BB&T Center Broward County, Florida June 5–10, 2016





BB&T Center Broward County, Florida

Transforming an Arena Site into an Iconic and Dynamic Destination June 5–10, 2016



About the Urban Land Institute

THE MISSION OF THE URBAN LAND INSTITUTE is

to provide leadership in the responsible use of land and in creating and sustaining thriving communities worldwide. ULI is committed to

- Bringing together leaders from across the fields of real estate and land use policy to exchange best practices and serve community needs;
- Fostering collaboration within and beyond ULI's membership through mentoring, dialogue, and problem solving;
- Exploring issues of urbanization, conservation, regeneration, land use, capital formation, and sustainable development;
- Advancing land use policies and design practices that respect the uniqueness of both the built and natural environments;
- Sharing knowledge through education, applied research, publishing, and electronic media; and

 Sustaining a diverse global network of local practice and advisory efforts that address current and future challenges.

Established in 1936, the Institute today has more than 39,000 members worldwide, representing the entire spectrum of the land use and development disciplines. Professionals represented include developers, builders, property owners, investors, architects, public officials, planners, real estate brokers, appraisers, attorneys, engineers, financiers, academics, students, and librarians.

ULI relies heavily on the experience of its members. It is through member involvement and information resources that ULI has been able to set standards of excellence in development practice. The Institute has long been recognized as one of the world's most respected and widely quoted sources of objective information on urban planning, growth, and development.

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About ULI Advisory Services

THE GOAL OF THE ULI ADVISORY SERVICES program

is to bring the finest expertise in the real estate field to bear on complex land use planning and development projects, programs, and policies. Since 1947, this program has assembled well over 600 ULI-member teams to help sponsors find creative, practical solutions for issues such as downtown redevelopment, land management strategies, evaluation of development potential, growth management, community revitalization, brownfield redevelopment, military base reuse, provision of low-cost and affordable housing, and asset management strategies, among other matters. A wide variety of public, private, and nonprofit organizations have contracted for ULI's advisory services.

Each panel team is composed of highly qualified professionals who volunteer their time to ULI. They are chosen for their knowledge of the panel topic and screened to ensure their objectivity. ULI's interdisciplinary panel teams provide a holistic look at development problems. A respected ULI member who has previous panel experience chairs each panel.

The agenda for a five-day panel assignment is intensive. It includes an in-depth briefing day composed of a tour of the site and meetings with sponsor representatives; a day of hour-long interviews of typically 50 to 75 key community representatives; and two days of formulating recommendations. Long nights of discussion precede the panel's conclusions. On the final day on site, the panel makes an oral presentation of its findings and conclusions to the sponsor. A written report is prepared and published.

Because the sponsoring entities are responsible for significant preparation before the panel's visit, including sending extensive briefing materials to each member and arranging for the panel to meet with key local community members and stakeholders in the project under consideration, participants in ULI's five-day panel assignments are able to make accurate assessments of a sponsor's issues and to provide recommendations in a compressed amount of time.

A major strength of the program is ULI's unique ability to draw on the knowledge and expertise of its members, including land developers and owners, public officials, academics, representatives of financial institutions, and others. In fulfillment of the mission of the Urban Land Institute, this Advisory Services panel report is intended to provide objective advice that will promote the responsible use of land to enhance the environment.

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Finally, the panel would like to acknowledge ULI Southeast Florida/Caribbean, a ULI district council that is leading efforts to address regional and local development issues important to Broward County. The council's engaged members continue to develop the efforts recommended by the panel that will foster thriving and sustainable communities. In this work, they are an invaluable resource.

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Background and the Panel's Assignment

BROWARD COUNTY AND THE CITY of Sunrise recognize the great potential presented by redevelopment of the BB&T Center site to be a major hub for activity in an area eager for broad transformation. To renew redevelopment interest among the region's various stakeholders, Broward County asked the ULI Advisory Services panel to develop a comprehensive vision that complements existing uses, local communities, and current construction projects within the west Broward County study area. Broward County emphasized the importance for recommended strategies and proposals to generate positive economic returns on a regional scale.

The study area is confined by the Sawgrass Expressway, Hiatus Road, and the canal along Interstate 595. This 10.6-square-mile area includes both the jurisdiction of the Sunrise and parts of the city of Plantation. In addition to the BB&T Center, the study area includes a variety of residential, commercial, and office developments. Under the direction of the Board of County Commissioners, Broward County currently owns the land on which the BB&T Center site is located.

Completed in 1998, the BB&T Center not only is home to the Florida Panthers National Hockey League team, but also serves as a major regional civic, sports, and entertainment venue. The 872,000-square-foot arena is the largest arena in Florida, with a seating capacity of 20,763 for concerts and 19,250 for hockey games. Starting from the project's completion date, Broward County estimates the BB&T Center to have an economic life of 30 to 35 years.

