parks, recreational facilities, and open spaces. These features protect important environmental and cultural resources and provide locations where a broad social spectrum from the community can meet and interact in a positive manner. Planning for these spaces requires a broad understanding of history, environment, site design, and engineering. It also requires an ability to bring together broad constituencies to develop common visions, sort competing priorities, advocate for public resources, and accomplish implementation. Vermont has an abundant of green spaces, commons and parks that rely upon the services and guidance landscape architects offer and they are involved with communities designing and implementing plans for public use.

Urban Design and Downtown Revitalization

Cities and towns around the country and Vermont are being reborn, as new life and energy are channelled back into our downtowns. This trend is well documented in the many recent and ongoing public/private partnerships, which have in common committed investors, organized downtown groups, and a renewed interest in urban living. A successful downtown revitalization strategy is the product of a broad range of planning, economic development, and design efforts. Landscape architects have helped many communities and private "stakeholders" achieve their revitalization goals through visioning and public participation programs, streetscape and infrastructure improvement designs, traffic and parking projects, organizational development, market analysis, and master planning. Most of those downtowns are still thriving as the improvements sparked growth and renewed sense of place and pride, these efforts provided by the guidance and leadership of landscape architects.

Campus Planning and Design

Landscape architects have worked in many different capacities with educational and healthcare

Application for Preliminary Sunrise Review Assessment

LANDSCAPE ARCHITECTS

June 30, 2008



facilities. Many have facilitated student, faculty, and administration “visioning” sessions that have led to the development of master plans. Landscape architects have also developed site plans that have involved road realignments, quadrangle plans, athletic facilities and landscaping plans, planting, lighting, outdoor furnishings, and signs. These tasks, which provide an improved level of safety, are tremendous responsibility to do it right and appropriate so not to mislead the public and stakeholders into improvements that do not work, not maintainable or costs prohibited.

Resort Planning and Design

Landscape architects have provided planning and design services for several of the major resorts in Vermont, including ski resorts, tennis and golf resorts. In addition, landscape architects have planned entire recreational and retirement communities, coordinating such complex issues as housing, infrastructure, open space planning, and natural resource protection. The tourist industry is one of the leading economic generators to Vermont, it is imperative landscape architects understand the economic, social and site infrastructure needs of these facilities so they work, attract the market and foster growth.

Economic and Fiscal Impact Analysis

Economic development is a critical factor in a community’s quality of life. It is directly linked to other aspects of community development including land use, transportation, housing, and infrastructure planning. Local governments employ a variety of marketing, policy, infrastructure support, real estate development, and financial tools to foster economic development in their communities. Landscape architects work with many groups in Vermont, identifying new economic opportunities, assessing the fiscal impact of potential projects and programs, and developing new policies to facilitate economic growth.

Visioning and Public Involvement Strategies

Establishing a vision for a community is a vital step in the planning process. The vision creates excitement and helps build consensus for the plan. Landscape architects believe the vision should come from the people who inhabit or will use the place. As landscape architects shares experiences and assists in facilitating public involvement sessions, they have helped Vermont communities identify and communicate their vision. Such examples are scenic corridor planning, smart growth initiatives, zoning, overlay districts, historic preservation and preserving open space.

In the second Sunrise submission of 2006, we stated that: “Not all of the work of landscape architects directly affects the health, safety and welfare of the public.” Landscape architects are asked to shape the site environment and have the responsibility to ensure that their guidance is sound and will not cause harm or waste valuable resources. They are also asked, however, to undertake regional land planning assignments, residential planting plans, or other types of minor projects that do not directly affect the health, safety or welfare of the general public and that are also types of work that can be performed by other non-licensed professions. This type of work would continue to be unregulated, as the definition of landscape architecture provided in the draft law indicates.

The United States Office of Personnel Management’s [Position Classification Standard for Landscape Architecture Series, GS-0807, February 1963](#) also provides a very detailed description of the work of landscape architects. **Appendix D** contains a copy of this description.



8 WHAT HARM OR DANGER TO THE HEALTH, SAFETY, OR WELFARE OF THE PUBLIC CAN BE DEMONSTRATED IF THE PRACTICE OF THIS PROFESSION / OCCUPATION WERE TO REMAIN UNREGULATED? (Note: The potential harm must be recognizable and not remote or speculative).

Similar to our previous application in 2006, following are four activities described with the type of services and explanation how the practice of those activities demonstrate public harm if left unregulated:

- Grading, Drainage and Stormwater Management;
- Site Design;
- Park Design;
- Roadway Design.

In considering the four types of services listed below, a chart describing elements of practice, education and sections under the current Landscape Architect Registration Exam (LARE) references the impacts of landscape architecture on the public, health, safety and welfare and how licensure protects the public can be found in the **Appendix H**.

Grading, Drainage and Stormwater Management

Landscape Architects provide grading and drainage plans for their clients which specify how the earth will be modified through the movement of soils, resulting in new topography and drainage patterns. The plans of the landscape architect direct the earthmoving process, indicating where to place cuts or fills to the existing grade. The plans specify the various types of slopes to be created on the site. Different soil types are able to be stabilized at different angles, thus the development of grading plans requires knowledge of the specific soils found on the site, as well as general knowledge about how those soils can be safely disturbed and reset. Often, grading plans necessitate the use of retaining walls in order to address special site conditions.

Closely tied to a grading plan is a drainage and stormwater management plan. Drainage plans, which are sometimes shown directly on the grading plan, specify how stormwater will drain on the newly graded site, typically away from buildings and towards natural drainage ways at the edge of the graded area. Depending on the site, the plans frequently include a storm drainage system comprised of catch basins, storm sewers, some form of stormwater retention, and an outfall to a larger storm sewer system or a natural drainage way. These plans delineate specific drainage sheds; specify precise slopes and gradients to ensure adequate but not excessive and erosive flow, and size pipes and drainage structures to optimally handle specified amounts of rainfall and runoff.

Stormwater management plans dictate how stormwater will be controlled on site to minimize increases in off-site runoff and reductions in overall water quality. Current best management practices minimize open or closed canalizations of stormwater and encourage naturally simulated flow through the use of dispersed overland flow, swales and constructed wetlands.

Erosion control plans are frequently required and developed as extensions of grading plans. These plans specify what natural or artificial short and long term methods will be used to prevent the erosion of exposed

Application for Preliminary Sunrise Review Assessment

LANDSCAPE ARCHITECTS

June 30, 2008



soil from the site during construction and of vegetated or otherwise stabilized soil from the site once the project is completed. In accordance with the National Pollutant Discharge Elimination System (NPDES) permits, which are mandated by the Federal Clean Water Act, the State of Vermont requires that Erosion Prevention and Sediment Control Plans be prepared for all construction activities resulting in a total land disturbance of one acre or more.

Grading plans specify how the earth will be destabilized and then re-stabilized in a new configuration. Currently, a civil engineer is required to hold a license in the State of Vermont to seal a grading plan, indicating that the State of Vermont has already determined that this type of work could create a recognizable harm to the health, safety and welfare of the citizens of the State of Vermont.

In particular, grading plans hold the potential to significantly affect the health, safety and welfare of the public because:

Inappropriate specification of material and construction on grading plans can result in erosion problems, destabilized soils and even landslides.

Improperly designed retaining walls can cause physical injury and or adverse environmental impacts upon failure.

Incorrect calculation and inadequate provision for stormwater drainage can result in flooding and/or costly damage to buildings, walkways, highways, bridges, site features, and other public and private facilities.

A substantial number of property damage cases arise from faulty design of grading, drainage, and erosion control. As demonstrated by the cases below, grading and drainage services rely on professional standards to ensure that projects of all sizes will not lead to damage from slope failure, erosion, freezing and thawing, expansive soils, or poor drainage in general. Specific case references can be supplied upon request.

In the case of *Fitzgerald v. City of Mt. Dora*, professionally produced plans for a fill source and retention basin incorporated appropriate safety considerations. However, improper supervision during the construction process resulted in the construction of steep, unstable slopes with no fencing or other protection. An 11-year-old boy was killed when the newly graded, unstable slopes collapsed on him.

The case of *Foxchase, LLLP v. Clatt* is a prime example of problems that can be encountered with grading and drainage design. In *Foxchase*, a golf course design firm had been hired to develop golf course plans and specifications, supervise work, and correct outstanding violations of a county erosion and sediment control ordinance. During the design and construction phases of work, excess water, sediment, sand, and debris flowed unabated down a creek on the golf course property to an adjacent property, where the runoff caused significant damage. The designer, an unlicensed landscape architect, and her firm were found liable for damages to the adjacent property based on evidence that the unlicensed landscape architect had written



“misleading letters to county inspectors in attempt to avoid responsibility for erosion control” and that she and her firm had “acted in bad faith in failing to properly correct the excess flow of water and debris that was damaging” the adjoining property.

Negligent design for stormwater has been linked to property damage in numerous cases. In *Redbud Cooperative v. Clayton*, a landscape architect prepared the original grading and drainage plan for a site and obtained the necessary approvals. Prior to construction and without consulting the landscape architect, the developer altered the plan. Significant deviations from the landscape architect’s plan included blocking swales and failing to build culverts, resulting in inadequate drainage of a subdivision. The cost of repairs required due to the developer’s negligence in the case exceeded the cost of properly implementing the initial plan prepared by the landscape architect.

A grading plan for a new school was negligently designed in a manner that collected large amounts of water in close proximity to a school. The school gym floor was seriously damaged by the resultant water and soil movements. An extremely similar situation occurred in Colorado, where a poorly designed grading and drainage plan resulted in the flooding of a school floor.

In another case, grading and drainage design proved to be extremely harmful to a house and other improvements on the property. After the contractor finished placing soil and completed the stabilization, the slope failed, causing significant damage to the property and a complete loss on the owner’s investment.

