



ADVANCING A RESILIENT PUBLIC REALM IN MIAMI

A PROJECT BY:

**VAN
ALEN**

INSTITUTE

MADE POSSIBLE WITH SUPPORT FROM:



THE
KRESGE
FOUNDATION





TABLE OF CONTENTS

THE BIG PICTURE4

OUR WORK IN GREATER MIAMI..... 8

CORE PRINCIPLES12

CREATIVITY IN GOVERNMENT..... 14

QUICK WINS 16

BUILD TRUST 18

CONCLUSION20

APPENDIX..... 24

PROGRAMMATIC DETAILS.....26

METHODOLOGY26

ADVISORS.....28

REPETITIVE LOSS PROPERTIES.....29

JOSÉ MARTÍ PARK 32

CLIMATE DESIGN LAB 34

THE BIG PICTURE

Flooding in Miami during a King Tide Event, October 2018 >
Photo: Scott McIntyre





THE BIG PICTURE

AS WEATHER PATTERNS BECOME MORE UNPREDICTABLE, URBAN VULNERABILITY TO HEAT, FLOODING, AND CATASTROPHIC STORMS HAS GROWN. BILLIONS OF HOMES, JOBS, AND LIVES ARE INCREASINGLY AT RISK. For more than 125 years, Van Alen Institute has advanced design solutions that make cities more resilient—physically and socially. We recognize that despite the risk, the future is urban.

Communities that are challenged socially and economically are frequently on the front lines of environmental change. Depending on size, budget, and political focus, cities have wildly differing abilities to protect residents. Under-resourced cities are often left out of the conversation entirely.

In response, Van Alen has collaborated with several U.S. cities and regions to develop equitable, implementable, and replicable design solutions to mitigate the effects of climate change. Focus areas include the Northeast region post-Hurricane Sandy, the Mississippi River Delta, and West Palm Beach, Florida. Most recently, we collaborated with two municipal governments in the Greater Miami area to push some truly innovative work forward.

OUR WORK IN GREATER MIAMI

Stormwater Park >
Photo: Saul Martinez



OUR WORK IN GREATER MIAMI

In 2016, President Barack Obama declared Miami to be “ground zero” for climate change. Miami has the most private property at risk of destruction. It also has a unique geology that renders traditional strategies insufficient. Water is inescapable; not only does it intrude from the coast, it also seeps upward through the area’s porous limestone soil substrate.

New ideas to help residents of the Miami region live with water—and live well—are urgently needed. In 2017, Van Alen Institute launched *Keeping Current*, an initiative to develop implementable and replicable solutions to sea level rise. *Keeping Current* investigated the region’s unique challenges and opportunities and defined targeted and actionable project scopes. Ultimately, we supported the development of two climate-adaptive parks, forged new connections between city leaders and community members, and contributed to local capacity-building.

PROJECT #1: STORMWATER PARK, NORTH MIAMI, FL

With the City of North Miami, a small municipality of predominantly low-to middle-income Haitian immigrants, we launched an international competition to develop a pilot project and masterplan for the city’s portfolio of “repetitive loss properties”—sites that experience repeated flooding and incur high insurance costs. Prior to launching, we met with city agencies and community residents to frame the competition. The competition called for a culturally relevant activation of a city-owned vacant lot that would beautify the neighborhood, protect adjacent properties from flooding, and provide social space for gathering as a community. Working with a design team led by Department Design Office, we completed the pilot project—now called Stormwater Park—on a formerly residential lot that had been sitting vacant for nearly two decades.

OUR WORK IN GREATER MIAMI

PROJECT #2: JOSÉ MARTÍ PARK, MIAMI, FL

We also worked with the City of Miami to launch an international design competition for a climate-adaptive redesign of José Martí Park, a 13-acre greenspace along the Miami River. Located in Little Havana, the park is the central gathering space of one of the nation’s largest Latin American immigrant communities. This culturally vibrant, low-income community is grappling with gentrification pressures, even as flooding from the Miami River regularly renders large sections of the park unusable and inaccessible. Through community engagement and a public solicitation, the city selected local landscape architecture firm Curtis + Rogers Design Studio to redesign José Martí Park to make it more resistant to flooding while addressing the community’s need for a safe gathering space.