The primary function of the arena has been to house the Panthers, a team that is under a license agreement with Broward County through 2028. However, the team could relocate after that date. While the Broward County



Site location and study area.



The arena site and nearby uses.

government considers the Panthers a vital partner in promoting and facilitating redevelopment of the BB&T Center site, it also recognizes the importance of developing flexible site scenarios.

The entire BB&T Center site consists of six parcels totaling 143 acres. Three parcels can be built upon and are the focus of the panel's redevelopment proposals; the other three parcels contain plat restrictions for wetlands or drainage.

The site has 7,500 parking spaces, provides access to the Sawgrass Expressway, and borders several eight-lane roadways, all of which makes the site an automobilecentric facility and limits the viability and sustainability of the BB&T Center. Because the expansive surface parking lot does not create an engaging or long-lasting recreational and commercial experience that encourages people to arrive early or stay after events, it fails to capture the economic benefits of those visitors. This is an opportunity lost.

Connecting visitors and local residents to the BB&T Center is a primary concern of Broward County. In addition to access to Sawgrass Expressway/I-75 and I-595 via NW 136th Avenue, the site is served by express bus service that departs from a park-and-ride facility at the site's southwest corner, taking commuters to downtown Fort Lauderdale and Miami.

The perimeter circulation for the arena site is defined by exits onto NW 136th Avenue at four points along the southern border and by exits onto Pat Salerno Drive at three points along the northern border. The Florida Turnpike Authority is studying the feasibility of introducing a northbound ramp onto Sawgrass Expressway/I-75 at Pat Salerno Drive—a project that would have long-term impact on traffic flow within and around the study area. Overall, the dominance of parking spaces and the primacy of automobile circulation challenge the current development potential of the arena site.

Broward County has introduced new zoning classifications such as transit-oriented development (TOD) and local activity center (LAC), aiming to redefine commercial



Business uses, master-planned residential space, semirural residential space, a corporate business park, and a regional outlet mall surround the arena site, which is zoned for industrial uses, though classification changes are allowed.

and residential uses to facilitate higher-density development and improve local conditions. These measures are intended to foster greater economic benefits and improve the quality of life of those living and working in the region.

Sawgrass Mills mall, the primary commercial center in the study area and the largest single-story mall in the United States, is situated directly across NW 136th Avenue from the BB&T Center. Thousands of people are drawn each year to the more than 300 shops encompassing almost 2.4 million square feet of retail space. The mall has become an essential destination for international tourists, especially from Latin America. Sawgrass Mills recently completed an 82,000-square-foot expansion and plans to add upward of 400,000 square feet of new space.

Several nearby construction projects are underway. Judged by potential development, the study area will



The entrance to the Sawgrass Mills Fashion Row.

evolve into an urban core in western Broward County that will feature the following:

- American Express Corporate Center—a 41-acre site with 822,000 square feet of office space, scheduled to open by 2018; the center is projected to consolidate American Express operations and add to the more than 3,000 jobs the company has already brought to the region.
- Metropica—a planned \$1.2 billion mixed-use development that will include 1,750 residential units (75 percent high rise, 25 percent over commercial space); 485,000 square feet of retail/entertainment space; 600,000 square feet of office space; a boutique hotel; and a transit-station hub along the Mall Ring Road for the Broward County Transit and municipal bus services.
- Westerra—an office-focused, mixed-use complex incorporating 1.6 million square feet of office space, 400,000 square feet of retail space, 1,500 residential units, and a 300-room hotel. Another 300-room hotel is

American Express's new regional headquarters under construction.



planned on Sunrise Boulevard just down the road from Westerra, adjacent to the Sawgrass Expressway.

The panel also considered six substantial residential developments near the arena site:

- Tao at Sawgrass, a two-tower condominium building with 396 residential units;
- Portico, a 417-unit luxury rental apartment development under construction;
- Artesia, condominiums and fee-simple townhouses with a 30 percent rate of rental occupancy and in the final phase of construction;
- Nexus, which provides one- to three-bedroom rental units;
- AMLI Sawgrass, which provides one- to two-bedroom rental units; and
- Sawgrass Preserve, a 300-home subdivision immediately south of the arena property.

The panel also evaluated projects within the region that may be in direct competition with development in and around the site, including the following:

American Dream Miami—a 195-acre development containing a mall, amusement park, and water park, plus 3.5 million square feet of retail space, a 2,000room hotel, an indoor skiing facility, and a recreational lake; and



A model of the future Metropica site.

