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February 1, 2021

American Society of Landscape Architects
LaGasse Medal Nominations – Landscape Architect
c/o Honors and Awards
636 Eye Street, NW
Washington, DC 20001-3736

To the ASLA Executive Committee and Board of Trustees:

I am pleased to nominate Barrett Kays, Ph.D., RLA, LSS, CPSS, FASLA for the LaGasse Medal (landscape architect). Barrett is a talented, innovative and award winning landscape architect and environmental scientist who has made notable contributions to the management and conservancy of natural resources and public landscapes. He is recognized for designing sustainable urban soils and landscapes, and for detailed and accurate analysis of natural resources, soils, watersheds, wetlands, surface waters, groundwaters, and contaminated sites. He blends his commitment for the rigorous scientific and analytical basis of sites and natural resources with his knowledge of design and he has managed landscape architecture and environmental science projects in twenty-five (25) states.

Since 1990, Barrett has conducted numerous research studies in the design of soils and landscapes primarily for major public urban park and special venue projects. He advocates that public landscape architecture projects should be designed for at least a 100-year life span and also designed to have sufficient resilience to withstand the most extreme rainfall, drought, cold, and heat events of record. He has been designing projects with this in mind for the last thirty years of his landscape architecture practice. Barrett uses state-of-the-art mathematical computer models to forecast climate extremes to decide on long-term resilient design standards, believing that the traditional methods of determining standards cause far too many design failures.

Landscape Architectural Design Projects of Note

In 1992 Barrett started soil, groundwater, and geotechnical investigations for the **Great Lawn and Belevedere Lake** design for the **Central Park Conservancy, Inc.** in New York.
- He applied his site investigation data into a research mathematical hydrological model to study worst case rainfalls and their impact on the Great Lawn. This led to a totally new soil design that would infiltrate a 100-year rainstorm occurring 3 hours before a major outdoor concert and allow one million visitors on the site without causing any damage to the soils, grass or people.
- Barrett also used the model to determine the amount of irrigation that was needed during a worst case summer drought in order to maintain zero stress on the grass and trees. This was thought to be one of the first technical studies for design resilience in a major urban park.
- In addition, he solved the mystery of sink holes in the Great Lawn and eliminated any future occurrence by managing the groundwater levels in the debris landfill under the Great Lawn by including four sub-terrain rooms that regulate water management in the landfill.
- Barrett redesigned the Belvedere Lake creating deep cool water ecological zones and shallow marsh edges. He managed two stakeholder groups consisting of the Manhattan Sierra Club and the Manhattan Audubon Society that became so excited with the success of the project that they

created with the Central Park Conservancy a poster showing the increased number of dragonfly species. The dragonfly population had been a real concern of the two stakeholder groups and they had brought suit to block the previous project masterplan.

- In **1998 the project received the ASLA Honor Award** and the Best Site Design by *New York Construction News.*
- Today the Great Lawn and Belvedere Lake continue to achieve all of the resiliency standards as proposed in the 1992 design.

More recently, Barrett has continued to improve the ways to accommodate even larger rainfall storms and severe drought events in his soil design for the **Restoration of the Main Fountain Garden** at **Longwood Gardens** in conjunction with West 8. **ASLA honored this project with a 2018 Design Honor Award**.

- Barrett invented a new soil design concept for Longwood Gardens. He dried the topsoil into small pellets using a rotary kiln process for the new Longwood soil mix. The pellets act like natural "bioswitches" suspended in the sandy mix and are calibrated to stop drainage at a specific moisture content and hold all of the remaining water in the soil for plant growth. This allows Barrett to select a project specific maximum moisture content depending upon the climatic region: e.g. semi-arid to mesic-humid. The minimum moisture content is then controlled by irrigation sensors. Thus the optimum moisture range is always maintained across the landscape.
- This level of moisture control is totally unique to his newest designs. Barret's precision modelling allows him to know during design development exactly how it will function over a 100 year life of the project.

Barrett is currently working on construction administration of the **Dwight D. Eisenhower Memorial** in Washington, DC. He has focusing his concept to achieve zero runoff and total soil storage of 1,000 year rainfall events and 1,000 year drought events.

