



New Orleans SDAT

The New Orleans EcoPark: A Catalyst for Sustainable
Rebuilding and Neighborhood Revitalization

A Sustainable Design
Assessment Team Report

New Orleans, Louisiana
December 13–15, 2006



AIA Center for Communities by Design

New Orleans SDAT

The New Orleans EcoPark: A Catalyst for Sustainable
Rebuilding and Neighborhood Revitalization

A Sustainable Design
Assessment Team Report

New Orleans, Louisiana
December 13–15, 2006

John Maudlin-Jeronimo, FAIA, *Team Leader*

Wayne Feiden, AICP, *Housing Affordability and Land Use*

Erica Gees, AIA, *Energy Efficiency and Building Prototypes*

Carol Johnson, *Economic Development and Project Marketing*

Ken Peregon, ASLA, *Sustainable Site Design and Resource Management*

H. E. (Sonny) Timmerman, PE, AICP, *Transportation and Connections*

Ann Livingston, Esq., AIA Center for Communities by Design

EXECUTIVE SUMMARY

On August 29, 2005, Hurricane Katrina changed the lives of the citizens of New Orleans and the Gulf Coast. It fundamentally altered the economic landscape and transformed New Orleans into a massive redevelopment zone. Even before Katrina's onslaught, New Orleans needed help: the city had the highest rate of poverty in the South. The application for the AIA SDAT stated

...the reality is that our situation demands more than redressing of past issues and current reconstruction needs, we must look to the future as we proceed to ensure that we invest wisely now, thereby reducing our vulnerability to economic and social deterioration as well as catastrophic events in the future. Achieving a sustainable future for New Orleans is possible only in the presence of shared goals concerning issues of environmental quality, social equity, and economic sustainability.

The goal of the New Orleans SDAT was unique. At its center was the creation of a viable and sustainable economic engine for the community and city. The conceptual Eco-Design and Industry Park, now branded as EcoPark, would be a place where citizens could learn about sustainable design and energy efficiency. They could purchase sustainable and energy-efficient products and learn how to install them. The Art Egg, a former warehouse for poultry products turned studio space and building of cultural significance, would be the focal point for EcoPark. But the team faced some important questions: How can the Art Egg and EcoPark at large be economically sustainable? And if EcoPark could be economically sustainable, how could it best contribute to the building of a sustainable community?

Overall Analysis

To be successful, this project relies on two critical factors—need and will. The need to rebuild is self-evident. Estimates for the time it will require to rebuild New Orleans range from 10 to 20 years. New Orleans is rebuilding and will continue to do so. But the city needs to rebuild in a more sustainable and energy-efficient way. Simply learning about sustainable design and energy-efficient principles is not enough. New Orleans needs to use building products and materials that support sustainable practices; EcoPark proposes to meet that need.

The SDAT members who had known and loved pre-Katrina New Orleans found visiting the city in the post-hurricane era to be depressing. Depressing, that is, until they met the citizens who were there to rebuild. Meeting them and hearing their hopes and dreams for the future was inspiring. The will to rebuild and to create a better New Orleans was apparent. Many people, organizations, and neighborhood groups voiced as a clear goal their will to build a better future and a sustainable New Orleans.

Key Recommendations

The SDAT proposed four recommendations for implementation:

- Work with other businesses to establish an EcoPark business district for mutual economic benefit and possible branding
- Develop and implement an Art Egg business plan in the next three to six months
- Adopt a community assistance agenda
- Embrace sustainable design as the impetus for change and endeavor to have this report's recommendations codified in new or existing city plans and development regulations where appropriate

INTRODUCTION

In January 2006, a New Orleans-based coalition submitted a proposal to the American Institute of Architects (AIA) for a Sustainable Design Assessment Team (SDAT) to assist the city and its citizens in addressing key issues facing the community through the creation of EcoPark and its associated connections to and benefits for the surrounding community.

The AIA accepted the proposal and, after a preliminary visit by a small group November 8–10, the full SDAT arrived in New Orleans. December 13–15, the team members, working closely with local officials, community leaders, technical experts, and citizens, studied the community and its concerns. During those three days, the team came to understand the issues and used its expertise to frame a wide range of recommendations, which were presented to the community in a public meeting on December 15.

This report is a more detailed version of the findings and recommendations that were presented to the community on December 15. After a brief overview of the SDAT program and process and a short discussion of New Orleans in general and EcoPark specifically, including the issues it is facing, the report covers

- Transportation and connections
- Sustainable site design and resource management
- Community linkages
- Energy efficiency and building prototypes
- Economic development and project marketing

A closing section offers some thoughts on how the community and EcoPark supporters can best move forward to address the range of issues and recommendations covered in the report.

What is the SDAT Program?

The SDAT program is an interdisciplinary community assistance program that focuses on principles of sustainability. Launched in 2005, the program represents an exciting new chapter in the AIA's history of supporting communities with volunteer design expertise.

The SDAT program is modeled on the AIA's R/UDAT (Regional and Urban Design Assistance Team) program. While the R/UDAT program provides communities with specific design solutions, the SDAT program provides broad assessments to help frame future policies or design solutions in the context of sustainability and helps communities plan the first steps of implementation. The SDAT program is based on an understanding of design as a process that

- Is integrative, holistic, and visual
- Is central to achieving a sustainable relationship among humans, the natural environment, and the place
- Gives three-dimensional form to a culture and a place
- Achieves balance among culture, environment, and economic systems

The SDAT program is grounded in the AIA design assistance team values, which call for a multidisciplinary approach, objectivity of the participating team members, and broad public participation.

Why is the SDAT Program Valuable?

Many communities are immobilized by conflicting agendas, politics, personalities, or even the overabundance of opportunity. Many communities have not yet taken stock of their current practices and policies within a sustainability framework, while others have identified issues of concern but desire assistance in developing a plan of action to increase sustainability. The SDAT process ensures that alternative solutions are given a fair hearing and that options are weighed impartially. The SDAT process

- Informs the community of opportunities and encourages it to take action to protect local and regional resources
- Helps the community understand the structure of the place at various scales and contexts—from regional resources to the neighborhood scale
- Explores and articulates the larger contexts and interactions of ecological, sociological, economic, and physical systems
- Visualizes potential futures
- Recognizes and describes the qualities of a place by preserving the best elements of the past, addressing the needs of the present, and planning for the needs of future generations

- Identifies and describes choices and consequences
- Connects plans and actions
- Advances the principles of quality sustainable communities
- Helps the community define the roles of various stakeholders
- Develops a roadmap for the implementation of more sustainable policies and practices

The key to SDAT success is diversity and participation; the process involves multiple disciplines and multiple stakeholders. The SDAT process includes not only the expert team but also government agencies and officials, private businesses, schools and students, community members, and other parties as appropriate.