▲ José Martí Park
Photo: Scott McIntyre

CORE PRINCIPALS

José Martí Park >
Photo: Scott McIntyre



CORE PRINCIPLE #1: CREATIVITY IN GOVERNMENT

Years of working with city leaders, community residents, nonprofit advocates, and designers has yielded three core principles that should drive climate adaptation in cities.

MAKE SPACE FOR CREATIVITY IN GOVERNMENT. WHEN IT COMES TO CLIMATE ADAPTATION, CITY LEADERSHIP MUST SUPPORT EXPERIMENTATION.

Governments wrestle with how to make space for innovation, which can seem like a luxury. Persistent and urgent problems like poverty and health disparities can leave little room—or incentive—for governments to take risks or experiment with systems. Procurement processes are often built in a way that reinforces this.

However, climate impacts will only become more severe over time and communities will not be protected if government leaders maintain the status quo. City leaders are now recognizing the urgent need for proactive solutions, and want to understand reasonable and actionable opportunities.

“THIS WORK REQUIRES A LOT OF INTERDISCIPLINARY THINKING. THE TEAM WE SELECTED WOULD HAVE BEEN MUCH MORE TRADITIONAL HAD WE NOT WORKED WITH VAN ALLEN.”
Jane Gilbert
Chief Resilience Officer, City of Miami
City partner for José Martí Park design competition

city departments—including Planning, Capital, Public Works, Parks, Buildings, and Procurement. Together, we identified city projects that were already in the pipeline, but had lost momentum and public enthusiasm. By encouraging agency leaders to consider these pipeline projects from a climate-adaptive lens, they started to break out of the silos that kept them from thinking holistically.

CORE PRINCIPLE #1: CREATIVITY IN GOVERNMENT

HOW THIS WORKED AT STORMWATER PARK:

In North Miami, we charted an opportunity to work outside of the city’s procurement process by raising private funding. With these funds in place, we ran the design-build competition. This structure was an entirely new way for the city to work. They entrusted the competition management and team selection process to Van Alen, but oversaw the construction and ongoing park management. They also helped us secure additional state funding for the project.

This structure enabled our interdisciplinary group to shape the Request for Qualifications (RFQ), review proposals, assess team qualifications, and offer interim design feedback. The emerging firm leading the design team found this expertise to be invaluable. Ultimately, we were able to infuse an under-resourced city with design expertise that would otherwise have been inaccessible.

North Miami’s willingness to experiment allowed swift movement from the competition RFQ to build, and Stormwater Park was constructed in less than two months.

HOW THIS WORKED AT JOSÉ MARTÍ PARK:

Working within Miami’s established procurement process, Van Alen tapped into our network of industry experts to create a more innovative RFQ than the city could accomplish on its own. We established a group of local and national multidisciplinary experts to help shape the competition process, including RFQ development and team selection. They used their expertise in architecture, stormwater management, federal policy, real estate, and community advocacy to provide a holistic framing of the problem and opportunity anticipated in the project scope.

This resulted in a competition brief that clearly articulated the interrelated issues of the project, thus challenging respondents to propose proactive and robust solutions. The RFQ attracted highly experienced and visionary firms with previous work that spoke to the niche components of the project. It also attracted highly enterprising top talent who presented unique and ambitious solutions to the design challenge.

This fusion of additional expertise from the beginning helped the city generate a much higher caliber of firms without a fundamental shift in their process.

CORE PRINCIPLE #2: QUICK WINS

IDENTIFY QUICK WINS. TANGIBLE PROGRESS KEEPS STAKEHOLDERS ENGAGED WITH INITIATIVES THAT SPAN YEARS.