Incompetence or negligence in the preparation and design of drainage and grading plans may result in accumulation of standing water in areas intended for pedestrians, bicyclists, and the public in general. In *Morrocco v. Piccardi*, a drainage plan resulted in drainage pitched toward a residence. In addition to causing property damage to the house and yard, the accumulation of water resulting from this negligent design created a dangerous condition near the entry to the house. The contractor was held liable for the condition after a resident fell on a patch of ice, shattering several bones and suffering permanent sinus damage.

Though erosion is most obviously a potential cause of property damage, unchecked stormwater runoff, loaded with erosive sediments, can also contribute to significant life safety risks. This point is illustrated by the case of *Martin v. Flanagan* where uncontrolled erosion ultimately altered the runoff pattern in an area. The defendant’s failure to adequately control erosion transformed overland runoff into eroded channels of water, accelerating and concentrating water that discharged onto a road. As a result, three people were killed where water had accumulated and formed an icy patch on the road.

As a hazard to public health and safety, negligent specification of inlet grates warrants serious attention based on past cases. The case of *Rodgers v. Meyers & Smith, Inc.* involved a landscape architecture firm that failed to assess the potential for a sewer grate to tilt when walked upon. The grate was not matched to its frame and did, in fact, tilt when walked upon by an adult man, heavily impacting his genital area. The injury caused debilitating pain in the victim’s “back and scrotum area” for years. The landscape architecture firm was found potentially negligent. At issue in *Dick v. Florida Department of Transportation* was the faulty design of a drain inlet, where the negligent mismatch of a grate and frame left a 7-inch gap. A sheriff’s deputy was investigating



at the side of the road when his foot became entrapped in the gap, causing a fall that ended in severe head trauma and total disability. The case was settled for \$700,000 before reaching trial.

These grading, drainage and stormwater cases illustrate recognizable and real situations of physical or financial harm to the public. The landscape architectural skill of developing grading, drainage and stormwater plans can have a significant impact on the general public. The significant potential for danger to the public from poor grading and drainage design and malpractice makes licensure the necessary level of regulation for this profession. More specifically, through licensure consumers can expect that:

The final grading will be appropriate for the site and the soil types found on the site;

Water will flow away from structures, walkways, roadway, parking areas, and other locations where people will live, work, travel or congregate;

Water will flow adequately off paved areas; and

Grades will not be too steep to allow the specific soil types to stay securely in place.

Example of Vermont Projects under direction or involved landscape architect relating grading, drainage and stormwater:

Vermont Vietnam Memorial at the I-89 Sharon Rest Area, Sharon, Vermont: Landscape architects were involved in preliminary site grading, layout of site components such as detention ponds, parking, access, sidewalks, picnic areas, lighting and planting design. Considerations included drainage issues, soils, site exposure, boulder placement for simulated dry creek bed, pavement surfaces and expected level of maintenance. Tasks involved concept design through construction plans and site inspections.

Quechee Gorge Visitor's Center along Route 4, Quechee, Vermont: Landscape architects were involved in the site planning and project management, coordinating with several disciplines for the final implementation. Tasks involved creating safer pedestrian crossings at the new Visitor's Center and local shops and the natural attraction, Quechee Gorge. Additionally, landscape architects were involved in construction details such as grading, outdoor steps and trail development, consultation on lighting, planting, pavement surfacing, signage and slope stabilization.

Site Design

In addition to providing drainage and grading plans for development sites, landscape architects can have responsibility for the development of the entire site design for public, private and institutional clients. This activity includes designing such site features as paved areas, walkways, stairs, ramps, parking areas, pedestrian circulation systems, and small structures. As a landscape architectural product, a site plan establishes the basic organization of uses and activities on a tract of land. Depending on the level of detail, site plans may include plantings, site furnishings, fences, walls, and a variety of other built features that landscape architects are called upon to incorporate into outdoor settings. Negligent layout of site features by



landscape architects creates risks to public health and safety when access to attractive nuisances is not appropriately restricted, when incompatible activities are located in direct proximity, and when opportunities for crime are enhanced by design that interferes with visibility and surveillance.

A competent landscape architect, as a site designer, recognizes an attractive nuisance and takes appropriate steps to limit access. In many cases, a fence or gate will be necessary to prevent injury, especially to children. A negligent site plan is typically characterized by inadequate fencing, inadequate warning signs, and improperly specified components of a security system, location of uses near hazards, the placement of incompatible design features close to each other, or some combination of these design defects.

Site plans specify how a site will be modified to suit a particular use. Currently, a civil engineer is required to hold a license in the State of Vermont to seal a construction site plan, indicating that the State of Vermont has already determined that there is a recognizable harm associated with this type of work to the health, safety and welfare of the citizens of the State of Vermont.

In particular, site plans, whether designed by landscape architects, civil engineers or architects, hold the potential to significantly harm the health, safety and welfare of the public because:

Failure to adequately isolate harmful elements can result in severe injury or death;

Poorly designed pedestrian, bicycle and vehicular circulation systems can increase the chances of conflict between the various different users that can cause personal injury or death;

Poorly designed site layouts or site features can cause improper use or failure resulting in both property and personal damages.

In addition to preventing fatalities, proper site design mitigates other serious harms associated with attractive nuisances. In the context of an outdoor pool as an attractive nuisance, design defects in the fencing around the pool caused the near-drowning and resulting severe developmental delays of a 19-month-old.

In another case, a child was brain-damaged after being struck by a car in a dangerous intersection immediately adjacent to the school the child attended. An appeals court found that the placement of a gate near the intersection could subject the school to liability for the child's injuries, since such a gate is foreseeable as a dangerous property condition where it encourages children to enter the street near a dangerous intersection.

Competent site designers also possess professional awareness of built features that will be incompatible if placed in close proximity. For example, as a landscape architect testified in a Michigan case, certain recreational areas and power lines should not be located in close proximity. In that case, three boys were electrocuted while playing under power lines in a park. As a result, one boy was killed, another had a leg amputated, and the third was seriously injured. In a separate case, a slide platform was located so close to a building that it allowed children access to the roof. Consequently, a landscape architect was charged with malpractice after a child was injured.

Adults, though better able to assess and avoid many of the hazards noted above, are also placed at risk by negligent site design. For instance, two marble sculptures recently installed in front of a new city office building in Denver protruded into the path of pedestrian circulation, posing a risk to public safety and violating the Americans with Disabilities Act, according to the City of Denver's Commission for People with Disabilities. The initial design of the art installation presented a particular risk to the blind, as well as bicyclists and



pedestrians in general. To remedy the problem, the developer of the new office building found it necessary to erect a temporary fence while investing additional resources to modify the sculpture.

Exterior stairways can be extremely dangerous if designed without the minimal competence of a trained professional. The potential harm from poorly designed outdoor stairs is evident in a Colorado *Doe v. Roe* case, where a fall caused severe head trauma and permanent disability. In this Colorado case, litigation revealed numerous design defects that made a stairway of landscape timbers extremely dangerous, including non-uniform riser height; inadequate handrails; and a lack of positive drainage on the steps, leading to ponding of water and ice. The defendant ultimately paid \$2 million dollars to settle the negligence case.

Guardrails are a common feature of outdoor stair landings, ramps, and decks, as well as a protective device generally placed at the top of slopes and at the perimeter of other hazardous features. In the case of *LaPlata County v. Moreland*, a deck was built without complete enclosure by a guardrail, despite a county government requirement to that effect. Relying on a non-existent guardrail, a visitor fell 10 feet onto rocks below, resulting in paraplegia, among other injuries. The victim sought to recover from the county for failing to enforce its code. However, the court held the county not liable, a legal result that highlights the importance of requiring site designers to demonstrate minimum competence prior to engaging in design work that has the potential for serious harm.

A significant number of injuries have been caused where curbs and other barriers have been inadequately designed to prevent cars from striking pedestrians on sidewalks and in other non-vehicular areas. A Florida case of *Koenig v. TOC Retail* revealed that this type of incident was so common at convenience stores that the industry had developed a name for it, a "drive-thru." The plaintiff in the *Koenig* case had been walking on the sidewalk in front of a convenience store when a car jumped the curb and caused severe injuries, including facial disfigurement and the amputation of a leg. Based on a claim that the curb and sidewalk were defectively designed as a barrier, the case was settled for \$5.4 million. The *Koenig* case was not unique, as evidence showed that at least 75 similar incidents had occurred at other stores owned by the same company in the preceding three years.

Pedestrians have been injured due to negligent parking lot design in a wide assortment of settings. According to reports of litigation, so-called drive-thrus are a persistent problem in high-traffic areas, such as convenience store, fast food settings, or schools. Two students were injured in a school parking lot when a car accelerated over a curb. In another case asserting negligent design against a theme park, several people were injured in a parking lot island designated as a picnic area. Noting evidence that the picnic area was surrounded on all sides by vehicular traffic and not protected by any form of barrier, the court held that the theme park could be liable for negligent design.

When designed with minimum competence, a parking lot will safely guide pedestrians, bicycles, and motor vehicles to and from their destination. Lacking minimum competence, the design of a parking lot can present an assortment of navigational hazards. In *Schager v. Midway Shopping Ctr. Ltd. Partnership*, a visitor was killed after falling from a parking lot to the driveway below. The court in that case found the failure to provide a guardrail or fence as part of the parking lot design to be sufficiently negligent to sustain a wrongful death citation against the property owner.

Incompetent railing design, particularly fastener specifications, was found as the cause of injuries where a 12-year-old boy fell 12 feet after leaning on a rotten wood rail. When the boy hit the ground, a nail entered his skull, resulting in loss of hearing and loss of facial muscle control. In another case of an improperly attached railing, a man fractured and herniated several disks and suffered permanent disabilities after falling with the



railing. Set at 29 inches, below the center of gravity of a typical adult, the height of the railing was ruled a serious design defect, contributing to the property owner's settlement of the case for \$350,000.

Negligent retaining wall design poses a serious hazard, which is greatly enhanced without an extensive technical vocabulary. In *Stone v. ITT Sheraton Corp.*, a retaining wall collapsed on two hotel guests, killing one and severely injuring the other. The case cited numerous design defects that caused the failure, including a lack of footings, no reinforcement, and inadequate drainage. The hotel paid \$2.25 million to settle the case.