The Graham Companies Employment Center—a 3 million-square-foot business park directly south of American Dream Miami with 1 million square feet of commercial space, 1.5 million square feet of office space, 2,000 multifamily rental units, two 300-room limited-service hotels, and two 500-room full-service hotels.

In addition to the completed and upcoming development projects, the study area is home to several acres of natural amenities. Nineteen acres of wetlands, including a protected archaeological site, are spread across the site's northwest corner. Across the Sawgrass Expressway, both the 660-acre Markham Park and the much larger protected Florida Water Conservation Area, a part of the Florida Everglades, provide extraordinary views for buildings facing west and visitors traveling via the expressway. With the BB&T Center elevated to about 29 feet above sea level and the rest of the site six to eight feet above sea level, the possibility of providing unobstructed views of these natural assets is of great value to prospective developers and visitors to the arena.

Like the rest of Florida, Broward County is no stranger to the impacts of climate change. Long-range planning efforts by the county continue to focus on sustainable and resilient development strategies to exceed the base flood elevation (BFE) mark set by the Federal Emergency Management Agency (FEMA). The current system for surface water management directs runoff into dry retention areas that overflow into wetland and lake areas for treat-



Aerial view of the BB&T Center and study area.

ment, with additional measures to provide protection from potential flooding.

On-site infrastructure and an elevated building site add to the marketability of future development of the BB&T Center in a region where rising sea levels and increased frequency of 100-year storms is a real concern.

The Panel's Assignment

Broward County asked the ULI Advisory Services panel to develop proposals for redevelopment of the BB&T Center site. The panel focused on the following issues:

- Development and economic potential: short- and longrange development scenarios and challenges given current and projected market conditions;
- Design and sustainability principles: potential approaches to overall development in the area;
- Connectivity: how to improve the site's connections with the surrounding area; and
- Implementation: how to phase development and allow for flexibility in accommodating varying market demands.

In focusing on these issues, the panel looked at specific questions in each area.

Development and Economic Potential

- What uses, design principles, and sustainability practices—including development density thresholds, streetscape designs, building placement/form standards, landscapes, and green infrastructure—should guide the development vision for the site to ensure that high-quality development occurs?
- Which potential forward-thinking approaches to urban design, architecture, site planning, and environmental design should be considered in an overall development concept?

Design and Sustainability

What short- and long-range development scenarios and challenges does ULI envision for this site given current



The panel tours the BB&T Center.

and projected market conditions, and what site, environmental, and political aspects should be considered?

- Would it be feasible or beneficial to use existing natural resources, including the wetlands area, to create open spaces that are both nature-based and urban in form and character?
- How can the project be positioned with respect to the Westerra, Metropica, and Sawgrass Mills developments—all of which have significant unbuilt entitlements for residential, commercial, retail, and hotel development—and how can the project be positioned

with respect to the larger context of the proposed American Dream mall development in Miami-Dade County?

Connectivity

How can future development improve site circulation and vehicular, transit, bicycle, and pedestrian connections to better connect the site and maximize the opportunities presented by its proximity to surrounding developments, neighborhoods, the Florida Everglades, and the region?

Implementation

- How should development on the site be phased to create and accommodate flexibility in varying market demands during the life of the project? How should development be phased to maintain a balance of density and uses to ensure success during each phase?
- What additional tasks should Broward County or Sunrise undertake, and which additional areas should they study or design?

Summary of Analysis and Recommendations

AN ANALYSIS OF THE BB&T ARENA site's development potential suggests that though initial demand for new development will be moderate, over time more opportunities will exist for a variety of uses at varying densities. The panel's recommended strategy focuses on realistic and organic growth of the residential, entertainment, and office markets with a strong potential for large entertainment uses.

The panel's recommendations for market potential, sustainability and site scenarios, connectivity, development strategies, and implementation are envisioned as general guidelines to support a robust framework for long-term regional growth.

The panel recommends the following:

- Recognize the district beyond the site.
 - Support planning that encompasses the broad area.
 - Propose a connection with Sawgrass Mills.
 - Support a new northbound ramp to Sawgrass Expressway.
 - Build an identity for "Downtown West Broward."
- Plan for long-term flexibility.
 - Consider post-2028 scenarios with and without the arena and the Panthers.
 - Consider gaming, such as a destination/casino resort.
 - Review the lack of an office and tech employment center.
- Capture immediate opportunities.