Who are the Key Participants in the SDAT Process?

SDATs bring a team of respected professionals, selected on the basis of their experience with the specific issues facing the community, to work with community decision-makers to help them develop a vision and framework for a sustainable future. Team members volunteer their time to be a member of the SDAT. To ensure their objectivity, they agree to refrain from taking paid work for three years from the date of completion of the SDAT project. A distinct team is assembled for each project based on the project's unique features. The team consists of a leader, five to seven members, and a staff person from the AIA Center for Communities by Design.

The professional stature of the SDAT members, their independence, and the pro bono nature of their work generate community respect and enthusiasm for the SDAT process which, in turn, encourage the participation of community stakeholders. The passion and creativity that are unleashed by a top-notch multidisciplinary team of professionals working collaboratively can produce extraordinary results.

Local Steering Committee

The steering committee is the key organizing group for an SDAT project. It is responsible for assembling local and regional information, organizing the preliminary meeting and SDAT visit, and generating local media coverage during the entire project. After the SDAT visits, the steering committee typically evolves into a group that is dedicated to implementing the SDAT recommendations.

Local Technical Committee

The local technical committee is the technical support group for the SDAT project, including local design professionals, environmental professionals, economists, and others whose skills and experience parallel those of the SDAT members and who bring with them detailed knowledge of local conditions, issues, and information resources. Their presence magnifies the effectiveness of the team.

Citizens

In the end, the citizens of the community are the critical players, both for their insights and observations during the team visit and for their support for the new directions that emerge from the SDAT process.

The New Orleans SDAT and the AIA hope this report will be a useful guide to EcoPark and New Orleans as a whole as they chart their future for the coming years and generations.

NEW ORLEANS TODAY

On August 29, 2005, New Orleans, the Gulf Coast, and the United States were permanently changed. Katrina is a name that will forever bring back instant visions of destruction, death, despair, and government ineptitude. On December 15—the day of the AIA’s SDAT public presentation, 15 months and 15 days after Katrina—the city was in the midst of recovery with less than one-half its pre-hurricane population. But New Orleans was in trouble even before the storm hit. The city had the highest rate of poverty in the South, and the residential neighborhoods adjacent to the SDAT site had a household income that was almost one-half the household incomes for the city. It is estimated it will take 10 to 20 years for New Orleans to rebuild. But there is hope, and progress is being made every day. Many dedicated individual citizens and organizations, including the city, are trying to rebuild in a more sustainable and energy-efficient way. The AIA’s New Orleans SDAT is contributing to that effort.

The proposed EcoPark site, zoned light industrial, is between Central City, Mid City, Gert Town, and the B. W. Cooper public housing complex and includes Zion City, Xavier University, and the Xavier Triangle residential community. It has excellent transportation connections to the city, region, and nation.

Neighborhood and community-based organizations, many with a long history, are working for the overall community’s success.

The SDAT application process, the preliminary site visit, and SDAT visit led the team to propose that EcoPark’s mission statement be reframed. The mission of EcoPark is to establish a dynamic regional center to promote, develop, and propagate sustainability and energy-efficient principles and use and to invigorate the community economically.

If EcoPark achieves its mission, the team believes strongly that it could serve as a national model and proposed the following vision statement for EcoPark: create a national model using the sustainable building industry as the economic catalyst for sustainable community building.

TRANSPORTATION AND CONNECTIONS

The area included in the transportation and connections discussion—or the Earhart Corridor—includes the communities of Gert Town, Zion City, Xavier Triangle, and B. W. Cooper, in addition to EcoPark, Xavier University, and the *Times-Picayune* and rail hub complex. The corridor lies just west of the central business district (CBD), south of I-10, and east of Carrolltown Boulevard. EcoPark site covers about 70 acres within the corridor and is bordered by Earhart Boulevard, I-10, Jefferson Davis Parkway, and Broad Avenue. This area lies within Planning District 4 in New Orleans, and is shown in the *New Century New Orleans Master Plan* published in October 2002.

Connections to the Region—The communities within the area and EcoPark have excellent connections to the rest of the city of New Orleans, the region, and the nation. I-10 lies immediately north of the area with direct access from interchanges at Carrolltown and the CBD. A large rail hub is within the eastern section of the area, and access to the Louis Armstrong International Airport is via Earhart Boulevard and I-10.

Proposed Transportation and Linkages—Within the city’s Planning District 4 are two proposed improvements that directly affect the Earhart Corridor: revitalization of the Tulane Avenue corridor that lies just north of I-10 and a new I-10/Tulane Avenue Intermodal node at Tulane Avenue, I-10, and Carrollton Boulevard. Both are within walking distance of the proposed EcoPark site. The Tulane revitalization corridor can be accessed by either Jefferson Davis Parkway or Broad Avenue. The new proposed transit-oriented development (TOD) node lies just west of Xavier University and can be accessed via Washington or Earhart.

Strengths, Weaknesses, Opportunities, and Threats (SWOT Analysis)

EcoPark is proposed to be located in a mixed-use area that includes a variety of diverse land uses. The corridor includes four residential communities, Xavier University, as well as both industrial and commercial uses.