Site designers both design and specify free-standing outdoor walls for screening, monumentation, and other purposes. Incompetence and negligence in the design of these walls is often associated with very serious injuries. In the case of *Tieder v. Little*, a student traversing a walkway outside a campus dormitory was killed when a vehicle struck an outdoor wall and the entire mass of the wall fell onto the student. An architect had designed the brick wall without adequate reinforcement, allowing the type of catastrophic failure where the entire wall toppled in one piece. The court noted the critical design error and found the campus architect potentially negligent. The collapse of the brick wall resulting in the decedent's death was entirely within the scope of danger in designing and constructing the wall without adequate supports, and was a reasonably foreseeable consequence of such negligence.

The importance of minimum competence in basic structural principles and construction details is also demonstrated in cases pertaining to decks and shade structures. In an Illinois case, a deck collapsed onto a man's feet due to inadequate fasteners. The injuries required surgery and caused a permanent disability. The construction firm in the case settled with the victim for \$894,000. In another Illinois case, a girl broke an arm in multiple locations and suffered other injuries after being thrown to the ground when a deck collapsed. After testimony established that the deck was defectively detailed, with inadequate design and specification of fasteners, the court imposed a judgment of \$1.3 million against the property owner. A California case settled for \$2 million after the overhead beam in a deck collapsed onto a tenant and caused serious, disabling injury.

As an element of site design, gates and fences cause injury where design and specifications fail to adequately control access to a potential hazard. Failure to safely enclose hazardous outdoor areas is discussed earlier in this section.

Aside from site enclosure and access considerations, gates and fences are themselves potentially hazardous, as physical objects that may directly cause injury if negligently designed or specified. As an example, landscape architects design fences to enclose outdoor service and utility areas. In one case, the door to a trash enclosure was designed without a lock or latch. On a gusty day, the door of the enclosure spontaneously flew open, striking a passerby on the head. Following the incident, the injured party suffered cognitive problems, including memory loss, prompting the land owner to settle the negligence case for \$900,000. In another negligence case, a path in a park was closed using a wire stretched between two posts twenty inches above the ground. With no lighting and no warning sign regarding the wire boundary, a walker on the path tripped over the wire, fractured his nose, and suffered other facial injuries. A similar wire boundary was responsible for the fatal severing of the spinal cord of a 13-year-old ATV rider.

The design of outdoor spaces requires landscape architects and other site designers to be conscious of potential hazards and to explore the use of signage where it may mitigate the risk of injury. Cases in other sections of this report have discussed injuries in negligence cases where there has been a failure to incorporate warnings regarding steep and unstable slopes, shallow water, abrupt ends of sidewalks and trails, and other hazards. In addition to hazards in executed designs, warning signs are an important safety measure for sites where projects are under construction. For example, the landscape architect hired to produce a plan



for a recreation area in Delaware was sued for wrongful death after an 11-year-old was killed attempting to sled in the construction area. The park district client was held liable for the death because warning signs around the construction zone were not posted clearly and was inadequate to effectively deter improper use of the unfinished recreation area.

Criteria for ramp design must account for a variety of users with different functional needs – wheelchair chairs, deliveries, and the general public, for example. In one case, failure to design an appropriate gradient for a delivery ramp resulted in knee injuries requiring surgery, as well as a \$175,000 jury award. Incompetent ramp design can also be injurious and costly for developers and property owners seeking professional guidance for accessibility compliance. In Colorado, a wheelchair ramp was deemed an attractive nuisance after a 5-year-old using the ramp for recreation collided with a vehicle in the adjacent street and suffered permanent disabilities. The ramp was steeply pitched and easily accessed to and from the adjacent street, and frequented as an amusement by local children on skateboards, bicycles, and even tricycles, illustrating the importance of access control and other site planning considerations in the safe design of outdoor structures.

These site design cases present actual situations of physical or financial harm to the public. Site design, a basic landscape architectural skill, if not performed properly, can have a significant impact on the general public. The high potential for harm to the public from poor or negligent site design and malpractice makes licensure the necessary level of regulation for this profession. More specifically, the public can expect that:

A site will be safe for use by them and their relations;

Threats to life or limb will not be inherent in the way the site is organized or constructed;

Use of parking areas, either as a pedestrian or motorist, will not involve hidden risks to themselves or others; and

Parents need not have fears for their children using, occupying or passing through the site on their own.

Example of Vermont Projects under direction or involved landscape architect relating site design:

Maxfield Feasibility Study, Hartford, Vermont: Landscape architects were involved in assessing the feasibility of recreational and support infrastructure to support a centralized area for town recreation and sports programs. Public meetings and discussion with town and area school officials, providing professional guidance in selecting appropriate fields and layout. Tasks including concept roadways, parking, choosing safer access off Route 5, trails and development of cost scenarios for budgeting.

Side Streets off Church Street in Downtown Burlington, Burlington, Vermont: Landscape architects were involved in developing site analysis and assessment of existing conditions to warrant streetscape improvements in the downtown area. Responsibilities were preparing site inventory and analysis, attend meetings, conduit design workshops, develop preliminary plans, selection pavement surfaces and treatment potentials and preparing a final report. Landscape architects were also involved in roadway design, widths and parking layout in coordination with transportation engineers.

The Woods at Killington, Killington, Vermont: Landscape architects led the efforts for an Act 250 application and hearing approval then developed final construction plans for this condominium project. Responsibilities were roadway design and grading in coordination with transportation and civil engineering, project management, house siting and layout, parking, drainage, planting and site inspections.



Park Design

Landscape Architectural services are increasingly requested by both the public and private sector to develop park plans and construction details that conform to standards for public health, safety, and welfare. The various types of park design in which Landscape Architects are involved range from urban hardscape public spaces to passive recreational parks and trails. These public spaces are used by a widely diverse population often involving plaza and gathering spaces which are universally accessible and ADA (Americans with Disabilities Act) compliant.

Park design can also include the design of active recreation spaces. Traditionally, active recreation includes baseball, softball, football, soccer, hockey, basketball, volleyball, tennis, and other field sports. The contemporary program for a community recreational facility may also accommodate rock climbing, rollerblading, and skateboarding. The landscape architect prepares site designs involving proper orientation of sporting areas, specifications for equipment to be installed for play, and detailed design for unique and complex elements of the facility.

Public and private investment in recreational facilities has increased dramatically in recent decades, with landscape architects frequently leading design teams and performing construction administration. The design of recreational facilities is another landscape architecture service area involving a broad assortment of technical skills and an accordingly broad set of potential harms. This section provides examples of the diverse public health and safety concerns that landscape architects confront in design for parks and outdoor public space.

The landscape architect in *Traub v. Cornell University* specified the basketball goal to be installed at an outdoor facility on a university campus. The specified frame did not incorporate safety measures to absorb the force of dunked balls and other impacts to the goal. In the *Traub* case, a recreational basketball player severely injured his wrists after dunking a ball into the rigid frame. The landscape architect's failure to recognize that a rigid frame would be a dangerous condition in its specified location caused the university to be potentially liable for injuries stemming from the negligent specifications.

The recent rise in popularity of "extreme" sports highlights the importance of technical competence in the design of outdoor recreational facilities. For example, in the case of *Luenberger v. City of Golden*, the Colorado Court of Appeals found that a local government may be liable for an injury sustained by a bicyclist using a half-pipe on city parkland. Such skate and bike facilities involve complex design solutions to link spaces and minimize conflicting patterns of use, while requiring tight control of specifications for railings, poured-in-place concrete, drains, and other features. Improperly specified paved surfaces are especially prone to rapid deterioration, creating hazardous conditions for roller sports.

The proliferation of skate parks and skate ramps in particular has been accompanied by reports of injury due to improper design. In Colorado, with no regulation of landscape architecture, a skate park was designed and built by a group of non-professionals. Stunt features were assembled without proper fastening or safety inspections, creating potentially dangerous conditions for skaters. Ultimately, a boy was killed after a pipe rail broke loose and crushed him.

While generally considered "passive" recreation, the design and planning of trails can involve high volumes of



traffic, conflicts between various modes of travel, and routes that enter and pass through both constructed and natural hazards.

In the New York case of *Santalucia v. County of Boone*, bicycle and pedestrian traffic used the same trail, with the direction of travel restricted on some parts of the trail. A woman pedestrian was traveling along the intended route when struck by a bicycle traveling the wrong way. The county that owned and operated the trail was held liable for \$150,000, based on a severe injury to the woman's shoulder that permanently affected her range of motion and potentially required surgery.

If a user is injured on a trail, a lawsuit will frequently allege design defects. A recent trail accident in Colorado killed a man intimately familiar with the Mary Carter Greenway Trail when his aorta was severed in a collision with another bicycle. The accident occurred near a narrow, blind curve at a road underpass. In another design negligence case related to traffic conflicts, a trail user was injured in a collision with a vehicle where the trail crossed a local road.

Dangerous conditions result when a trail alignment is selected that passes near steep slopes or, in the case of *Brown v. State*, a cliff. In the *Brown* case, a trail in a state park traversed the top of a cliff, from which a boy fell to his death. The negligence of the state's landscape architect was found to have caused the fall. In the opinion of the court holding the state liable for the boy's wrongful death, the court noted:

It would have been simple to have built a wall of such height and of such precipitate elevation that it would have been a plain warning to the visitors who had been enticed to proceed to its face that beyond they should not go, that beyond it were dangers which the [landscape architect] testified he knew existed. We believe that the arts of landscape architecture could have devised a wall, which would have been a barrier without marring the beauty of the spot.

The desire of the *Brown* court for a design professional that will combine aesthetic sensitivity and life safety skills in trail design is representative of the demands placed on landscape architects as the profession has evolved.