- Focus on an entertainment mixed-use core, including a boutique hotel and new housing.
- Create a plaza for civic benefit, with programming that engages the community.
- Add a sports field with subsurface compensatory stormwater storage.
- Promote "edu-tainment" for the wetlands, such as an archaeological site.
- Consider demand for family entertainment.
- Limit cross-competition in the market.
- Use all available tools to kick-start community and economic benefits.
 - Leverage and defer land value gains in public/private partnerships.
 - Secure a long-term cash-flow stream from the tax base, from a participating ground lease, and from agreements to share net operating income.
- Champion the site.
 - Create the Downtown West Broward Leadership Council, with private sector and public official cochairs to manage the process and serve as an advocate for the district overall.
 - Focus attention on site development; do not wait to schedule meetings; do not delay the process; construct a request for proposals (RFP); and engage the public quickly and efficiently.

Development Potential

USING MARKET DATA, stakeholder interviews, and its own development experience, the panel concluded that to ensure successful site development in the short and long terms, the mix of uses must be complementary. The panel also assessed options that consider the Panthers' lease expiration in 2028.

Demographic Overview

Sunrise has experienced consistent population growth since 2010, following a decline of 1.6 percent from 2000 to 2010. With a growth rate of 1.6 percent over the past five years (2011–2016), the city is growing at a faster rate than is Broward County and the rest of Florida. In addition, the city's projected growth of 1.2 percent over the next five years is on par with that of its neighboring cities. For Sunrise, the expected addition of about 6,000 people between 2016 and 2021 represents 2,300 new households. Whereas the study area predominantly consists of singlefamily suburban neighborhoods, potential developments, with and without entitlements, would bring smaller units to the market, expanding the market's appeal to more oneperson households and couples without children.

The demographic data also show a growing Hispanic population that now makes up one-third of the study area's population. From 2000 to 2014, Hispanic population growth was 93 percent for the study area and 77 percent for Broward County. Because of the city's suburban location and historical development patterns, forecast data led the panel to propose an increase in density to manage population growth.

Age Distribution

Sunrise's population leans heavily toward the older end in age distribution with approximately 46 percent of heads of household age 55 and older. Due to aging demographic groups, Sunrise's development patterns historically have been characterized by low-density development that targets homeowners instead of renters. Only about 15 percent of the city's households are within the millennial age range of 25 to 34, an indication of the untapped millennial housing market. Any proposal for development that targets young working professionals would need to consider this demographic group's financial capabilities.

Head of Household Age Distribution, Sunrise

Age	% of total	
22–34	15%	
35–44	18%	
45–54	20%	
55–64	19%	
65+	27%	

Sources: Claritas; American Fact Finder.

Population Growth

	Population			Annualize	ed growth
Area	2010	2016	2021	2010–2016	2016–2021
Sunrise	84,439	92,636	98,499	1.6%	1.2%
Broward County	1,748,066	1,896,994	2,017,374	1.4%	1.2%
Florida	18,801,310	20,299,288	21,515,406	1.3%	1.2%
United States	308,745,538	322,431,073	334,341,965	0.7%	0.7%

Sources: Claritas; American Fact Finder.

Income Distribution

Sunrise has a median household income of \$49,370, lower than that of other cities in the study area, which have median household incomes that range from \$67,548 to \$115,556. About half the households in Sunrise earn less than \$50,000 annually, compared with 37 percent of households in Plantation and 26 percent of those in Weston. Most new development appears to cater to people who earn between \$50,000 and \$100,000, which is about 30 percent of Sunrise residents.

More than 70 percent of current study area residents have moved to the area since 2000, and almost 50 percent of inbound migration comes from Miami-Dade County, making Sunrise a cost-effective submarket for those working outside the city of Miami.

Income	% of total
Under \$50,000	50%
\$50,000-\$75,000	18%
\$75,000-\$100,000	12%
Over \$100,000	20%

Household Income, Sunrise

Sources: Claritas; American Fact Finder.

Market Trends, Opportunities, and Risks

Using information gathered through stakeholder interviews, conversations with local brokers, and research produced by those brokerage firms, the panel analyzed the site's development potential, focusing on existing competition at Sawgrass Mills mall, Sawgrass International Corporate Park, current developments at Metropica and Artesia, and entitled developments at Westerra. The panel's analysis also took into account current market conditions and the proposed timeline for site development.

Residential

The study area contains 10,574 units, almost a quarter of which were built in the past 15 years. In 2014, median

rents, median home values, and vacancy rates in the study area were all stronger than county averages. Although the value of homes has been steadily rising since 2011, the volume of transactions has been decreasing since mid-2015, indicating a slowdown in the homeownership market. In addition, new supply at Artesia, Metropica, and Westerra presents significant local competition.