Another age old landscape problem is how to keep moisture on top of a steep slope and avoid wetness at the bottom of a steep slope. Barrett is now working on a project where he has designed a system to basically remove gravity from affecting the distribution of soil water on a steeply sloping landform. In this method the moisture content can be kept very uniform on slopes.

Barrett has been involved in the design of totally new types of stormwater treatment systems for over 18 small and large public projects relating to USGBC Platinum, USGBC Gold, and International Cascadia Living Building Awards.

These new highly precise water management systems will allow landscape architects the ability to create new and if desired complex plant and micro-organism schemes across a landscape. The technology that Barrett is developing opens new ways to adapt to climatic change and at the same time conserve and protect water quality. His new landscapes equal stormwater quantity and quality control of the highest order.

Barrett has served as consultant to numerous landscape architectural design teams on a wide range of projects, including:
- **Restoration of Nelson Rockefeller Hudson River Park**, New York, NY
    Client: Battery Park City Authority, New York, NY
- **Dwight D. Eisenhower Memorial**, Washington, DC

Client: Gehry Partners + AECOM, JV, Arlington, VA
- **Redesign of National Air & Space Museum**, National Mall, Washington, DC
    Client: AECOM, Arlington, VA
- **North Carolina Museum of Art Park**, Raleigh, NC
    Client: Stewart, Inc., Raleigh, NC and Civitas, Inc., Denver, CO
- **Interstate-70 Over Structure Park**, Denver, CO
    Client: Civitas, Inc., Denver, CO
- **Redesign of Historic Moore Square Park**, Raleigh, NC
    Client: Sasaki Associates, Inc., Watertown, MA
- **Devereux Meadows Park**, Raleigh, NC
    Client: Andropogon Associates, Inc., Raleigh, NC
- **Presidio Parkway & Tunnels**, San Francisco, CA
    Client: Presidio Trust, San Francisco, CA
- **Interstate-440 Median Landscaping**, Raleigh, NC
    Client: Kimley-Horn & Associates, Inc., Raleigh, NC
- **North Waterfront Park**, Wilmington, NC
    Client: Hargreaves Jones Associates, Boston, MA & Stewart, Inc., Raleigh, NC
- **North Carolina School for Science & Mathematics**, Morganton, NC
    Client: Stewart, Inc., Raleigh, NC
- **North Carolina Arboretum**, Asheville, NC
    Client: O'Brien Atkins & Associates, Inc., Research Triangle Park, NC

Design Awards Received
- **2018 ASLA Design Honor Award**, Restoration of Main Fountain Garden, Longwood Gardens, Kennett Square, PA by American Society of Landscape Architects
    Client: West 8. New York, NY
- **2017 Top Green School Award in the Carolinas**, Isaac Dickson Elementary School, Asheville, NC
    Client: Legerton Architecture, Inc., Asheville, NC & Innovative Design, Inc., Raleigh, NC
- **2017 LEED Platinum Award**, Isaac Dickson Elementary School, Asheville, NC
    Client: Innovative Design, Inc., Raleigh, NC
- **2015 Publication Honor Award**, ASLA LATIS Series Publication by NCASLA
    Client: Landis, PLLC, Raleigh, NC
- **2012 LEED Platinum Award**, Creative Arts Building, Haywood Community College, Clyde, NC
    Client: Innovative Design, Inc., Raleigh, NC
- **2011 International Cascadia Living Building Award**, Sustainable Living Center, Maharishi University, Fairfield, IA
    Client: Innovative Design, Inc., Raleigh, NC
- **2010 LEED Platinum Award**, Freshman Hall, Emory University, Atlanta, GA
    Client: Ayers Gross Saint, Baltimore, MD
- **2009 LEED Gold Award and FHWA Environmental Excellence Award**, Mountain Region Visitors Center
    Client: Innovative Design, Inc., Raleigh, NC
- **2008 Beyond Green High Performance Building Award**, Northern Guilford County Middle School, Greensboro, NC
    Client: Innovative Design, Inc., Raleigh, NC