Similar to the danger of designing a trail along a cliff, recreational areas may be designed in a way that magnifies the latent hazards of bodies of water. In *Benton v. City of Oakland*, a shallow area at a public beach was known to the city, but no warning sign was posted. The city was held liable when a visitor dove headfirst into the shallow area and broke his neck. In another case, involving public property used to access a municipal reservoir, the failure to post "No Swimming" signs or erect a fence around the reservoir was found to have contributed to a drowning death in the reservoir. The dual use of reservoirs for water storage and recreation creates special hazards for users of the reservoir.

These park design cases present situations of real physical or financial harm to the public. The landscape architectural skill of park design, if not performed properly, can have a harmful impact on the general public. The high degree of danger to park users from poor or negligent site design and malpractice also suggests that licensure is the desired level of regulation for this profession. More specifically, users of parks can expect that:

The recreational use of a park will be safe for all users;

Recognizable threats to life or limb will not be inherent in the overall design of the park or in the details



of specific areas;

Water bodies will be either safely designed or sufficiently protected and signed to keep users from danger; and

Parents need not have fears for their children using, occupying or passing through the site on their own.

Example of Vermont Projects under direction or involved landscape architect relating park design:

Burlington Waterfront Park and Promenade, Burlington, Vermont: Landscape architects were involved from concept to construction in developing one of the most visited and used parks in Vermont. Components included access development, parking, bicycle trails, sidewalks, safer access for pedestrians crossing an existing railroad, access to the waterfront, seating, lighting and planting. Landscape architects collaborated with several disciplines and the City, as well as deciding upon surface pavements, materials, benches, railings and the popular swings attachments.

Burlington Fishing Pier, Burlington, Vermont: Adjacent to the waterfront promenade landscape architects were involved in pier layout, amenities improvements such as handicapped access, hand rail design, lighting and access to the pier surface. Landscape architects were involved in site inspections and consultation with various other support disciplines.

Winooski Riverfront Park and River Walk, Winooski, Vermont: Landscape architects provided layout and design for this revitalization along the Winooski River and downtown. Tasks included project management, layout, rail design, outdoor steps and surface materials, slope stabilization, planting and coordination with structural, civil and electrical engineering.

Roadway Design

Vehicular circulation is a basic component of site planning as well as a basic design component of its own. Landscape architects routinely provide basic roadway design services to clients, both in the public and private sector. The nature of work extends from streets for subdivisions and other forms of new residential development to roadways serving parks and recreational facilities, business parks, academic and institutional campuses, and industrial parks.

Roadway design by landscape architects involves both aesthetic judgment and sound technical practice. From an aesthetic perspective the designer must be capable of visualizing the three-dimensional aspects of all elements of a roadway. It is imperative, however, that all roadway design also incorporates appropriate technical criteria of strength, safety and uniformity.

A wide and diverse variety of determinants needs to be considered in the selection of roadway location. In addition to meeting the proposed traffic "desire lines", consideration also needs to be given to existing and proposed land uses, existing and proposed traffic patterns, integration with other forms of transportation, topographic features, ecological factors, historical factors, scenic opportunities, acquisition and construction costs, long-term operation and maintenance issues, and prevailing social, economic, and political structures. Landscape architects are educated and trained to undertake analyses of these determinants and to ensure that roadway location is responsive to natural features, preserves and accentuates the best qualities of the



landscape, and provides for a variety of visual experiences.

Technical competency in roadway design requires a base understanding of general roadway standards, roadway geometry, vehicular characteristics and operational characteristics. This includes knowledge of such diverse areas as visual perception (cones of vision related to both visual acuity and peripheral vision), rates of braking and acceleration, and coefficients of friction.

The geometric design of roadways consists of two primary elements—horizontal alignment and vertical alignment. The horizontal alignment, in essence, provides the “routing of the roadway”. Vertical alignment takes into account roadway gradient, inclines, and also looks at transitions affecting sight distances at both crests and low points in the roadway. A strong understanding of these two elements, and their interrelationship, is essential in fitting a roadway design into existing topography.

Horizontal alignment consists of two primary components—straight lines (tangents) and circular curves (arcs). Sight distances are analyzed with respect to roadway geometry and speed to ensure adequate stopping capability in response to roadway hazards. Higher speed roadways generally require “superelevation” (the cross slope of a road from the outside edge to the inside edge) on curves to counteract centrifugal force at higher speeds by ensuring a safe coefficient of friction between tires and roadway surface. Rates of superelevation are influenced by design speed, design geometry and roadway surfaces, adjusted for regional climatic conditions, terrain conditions, type of area (e.g., rural versus urban) and the frequency and speed of vehicles.

The vertical alignment, or profile, of a roadway is also composed primarily of two geometric components—inclined straight lines (tangent gradients) and vertical curves which are parabolic, rather than circular, in nature. Maximum gradients vary significantly, depending upon terrain, speed, capacity and use of the road. Therefore, a designer must understand when to apply the appropriate standards. Vertical curve length is a major determinant for safe sight distances. It is critical that vertical curve length relate to the appropriate design speed; otherwise, hazardous conditions will be created. The ability to accurately calculate and locate the low point in the sag of a curve is also highly important to roadway drainage. Failure to properly position drainage structures at these low points can also create the potential for roadway flooding.

In addition to the more technical aspects of roadway location and design, planting design can also influence roadway enjoyment and safety. An understanding of critical sight lines is key in the placement of plant material along roadways. At intersections it is essential that unobstructed lines of vision be maintained and that the appropriate standards be employed to determine the location and size of these unobstructed areas.

Designing the specific elements that occupy the right of way outside of the roadway is also a part of the practice of landscape architecture. These designs, commonly referenced as streetscapes, can affect many more individuals than only those that are traveling in motor vehicles on the roadway itself.

Landscape architects are educated and trained to be involved in decision-making on all of the above aesthetic, technical and geometric aspects of roadway design.

Roadway design plans control how motor vehicles will move through the landscape. Currently, a civil engineer is required to hold a license in the State of Vermont to seal a construction plan for a roadway, indicating that the State of Vermont has already determined that there is a recognizable harm to the health, safety and welfare of the citizens of the State of Vermont associated with this type of work.

Application for Preliminary Sunrise Review Assessment

LANDSCAPE ARCHITECTS

June 30, 2008



In particular, incompetent roadway design holds the potential to significantly harm the health, safety and welfare of the public because:

Failure to properly design horizontal or vertical alignments can create hazardous driving conditions due to inadequate sight distances or the inability of the motor vehicle to stay on the road at a reasonable speed;

Improperly designed roadways can create hazardous driving conditions associated with poor drainage, insufficient sight distances at intersections, or poor surface conditions due to improper construction; and

Inadequate or improper streetscape design can create physical hazards for pedestrian, bicyclists and motorists alike.

The creation of safe and visually pleasing roadways enhances both the public's enjoyment and general welfare. From an aesthetic perspective, good roadway or street design enhances a motorist's, bicyclist's or pedestrian's sense of place and space.

In both urban and village environments, appropriate integration with non-motorized forms of transportation is vital. In order to effectively achieve this, it is crucial to understand the unique characteristics of each form of transportation. Inattention to this will frequently place bicyclists or pedestrians in potentially unsafe or life-threatening situations. For example, as speed differentials increase between forms of transportation, more separation between these modes becomes more desirable, both for purposes of comfort and safety. Physical separation or barriers such as walls, curbs or railings may need to be employed. Failure to do so will result in hazardous conditions, increasing the potential for harm.

As previously mentioned, the relationship of geometric design of roadways to sight distance is critical for roadway safety. Failure to create sight distances adequate for the design speed of a roadway will produce hazardous conditions. To ensure the protection of the public, it is essential that designers be able to show a minimum level of competency in meeting requisite standards related to sight distance in roadway design.

From a more regional perspective it is also vital that designers consider local climatic conditions in the design of streets, drives and roadway. The icy and snowy winter conditions prevalent in Vermont require a localized understanding of design considerations related to gradient, degree of roadway curvature and superelevation. Reduced rates of coefficients of friction on icy roadways may require adjustments based on these localized conditions. Failure to take such design factors into consideration will increase the risk of danger and potential harm to users of the roadway.

Issues related to the structure and substructure of a roadway also influences public, health, safety and welfare. In our localized climate, failure to protect the structural integrity of the roadway sub-grade by not providing adequate surface and subsurface drainage will result in frost heaves, creating both maintenance and safety issues.

Even the seemingly harmless task of planting shrubs along a roadway or in the median of a boulevard can have disastrous consequences if a minimum level of professional competency is not employed. In the case of *Kelley and Kelley v. Hallum*, the berm and plantings at an intersection were initially designed by a licensed landscape architect, which plans the court found to be competent and safe. Without authorization, others modified the planting specifications in a manner that caused impeded visibility at the intersection. No such



obstruction would have occurred had the landscape architect's plans been implemented. After a woman was killed in a collision at the intersection, and based in part on obstructed views, the non-landscape architects were held liable for the wrongful death caused by their negligence. Obstructed views at intersections are extremely dangerous. As demonstrated by several other cases – involving skull fractures and permanent loss of vision, quadriplegia, and fatal injuries – vegetation is frequently the cause of such obstructed views.

Improperly specified plantings in the road right-of-way are a potential hazard not only as a visibility problem, but also as a physical danger to cars and drivers. Excessive debris from plant material has been associated with accidents involving pedestrians, and weak wood has also fallen and injured the passive users of a site. Similar accidents have involved motorists. In one example, a tree planted in a roadway median fell on a car, leaving the passenger a paraplegic.

Streetscape designs, often times associated with urban park and outdoor spaces, include paving, lighting elements, street trees, signage, and other features typical of an urban street environment. To an extent equivalent to other built products of the design professions, many people use streetscape projects, with users representing a cross-section of all ages and ability levels.

Injuries in the streetscape setting are particularly prevalent where the designer fails to accurately articulate the dimensions of paving elements or fails to adequately control final grades through specifications. Poor grading control leads to vertical discontinuities in a walking surface, creating trip hazards and causing injuries. A three-eighths inch vertical gap between pavers and a sidewalk was deemed by one court to be a "defective, unsafe, and dangerous" condition after a woman tripped and injured her wrist and arm as a result of the gap.