The apartment market has been strong coming out of the national recession, with vacancy rates topping 10 percent only twice in the past five years. Although absorption was weaker in 2015, the past four years have been stronger, with absorption averaging 200 units per year. Rent growth has been steady, with rents rising by 5 to 7 percent annually since 2011. Monthly rents for apartments are under \$1,500. Home values in most of the study area fall within the range of \$200,000 to \$300,000.

The market has yet to pull in millennial demand with stateof-the-art residential product. New employment sectors would also help open opportunities to attract millennials to Sunrise.

One primary weakness in the apartment market is that a population weighted toward those 55 and older tends toward homeownership, which their income levels can support. In addition, renters and homebuyers want to remain close to employment centers and central business districts in Miami and Fort Lauderdale, and apartments near those cities will always compete with developments in the study area. Demand can be cultivated through smart development practices and marketing, but rents must climb to support such development, and the panel does not believe that rents have yet hit the threshold needed to justify highdensity development. Requirements for structured parking have also complicated the development of both apartment and office properties.

Office

The office market has also held strong, with a vacancy rate of 10 to 12 percent. Most of the inventory is in Sawgrass International Corporate Park, one of south Florida's largest corporate centers, providing 20,000 office and lightindustrial jobs. Rent growth has also been steady since 2012 and, pending preleasing activity, could spur development. International and regional firms have a strong presence in the area, represented by HBO Latin America and the construction of the American Express Corporate Center. In addition, potential exists to tap into an emerging technology sector and foster a relationship with a regional educational institution to develop office space.

Market data indicate a lack of office leasing velocity and market depth; it is therefore difficult to justify speculative construction at a large scale without preleasing activity or knowledge of tenants in the market. With three years of net supply growth, absorption has been staggering since 2012. A low vacancy rate combined with rent growth is typically a precursor to new development, but the demand picture has not yet cleared to justify new office development.

Retail

As an international commercial destination, Sawgrass Mills mall continues to lead Sunrise and the region in retail performance. The mall, one of the largest tax-revenue generators in the state and a huge employment driver, has a critical influence on Sunrise and its ability to attract development at the BB&T Center site. About 28 percent of the jobs in the study area are in the retail sector, and many of those are at Sawgrass Mills. The expansion of the mall and new developments at Metropica will add to the destination environment that Greater Broward County needs. The market data suggest a strong retail industry, with vacancy rates consistently below 9 percent, and steadily growing rents.

The American Dream mall presents significant regional competition, with its retail and entertainment space, plus hotel rooms, as does the Graham Companies development, with retail space, residences, a business park, and hotel rooms. Though these developments are still in the planning stages and not fully entitled, the panel factored in their expected construction and leasing because of the significant impact the American Dream mall will have on every property type in the Sunrise market.

Although the American Dream mall will affect Sawgrass Mills, the panel believes that impact will be limited because the American Dream mall is theme-park focused and its product pricing will be at market rates instead of outlet rates.

Sustainability and Resilience

BROWARD COUNTY AND THE COMMUNITY sug-

gested that the panel focus on aspects of sustainability, such as balanced resource use, and pay specific attention to the Everglades, energy, and water.

A successful revitalization of the BB&T Center requires an understanding of several natural features in the region as well as their impact on the direction of future development.

High-priority actions as determined by Broward County. Each number refers to actions as categorized in the Broward County Climate Action Plan document.



Contribute to local, regional, and state climate planning efforts (#1) Support the Southeast Florida Regional Climate Compact (#3)



Lessen the cumulative impacts to natural systems (#16) Support Everglades Adaptive Restoration (#17) Develop habitat buffer zones (#18) Increase the number of miles of living shorelines and dunes (#19)



Continue local water conservation programs (#24) Monitor and protect wellfields (#27) Develop alternative water supply strategies (#28)



Accelerate government operations' GHG-reduction efforts (#35) Implement a Better Buildings Challenge (#36) Support third-party retail power purchase agreements (#48) Increase rooftop solar on county facilities (#49) Actively pursue the installation of alternative-fuel-vehicle infrastructure (#50)



Encourage FEMA to consider sea-level rise in flood map updates (#59) Analyze sea-level rise, drainage, and hurricane impacts (#68) Develop adaptive management strategies (#69) Apply models to develop resilient design standards (#70)



Educate the community on climate change (#81) Engage volunteer corps (#86) The panel considered various design principles, provisions for open spaces, the value and constraints presented by the proximity of the Everglades, and the general connectivity of the region. In this section of the report, the panel presents an overview of best practices, emphasizing environmental and quality-of-life factors specific to the arena site.

Broward County Climate Action Plan

Published in 2015, the Broward County Climate Action Plan (CCAP) provides nearly 100 guidelines for mitigating greenhouse gas emissions and improving community resilience.