- **2008 USEPA Top Water Saving School in US**, Northern Guilford County Middle School, Greensboro, NC
    Client: Innovative Design, Inc., Raleigh, NC
- **2005 Nation's Top Exemplary Sustainable Building Award**, Heritage Middle School, Wake Forest, NC
    Client: Innovative Design, Inc., Raleigh, NC
- **2000 Design Honor Award**, Fredrick Law Olmsted Causeway at North Carolina Arboretum, Asheville, NC
    Client: O'Brien Atkins & Associates, Inc., Research Triangle Park, NC
- **1998 Design Excellence Award**, North Carolina Arboretum, Asheville, NC
    Client: O'Brien Atkins & Associates, Inc., Research Triangle Park, NC
- **1998 Design Honor Award**, Great Lawn & Belvedere Lake Restoration, Central Park, New York, NY by American Society of Landscape Architects
    Client: Central Park Conservancy, Inc., New York, NY
- **Best of 1998 Site Design Award**, Great Lawn & Belvedere Lake Restoration, Central Park, New York, NY by F.W. Dodge New York Construction News, New York, NY
    Client: Central Park Conservancy, Inc., New York, NY

Environmental Damage Forensic Investigations

Another part of Barrett's practice involves environmental damage forensic investigations and expert witness work. He firmly believes that professionals must study landscape failures as a means to better understand the critical aspects of landscape and engineering design. Many landscape and engineering design failures are a result of the lack of understanding of the principles of subsurface drainage.

Barrett was involved in the **Henderson County Drainage District #3, et al v. United States of America** case involving a monetary claim of $440 million dollars for alleged subsurface flooding, seepage, and crop loss damages from 1937 through 2004 arising out of the construction of the lock and dam system on the Upper Mississippi and Illinois Rivers. HCDD #3 and ten other large agricultural drainage districts located immediately behind the river levees presented their case in the United States Federal Court of Claims against the Rock Island District of United States Army Corps of Engineers. Barrett served as expert for the defendant United States Department of Justice. He collected site samples and data, conducted laboratory testing, and modelled the surface and subsurface hydrologic conditions on a daily basis for 65-years of climatic records. He found that in spite of the fact that the water levels in the rivers were 25 to 30 feet above the farm lands, the adjacent river did not cause any of the damages in the drainage districts. He further found that the districts were wet because of rainfall falling directly onto the agricultural lands, and were made much worse because of their antiquated drainage systems and management practices. He even showed that by improving their internal drainage and irrigation systems the farmers could more than double their average annual crop yields.

In a technically similar case, Barrett served as expert for **United States Department of Justice** and the **United States Fish and Wildlife Service** defending the practice of restoring wetland hydrologic conditions in the Pocosin Lakes National Wildlife Refuge. He showed that restoration of historic hydrologic conditions had no effect on surface or subsurface flooding in the adjacent farmlands.

Recently Barrett used his environmental forensic expertise when the **Cheyenne River Sioux Indian Tribe** sued the **Omaha District of United States Army Corps of Engineers** in United States Federal Court of Claims. The CRST claimed that the Oahe Reservoir located on the Missouri River in South

Dakota had damaged their reservation during a single flood event in March 1997 by causing sedimentation over 35-square miles, averaging two feet in depth, and totaled over 72 million cubic yards of sediment. Barrett's expert team established forty georeferenced points across the alleged damage area and collected samples from the surface to a depth of 5 feet. He proved that virtually all of the sediment in question was deposited prior to the construction of the Oahe Reservoir and that most of the sediment was deposited from 220 to as much as 13,500 years ago by using ^{14}C radiocarbon dating techniques. The same radiocarbon dating techniques are used to study the history of climatic change over the last 50,000 years. This has allowed people to study evidence of past desertification in the western United States.

The environmental analysis techniques used for assessing large scale environmental damages can also be used for environmental restoration design and adaptation to climatic change. Therefore there is a direct relationship between studying past climatic extreme events and designing sustainable landscapes for the future.

Barrett has also served as expert investigator and witness in over 75 cases in various state courts regarding damages due to flooding, stormwater, water quality, air quality, takings, construction, and/or professional liability issues.

Summary

Dr. Barrett Kays has contributed to our profession through his research and scientific endeavors in areas that are crucial to the success of our projects – specifically soil and water. He has advanced landscape architecture practice by blending his deep knowledge of soils with his strong understanding of design. Barrett is an innovative and creative landscape architect and environmental scientist who has made notable contributions to the management and conservancy of natural resources and public landscapes and is truly deserving of being awarded the LaGasse Medal.