Urban design elements such as signs, tree planters, and utility equipment also create trip hazards in defective streetscape design. For example, in one typical case, an access cover in a sidewalk was not properly specified to match its frame, creating a one-inch grade differential that was found to have caused head, arm, and knee injuries to a passerby. Defective design and specifications for a tree grate were alleged to have caused injuries in a Rhode Island trip and fall case. In a third example of hazardous design details, a jury awarded \$841,000, including punitive damages, when a store patron was injured after tripping over a disused metal sleeve for a traffic sign. The jury deemed the property owner liable for a latent defect in shopping center improvements.

A streetscape is hazardous if it does not provide a clear path for pedestrians. It would, for example, be negligent to design a fence that obstructs a sidewalk and forces pedestrians to walk in a busy roadway. A pedestrian was killed in this exact situation in the Utah case of *Braithwaite v. West Valley City Corp.*, in which the local government was held liable for the defective design. Obstructions to pedestrian traffic have also caused serious injury in reported Colorado and Louisiana cases.

Example of Vermont Projects under direction or involved landscape architect relating roadway design:

Randolph Downtown Revitalization, Randolph, Vermont: Landscape architects developed a downtown master plan for streetscape improvements including sidewalk surfacing, seating, railings, lighting, handicapped accessibility, sidewalk bollards, traffic control and street calming. The project design included a new platform for Amtrak passenger rail service to the town, and renovations to turn a historic freight house into a new transportation center. Project management, consultation with the public, conducting design charrettes and coordination with support engineering were the various tasks landscape architects were responsible.



Stone Cutters Way Pedestrian Path, Montpelier, Vermont: Landscape architects were involved by coordinating with City officials reclaiming a highly visible, eight-acre property to enhance business, add much needed parking space, and create a new through-passage in the downtown. It further met officials' goals to reclaim the riverfront for aesthetic and recreational purposes, and construct a segment of the city's planned bicycle and pedestrian path on the site. Meeting these goals required significant planning, coordination and facilitation of public participation and collaboration with support engineering. Landscape architects developed construction details, railing design, slope stabilization lighting, seating, interpretive signage and plantings.

Ludlow Downtown Streetscape, Ludlow, Vermont: The scope of services for landscape architects encompassed facilitation and coordination of all phases of the planning process including media relations, design and production of communications materials, site analysis and streetscape improvement planning. Streetscape improvements included landscape architects preparing sketch plans of safer pedestrian crossings, utilizing bulb-outs and visible crosswalks, lighting, sidewalk surfacing, relocating handicapped parking, and curb re-alignments. Additional discussions with street business owners, local organizations and Vermont Agency of Transportation assisted in design development and alignment considerations. The plans will be used or the town's budget planning for future implementation.

WHAT BENEFIT CAN THE PUBLIC REASONABLY EXPECT IF THIS PROFESSION / OCCUPATION IS

7

REGULATED AND HOW WOULD IT BE MEASURED?

First and foremost, licensure is critical for protecting the public from unqualified or incompetent individuals who engage in professional practice, as there is a direct relationship between the practice of landscape architecture and public health, safety, and welfare (see the various responses to Question 8). Some of the specifics of what the public may expect are highlighted at the end of several of the separate responses to Question 8.

The Council of State Governments' Council on Licensure, Enforcement and Regulation defines licensure as "a process by which a government agency grants individuals permission to engage in a specified profession or occupation upon finding that individual applicants have attained the minimal degree of competency required to ensure that the public's health, safety and welfare will be reasonably protected." In exchange for this exclusive privilege, licensees agree to be regulated by the government and take on professional responsibility and professional liability.

When this statement is applied in the context of the practice of landscape architecture, the benefits to the public include:

Licensed landscape architects are required under law to act on the client's behalf. They can be held personally responsible for their actions and can be sued or criminally prosecuted for errors or negligence. By placing their stamp on a design, a licensed professional takes the responsibility for that design.

Licensure assures the public that licensed landscape architects are capable of providing landscape



architectural services. All licensees must meet the education, training and examination standards of the jurisdiction in which they wish to provide services.

Consumers are able to identify a competent professional through licensure, and have a clear avenue to take action in case of malpractice or unethical behavior by a licensee. The State can revoke the right to practice for licensees who have shown themselves incompetent or grossly negligent within their practice history. In this manner, the State can act to prevent future problems through its enforcement tools: remediation, suspension and/or revocation of a license.

There are additional factors that contribute to the need for the regulation of landscape architecture:

Some landscape architectural services cost more in a non-regulated environment. Only full licensure would bring these costs down. Landscape architects are trained to perform many functions that require a professional stamp or seal. However, in Vermont, landscape architects are not authorized to stamp their designs. Consequently, if a client wants to use a landscape architect's expertise for such projects, he or she must bear the cost to include a licensed design professional on the design team, who will supervise the work and provide his or her stamp to the design. These are the same designs for which the same landscape architects could provide their legal stamp in 48 states, including all states that surround Vermont.

Since many aspects of the landscape architecture profession overlap with work done by other licensed design professions, licensure enables landscape architects to compete with other design professions on a more level playing field. This is a public benefit, when as a result of this increased competition and greater consumer choice; a healthy marketplace can lead to reduced project prices for the consumer.

This question has also been addressed in other states as they have considered either to initiate the licensing of landscape architects or the continuation of existing legislation that already requires licensing of landscape architects. Their conclusions provide additional information.

In 1987, three separate entities reviewed the need to license landscape architects and they each concluded that there was a benefit to the public in licensing landscape architects.

The performance audit of the Office of the Florida Auditor General evaluated the "regulatory program for landscape architecture and its ability to protect the public health, safety and welfare." In their evaluation, the agency contacted states that did not regulate landscape architecture [At the time, 38 states regulated landscape architecture]. The scope of the performance audit "evaluated the effectiveness of the regulatory program for landscape architecture and its ability to protect the public health, safety and welfare. As part of this audit we also evaluated the need for, and the benefits derived from, regulating the profession of landscape architecture." Findings included:

Executive Summary: The State's use of police powers to regulate the industry were reasonable and that given the program's legislative intent the current form of regulation was more appropriate than other forms of regulation. We found that the cost of regulating landscape architecture services is not significant. We further concluded that the absence of regulation could be more harmful to the public than the cost associated with regulating the profession. Based upon our analysis of the program according to the sunset review criteria, we recommend that the Legislature continue the regulation of landscape architecture.



Findings and Recommendations: Based upon the evidence collected, we found that:

- The public could be harmed if the profession were deregulated;
- A reasonable relationship exists between the exercise of the State's police powers and the protection of the public;
- The current form of regulation is the most appropriate;
- The costs associated with regulating landscape architects are not unduly restrictive; and
- The absence of regulation could be more harmful to the public than the costs associated with regulating the profession.

Findings and Recommendations: The public health, safety and welfare could be significantly harmed or endangered without regulation of landscape architects. Through our review we identified the following four basic ways the public could be affected by a lack of regulation:

- The consumer would not be able to gauge the competency of practitioners because licensing requirements and practice standards would not have to be met;
- The overall quality of service would be reduced because unskilled people could provide landscape architecture services;
- The loss of the disciplinary process which is the only consumer recourse that can prevent the practitioner from continuing to provide substandard services;
- There would be potential harm to property, individuals, communities, and the environment due to substandard services.

Findings and Recommendations: Even though some of the regulation indicates that regulation may not be necessary, we believe that there is convincing evidence for the State to continue regulating landscape architects. The profession should be regulated because landscape architects provide services that affect both the immediate consumer and other members of the general public. Without regulation only the consumer would be responsible for assessing the landscape architect's competency. Even though some potential threat of legal recourse may be an incentive for some consumers to select a competent practitioner, the ultimate cost of a poor choice could cause irreparable harm to the community and the environment. Therefore, it is in the general public's best interest to provide consumers with the choice to select practitioners who have met some competency standards. Regulation protects the consumer and the general public by attempting to ensure that the consumers have the opportunity select practitioners who have met minimum competency and practice standards.

Findings and Recommendations (consideration of lesser forms of regulation): The purpose of regulating a profession is to protect the public health, safety and welfare. Under either registration or certification forms of regulation, the consumer would be responsible for determining the competency of the landscape architect. Both forms of regulation may provide some indicator of the practitioner's competency. The wrong choice by a consumer could endanger or be harmful to the public. Because of these problems, we believe that registration and certification are inappropriate forms of regulation for landscape architecture in Florida. While other forms of regulation may protect the public to some degree, licensure is the only form of regulation that can protect the public and the consumer by attempting to ensure that competency and practice standards are met. Therefore, we conclude that regulation by licensure is the most appropriate form of regulation for the practice of landscape architecture.



The Florida Senate Economic, Community, and Consumer Affairs Committee Staff reviewed the central question: "Does the law relating to landscape architecture protect the public from serious potential harm to such an extent that the public's health, safety, or welfare would be threatened" In summary:

This report examines the anticipated effect of non-regulation by the state and concludes that state regulation is necessary for the protection of the public health, safety and welfare. The conclusion is based upon the fact that landscape architects perform professional work in physical land planning and design which directly affects the public health, safety and welfare.

(Findings - cost and benefits of regulation to the public): Chapter 481, part II [the landscape architecture licensing statute] affects the public health, safety and welfare of the recipients of the services provided under this statute. Landscape architects are fully licensed practitioners who have direct contact with persons (clients) shaping Florida's physical environment. Such clients, often in the business of construction, are dependent upon those advising them and are not in a position to evaluate the interrelated ramifications of a development activity in Florida's sensitive environment. The licensure of landscape architects benefits all people in Florida by providing some assurance that substandard service and resultant harm to persons, property, and environment are avoided because registered landscape architects are qualified and competent professionals who have met certain minimum education and experience requirements and have demonstrated competency through examination. Regulation and the disciplinary process helps assure the proper handling of changes made to the environment caused by increased growth in the state. Regulation helps minimize erosion, flooding, and water contamination problems by use of proper drainage techniques and prevents poisonous and hazardous plants and materials from being used in a public area without proper precautions. Finally, regulation may also protect clients from the financial loss of paying for improper environmental architectural design. To the extent that the practice act insures that only competent persons are permitted to practice landscape architecture in the state, the public benefits from the regulations.