Managing climate change requires fundamental change, including large and expensive infrastructure, complex planning, and huge funding. All of this takes time—but over time, what was once urgent can wane and projects can be derailed. Governments struggle to keep citizens informed and engaged in the progress, which can lead to stakeholder fatigue, when communities are polled and surveyed ad infinitum with no tangible outcomes.

We have to start somewhere. We need more short-term wins—not in lieu of larger planning initiatives, but in favor of them. Short-term wins can plug into larger planning strategies, and bring communities along in the planning processes.

HOW THIS WORKED AT STORMWATER PARK:

“SEEING A THOUGHTFUL AND NATURE-DRIVEN PARK COME TO FRUITION IN A SHORT AMOUNT OF TIME IN NORTH MIAMI IS A HUGE STEP IN THE RIGHT DIRECTION. THE VAN ALLEN PROJECT HAS GIVEN NORTH MIAMI THE GIFT OF NOT ONLY A PARK, BUT A VISIBLE AND TANGIBLE SOLUTION ON HOW THIS CITY CAN EASILY MOVE FORWARD EVERY SINGLE DAY WITH CLIMATE ADAPTIVE PARKS AND OUTDOOR SPACES.”

Rachel Goldberg, North Miami Resident

ambitiously outlines an agenda for property management at the hyper-local and regional scales, and it will take years to implement in full. To demonstrate its potential impacts, we worked with the design team to complete a pilot project in just a few months.

CORE PRINCIPLE #2: QUICK WINS

With five months from team selection to public opening, the team transformed the vacant project site into a beautiful community gathering space that absorbs excess floodwater from adjacent properties and educates visitors about the reality of flooding in the community.

The quick window for project design and implementation allowed the city’s needs and community feedback to transform into demonstrable action right away and build interest in future climate and planning initiatives. We used the built project to ground community members in conversations about the masterplan and its potential impact. Van Alen also gauged community perceptions and sentiments about the complex and provocative topic of climate retreat. The citizens of North Miami now have tangible proof that these projects can be done quickly and relatively inexpensively, and are better equipped to hold their city leadership accountable for future change.

HOW THIS WORKED AT JOSÉ MARTÍ PARK:

In Miami, the initiative to adaptively redesign José Martí Park had experienced a few stops and starts before our involvement. Community members had previously been engaged, and there was skepticism and confusion about if and when they would get a new park.

To address this, Van Alen rallied the community around short-term, tangible milestones, like the launch of an RFQ and selection of the design team. We invited the community to a free celebration when the RFQ opened, and hosted a community picnic to announce the winning team, which was attended by city officials. The in-person touch points with city leadership and the winning design team helped community members feel included in the process and marked the significance of critical milestones before construction.

CORE PRINCIPLE #3: MEANINGFUL PARTNERSHIPS

BUILD MEANINGFUL, ACTIVE, AND ONGOING PARTNERSHIPS WITH COMMUNITIES—ESPECIALLY WITH MARGINALIZED GROUPS. TRUST LIES AT THE CORE OF URBAN ADVANCEMENT.

The general consensus is that community engagement is good. What community engagement should look like is far more nebulous. Public engagement is often relegated to the ballot box, an environment that cannot possibly provide people with adequate information for decision-making. Many city leaders want to infuse the planning process with fresh engagement strategies that inform, involve, and elevate.

On top of these typical challenges, climate-adaptive projects tend to be quite technical, convoluted, and thematically dry. To combat this, Van Alen set creative

“I HAD NO IDEA A PROJECT LIKE THIS WAS POSSIBLE IN MY COMMUNITY.”

Mattie Mays, North Miami Resident

new precedents for participatory design to meet people where they are. As an organization based outside of Miami, it was critical to support local individuals already engaged in building climate literacy in the community. We composed a group of well-

connected, knowledgeable, and influential members of the immediate community, called the Project Outreach Team, to help plan, facilitate, and spread the word about community events.