Thank you for your consideration.

Sincerely;

Rodney L. Swink, FASLA, PLA

Photos:
Belvedere Deep Lake Pool Construction
Restoration Belvedere Lake
Restoration Great Lawn and Belvedere Lake
Central Park Conservancy Poster
Restoration Main Fountain Garden Longwood

**CENTRAL PARK
CONSERVANCY**
central to the park

January 24, 2019

American Society of Landscape Architects
LaGasse Medal Nominations – Landscape Architect
c/o Honors and Awards
636 Eye Street, NW
Washington, DC 20001-3736

To the ASLA Executive Committee and Board of Trustees:

I am very pleased to write in support of Barrett Kays, PhD, FASLA nomination of the LaGasse Medal. I had the opportunity to work with Barrett on the Reconstruction of the Great Lawn and Belvedere Lake in the late 1990s. The scope and impact of this project remain a significant milestone in the restoration of Central Park as a masterwork of landscape architecture and one of the world's important and celebrated public landscapes.

Barrett was a leading member of the design team and provided soil science, environmental, and drainage design consulting. His expertise and contributions were critical in establishing the foundations for the sustainable stewardship of this vital civic landscape in the 20 years since it was reconstructed. Barrett's contribution established a tangible precedent, highlighting the importance of aligning soil and environmental science with landscape architecture, and influencing our approach to ensuring the successful and responsible stewardship of the designed public realm.

Barrett's work as scientist and landscape architect in the public realm has made a significant contribution to the stewardship of public open space, and I am honored to endorse his nomination for the LaGasse Medal.

Sincerely,

Christopher J. Nolan, FASLA
Chief Operating Officer & Chief Landscape Architect

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Rodney Swink, FASLA, PLA
ASLA Executive Committee
636 Eye Street
Washington, DC 20001-3736

Re: Recommendation for Barrett Kays, FASLA
        For ASLA LaGasse Medal

Dear Rodney,

I am pleased to write this letter in support of Barrett Kays for the ASLA LaGasse Medal.

I have known Barrett since 1994 when we worked together on the Restoration of Central Park's Great Lawn and more recently through his work on the Eisenhower Memorial in Washington, DC while I was at AECOM. I have been long impressed by Barrett's ability to synthesize his dual roles as a soil scientist and consulting landscape architect.

He has served as a knowledgeable expert for many land development projects over his distinguished career. Barrett is able to assess a project's needs and explain clearly how soils can be mitigated to support a landscape architectural agenda of long-term, sustainable performance.

He has been a strong advocate for our profession though his research, writing and lecturing - always advocating for soils as a critical resource to be conserved and enhanced for improved landscape function. His consulting work throughout the United Stated with landscape architects, engineers, agencies and owners has advanced the industry's understanding of best practices for soil design and stewardship during construction. As a professional I have relied on both his sage advice and sound writings to improve the designs my numerous public projects in the New York City area. As an academic, I use his writings as part of my planting design and green infrastructure courses to ensure students understand the critical role soils play in sustainable design.

In short, Barrett has raised the bar of excellence for our profession. He has and continues to be a shining example of an influential landscape architect who is esteemed as a true scientist-practitioner in the realm of soil conservation and enhancement.

Sincerely,

Andrew Lavallee, FASLA, RLA
Partner

ncma North Carolina Museum of Art

STREET 2110 Blue Ridge Road, Raleigh, NC 27607-6494 MAIL 4630 Mail Service Center, Raleigh, NC 27699-4630
TEL 919.839.6262 FAX 919.733.8034 WEB ncartmuseum.org

ASLA Executive Committee
636 Eye Street
Washington, DC 20001-3736

Dear Committee,

In my capacity as planning director of the North Carolina Museum of Art and director of its Ann and Jim Goodnight Museum Park, I am delighted to write in support of Barrett Kays for ASLA's La Gasse Medal. I have known Barrett for many years during the development of the museum campus, and have gained a deep appreciation for the scientific approach he brings to implementation of complex landscapes.

Most recently, we completed an important expansion of our park that unified the museum campus. Core to the design, developed by Mark Johnson of Civitas Inc. (Denver), was the transformation of a highly degraded former prison site into a community-gathering place. It was a brown-field, stripped of topsoil and spoiled by a century of abuse.