Strengths

- A diverse heritage and ethnic background
- An excellent location within the city
- Xavier University
- An existing industrial site
- Excellent transportation access
- A committed citizenry that wants to stay in the area

Weaknesses

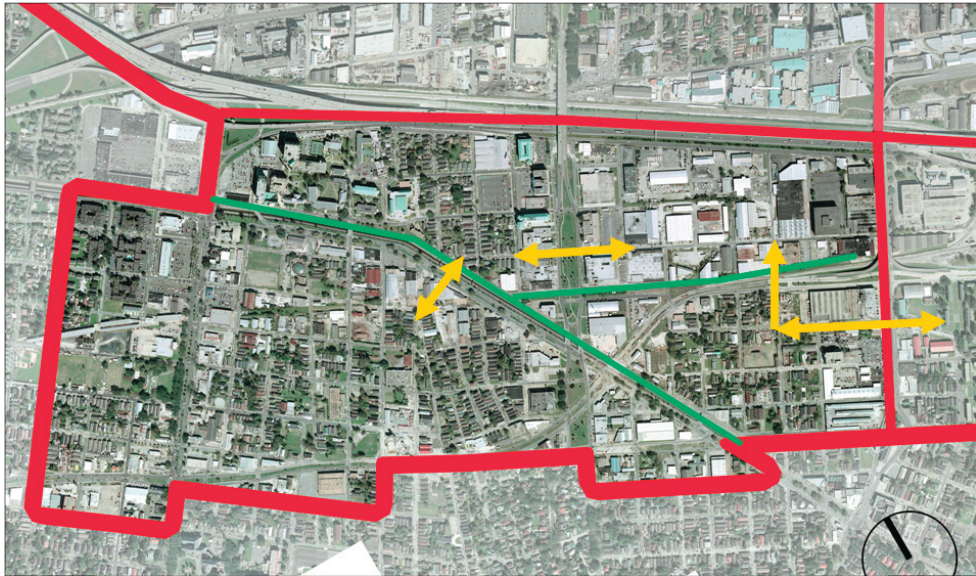
- Poor condition of the infrastructure
- Decaying neighborhoods
- Dilapidated housing
- High levels of poverty
- Sustainability of the corridor
- Crowded industrial areas with limited open space

Opportunities

- Capitalize on local entrepreneurial efforts in the industrial park
- Provide education and training for local and nearby residents
- Leverage EcoPark efforts to retain and recruit businesses and industry and develop and revitalize neighborhoods in the corridor
- Work to enhance the image of the corridor
- Create a sustainable environment in the area
- Work to promote energy efficiency within the region

Threats

- The problem of the image of the corridor
- The need to “get ahead of the curve” in environmental approach and thinking
- The fragmented ownership of properties in the area and EcoPark



Major Access and Links

Recommendations

EcoPark should be developed and linked into the neighborhoods and nearby communities. The focus should be to provide and improve the pedestrian and bicycle linkages within EcoPark and connect the park to the nearby neighborhoods. A new bicycle pedestrian way should be implemented along the Washington Canal, which would be tied along Earhart to EcoPark.

Connections to Other Issue Areas

EcoPark's primary connection to other issues lies in the area of sustainable site design and resource management. The physical improvements of both transportation and sustainable site design are linked and cannot be viewed in isolation.

SUSTAINABLE SITE DESIGN AND RESOURCE MANAGEMENT

In terms of its development, EcoPark presents both physical and program site issues, including access and connections to adjacent neighborhoods, involvement of existing businesses within and adjacent to EcoPark, stormwater management, and EcoPark image and identity.

As mentioned above, EcoPark site is easily accessible by vehicle, for both automobiles and trucks servicing the businesses and industry within EcoPark. However, to enable residents of the adjacent neighborhoods, many of whom do not have automobiles, to travel to EcoPark, we recommend developing a system of nonmotorized routes—side-walks and paths—for pedestrians and bicycles. This system will promote healthy lifestyles while allowing neighborhood residents better access to the resources available in EcoPark. The system should connect all of the nearby neighborhoods—Gert Town, Xavier Triangle, and Zion City—to EcoPark and should connect to other elements of the nonmotorized transportation system in the New Orleans area.

Finally, for EcoPark and its surrounding neighbors and neighborhoods to secure and maintain beautification, human comfort, and environmental quality, they should adopt the mantra: “Trees, trees, trees, and more trees.”

Recommendations and Observations

Washington Avenue and Canal

- Together, Washington Avenue and the adjacent canal create a substantial barrier separating EcoPark from Gert Town. We recommend developing improved nonmotorized crossings to ease connections.
- The median in Washington Avenue is lacking landscaping. The existing trees should be preserved and additional trees and other plantings should be installed in the median.
- The concrete canal paralleling the roadway is an eyesore and does not provide access to the canal’s water. We recommend removing the concrete side walls at a minimum and providing a softer, greener method of bank stabilization; capping with a green parkway top is another alternative method to consider that could make the crossings more attractive. In either approach, we recommend a nonmotorized path be incorporated along the canal with connections to EcoPark and the neighborhoods.

Xavier Triangle

- This small neighborhood is constrained by Xavier University on both east and west.
- We recommend improving nonmotorized connections to EcoPark and other neighborhoods, specifically Gert Town.
- Xavier Triangle also seems well-suited to site the future prototypical sustainable houses recommended elsewhere in this report.

Jefferson Davis Parkway

- The parkway includes a very wide median with essentially no landscaping. We recommend improving the permanent landscaping and developing additional uses for the median consistent with EcoPark's mission. For instance, a tree farm or nursery and/or use for stormwater management through permaculture should be explored.
- The existing nonmotorized path in the median (which crosses over I-10) should be enhanced and cross-connections between the Xavier University residence halls and the Xavier Triangle neighborhood on the west to EcoPark on the east should be developed.

I-10 Corridor

- This major interstate highway provides excellent access to EcoPark, but also creates a strong barrier with only three crossing points in the study area. We recommend efforts to include nonmotorized routes in these crossings.
- The image of EcoPark for many people will be that seen as they drive by on I-10. For this reason, treatment of the north edge of the park should be designed with this view in mind. Identification signage visible from I-10 may help create awareness of EcoPark.

Earhart Boulevard

- Earhart Boulevard creates a barrier between EcoPark and the Zion City neighborhood. We recommend developing improved nonmotorized crossings to ease connections.
- The median in Earhart is totally lacking landscaping. A substantial number of trees and other plantings should be installed in the median.

Adjacent Businesses

- There are at least three business locations adjacent to but outside the current boundary of EcoPark with which the park should seek alliances, although only one, the *Times-Picayune* newspaper is currently in operation. The other two, the Blue Plate building and Universal Furniture, are currently vacant; when they are reoccupied we recommend working to influence the kind of operations to be located within them.
- At the outset the relationship with the *Times-Picayune* should be cultivated. This can be a win-win situation by providing resource stream management and energy-efficiency consulting and advice. In return, the *Times-Picayune* should be encouraged to provide exposure of EcoPark through its publications.

Broad Avenue

- The elevated configuration that carries Broad Avenue over I-10 creates a noisy visual barrier that separates the *Times-Picayune* from EcoPark. It also provides strong definition of the eastern edge of the park.
- Careful thought should be given to the programming and redesign of the space below the elevated roadway to allow multiple uses. Some possible uses include parking, festivals celebrating sustainability, and a market for artisans and sustainable products they produce.