Developing meaningful partnerships with local civic organizations—like Urban Impact Lab, a civic innovation firm that had years of experience advocating for investment in Greater Miami—was equally important. Our work together brought additional resources, networks, and attention to this well-deserving firm committed to long-term impact in the region, and their work will carry the effort forward long after our specific projects close.

CORE PRINCIPLE #3: MEANINGFUL PARTNERSHIPS

HOW THIS WORKED AT STORMWATER PARK:

The North Miami community was well aware of the flooding issue at the vacant lot and that its former resident had moved to a new home because of it. The City was very curious about the possibilities for the vacant lot. In collaboration with Urban Impact Lab, we developed a meaningful and robust community engagement strategy.

During the RFQ development, Urban Impact Lab talked to community members about their experience of flooding in the neighborhood and solicited their desired vision for a new community space. With the Project Outreach Team, they went door-to-door, listening to neighbors talk about their lives in the neighborhood and explaining the project. We tapped into community gatherings already taking place, from local jazz gatherings to sustainability awareness fairs.

The community engagement strategy included several touch points with designers from the beginning. A speed dating-style activity presented community members with the opportunity to meet the architects bidding for the project, listen to their pitches, and evaluate their proposals with the jury. After their selection, Department Design Office hosted on-site walk-throughs to paint a picture of where each design element would go and solicited community perspectives. When the site officially opened, community members were thrilled to see how their feedback had been incorporated.

HOW THIS WORKED AT JOSÉ MARTÍ PARK:

In Miami, our Project Outreach Team helped to creatively establish relationships with the community. They outlined Little Havana’s top community activities and used that as a framework to design community events. They tapped community channels to administer a survey about community preferences for the park that informed the RFQ’s content. To ensure the community was aware that their park was going to be redesigned, we worked with them to throw a community party at the park featuring a popular local band, free arepas, bounce houses, face painting, and a Zumba session with the neighborhood’s favorite instructor—all ideas and connections that stemmed from the Project Outreach Team’s efforts.

To announce the winning team’s selection, Van Alen hosted a free picnic for residents to share their experience in the park and ideas for how to improve it directly with the team. Urban Impact Lab also set up large boards with sticky-notes so people could jot down ideas at any time.

CONCLUSION

2018 Climate Design Lab final presentations >
Photo: Scott McIntyre



CONCLUSION

We are proud of the successes of two years working in Greater Miami. Looking ahead, these principles will continue to guide Van Alen’s work, and we hope they can serve as a resource for others engaged in the effort to make our cities more livable. Responding thoughtfully and holistically to an issue like climate change is not as improbable as it sounds. We have to start somewhere. The future of our communities depends on it.

▼ Ribbon cutting for Stormwater Park
Photo: Saul Martinez



APPENDIX

Miami Mayor Francis Suarez at José Martí Park community engagement event >
Photo: Curtis + Rogers Design Studio



PROGRAMMATIC DETAILS

Keeping Current: A Sea Level Rise Challenge for Greater Miami was a series of initiatives inviting interdisciplinary teams to develop solutions and ideas to combat sea-level rise through the lenses of economy, ecology, and equity.

The project sought to develop solutions that were:

- 1. replicable across South Florida
- 2. responsive to the interrelated economic, ecological, and equity impacts of climate change
- 3. aligned with the resilience strategy developed through the 100 Resilient Cities process

METHODOLOGY

PHASE I: FRAME THE PROBLEM

Local academics at the University of Florida, University of Miami, Florida International University, and Florida Atlantic University have been leading the way in discovering and identifying the myriad of causes and effects of sea level rise in South Florida and beyond. Building off their research, and the work of the South Florida Climate Compact, Van Alen led a summit in November 2017 to progress the conversation on resilient design solutions in coastal and inland areas.

Through this work, Van Alen developed the Resource Guide, a report to inform designers responding to subsequent project challenges.

PHASE II: FRAME THE ANSWER & IMPLEMENT

Keeping Current included two design competitions in partnership with the City of Miami and the City of North Miami. We sought to address coastal conditions with Miami and inland conditions with North Miami.