Civitas assembled an expert team for the project, and turned to Barrett to tackle the complex job of designing soils that would function for events, water management, and healthy plant life. The heart of the project is the Ellipse: a perfect elliptical lawn designed to host large-scale events, even the day after one of our frequent summer storms.

The prison soils were exported to a large field to create new piedmont meadows, now establishing as a natural environment for large-scale sculpture. Twenty mounded wave-gardens interwoven with paths are thriving with native grasses and pollinator plants. To say the existing condition were challenging, would be an understatement, but design features were successfully realized because Barrett brought a scientific approach to the landscape and civil design process. His recommendations for double digging the soil and sourcing unique soil mixes for each of the planting palettes used throughout the design allowed the project's success and year-round enjoyment by our public. I recall Barrett making the contractors a bit crazy by insisting on "sift tests" for each batch of specifically designed soils, proving that his specifications were rigorously followed.

I first met Barrett after his incredible project to restore Central Park's Great Lawn. As a native New Yorker, I especially appreciated the importance for my City and as a national model. It was also my introduction to the science of soil design, and quickly became aware of Barrett's leadership in the field. His contribution to landscape design, environmental restoration, and academics is legendary and certainly deserving of ASLA's prestigious La Gasse Medal.

Thank you for this consideration.

Daniel P. Gottlieb, Hon.ASLA
Director of Planning, Design, and Museum Park
North Carolina Museum of Art

dgottlieb@ncartmuseum.org

November 7, 2018

ASLA Executive Committee
636 Eye Street
Washington, DC

Re: Letter of Support, Barrett Kays, LaGasse Medal

Dear Members of the Executive Committee:

I am writing in support of the nomination of Barrett Kays, FASLA for the LaGasse Medal. I have known Barrett for years and recently completed the Ann and Jim Goodnight Museum Park, at the North Carolina Museum of Art, with him.

Barrett is a unique individual in our profession. He is well versed and capable in design and a great design collaborator, but his contribution to the profession has come through his deep knowledge of soil science and how soil contributes to the sustainability and resiliency of a designed landscape. Barrett informed our work far beyond the role of soils. He brought an over-arching perspective of the role that climate, soils, stormwater and groundwater play in the Raleigh region, and more specifically, the role, composition and impact of the disturbed soils of the site, which was formerly a prison and prison farm. His affable personality and hands-on approach were invaluable in the field during construction, as he was eager to work with our staff and the contractor's staff to teach us all how we could diagnose soil issues and improve soil qualities as both growing and hydrological media.

Barrett has worked far and wide, teaching many landscape architects how to improve the quality of our work and hence the impact of our profession. His knowledge, spirit and impact would be a fine testament to the values and contribution of Alfred B. LaGasse himself.

Sincerely,

Mark W Johnson

Central Park's Turtle Pond
& Belvedere Castle

1 Common Green Darner
Large, olive green thorax, males have bright blue abdomen

2 Cherry-faced Meadowhawk
Males are bright red. The different species of Meadowhawk are difficult to separate even by experts.

3 Eastern Forktail *in wheel*
Central Park's most common damselfly. Tiny. Males have green thorax, black abdomen with bright blue tip.

4 Fragile Forktail
Tiny. Green or blue exclamation points on thorax.

5 Common Whitetail *female*
White dashes on abdomen. Male as white abdomen and different wing pattern.

6 Calico Pennant
Males have red hearts on abdomen.

7 Eastern Amberwing
Smallest Central Park dragonfly. Males have amber-colored wings and body.

8 Blue Dasher
Central Park's most common dragonfly. Males have green eyes, white face and powder blue abdomen.

9 Orange Bluet
Males orange and black, abdomen with orange tip.

10 Black Saddlebags *in tandem*
Large black markings on hind wings.

11 Eastern Pondhawk *ovipositing*
Females are bright green. Males are powder blue with green face.

12 Spot-winged Glider
Appears brown with red face in flight, commonly over lawns. Small black spot on hind wings.

13 Widow Skimmer
Males have black and white wings.

14 Twelve-spotted Skimmer
Males have black and white spots on wings.