Calliope Street/Railroad Right-of-Way/Permaculture Strip

- This strip of land extends from the permaculture strip behind the Art Egg Building, west through the railroad right-of-way (and Calliope Street) west into Gert Town. It provides an opportunity for a continuous green ribbon defining the southern edge of EcoPark.
- We recommend expansion of the permaculture to accept additional stormwater from more of EcoPark.
- Landscaping should be designed to create a definite edge and to establish an appropriate green image of EcoPark.
- Consider locating an image “icon”—perhaps an energy-producing windmill—within the strip to identify EcoPark.
- Nonmotorized paths should be incorporated in the strip to connect to elements of the park, Xavier University, and the neighborhoods to the west.

Improvements Within EcoPark

In addition, we recommend the following internal improvements within EcoPark:

- Widen the existing streets to ease truck movements
- Include sidewalks on at least one side of the street to encourage walking to and within the park
- Seek opportunities to plant trees and other plants to provide a greener image and to help attenuate the urban heat effect
- Improve edge treatments to soften, provide a green image, and create an EcoPark identity
- Provide signage, both directional and major EcoPark entry signage, that help create EcoPark's image
- Explore opportunities for EcoPark-wide stormwater management/permaculture

Recommendations for EcoPark Programs

Several existing businesses within and adjacent to EcoPark should be brought into the process of developing EcoPark soon. We recommend developing programs to promote sustainable, energy-efficient operations and training individuals to provide services to the existing businesses that will demonstrate the value of sustainable practices. These could include

- Analysis of the resource stream—both incoming materials and waste produced—to recommend ways to reduce demand and waste
- Analysis of energy usage to find ways to increase energy efficiency and demonstrate cost savings to the businesses
- Development of a recycling program, perhaps to include a recycling center
- Exploration of opportunities to connect to training programs with Booker T. Washington High School (when it reopens), the Goodwill Industries Career Center, and local colleges and universities to incorporate sustainable building techniques and methods in their programs
- Exploration of possibilities for improved stormwater management through green roof retrofits onto existing buildings, cisterns to capture and reuse roof drainage, and reuse of graywater

In summary, site-related recommendations include

- Provide nonmotorized path connections to the neighborhoods to reduce reliance on the automobile for local trips and to promote a healthy lifestyle
- Improve vehicular access routes near and especially within EcoPark
- Plant trees and other plants both to establish an appropriate image for EcoPark and to reduce the urban heating effect
- Explore means to improve the efficiency of the existing businesses in EcoPark through resource stream management, energy efficiency analysis, and joint or shared stormwater management/permaculture facilities
- Explore programmatic connections to both existing businesses and the nearby neighborhoods that provide information on sustainable construction, products, and lifestyle
- Explore joint training programs with businesses, schools, and the neighborhoods

COMMUNITY LINKAGES

The health of the New Orleans EcoPark is inexorably linked to the health of its host neighborhood. EcoPark must work in partnership with its neighbors and be a catalyst to a synergy that makes the community and EcoPark stronger.



Mid City—Interstate 10, its limited overpasses, and its surrounding land uses isolate EcoPark from Mid City and reduce the opportunity for partnerships. The interstate, the industrial area that will become EcoPark, and the corrections facilities on the easterly side of I-10 create a dead area, especially at the pedestrian scale, that is devoid of any meaningful street life during the day and especially at night. These features divide and damage an area that was once a coherent neighborhood. Fortunately, beyond the corrections facilities area, Mid City is very diverse socially and economically with strong human and built resources that could contribute to EcoPark’s strength.

Any repair of the damage that occurred when the interstate slashed through what was once an intact connected neighborhood, no matter how slight, is desirable. There are some very limited opportunities for improved connections. First, improving bicycle and pedestrian facilities through EcoPark and over the interstate will shorten the perceived distance over the “dead” zone. Second, any activities that make EcoPark more interesting to view, walk through, and visit will reduce its image as a dead zone.

Xavier University—Xavier University is the strongest economic engine in the neighborhood and will be a critical partner for any successful activity. Like many universities, Xavier’s relationship with its surrounding neighborhood is mixed. Its expansions have, at times, been insensitive to neighborhood needs and interests. At the same time, its investments and its presence have provided an economic and social anchor. Its president, and indirectly the university, was recently awarded the Presidential Medal of Freedom because of its commitment and success in rebuilding in the aftermath of Hurricane Katrina, a rebuilding operation that helped keep the surrounding neighborhood vibrant.

Opportunities for connections with Xavier University exist mainly through partnerships, job training, and possibly other university investments.

New Orleans Eco-Design and Industry Park—Obviously, EcoPark cannot exist without working with the existing industrial and commercial tenants and property owners. The area includes some very strong tenants and property owners as well as some empty, underused, and distressed properties. There is an opportunity to provide a governance structure that can be of synergistic benefit to all of the tenants. Many tenants and property owners may be reluctant to embrace EcoPark until it can demonstrate the ability to add value to all the tenants and owners.

Biomedical District—The newly created New Orleans biomedical district connects the Mid City medical centers with Xavier University and includes EcoPark. This provides opportunities for strengthening the community and city economy and building EcoPark. Education and medical uses (“eds and meds”) are two of the strongest and most sustainable elements of New Orleans’ economy. EcoPark can build on this opportunity, both to benefit from this potential investment and to promote those biomedical uses that follow sustainability principles.

Residential Neighborhoods—Xavier Triangle, Zion City, Gert Town, and B. W. Cooper—All four abutting residential neighborhoods are struggling to recover from Katrina and from the severe economic challenges, low education attainment levels, and significant blight they faced in the pre-Katrina era. Although these neighborhoods have limited employment opportunities within, they are located within a long walk or short bus ride of downtown and multiple universities, medical centers, and large employers.

Before Katrina, all of the neighborhoods had intact social structures with strong family, neighborhood, and church networks and had homes that parents have passed down to their children over multiple generations. Now these neighborhoods face the challenge of both recovering from the storm’s physical and social damage and the forced displacement and separation of residents. As a result of this unprecedented loss, the social network, which has helped the neighborhoods to rebuild, is under obvious stress.