Throughout each competition, Van Alen, in collaboration with Urban Impact Lab, led an inclusive community-engaged design process connecting challenge teams and municipal stakeholders with community members to incorporate local knowledge, feedback, and interests into the designs. The engagement process was developed in coordination with Project Outreach Teams—groups of community stakeholders paid to help us shape engagement—that include residents, business owners, community centers, and more.

In collaboration with Miami-Dade County, we launched climate and design education program for high school students. Details for each of these competitions is included in the following section.

PHASE III: AMPLIFY

To help communities visualize, understand, and advocate for sea level rise solutions, Van Alen hosted an exhibition to showcase the design proposals and work with communities to identify the necessary steps to push ideas toward implementation.

On December 16 and 17, 2019, we gathered regional leaders in design, government, development, and community engagement for a design-thinking workshop to help create tools and solutions that better advance climate-adaptive design.

PARTICIPATING ORGANIZATIONS

Broward County Office of Resilience	Florida International University
C40 Cities Climate Leadership Group (New York)	Local Office Landscape & Urban Design (Miami)
City of Miami Beach Office of Resilience	National Innovation Service (New York)
Colloqate (New Orleans)	The CLEO Institute (Miami)

ADVISORS

Van Alen worked with local and national leaders on climate change, environmental science, design, engineering, and planning as Project Advisors to facilitate and guide *Keeping Current*. The Project Advisors played a crucial role in framing the research program, developing the RFPs, determining the feasibility of designs, and ensuring that the designs enhance the ecology, economy, and contribute to making communities more equitable.

CHRISTINA DE CONCINI
Director, Government Affairs, World Resources Institute

NICOLE HERNANDEZ HAMMER
Biologist and Environmental Justice Advocate

STUART KENNEDY
Consultant, Sub-Culture

JESSE KEENAN (PROJECT ADVISOR CHAIR)
Faculty of Architecture, Harvard Graduate School of Design

CAROLINE LEWIS
Founder, The CLEO Institute

DAVID MARTIN
President, Terra

JAYANTHA OBEYSEKERA
Director, Sea Level Rise Solutions Center, Florida International University

COMPETITION DETAILS

PROJECT #1: REPETITIVE LOSS PROPERTIES

Van Alen and the City of North Miami sought an interdisciplinary team to develop a pilot project and masterplan to reimagine public uses for North Miami’s current and future portfolio of flood-prone vacant lots, formally known as repetitive loss (“RL”) properties.

For this competition, we asked:
How can we design spaces that promote climate-conscious behavior? How can we reimagine underutilized communal spaces to bring the community together and adapt to climate impacts over time? How can these sites be re-purposed to reduce the cost of flood insurance for adjacent communities?

Through a two-stage, seven-month competition, Van Alen and the City of North Miami selected three finalist teams and ultimately awarded the winning team \$80,000 for masterplan development and pilot design implementation at one RL site.

JURY

The jury played a critical role in identifying the three finalists, choosing the selected team, and helping shape the ultimate design concept. Its members:

- | | |
|-----------------------------------|---|
| Akin Ozaydin, City of North Miami | Jennifer Bolstad |
| Debbie Love, City of North Miami | Local Office Landscape and Urban Design |
| Germane Barnes, Studio Barnes | Jeremy Alain Siegel, BIG Architecture |
| Jayantha Obeysekera | Jessica Lax, Van Alen Institute |
| Florida International University | Marta Viciado, Urban Impact Lab |

WINNING TEAM

Department Design Office was chosen from three finalists for Stormwater Park’s design.