(Findings – Potential impact of non-regulation): In the absence of regulation, there would probably be a certain amount of self-regulation within the profession. The American Society of Landscape Architects has adopted a Code of Ethics and procedures for processing complaints and disciplining practitioners who violate the code's provisions. According to the Auditor General's report, the association could use professional designations to indicate the practitioner's competency to the consumer and could enforce practice standards as a condition of membership. But membership is voluntary; and, absent membership, the ASLA would not be as effective as the state board presently is in maintaining acceptable landscape architecture standards. The bottom line is that the ultimate cost of incompetency is irreparable harm to the community and the environment.

(Findings – Potential impact of non-regulation): Non-regulation of landscape architects could be detrimental to the public interest in a number of ways. The consumer would not be able to gauge the competency of practitioners because licensing requirements and practice standards would not have to be met. The disciplinary process would be lost, which is the only consumer recourse that can prevent the practitioner from continuing to provide substandard service. Substandard service could harm the consumer, their property and their environment where poor drainage techniques cause erosion, flooding, and water contamination problems, even to whole communities, or, if unsafe playground equipment were to be specified, or, should improper designing be done for handicapped facilities involving ramps, toilets, paths, and parking etc. (In relation to outdoor recreation areas and toilets, landscape architects are concerned with surface and ground water which could become



contaminated by improper installation or location of toilets.) The established recognition and benefit of licensure through the myriad of state and local government agency rules/ordinances recognizing and in many instances, requiring the specialized expertise of licensed landscape architects would be lost.

(Findings – Potential impact of non-regulation): While the repeal of Chapter 481, part II, Florida Statutes may allow the competitive market to determine the quality of service, the public, through poor design, could be irreparably harmed.

The review went on to indicate that the Florida Regulatory Sunset Act contains criteria which the legislature shall consider in determining whether to re-enact a regulatory chapter and that “the following represents these criteria and the conclusions of this sunset review”:

Would absence of regulation significantly harm or endanger the public health, safety or welfare?

- Yes. The absence of regulation would have the potential to harm the public in a number of ways. The consumer would not be able to gauge the competency of practitioners because licensing requirements and practice standards would not have to be met. The disciplinary process would be lost, which is in the only consumer recourse that can prevent the practitioner from continuing to provide substandard service. Substandard service could harm the consumer, their property and their environment where poor drainage techniques cause erosion, flooding, and water contamination problems, even to whole communities, or, if unsafe playground equipment were to be specified, or, should improper designing be done for handicapped facilities involving ramps, toilets, paths, and parking etc. (In relation to outdoor recreation areas and toilets, landscape architects are concerned with surface and ground water which could become contaminated by improper installation or location of toilets.) The established recognition and benefit of licensure through the myriad of state and local government agency rules/ordinances recognizing and in many instances, requiring the specialized expertise of licensed landscape architects would be lost. While the repeal of Chapter 481, part II, Florida Statutes may allow the competitive market to determine the quality of service, the public, through poor design, could be irreparably harmed.

Is there a reasonable relationship between the exercise of the policy power of the state and the protection of the public health, safety and welfare?

- Yes. As noted by the Auditor General's performance audit, a review of the [Florida statutes and rules] indicates that the statutes and rules are consistent, and that they are not overly restrictive or excessive. The law authorizes the Board of Landscape Architecture and gives it the power to adopt rules; to establish fees for application, examination, reexamination, licensing and renewal, and reinstatement; to certify an applicant for licensure; and to impose disciplinary action on a registered landscape architect for violations of the law. In light of the review of the statutes and rules for other professions staff concluded that these powers are not unreasonable and are not unlike the laws of other regulated professions in the state.

Is there a less restrictive method of regulation available which would adequately protect the public?

- No. While there are other methods of regulation available, it is doubtful that these methods would adequately protect the public. In general, professions are regulated for the purpose of protecting the public health, safety or welfare. Current Florida statutes regulate the practice of



landscape architecture and limit the use of the title “landscape architect” to those individuals licensed by the Department of Professional Regulation. Licensure is the most restrictive form of regulation. It restricts the scope of practice so that it becomes illegal for unlicensed individuals to provide the service. However, licensure may not always be appropriate since regulatory restrictions often lead to higher prices, shortages of services, and ambiguous results concerning overall quality. Therefore, it is in the public’s best interest to have the least restrictive level of regulation while also being adequately protected. Regarding landscape architecture, the present method of regulation (licensure) is somewhat restrictive; however, most of the requirements appear necessary to protect the public for potential harm. Applicants for state licensure must satisfy certain educational or practical experience requirements and pass a licensure examination. Licensees must abide by the rule adopted by the board. Partnerships and corporations desiring to practice landscape architecture in Florida must also apply for and be issued a certificate of authorization. The law also contains provisions pertaining to the use of seals as well as prohibitions, penalties and disciplinary proceedings. [The sunset review also recommends the repeal of a provision requiring a licensed landscape architect as a principal in any firm that offers landscape architecture services. That provision continues to exist. The answer to these sunset criteria also goes on to describe the other forms of regulation (registration and certification).] While other forms of regulation may protect the public to some degree, licensure is the only form of regulation that can protect the public and the consumer by attempting to ensure that competency and practice standards are met. Therefore, staff concludes that regulation by licensure is the most appropriate form of regulation for the practice of landscape architecture.

Does the regulation have the effect of directly or indirectly increasing the costs of any goods or services, and if so, to what degree?

- Yes. There are certain costs to the public associated with regulating landscape architects. These costs can be categorized as either direct or indirect, and are generally passed on to the consumer and, ultimately, other members of the general public.

Is the increase in the cost more harmful to the public than the harm which could result from the absence of regulation?

- No. Although it is impossible to determine the precise effect this regulation has on the cost of landscape architecture services, staff could not find any evidence to indicate that the costs associated with regulation were unduly burdensome to the practitioner or to the consumer. On the other hand, staff found that the absence of regulation could harm the public by eliminating state controlled competency and practice standards, risk irreparable harm to the public and the environment through incompetent practitioners, and remove the disciplinary process that is intended to ensure that practice standards are met. Therefore, any increase in the cost of landscape architecture services attributable to these provisions is less harmful than the harm that would result in their absence.

Are any facets of the regulatory process designed for the purpose of benefiting, and do they have as their primary effect the benefit of, the regulated entity.

- Yes. As previously mentioned, the regulation provisions pertaining to corporate and partnership practice, requiring that at least one principal officer of a corporation or partner of a



partnership be a landscape architect, primarily benefit the regulated entity without adding any measure of protection for the public not already provided for by the disciplinary, seal. Licensure and other corporate requirements in the statute, e.g., certificate of authorization. "

WHY ISN'T THE PUBLIC PROTECTED FROM UNPROFESSIONAL PRACTITIONERS THROUGH MEANS

7

OTHER THAN REGULATION? (For example, criminal penalties, consumer fraud laws, small claims court, civil litigation, etc)?

The regulation of design professions through state licensing provides for investigation and discipline when consumers have been financially harmed due to technical defects. Without a landscape architecture statute, investigation of cases and obtaining remedies for substandard practice is difficult to accomplish using general legal principles or a general statute such as a consumer protection act. For landscape-related professionals, the recent Colorado case of *State v. Applied Landscape Solutions* is an example of a state consumer protection act being used to take action against an unethical and technically incompetent practitioner. In that case, a design/build landscape contractor generated at least one dozen consumer complaints within the first few months of operation, designing irrigation, grading, and outdoor stairs defectively. After more than two years of litigation, several defendants had not settled or reached judgment, and injured consumers were still awaiting restitution for the cost of property damage.

Several observations from the *Applied Landscape* case are relevant when considering the merits of general consumer protection laws in addressing problems in the market for construction design services:

Consumers have no basis under consumer protection laws to discern qualified versus unqualified providers of services. A pattern of harm must develop before a provider's capabilities or lack thereof is publicly known.

A state consumer protection act may provide an inadequate basis to prosecute individuals operating beyond their capability. At the least, it is an inefficient means of protecting consumers.

Consumer protection laws are backward-looking and do not incorporate technical standards for specific professional products. These laws accordingly offer little protection above and beyond the negligent actions discussed above.

In contrast to consumer protection laws, licensure provides a front-line safety net against malpractice. All of the existing general consumer protection remedies are available **after** a bad action has taken place. By measuring the competence of those who wish to practice the profession, licensure serves to **prevent** such actions from taking place – protecting the environment and personally property, avoiding injuries, and saving lives.

All states other than Vermont have recognized regulation as necessary for the landscape architecture profession. Just like architecture and engineering, landscape architecture has developed a nationally-recognized system for assuring competence in the practice of the profession – and it is implemented only through licensure. Furthermore, it is only through full licensure that landscape architects are able to perform the functions that require a professional stamp or seal. Currently, Vermont landscape architects must work under the supervision of a licensed design professional so that the licensed professional can provide his or her stamp to the design. These are the **same types of projects** for which the **same landscape architects** could provide their legal stamp in New York, Connecticut and every other state in the nation. This adds cost to



projects and creates a state-sponsored barrier to the practice of the landscape architecture profession in Vermont. Only full licensure can solve this problem.

When considering whether to renew the licensing of landscape architect in South Carolina in 1979, the South Carolina Legislative Audit Council stated in its conclusion to continue such licensing:

“Land planners and designers protect the public and the environment through the careful consideration of human needs and utilization of natural resources. A registered landscape architect has achieved a demonstrated level of proficiency in the advanced techniques of site evaluation which ensure maximum attention to health and safety issues, as well as respect for nature and ecology.” Other Audit Council findings indicated:

The public relies on the judgment and skill of registered landscape architects to provide land areas that are safe, usable, and pleasing to live with.