Xavier Triangle, the smallest of the neighborhoods, is recovering very slowly but the investment of Xavier University to repair its own properties has provided some help. Zion City, while severely damaged, had less damage than many other neighborhoods. Gert Town is facing a huge recovery task but some of its incompatible industrial land uses might be removed as part of the rebuilding. B. W. Cooper, the huge but now largely empty public housing facility, faces the largest challenge as well as potential opportunity, with massive plans to rebuild and transform it into a mixed-use, mixed-income neighborhood.

Recommendations

The SDAT recommends the following actions for EcoPark to partner with and help contribute to its own health and that of the community.

Build Communication and Community Partnerships with EcoPark using the following structures:

- Community Advisory Board—made up of representatives of the abutting neighborhoods (Zion City, Xavier Triangle, Gert Town, and possibly B. W. Cooper). The board should share ideas about the physical and social structure of EcoPark and identify possible community partnerships. Such a committee structure does *not* replace the need for an EcoPark representative to meet individually with each of the



neighborhood organizations. EcoPark, unlike a new industrial park that takes over portions of an existing neighborhood, may not be able to guarantee any revenue stream to support neighborhood improvements, but it should be able to search out partnerships that are mutually beneficial. The neighborhoods would prefer a commitment to specific quantified neighborhood benefits.

- EcoPark Governance or Other Cooperative Structure—made up of representatives of the Art Egg, EcoPark team, and the tenants and property owners within EcoPark boundaries. This relationship should be based on mutual and synergistic benefits and should include both ecological and more traditional industrial-park governance benefits. Services to be shared cannot be identified until the partnership develops, but it could include traditional services such as gateway and wayfinding signage,

shared security if necessary, and needs identified by existing tenants and owners. The adjacent *Times-Picayune* offices should be included in these discussions and, possibly, in any resulting governance structure.

- Regular Meeting Schedule—between EcoPark and administrative and development personnel at Xavier University, at the Mid City medical centers, and at any entity that gets formed around the biomedical center to explore future partnerships and build relationships.

Bring in the Community to Play in EcoPark

EcoPark must create a sense of place, create an identity, and invite the community to come play. Whether it is parade floats or other businesses, arts enterprises, or eco-enterprises, a sense of place is critical and will invite the neighborhood in to visit. It will also help reduce its image as a perceived “dead” zone for pedestrians crossing the area.

- Existing businesses, especially the parade-float business, and the revitalized Art Egg building provide the best opportunities for community play. This play should start with a community party at the ribbon cutting when the building reopens. In addition to green construction businesses, the Art Egg building should retain space for artists, especially those contributing to the building trades (e.g., locally made concrete counters).
- Artist live/work space (and possibly nonartist space) in the Art Egg building would help contribute to the area’s liveliness and safety. If the neighborhood is interested (see discussion below about activities outside EcoPark), live/work space would also be a good match in the furniture building on Earhart Boulevard across from the Art Egg building and in the Blue Plate Special building. Although these last two sites are outside EcoPark, they could strengthen their host neighborhoods and add to a revitalization that will help connect the neighborhoods to EcoPark.
- Arts and green industry open houses and festivals can add to the vitality of the area. The area should not, however, compete with opportunities that can best occur in and strengthen residential neighborhoods. In particular, a farmer’s market might be better in a neighborhood and with neighborhood ownership than in EcoPark, unless neighborhood groups do not want a farmer’s market.



Bring in the Community to Work in EcoPark

The greatest contribution EcoPark can make to the sustainability of its surrounding neighborhoods is to provide the opportunity for job training and potential jobs to area residents.

- Partnerships with companies selling new green technology are critical to ensure that those companies have a stake at providing job training. EcoPark is already planning on a strong focus on training and jobs in the energy and environmental aspects of green building construction.
- Partnerships with other educational institutions are critical, especially with the



Booker T. Washington High School. The school's rich vocational education history and strong neighborhood relations make it the ideal job training companion for both high school students and for adult education. Other partnerships are possible with Xavier University, Delgado Community College, and other area colleges.

- Training programs for students to evaluate and clean up a contaminated environmental legacy is consistent with EcoPark's mission for green construction and a clean environment. Jobs in this field can provide a good life-long career for city and neighborhood residents. EPA Brownfields Job Training grants are available to fund such programs. This type of project could help EcoPark reach a critical mass.



Take Good Design from EcoPark into the Community

EcoPark has the opportunity to partner with neighborhood organizations and other groups investing in neighborhood reconstruction to bring green buildings and green rehabs to the community. EcoPark can demonstrate that green building is not only for wealthy residents, create model green buildings near EcoPark, and help lower-income residents lower their utility bills.

- Partnerships with Neighborhood Organizations—Some neighborhoods can provide building lots and labor; EcoPark can provide expertise and some opportunities for discounted materials. Although such efforts would require a great deal of work by all parties, there are other nonprofit and vendor partners involved in the New Orleans rebuild who are willing and able to help.
- Vendor Involvement—Vendors should participate in these rebuilding efforts through the discounted pricing of their materials and their access to investment capital. It is important, however, to make sure that participants understand the risks

of new technologies, that they do not feel that EcoPark is endorsing unproven technologies, and that they do not find that investments in housing are displacing existing residents. New residents should be welcome, but only when there is no displacement.

Assist Ecologically Friendly Concepts in the Surrounding Community

These concepts could include the housing investments and adaptive use of former commercial and industrial buildings for live/work space discussed above. Outside EcoPark, however, the park should only participate when there is neighborhood support. Opportunities for work in EcoPark suffice and should preclude the need to get involved with controversial projects. In any case, EcoPark needs to avoid “mission-creep” and should not compromise its core mission.

- Advocate for community when the community desires such advocacy. EcoPark could offer its expertise and presence to help advocate for the community. Issues are sure to emerge with the post-Katrina rebuilding, such as the design of a new mixed-use, mixed-income B. W. Cooper complex. In advocacy, as in any project outside EcoPark, care must be used to avoid using resources or taking actions that would in any way threaten the core mission or that could harm any surrounding neighborhoods.
- Brand EcoPark to contribute to the greater community. Today, the industrial area that will become EcoPark has no clear identity or centralized signage. Building an EcoPark brand and community presence is an intangible but critical part of EcoPark’s development. Branding must help ensure that the public sees the park as a premium location. Branding should be designed to be embraced by EcoPark businesses, including existing non-eco “legacy” businesses in the park and by area residents. The brand will be successful when industrial tenants and surrounding neighborhoods start using the term EcoPark and identify themselves in relationship to EcoPark. Branding efforts should include appropriate signage



As shown by the arrows above, EcoPark can connect to the surrounding neighborhoods at various points.



and landscaping at every EcoPark gateway and entrance, signage in the park visible from EcoPark, appropriate signage and landscaping at the pedestrian and bicycle linkages to and adjacent to EcoPark, and a logo that every business in EcoPark wants to use and reflect on its own signage and letterhead.