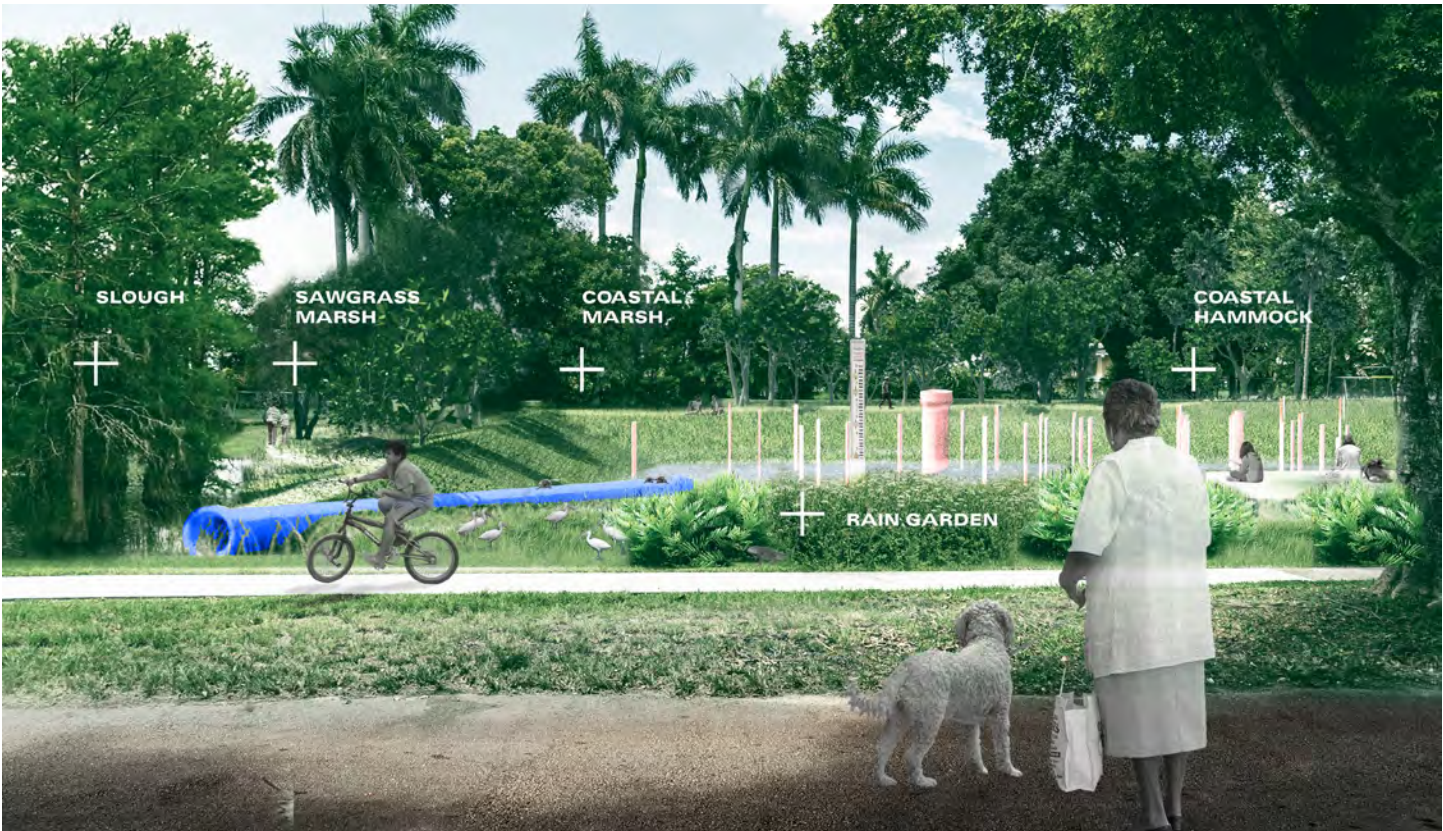
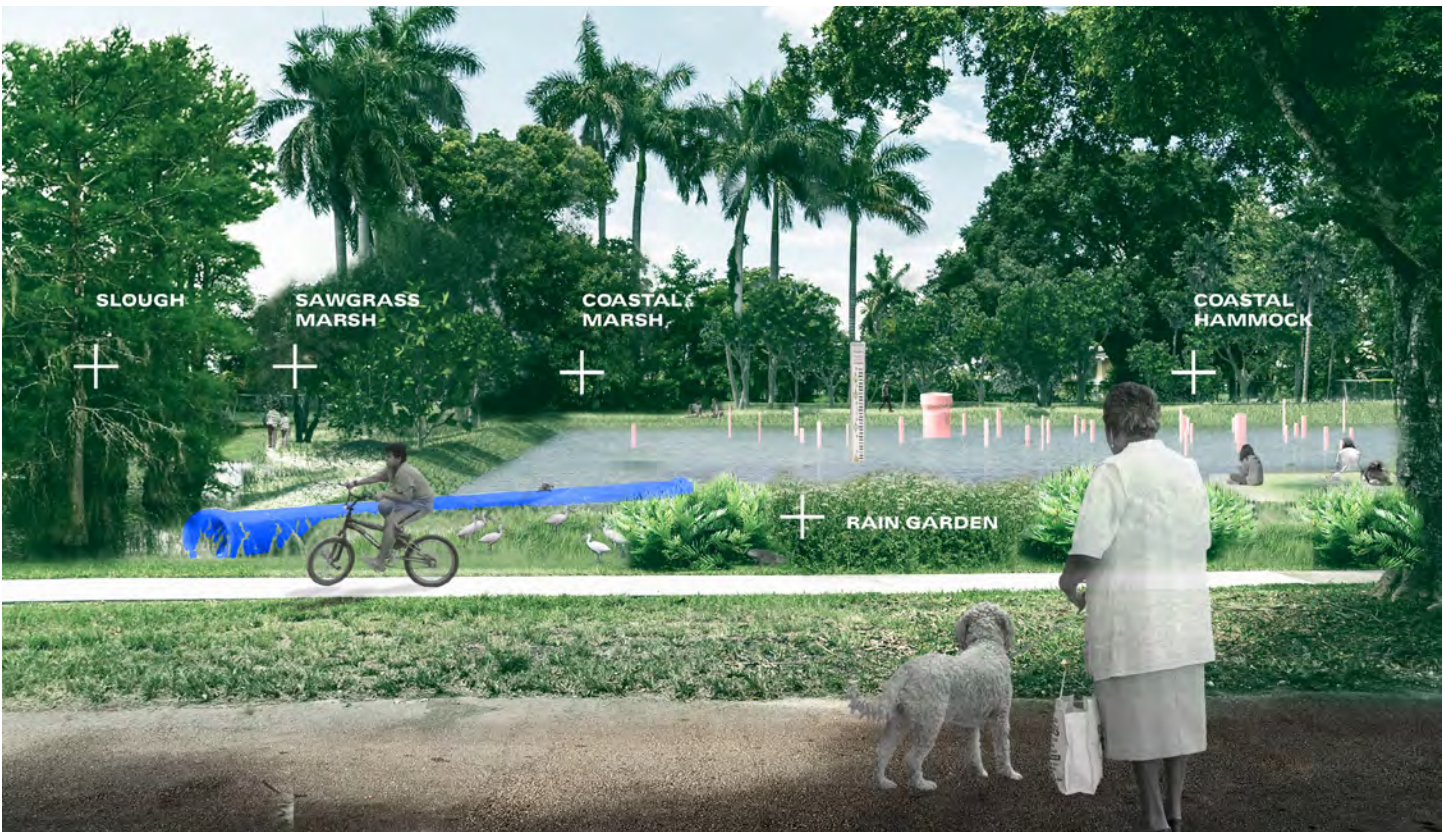
Stormwater Park highlights and celebrates its role as a stormwater park with a large central basin that collects water to reduce flooding for the neighborhood, a limestone platform that offers a place to sit and play, and a new walking path that guides visitors through plants native to South Florida.