All sectors of the general public expect and rely upon up-to-date and innovative design concepts that result in safe and attractive land areas which enhance the quality of life and increase the value of developed property.

The Legislative Audit Council was charged with answering the question: “What economic, fiscal, and other impacts would occur in the absence of the administering of the programs or functions of the Board?” In addition to fiscal impact of losing “identifiable land design professionals whose environmental expertise and concern for human aesthetic values have made South Carolina a safe and pleasant place in which to live,” the LAC also concludes that “without control mechanisms such as State regulation, incompetent providers of landscape architectural services would endanger the public’s health, safety, and welfare in three areas: improper land planning, faulty design, and inadequate consideration to environmental issues or human needs. The report continues to explain that the term land planning includes site selection, conservation of natural resources, meeting client use requirements, project cost estimation and timing, site access, contours, and climate.

Professional jurisdiction between architects, landscape architects, land surveyors, and civil engineers may overlap at times since these other professions can perform landscape architectural work when such work is incidental to their practice. However, registration as a separate and distinct profession is essential for consumers to be able to identify qualified and competent landscape architects.

The conclusion was, “The Board of Registration performs a needed function in the regulation of landscape architects and should not be terminated. It is the responsibility of the State to protect the safety and welfare of its citizenry and to conserve natural resources and environmental quality. This is accomplished, in part, through competent land design professionals subject to adequate legislative control.”

ARE YOU SEEKING LICENSURE, CERTIFICATION OR REGISTRATION?

6

(See 26 V.S.A. 3101a. Definitions).

Licensure.



7 WHAT OTHER REGULATED PROFESSIONS / OCCUPATIONS PERFORM SIMILAR SERVICES TO THOSE OF THIS PROFESSION / OCCUPATION?

Architects, Planners, Engineers (civil, transportation, lighting, water and waste water, structural). Other non-state regulatory agencies providing minimal competency criteria include:

- Leadership in Energy and Environmental Development (LEED)
- Fellows of American Society of Landscape Architects (FASLA)
- American Planning Association (APA)
- The Council of Landscape Architectural Registration Boards (CLARB)
- Irrigation Association (IA)

12.1 How will the program distinguish between or among respective scopes of practice?

Landscape architects acknowledge that there are some overlapping areas of practice between landscape architecture and various aspects of architecture and civil engineering. This is not to suggest that these professions practice the majority of the elements of landscape architecture, but that there are elements that are practiced by more than one profession. In recognition of this overlap, the other design professions regulated by the Office of Professional Regulation are exempt from the need to be licensed as landscape architects.

It is also important to acknowledge that there are unregulated professions that also have overlapping areas of practice with landscape architecture. This proposal would not restrict those professionals from continuing to do their work. For example, landscape designers and horticulturists provide services that are sometimes also performed by landscape architects, but would still be able to perform such work under the proposal. The law would include the following clause, which is similar to a clause that also appears in the Vermont licensing laws for architects and land surveyors:

“This chapter shall not be construed to limit or restrict in any manner the right of a practitioner of another profession or occupation from carrying on in the usual manner any of the functions incidental to that profession or occupation, including landscape designers undertaking work that does not require a discretionary permit, foresters preparing forest management plans, and professional planners.”

Refer to **Appendix E** for the proposed VT Sunrise Law for Landscape Architecture.

13 HOW MANY PRACTITIONERS OF THIS PROFESSION / OCCUPATION DO YOU ESTIMATE ARE PRACTICING IN VERMONT?

VTASLA estimates that there are approximately 150 landscape architects who are practicing in Vermont. It is likely that there are additional landscape architects outside Vermont who may occasionally practice in the state.



ESTIMATE THE PERCENTAGE OF PRACTITIONER PRACTICING IN THE FOLLOWING SETTINGS?

14

Nationally, approximately two-thirds of landscape architects are in private practice; the remaining third is divided roughly evenly between those who work in the public sector (including federal, state, and local governments) and academia (including students of landscape architecture). In Vermont, the percentage of those in private practice is higher, because national numbers include employees of major federal agencies, including the National Park Service, Bureau of Land Management, and the Forest Service. VTASLA estimates that approximately 80 percent of Vermont landscape architects are in private practice.

IS FORMAL EDUCATION REQUIRED?

15

Yes

Refer to **Appendix F** for list of landscape architecture programs accredited by the Landscape Architectural Accreditation Board.

Education requirements:

Under the proposed legislation, the primary path to licensure requires an applicant to have graduated from a landscape architecture program accredited by the Landscape Architectural Accreditation Board.¹ Most of the 48 states that regulate landscape architecture require an accredited landscape architecture degree. In addition to this route to licensure, the Vermont proposal (like 30 existing state laws) also provides for candidates who have a range of experience to qualify to take the licensure examination (details provided with Question 16). The exam ensures that no matter the background of the applicant, all must meet national competency standards to qualify for licensure.

Where this education may be obtained?

Education must be obtained via a program that is accredited by the Landscape Architectural Accreditation Board. The LAAB is recognized by the Council for Higher Education Accreditation as the accrediting agency for first-professional baccalaureate and master's degree programs in landscape architecture in the United States and Canada. LAAB currently accredits 45 programs leading to baccalaureate degrees and 39 leading to master's degrees.

The LAAB develops standards to objectively evaluate landscape architectural programs and judges whether a school's program is in compliance with the accreditation standards. Accreditation evaluates all programs against standards that ensure the essential educational components leading to entry level professional competence.

According to the LAAB standards, a first-professional degree curriculum "must include the core knowledge skills and applications of landscape architecture: landscape architectural history, philosophy, theory, values,

¹



ethics, practice, planning, design, implementation, and management.” At a bachelor’s level, it consists of “an educational context enriched by other disciplines, including but not limited to: liberal and fine arts, natural sciences, social sciences and opportunities for students to develop areas of interest.” Those at a master’s level must develop research in areas that provide expertise or expanded knowledge related to the profession. In more specific terms, an LAAB-approved curriculum must include coverage of:

- Design theories, methodologies & applications
- Site design & construction, such as grading, drainage & circulation
- Construction materials, methods, technologies & applications
- Professional practice methods, values & ethics
- Communication in written, verbal & visual applications
- Landscape planning & management at various scales & applications
- Natural & cultural systems
- Computing applications & other advanced technology
- Landscape architectural history & theory
- Plants and ecosystems at various scales & situations

Accreditation criteria also include many other factors, including strength of faculty, facilities, equipment, information systems, as well as the evidence of alumni professional accomplishments, which includes professional employment in the profession and licensure.

IS SUPERVISED EXPERIENCE REQUIRED IN ADDITION TO, OR INSTEAD OF, FORMAL EDUCATION?

11

Yes.

Experience requirements:

The proposed licensure legislation would require candidates with an accredited degree to have three years of experience. Candidates without an accredited degree could qualify with nine years of experience. In order to ensure a standard level of competency, all of these applicants would be required to take and pass the licensure examination (see Question 17).

Landscape architects, like other design professionals, understand that there is no substitute for experience in the preparation for practice of the profession. This is why landscape architects are required to work under the supervision of a licensed landscape architect before being eligible for licensure. Most states require either two or three years of experience with an accredited undergraduate degree, and many allow one year of the requirement to be fulfilled with an accredited graduate degree. Many states require the experience to be obtained under a licensed landscape architect, although some states allow other licensed professionals (architects, engineers) to serve as the supervisor for at least some of their training period.

The licensure process serves three main purposes in this area: (1) auditing the length of experience; (2) auditing the diversity of experience; and (3) analyzing special circumstances for those individuals who do not have a landscape architecture degree. These functions safeguard the public from those individuals who are unprepared to be licensed – and protect the public health, safety, and welfare.

Application for Preliminary Sunrise Review Assessment

LANDSCAPE ARCHITECTS

June 30, 2008



The licensing board must handle special cases in which an individual has gained competence in landscape architecture through experience, rather than an approved degree program. Thirty states allow an applicant for licensure to become eligible by virtue of an extended period of experience. This is an important function of the licensing board, for it protects qualified professionals from being unfairly excluded from licensure. It is a critical safeguard to keep licensure from becoming a barrier to practice by those who are competent, and ensures that the main purpose of licensure remains the protection of the public health, safety, and welfare.

Where this experience may be obtained?

The key to qualified experience under the proposed licensure law is that it be of a diversified nature, meaning that it adequately covers the scope of practice (as defined in the law) and is progressive in nature to indicate that it is of increasing quality, complexity, and requiring greater responsibility. Experience must be obtained under the supervision of a licensed landscape architect. The exception to this requirement is that a portion of the experience may be obtained under the supervision of another licensed design professional (architect, professional engineer, land surveyor).

Candidates applying with an accredited degree may substitute one year of experience with another licensed design professional and candidates without such a degree may substitute up to three years of such experience.

IS THERE A NATIONAL EXAMINATION?

12

Yes, the Landscape Architect Registration Examination

Name and address of examination agency:

Council of Landscape Architectural Registration Boards
144 Church Street NW, Suite 201
Vienna, VA 22180
Phone: 703-319-8380 Fax: 703-319-8290
Joel Albizo, Executive Director

Examination requirements:

Every state licensure law requires new applicants to pass the Landscape Architect Registration Examination (LARE). The LARE is a five-section examination that tests the minimum knowledge, skills, and abilities necessary for a licensed professional to protect the public health, safety and welfare. It is developed and administered by the Council of Landscape Architectural Registration Boards (CLARB). CLARB is comprised of the regulatory boards from the U.S. states and Canadian provinces that license landscape architects.