Support for Community Linkage

EcoPark and the community are stronger with each other than without and jointly can contribute to a healthy community. Because funding sources recognize the importance of these types of linkages, some private, government, and foundation support will be possible only in the presence of such a partnership.

Although collaboration is always beneficial, each entity can and has received certain grants and donations on its own, for which no partnership is necessary. There are, however, other grants and donations for which partnerships will be critical. Foundations, corporations, and individuals seeking new paradigms to address poverty and environmental issues don't want to simply invest in rebuilding, or even green rebuilding, they want new models.

The rebuilding of New Orleans has prompted huge government and foundation support, but some funders continue to seek grantee programs that will make a difference, and not simply (although also important) fix another roof. EcoPark, in collaboration with the community, can provide a paradigm shift that can excite funders and be replicated in other communities. Small local foundations and large foundations such as the Ford Foundation, Surdna Foundation, and Clinton Foundation, government entities such as the Environmental Protection Agency, union support such as the AFL-CIO, and corporate support should all be sought. At the same time, EcoPark should seek newly emerging community improvement-based investments for which investors expect a return but are willing to take the long view.

ENERGY EFFICIENCY AND BUILDING PROTOTYPES

Background

A driving force for the creation of EcoPark is the need to build more sustainably in response to the highly visible failure of previous urban planning, resource management, and building strategies. The catastrophic nature of Hurricane Katrina was the tipping point for many. In the face of rising fuel costs and changing weather patterns, a formulaic end-all solution will not adjust the general thinking to go beyond the envelope of traditional prescriptive solutions.

The renewal of the Gulf Coast region demands a dramatic paradigm shift to a more holistic way of thinking about how we build and restore our homes, neighborhoods, and city. This new thinking implies a dramatic shift in how we live as a community and how we empower ourselves and educate our children. Our technologically sophisticated culture has created a fragile interface of knowledge that has proven unsustainable in all respects. With Hurricane Katrina creating a near tabula rasa event, New Orleans is now poised to respond with a new regional vernacular that addresses society, economy, culture, climate, site conditions, and a more sustainable way of building. EcoPark will provide the seed for that change. Not only will the center be the model for sustainable building as it develops prototypes and sustainable regional responses, it will also foster change as the catalyst for the much needed socioeconomic revitalization of the adjacent neighborhoods of Zion City, Gert Town, and the Xavier Triangle.

Climate and Site

New Orleans is located at 29° 57' latitude, approximately 100 miles upriver from the Gulf of Mexico. The city has a total area of 350.2 miles with approximately 48.5 percent water. A subtropical, highly humid climate with hot summers and mild winters defines the weather pattern. During the summer months, the average daytime temperatures are in the 90-degree range; the winter daytime average temperature hovers around 60. Higher rainfall periods tend to be from June to September with October being the driest.

Protected by built levees, the city is situated on the Mississippi Delta next to Lake Pontchartrain; most of its districts are below sea level. The original historic core was built on higher “frontlands” with the newer “backland” areas located on the lower lying silt and clay soils. As mentioned earlier in the report, toxic pollutants, notably lead and arsenic, are present throughout the city in varying degrees and need to be addressed with rebuilding.

SUMMARY OF CLIMATE DATA AND SITE CONDITIONS FOR NEW ORLEANS

Climate Site Characteristics	Range	Extremes	Manifestation	Traditional Response	Passive Response
Temperature ^{1,2}	Lows 43°–74° Highs 60°–92°	11° 102°		Electrical HVAC	Insulation Orientation Vegetation
Relative Humidity	70%–90%			AC + Elec. Dehumidifier	Passive Dehumidification Air Movement
Precipitation ^{1,3}	3.05"–6.83"	0.15" 21.18"	Flooding	Streets Sewers Levees	Permaculture Vegetative Swales Cisterns
Average Annual Precipitation	64.2"				
Driving Rain + Hail	Hurricane + Thunderstorm				Structural
Sky Conditions Solar Radiation	46%–63% Solar Potential		Cloud Cover Heat Gain + Retention		Vegetation/Green Roofs Constructed Shading
Wind	12–15 mph N, SE, NE Predominant	30 mph		Low-Profile Buildings Shutters	Vegetation + Screen- ing Structural Reinforcement
Significant Vegetation	Oaks, Cypress, Magnolia	Treeless Districts	Inconsistent within City Dis- tricts		Transportation Gre- enways Stormwater Swales
Flat—Below Sea Level Site	0'–10' Below Sea Level		High Water Table	Vented Crawl Space/Slabs on Grade	Vented Crawl Space Insulated Slab
Special Weather Characteristics	Hurricane	Camille Katrina	Categories 2–4 74–155 mph	Levees Evacuation	Stormwater Plan
Special Site Characteristics	Termites Rodents	Formosan Termite		Structural Damage	Alternative Materials + Detailing
Special Settlement Characteristics	Dense Urban Setting				Green Spaces to Encourage Stack Effect Ventilation