Several strategies from the CCAP are relevant to the BB&T Center and the entire west Broward County study area and should be pursued as soon as possible, either before the initial stages of redevelopment or in parallel with the development plans, which are outlined later in this report.

Primary Goals

The panel recommends further examination of the following CCAP primary goals:

- Monitor and protect well fields by applying a model of the sustainable use of the Floridian aquifer to the potable water supply.
- Develop alternative water supply strategies in coordination with all utilities and municipalities. As stated in the Broward County Regional Master Reuse Plan, before implementing water reuse strategies, the county, in collaboration with federal and state agencies, should evaluate reuse water interaction with, and impacts on, the natural systems. Over time, pursue the advancement of the C51 reservoir to ensure the long-term vitality of the county, the state, and the greater interstate region.



Apply models to develop resilient design standards at a regional scale. This step can be used as an opportunity to increase the percentage of pervious areas by implementing appropriate regulations for new construction, redevelopment, additions, retrofits, or

Secondary Goals

modifications of property.

In addition, the panel has identified secondary CCAP goals also applicable to the study area:

- Adopt adaptation standards and enhance the resilience of county-owned infrastructure that contributes to climate change and sea-level rise; address mitigation and adaptation policies contained in the land use plan. Such adaptation policies should incorporate infrastructure design and construction standards, such as the installation of LED streetlights and garage lighting on new roadways and parking facilities. These policies should have a long-term goal of converting existing systems and installing alternative-fuel-vehicle infrastructure.
- Improve the resilience of buildings and structures using local zoning and code requirements, and provide prospective homebuyers and businesses with a checklist tracking adherence to these requirements. Policy changes should encourage climate-resilient construction, with special attention paid to the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) standards in building and community design.

- Engage the private sector to develop strategies for adapting energy infrastructure to be more resilient, including new regional power-generation facilities, transmission infrastructure, and gas and liquid fuel distribution systems. Systems can also be protected from infiltration of floodwater through coordination with utility companies and municipalities.
- Determine the health and value of natural systems using vulnerability or risk-assessment standards. Focus support for the Everglades adaptive restoration effort overseen by the U.S. Army Corps of Engineers, Florida Department of Environmental Protection, U.S. Fish and Wildlife Service, U.S. Geological Survey, National Park Service, and South Florida Water Management District—by developing habitat buffer and transition zones and by continuing local water conservation programs.
- Increase the planting of diverse native vegetation by encouraging urban reforestation and use of green infrastructure. Offer grants for increasing the tree canopy and incentivize green roof structures, thereby helping reduce the urban heat-island effect.

Green Space and Infrastructure Goals

Green infrastructure is flexible and resilient and allows the local government to maximize limited public dollars to achieve multiple goals with a single investment. Although typical green infrastructure practices focus on protecting water quality, green infrastructure can also achieve cobenefits, such as improved public health, a higher quality of life, and economic development.

Broward County is committed to protecting and enhancing local and regional ecosystems and to optimizing the cobenefits of habitat restoration, deployment of coastal buffers, wetland mitigation, urban reforestation, and expanded use of green infrastructure. The county is committed to creating a healthy, enjoyable, and climate-resilient environment. The panel recommends the following green space and infrastructure elements to help the county achieve sustainable and resilient development:

Aerial view of east Sunrise.

- Bioswales provide excellent stormwater protection for streets, homes, and businesses.
- Newly planted trees create shade, clean the air, and increase property values.
- Greenways offer residents and visitors the opportunity for physical activity and stress reduction while reducing the urban footprint.
- Habitat-protection strategies preserve areas of high biodiversity, protect areas around trees from paving, mimic the natural hydrology for site drainage where possible, and minimize use of impermeable materials to reduce water runoff.
- Landscaping that preserves or restores native plants improves site biodiversity.
- Roofing and paving materials with appropriate albedo and emissivity minimize the heat-island effect.

Energy Use Optimization and Generation

Broward County should set a target of "near net zero" energy and water use in the proposed district's design, construction, and operational outcomes. If such an approach is considered for the site, a life-cycle return on investment will be an integral part of the organizational programming/feasibility design plan from the outset. *Netzero energy* is defined as the ability of a facility to generate all its needed energy on site through demand reduction and use of renewable energy sources.

Application of the following steps by Broward County will leverage the site as a sustainable asset for future developers.

Step 1: Design for Best Orientation and Envelope Design

 Optimize orientation for exposure to daylight, and minimization of glare and heat gain, as well as to address north winter wind issues/cooling.

Reviewing Financing Options Using DSIRE

According to the Database of State Incentives for Renewables & Efficiency (DSIRE), Broward County and potential developers currently have 27 financial incentive options for funding, fully or partially, efforts to reduce system and building energy use as well as for moving to more renewable and energy-efficient sources.