According to an independent audit conducted by the Educational Testing Service, the LARE meets or exceeds all nationally recognized testing standards. The content of the LARE is based on the results of a thorough Job Analysis Survey, which determines what tasks landscape architects do as part of their normal practice, and the knowledge, skills and abilities (KSAs) required accomplishing those tasks in a manner that protects the public from harm. Testing experts then use a mathematical model to determine the best method for testing the



KSAs. The result is an exam that tests those KSAs, which most impact public health, safety, and welfare, using the most appropriate testing methodologies.

The Job Analysis Survey is the backbone of the LARE. The most recently completed survey was mailed to 6,000 individuals practicing landscape architecture in the United States and Canada. The survey asked for information on tasks, knowledge areas and competencies that landscape architects perform as part of their normal practice.

This process illustrates the critical role that the LARE plays in ensuring that any licensed landscape architect can be trusted to protect the public health, safety, and welfare. The development of the exam is based upon identifying those critical tasks that impact the public health, safety, and welfare and building the examination around those KSAs that are necessary to complete those tasks. The LARE **only** includes those issues that (1) significantly impact public health, safety, and welfare, (2) are regularly performed as part of the normal practice of landscape architecture, and (3) the skills required to perform those functions are acquired prior to registration. These components together comprise the minimum standards applicants must meet in order to safely practice landscape architecture.

The LARE is divided into five sections, three multiple choice sections and two graphic design sections. Each section covers a critical content area and contains subcategories identifying the specific KSAs to be tested:

Section A — Project and Construction Administration is the first multiple choice section, with 70 questions. It tests knowledge and skills used throughout the project development process that are associated with the legal and financial aspects of a project, and managing a design team. It includes questions on construction law, contracts, construction observation and construction administration processes.

Section B — Inventory, Analysis and Program Development is also comprised of multiple choice questions, with 90 items. It tests a candidate's knowledge of inventory, data gathering and analysis techniques and the conceptual decision-making process that occurs before the design decisions are made. Topics include site suitability, functional relationships, patterns of land use, accessibility regulations, water quality requirements, and regional hazard design considerations.

Section C — Site Design is the first graphics section, consisting of four design vignette problems. It covers KSAs associated with the synthetical process of incorporating elements into natural and built environment in a safe and effective manner. Elements of the vignettes include site design for buildings, layout of playground equipment, vehicular and pedestrian circulation, roadway alignment design, and designing site lighting layouts.

Section D — Design and Construction Documentation is the third multiple choice section, with 120 questions. It tests KSAs required to implement the design into a final constructed product, including considerations for the appropriate shape and characteristics of assemblies, structural integrity and integration into existing site conditions. It includes layout plans, grading plans, drainage plans, demolition plans, erosion and sediment control plans, planting plans, and irrigation plans. Questions are also included that address design needs of special populations, elements of circulation systems and their design requirements, lighting systems, noise attenuation and mitigation techniques, and structural considerations. Applicants are also tested on knowledge of erosion and sedimentation, irrigation systems, biofiltration and other drainage methods, grading, drainage and stormwater treatment, including how to perform subsurface storm drain calculations and determine pipe sizes.



Section E — Grading, Drainage and Stormwater Management, the final section of the LARE, is a graphic response section consisting of four problems that test KSAs required to manipulate the surface of the land to meet design objectives and to direct surface and subsurface water. The grading portions of the section require examinees to manipulate contours and spot elevations, calculate slopes, grades and volumes of material, facilitate the removal of stormwater, and change the elevations of the existing landscape to accommodate structures, parking and circulation. The drainage portions of the section test the ability to design surface and subsurface storm drainage systems, including hydraulic characteristics and storm drain connections, to effectively and safely remove storm water from a site.

The passing level, or “cut score” for each of the multiple choice sections is based on the level of performance expected of minimally qualified candidates taking that particular section. The levels of expected performance are determined by using scientific testing methods.

The graphic vignette problems are graded by licensed landscape architects with at least five years of experience after licensure. The evaluation itself takes place at a central grading session, where all of the examinations are scored at one time. Candidates are graded on how their solutions affect the public health and safety issues and not on the aesthetics of the design. For example, candidates are tested on the form and functions of various tree types. They are judged on whether the trees selected in a design function according to the problem criteria and *not* whether they select the prettiest trees. This type of problem might require that trees along a walkway not have low hanging branches which would obscure the sightlines, offer cover for muggers, or pose a collision hazard.

The grading process, in which every examination is graded at least twice and as many as four times, makes certain that every examination solution is reviewed fairly and completely. It eliminates subjective evaluation and bias, and ensures that all exams are graded against the same criteria. The process protects the rights of the candidate by applying objective criteria; and, it protects the public by ensuring that only those candidates, who have been proven to possess the KSAs to protect the public, pass the exam.

While education and experience standards ensure that each licensure applicant has been prepared to practice the profession, the LARE provides a definitive measure of competence that is designed with the sole intent of protecting the public health, safety, and welfare. Those who pass through this complete process can be designated a licensed landscape architect by the states in which they practice.

DOES THIS PROFESSION / OCCUPATION NEED CONTINUING EDUCATION?

6

Yes

Explain:

Landscape architecture, just like other design professions, continues to evolve with new technologies, academic research, and practical experience. As these new features become more prevalent in the profession, it is important to ensure continued competency by those who are licensed to practice the profession. Any requirements for continuing education must be tied to public health, safety, and welfare, but also provide flexibility to the practitioner for the venue in which he or she seeks to expand knowledge and skills. It is important for Vermont to allow for reciprocity in this area so that practitioners who are licensed in other states that require continuing education do not have difficulty meeting the requirements of multiple



states. Currently, numerous states require their licensed landscape architects to attain a level of continuing education as a condition of renewal. An additional nine states have statutory authority to adopt continuing education requirements, but no regulations have been promulgated.

Refer to **Appendix G** for a detailed analysis of the State by State Continuing Education Requirements for Landscape Architects.

7 **BASED ON THE CRITERIA YOU PROPOSE AS A REQUIREMENT TO BECOME LICENSED / CERTIFIED / REGISTERED, ESTIMATE HOW MANY OF THE CURRENT PRACTITIONERS WILL QUALIFY?**

Based upon our general knowledge of the landscape architecture community in Vermont, we believe that most individuals claiming to be landscape architects will qualify under the proposed licensure requirements. In fact, many Vermont landscape architects are now licensed in other states because their practice has taken them to places like New York, Indiana, Louisiana, Georgia and Connecticut where a license is required. These licenses do not provide any recourse for Vermont residents who contract for work from Vermont landscape architects. Only a Vermont license would establish protection here in Vermont.

The important issue here is that those who do not qualify will fail **only** because they do not meet the standard for competence to practice the elements of the profession that can impact the public health, safety, and welfare. They will be free to practice the other elements of landscape design and management that do not impact the public health, safety, and welfare, as long as they do not use the title "landscape architect." This maintains the distinction for the consumer between the licensed and unlicensed practitioner.

8 **WHAT TRANSITIONAL PROVISIONS / "GRANDFATHER PROVISIONS" DO YOU PROPOSE FOR CURRENT PRACTITIONERS TO OBTAIN LICENSURE / CERTIFICATION / REGISTRATION?**

The transitional provisions in the proposed law are the standards that have been established for all who enter the profession, whether in the initial period after the law takes effect or years afterward. The provisions provide that those without an accredited degree may qualify for the licensure examination with at least nine years of experience.

Those landscape architects that currently hold licenses in other states could request a license in Vermont through comity/endorsement, without the need to take the exam again.



APPENDICES

9

Appendix A: American Society of Landscape Architects (ASLA) Code of Professional Ethics, April 27, 2007.

Appendix B: American Society of Landscape Architects (ASLA) Code of Environmental Ethics.

Appendix C: An Act of the Colorado law for Landscape Architecture.

Appendix D: Position Classification Standard for Landscape Architecture Series, GS-0807

Appendix E: Vermont Sunrise Proposed Law

Appendix F: Landscape Architectural Education and Accredited Programs.

Appendix G: State by State Analysis of Continuing Education Requirements, April 15, 2008.

Appendix H: Impact of Landscape Architecture on the Health, Safety and Welfare, How Licensure Protects the Public, June 21, 2008.

Appendix I (Question 22): List of all interested persons or groups in favor of, or opposed to, this request. Have they been consulted?

Appendix J (Question 23): Statistical data on disciplinary actions for this profession / occupation in other states.

Application for Preliminary Sunrise Review Assessment
LANDSCAPE ARCHITECTS
June 30, 2008



APPENDIX A

American Society of Landscape Architects (ASLA)

Code of Professional Ethics, April 27, 2007.

Application for Preliminary Sunrise Review Assessment
LANDSCAPE ARCHITECTS
June 30, 2008



APPENDIX B

American Society of Landscape Architects (ASLA) Code of Environmental Ethics.

Application for Preliminary Sunrise Review Assessment
LANDSCAPE ARCHITECTS
June 30, 2008



APPENDIX C

An Act of the Colorado law for Landscape Architecture.

Application for Preliminary Sunrise Review Assessment
LANDSCAPE ARCHITECTS
June 30, 2008



APPENDIX D

Position Classification Standard for Landscape Architecture Series, GS-0807

Application for Preliminary Sunrise Review Assessment
LANDSCAPE ARCHITECTS
June 30, 2008



APPENDIX E

Vermont Sunrise Proposed Law

Application for Preliminary Sunrise Review Assessment
LANDSCAPE ARCHITECTS
June 30, 2008



APPENDIX F

Landscape Architectural Education and Accredited Programs.

Application for Preliminary Sunrise Review Assessment
LANDSCAPE ARCHITECTS
June 30, 2008



APPENDIX G

State by State Analysis of Continuing Education Requirements, April 15, 2008.

Application for Preliminary Sunrise Review Assessment
LANDSCAPE ARCHITECTS
June 30, 2008



APPENDIX H

Impact of Landscape Architecture on the Health, Safety and Welfare,
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APPENDIX I

(Question 22): List of all interested persons or groups in favor of, or opposed to, this request. Have they been consulted?



APPENDIX J

(Question 23): Statistical data on disciplinary actions for this profession / occupation in other states.