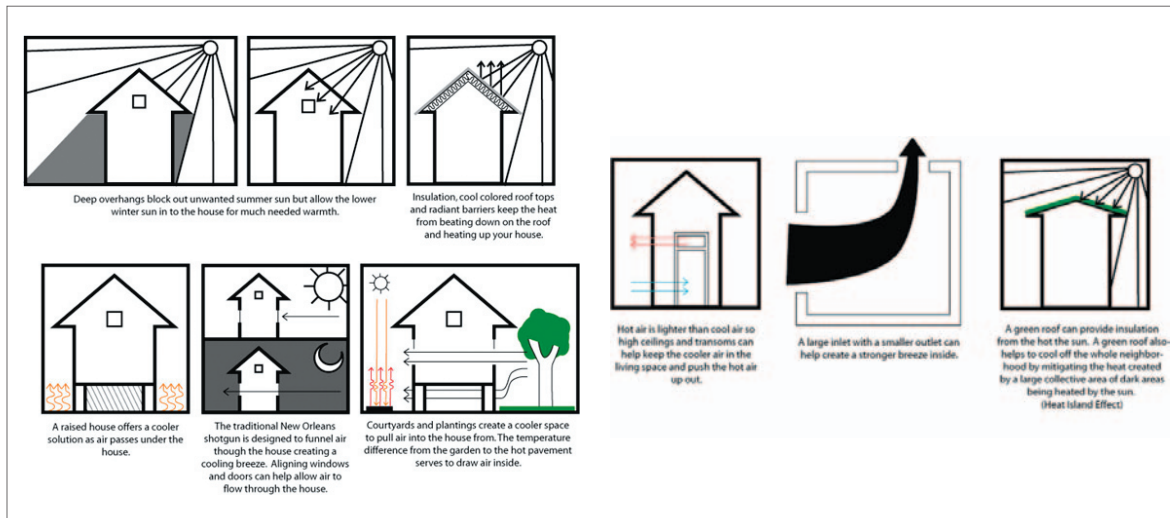
1 Monthly average

2 Record-setting day

3 Record monthly average

In general the New Orleans climate requires that we control humidity levels and fresh air requirements within the structure as well as heat gain during hotter months. Any structure will also need to address the high water table, soil instability, stormwater runoff, insects, and heat island effect. A few examples of conceptual responses to these issues follow. We provide this information merely as an overview of the issues driving sustainability in New Orleans. This knowledge and expertise is available within the core founders of EcoPark.

SOME EXAMPLES OF PASSIVE/CLIMATE SPECIFIC/ENERGY-EFFICIENT RESPONSES



Diagrams developed by Sara Dean and Stephanie Mezynski of FutureProof, New Orleans.

Residential Design Concepts

In the wake of Katrina, the immediate urgent need lies in rebuilding or repairing most of the current housing stock. Sustainable energy-efficient models require neither higher costs for the homeowner nor a change in the traditional New Orleans vernacular home design. Past experience shows that these designs can incorporate sustainable solutions that can be further expanded at minimal cost with proper planning. EcoPark housing prototypes will provide the opportunity for builders and housing industry partners to develop and test affordable building systems, energy modeling, and retrofit solutions. EcoPark will also act as a clearinghouse for these resources.

A PASSIVE HOUSE DESIGN FOR A TYPICAL NEW ORLEANS BUILDING LOT



New Orleans prototype by Russ Karsen of FutureProof, New Orleans.

Multifamily Residential Design Concepts

EcoPark should also develop alternative models for sustainable multifamily dwellings. The climate needs of multistory units are different than the single-family home but provide enormous potential as an alternative method of densification on higher ground areas throughout the city. The team recommends that a feasibility study be undertaken for the B. W. Cooper housing project. Given B. W. Cooper's history, the desire to demolish it is understandable, but the team thought the project has potential as a study case. The complex can be converted to mixed-income units of one- and two-story townhouses. With selective demolition; reconfigured fenestration; and the addition of porches, verandas, and permaculture landscaping, the soil quality and cooling capacity of the site can be greatly enhanced while providing an economical opportunity in proximity to EcoPark, facilitating any energy modeling and testing of new housing and landscape models. The need for worker housing in proximity to the EcoPark and areas being rebuilt must not be ignored.

Neighborhood

Sustainability reaches far beyond the building envelope into our patterns of settlement and how our communities and neighborhoods relate to each other. The economic savings that are produced by altering our energy use can be increased at a neighborhood scale by minimizing our replication of resources that we use only part time. When we apply passive ventilation, shading, and stormwater management strategies to the larger block, we increase the overall effectiveness of these climate-control measures while supporting the neighborhood social structure. Providing domestic amenities such as laundry facilities, car sharing, and community gardens within the block structure can reduce household expenses and foster a sense of community. Years of economic depression as well as the effects of the hurricane have severely stressed the cultural sustainability of the adjacent neighborhoods of Zion City and Gert Town. As several generations of families look to stay in their neighborhoods, the provision for alternative elder housing models will keep these areas vibrant and preserve the collective memory of the culture.

Commercial, Institutional, and Light Industry

In a traditionally heavy brownfield site, we must not neglect the effort required to clean up these areas and work toward developing a clean economy. Through recycling and waste stream management, EcoPark has the capacity to regenerate the city and the region. EcoPark will be the catalyst for change by setting the example and supporting the businesses within the park as they develop sustainable practices. Many of the existing commercial, industrial, and institutional buildings that weathered the storm and are once more operational were built of a traditionally more resistant construction.

Regional Connections—Think Regionally, Act Locally

As EcoPark becomes the regional resource and model for a new green, sustainable, and environmentally regenerative building practice, it will also provide opportunities for its business partners, community workforce, and partnering educational facilities. Through passive and active educational functions, EcoPark can be the model for other urban and sustainable resource centers around the country.

As humans we have no control over the weather, but the way we choose to respond to it can give us control over our destiny. As we transform ourselves from an energy-intensive building culture to a design-intensive culture we will empower ourselves

and our communities. EcoPark will provide the engine for the thinking process and the model that sets the course to move beyond the envelope of our traditional building into a more holistic sustainable one.

Instead of generating formulaic principles, EcoPark should be on the forefront by empowering individuals to embrace the stewardship of their land, city, and region as it connects to the ecological system that supports it. Education and outreach programs for students, workforce, industry leaders, contractors, and the general public can be the vehicle for that change. The demonstrated use of alternative systems along with the incorporation on site of readily available recycled materials can also support that mission. Ideally the knowledge base generated by the park will begin to take on a life of its own growing exponentially over time and firmly anchoring a culture of creative, empowered problem solvers into the city and region beyond.

EcoPark

As an available prototype, EcoPark can fill the immediate need of jumpstarting the evaluation of new models. It can also provide information resources, public outreach, and education for the current housing rebuilding effort in New Orleans. EcoPark's primary function is to provide information, modeling, resources, demonstration, and work opportunities around sustainability, as well as support green businesses. Its integration with adjacent neighborhoods, however, will also be a model of social, economic, and environmental sustainability in the city and for the region. BuildSmart Expo forums can provide workshops, technical resources, product displays, and demonstrations for homeowners, businesses, and workforce training. The opportunity to use the rebuilding of New Orleans as a laboratory is enormous, but with every passing day we are losing potential knowledge. As recommended in the following section on economic development, a concrete plan of action should be undertaken to forge partnerships with other complementary institutions and public entities. Sustainability-specific recommendations follow.