Florida offers a sales tax exemption on solar and combined heat and power systems, a renewable-energy production tax credit, and a property tax exclusion for residential renewable-energy property. The federal government offers several tax credits and exemptions as well as considerable funding for energy efficiency, weatherization, energy conservation, renewable energy, and other green programs via grant and loan programs. In addition, Broward County approved in 2016 a countywide property-assessed clean energy (PACE) program, providing an innovative form of financing for clean energy and resilience improvements for residential and commercial property owners across the county.

The DSIRE website includes a clickable map allowing users to search for policies and incentives by state.



- Explore the appropriate wall ratio/sill height to improve curtain-wall performance and daylight opportunities/ restrictions.
- Explore daylight penetration to offset constructed lighting/levels of lighting.
- Optimize the facade and roof orientations for differing performance demands; for example, modification of glass types (and performance metrics) and insulated

wall sections through use of double/triple glazing, deep wall plenum/rain screens, and so on.

- Develop shading options for the facade; for example, use of external shading devices (while considering climate and maintenance implications).
- Develop shading options for the whole building; for example, use of a parasol for sun/rain screening.

Step 2: Design for Passive Systems—Moving Air, Use of Daylight

- Explore daylight penetration to offset electric lighting/ levels of lighting and depth of floor plate.
- Use an atrium as a natural return air plenum with the thermal chimney effect.
- Employ a thermal mass of concrete structure and "basement."
- Use a tight facade and roofs to minimize air infiltration.
- Employ conditioned "irresistible" stairs between levels as an alternative to elevators.
- Understand passive systems, and know how to use the building in different seasons and at different times of day.

Step 3: Design for System Effectiveness

- Investigate differing parameters and building core thermal comfort strategies or differing delivery methods; that is, the circulation in conference rooms and workspaces should have different set points.
- Determine thermal comfort set point; use a wider range of wet bulb/dry bulb high/lows.
- Support LED systems and other lighting fixture efficacy
 —better lighting for human tasks/lighting level set points (less ambient and more task lighting).
- Use dehumidification methods centrally, such as an enthalpy wheel, desiccant approach, and others.
- Tie the system economizer to carbon dioxide sensors (building occupant loads); take a demand-side approach.

- Employ a dedicated outside air system, decoupling ventilation air from the primary heating and cooling system, perhaps through localized heating and cooling via radiant systems in occupied space.
- Reduce and vary air volumes.
- Provide raised-floor air distribution/displacement ventilation.
- Harvest daylight/adjust light levels and include on/off (occupancy) controls.
- Deploy and optimize integrated but easy-to-use building management systems (aligned to the operator), tying together (at a minimum) lighting, HVAC, and water systems.
- Provide smart controls and diagnostics that are nonproprietary and continually updatable.
- Use oversized ducts and pipes, and reduce the size of pumps and fans (and run the latter more regularly for efficiency).
- Use soft-start pumps and fans.
- Install geothermal systems via foundations.
- Provide nighttime air flush/open intake.
- Partner low-flow water fixtures with optimized pumping and day-tank placement.
- Localize water heating or waste-heat capture for water heating.
- Capture heat from the data center for thermal uses (air and water).
- Understand and use smart controls/building management systems, and provide ongoing training and optimization.

Step 4: Align Operator and Occupant Behavior

 Seek peer review of operations, including systemcontinuous commissioning (often supported by the public utility).

- Establish predictive/preventive maintenance protocols.
- Scan for energy-operational efficiency incentives from federal, state, local, and utility sources.
- Contract with equipment vendors who will maintain equipment to the highest standard.
- Hire/retain a level of capability to use the systems and optimize it.
- Create incentives/competition for reduction of energy use in the occupant space.
- Target information technology use in office spaces: 80 percent laptops, 20 percent desktops.
- Employ vending machine energy misers, and tackle other phantom loads.
- Provide/procure automatic turn off for copiers, flat screens, and desk/task lighting (for example, using motion sensors), and tackle other phantom loads.
- Provide for facility cleaning during the day.
- Ensure that lights are shut off at night and whenever not in use.
- Employ either green-grid power or an on-site, dedicated renewable power source for plug-in vehicles in the facility.

On-site energy strategy diagram.





- Promote facility energy stewardship through education, engagement, and innovation; deliver the message: "You are part of the net-zero equation."
- Use occupant local control of task lighting and air systems by monitoring raised-floor ventilation rates at diffusers, *not* with thermostats. Deliver the message to users: "You make your environment work best, and when you are not there, turn it off!"
- Recognize the value of wider temperature set points (cold days might be a bit colder).
- Participate in load-shedding efforts; at certain times of day, some aspects of energy use may be lowered (less lighting used), or laptops can be unplugged and run on battery power.
- Report wasteful energy practices.