Stormwater parks like this can lower flood insurance rates and become a model for more community-oriented infrastructure in South Florida.

Stormwater Park’s design team included Miami-based artist Adler Guerrier who added his experience in public art; Forerunner, who brought a nuanced understanding of FEMA’s Community Rating System and floodplain management; and Andrew Aquârt, who acted as the team’s local architect with a decade of practice in Miami.



▲ Rendering of “Good Neighbor”
Image: Department Design Office



▲ Renderings of “Good Neighbor” during wet (top) and dry (bottom) season
Image: Department Design Office

APPENDIX

PROJECT #2: JOSÉ MARTÍ PARK

Van Alen Institute and the City of Miami solicited an interdisciplinary team to develop a visionary and implementable climate-adaptive design solution for José Martí Park in East Little Havana. The selected team is working in two phases: Phase I will involve development of schematic designs and a high-level master plan with Van Alen Institute, the City of Miami, and the community. In Phase II, the team will work with the City of Miami to produce construction drawings for the build out. The park redesign and construction is estimated to be a multi million-dollar project and is expected to be built in 2022.

This competition asked:

How can we create a new model for adaptive redesign for South Florida? How do we create a park that represents community engagement and stewardship? How can we create places that support well-being?

PEER REVIEW GROUP

These interdisciplinary experts will continue to support the design team to make sure they have the right resources to complete their vision:

Sonia Chao, University of Miami	Florida Department of Transportation
Nancy Clark, University of Florida	Jessica Lax, Van Alen Institute
Jane Gilbert, City of Miami	James Murley, Miami-Dade County
Katherine Hagemann, Miami-Dade County	Sonia Succar, The Nature Conservancy
Ken Jeffries	Marta Viciedo, Urban Impact Lab

WINNING TEAM

Curtis + Rogers Design Studio was selected by the City of Miami for their expertise in urban design, landscape architecture, and engineering, and extensive local experience in Miami-Dade County. Their team—composed of architects, ecologists, engineers, planners, scientists, and community engagement experts—are creating a dynamic vision for the park that will support a resilient Miami for generations to come.

Their team: Curtis + Rogers Design Studio, Inc.; Cummins & Cederberg; E Sciences Incorporated; FIU – Sea Level Solutions Center; The CLEO Institute; Touzet Studio; Arcadis; Local Office Landscape and Urban Design



IDEAS COMPETITION: CLIMATE DESIGN LAB

In collaboration with Miami-Dade County Public Schools, The CLEO Institute, and the University of Miami, we launched the Climate Design Lab. The Lab was a two-year summer intensive program that engaged high school students in a competition to research, design, and develop forward-thinking solutions to climate change. Over a three-week period, the students worked one-on-one with a leading group of South Florida architects, designers, academics, and experts on the development of design solutions to address the future impacts of sea level rise on South Florida.

The curriculum had two components:

1. Climate Science and Strategies:

The CLEO Institute provided a crash-course in climate science. Students met scientists, architects, city leaders, and business owners who taught them about their work and shared leading strategies to combat sea level rise in their respective sectors. Students also visited relevant projects in the city.

2. Design-Thinking and Idea Development:

The University of Miami School of Architecture and Abess Center led the students through a week of design-thinking exercises to help them understand how communities might experience sea level rise in the future. Student were each assigned a neighborhood in Miami and were given future projections of sea level rise in those neighborhoods for every two decades until the year 2100. They developed ideas to protect the people and infrastructure in those communities, and summarized their ideas through graphic scribing, a method for visually representing ideas.

Students presented their final ideas to a group of experts from various disciplines at a final awards ceremony:

Commissioner Eileen Higgins
Miami-Dade County, District 5

Jessica Lax, Van Alen Institute

Katie Hagemann, Miami-Dade County

Lauren Ordway
Institute for Sustainable Communities

Rene Gonzalez
Rene Gonzalez Architects

Yoca Arditi-Rocha, The CLEO Institute

Nancy Clark, University of Florida

Aida Curtis
Curtis + Rogers Design Studio

Elisa Juarez, Target

Jordan De Leon, Miami Foundation

Caroline Lewis, The CLEO Institute