Recommendations

These recommendations focus specifically on the energy-efficiency and sustainability aspects of the EcoPark mission. For EcoPark to take full advantage of available grants and funding sources, we recommend that it form alliances with existing institutions, trade organizations, educational institutions, and public and private organizations.

These partnerships will provide legitimacy, resources for testing prototypes, vehicles for broad-scale dissemination of information, and opportunities to develop scientific modeling. To achieve a successful outcome, the following issues should be addressed as soon as possible:

- Establish evaluation criteria for prototypes. Articulate control and monitoring strategies to maximize the information stream. Keep all information in the public domain. Develop options for prototype guidelines and parameters.
- Create a minimal baseline of performance standards and design and construction details for specific aspects of the building. Articulate testing, monitoring, evaluation, and compilation of results. This process could further evolve into a specific Gulf Coast building code. (See testing criteria below.)
- Develop a strategy for creating educational materials for contractors and property owners. Create tools for disseminating the scientific study of new building techniques.
- Develop a program for providing training and outreach through a variety of media, regularly scheduled workshops and conferences, publications, apprenticeship programs, EcoPark fairs, and education in schools and universities.

All building prototype testing and evaluation should include and address the following:

- Passive and low-energy responses to comfort zone maintenance: temperature, humidity control, and indoor air quality
- Overall energy load and payback time that consider initial investment and operational costs
- Lifespan, weatherability, and resistance to climate, mold, insects, and rodents
- Potential capacity for expansion, repair, or relocation
- Source and cost of materials using a triform sustainability test
- Ease of construction—local production by trained workforce and property owners
- Potential for recycling construction and cradle-to-cradle costs
- Embodied energy in envelope construction
- Safety and sustainability of manufacturing, materials, and construction
- Compatibility with preexisting systems
- Embedded capacity for educational, social, and economic change
- Embedded capacity for appropriation of structure and space by owner and an ability to inspire and foster creative, healthful human activity

ECONOMIC DEVELOPMENT AND PROJECT MARKETING

According to the New Orleans Planning Commission's study, "diversifying and strengthening the city's economic base is possibly the single most important element in growing and improving the city." By implementing EcoPark, New Orleans can achieve its goal of becoming a home for diverse companies that contribute to the strengthening of the local economy.

EcoPark is an impressive, great concept. It covers 11 city blocks over several acres with existing businesses. Currently this area is a traditional industrial park with no retail presence or mixed-use buildings. The economic viability of the current industrial park appears to be disparate. EcoPark can be used as a catalyst to galvanize the existing business community at large with the following multilayer tax incentives:

- Renewal Communities Tax Benefit
- Gulf Opportunity Zones
- New Markets Tax Credit
- Community Development District

EcoPark needs to establish a business structure that will run its operations as an authentic business rather than as a volunteer effort, while taking care to maintain the energy and goodwill of its current volunteers. Implementing a quasi public/private organization will transform the industrial park, and EcoPark will bring its mission to bear: to become a "dynamic center to promote, propagate, and economically invigorate green, energy-efficient principles, design, and implementation."

SWOT Analysis

Strengths

After 15 months and 15 days, post-Katrina volunteerism is still strong. This communal energy has brought together neighborhood groups, artists, students, designers, activists, government officials, and business leaders. EcoPark is an effort to create awareness of using green energy-efficient, principles, design, and products in the New Orleans Rebuild effort.

This dynamic group's cross-pollination in its efforts to rebuild New Orleans will foster an environment of social changes that will provide economic benefits to the community at large by converting an 11-block industrial park into an EcoPark.

EcoPark, currently an industrial park, should be formalized into a district and a business operation that is recognized by all stakeholders: the surrounding neighborhoods, the university, the businesses within the industrial park, and local and state government.

- Organize the chaos and just-in-time outreach culture
- Investigate why the question, “What is EcoPark?” elicits multiple responses that demonstrate a lack of a shared vision and clear mission
- Develop and implement a three-year strategic plan and measure year-over-year progress
- Define what success looks like

Weaknesses

The current team of community leaders, university members, and activists came up with multiple definitions in response to the questions: What is EcoPark? What is the geographic boundary?

- A shared vision is neither clearly articulated nor bought into by the community at large
- A dedicated funding source needs to be secured
- The current volunteer structure is a risk to the long-term viability of EcoPark

Opportunities

- Improve the rebuilding of New Orleans by providing sustainable housing and communities. The flawless implementation of EcoPark concept will create sustainable communities.
- Anticipate that an intended project outcome will be a leveling of the historical urban designs that foster poverty and segregation.

Threats

All of the following stakeholders must understand the answer to the question, “What is EcoPark?”

- Public entities—local and state government
- Private entities—existing businesses in the industrial park
- Community at large—neighboring communities other than Gert Town and Zion City

Recommendations

1. Execute a succinct action plan to
 - Create EcoPark as a legal entity
 - Communicate EcoPark mission
 - Obtain designation as a community development district
 - Secure seed funding
2. Link startup operations to a strategic plan
3. Develop a three-year plan that articulates a clear strategy as to how the project will grow from a startup to a sustainable operation:
 - Communication
 - Land acquisition
 - Funding (private and public)
 - Human resources
 - Knowledge capital

Connections to Other Issue Areas

The bottom line for this project lies in integrating the disparate efforts to rebuild New Orleans into recognized priorities for the city. To build sustainable communities, the city needs to resolve the following issues by implementing EcoPark:

- Create jobs with higher wages to reduce the number of working poor
- Provide workforce housing for the anticipated workers who will move into communities surrounding EcoPark
- Obtain operations cost reduction for current industrial park companies by leveraging EcoPark resources to educate them about energy conservation products and practices

MOVING FORWARD

The AIA's SDAT process and the participation of individual residents and community organizations have created sufficient momentum for the project to move forward. Critical to the success of the enterprise is the need to invite community participation, strengthen the working relationship established with Xavier University, and build new relationships with other educational institutions, both technical/vocational and post-secondary.

The SDAT has four recommendations for implementation:

- Work with other businesses to establish an EcoPark business district for mutual economic benefit and possible branding
- Develop and implement an Art Egg business plan in the next three to six months
- Adopt a community assistance agenda
- Embrace sustainable design as the impetus for change and endeavor to have this report's recommendations codified in new or existing city plans and development regulations where appropriate

The American Institute of Architects
Center for Communities by Design
1735 New York Avenue NW
Washington, D.C. 20006-5292
www.aia.org