Step 5: Choose the Right Energy for the Right Use

- Use natural gas for heating air and water (natural gas is not net zero but is more efficient than electricity).
- Use waste heat (from the data center, from kitchens) for heating air and water.
- Use geothermal approaches for air modification—via a well or foundation pier.
- Use energy storage—ice pond or other—but avoid chemical batteries.
- Use specialized solar photovoltaics to power electric vehicles for staff commuting or fleet.

Step 6: Employ On-Site Renewable Energy

- Provide rooftop/building-parasol orientation for solar collectors.
- Provide garage-rooftop building orientation for solar collectors.
- Use the power grid (net metering) as "the battery."

- Right-size the mix of electricity and heat/thermal generation by using coolant from the solar collectors for radiant heating and for hot water generation.
- Minimize energy loss by using power inverters establish a facility system that employs direct current (DC) power.

Regional Water Supply Management and Protection

The impacts of climate change present serious issues for sustainable water management; they affect water and wastewater infrastructure, drainage and flood-control operations, and the quality and abundance of water supplies. An effective response requires the coordinated efforts of government agencies and service providers and a holistic approach that treats water supply, disposal, and management as integrated systems.

In southeast Florida, climate change is predicted to influence precipitation patterns and affect both water supply and water management practices. Fewer storms, drier winter and spring months, and an increase in local evapotranspiration rates (water lost to the atmosphere through evaporation and plant transpiration) will increase the frequency and severity of droughts, while less frequent but more intense storms will tax water management systems, causing both inland and coastal flooding.

These impacts will be compounded by sea-level rise. Coastal wellfields will be lost because of saltwater intrusion, and water management operations will be constrained because of increases in groundwater levels and reduced discharge potential at canal-water control structures. In addition, sea-level rise from climate change is threatening the Florida Everglades, the backbone of Broward County's natural resource system, highlighting the urgent need to restore the wetlands.

Addressing the impacts of climate change requires finding ways to consistently maintain adequate high-quality water supplies for all local communities. It will be necessary to use strategies to reduce the cost and energy demands of alternative water supplies, to consider future conditions with respect to the placement of infrastructure, and to make investments in new and upgraded infrastructure to maintain essential drainage and flood-control operations. An improved delivery and distribution of water flow would provide both natural resources and benefit the water supply.

The county must propose practical solutions today to help mitigate the impact of climate change on its future water supply. The county must try to optimize water resource use, with conservation being paramount, and develop new sources that are less vulnerable to changing climate conditions. The challenge will be to implement these necessary projects without markedly increasing energy consumption—a difficult task that underscores the value of conservation as a priority strategy. Policy and regulatory changes, funding for infrastructure, development of alternative water supplies, public education, and exploration of new finance strategies will all be necessary to make significant progress and may require collaboration between the city, county, state, and federal governments.

The panel suggests that Broward County develop integrated water management plans that include water utilities, wastewater service providers, water managers, and partners to the Southeast Florida Regional Climate Change Compact in joint assessment and planning strategy. This coordinated plan needs to address stormwater use and disposal, traditional and alternative water supplies, wastewater disposal and reuse, and water conservation measures.

These actions will help the area maintain an adequate water supply; develop decision-support tools necessary to build community resilience and increase the resilience of natural systems through water resource management; and ensure that future generations in the county have access to the same natural resources.

Water Use Optimization and Reuse

Several development principles exist that Broward County can apply to the redevelopment of the arena site to reduce water consumption, improve building standards, and



An example of naturalvegetation green space.

> fulfill "net zero water" aspirations. Employing a variety of systemwide projects and regulating building design and infrastructure standards can ensure the long-term viability of the arena site through the current century and into the next. Broward County should aim for a strategy that calls for half of all water use to involve low-flow fixtures.

> For the greater west Broward County study area, low-flow fixtures can reduce water use by 40 percent or more. No-flow fixtures, such as waterless urinals, should also be strongly considered as a long-term strategy for further minimizing water use.

> For structures on the BB&T Center site, rainwater collected from roofs, water collected through condensation, and any groundwater from sump pumps and garage perimeter drains can be treated and stored for use by cooling towers, toilets, and purple-pipe irrigation external to buildings. The internal purple-pipe systems can distribute graywater and possibly blackwater from sinks, showers, and coolingtower blowdown to be used by internal systems; variation would be based on the level of contamination and treatment. Base filtration, with the possible addition of some chemical when necessary, can treat nonpotable water collected on site. Concrete or prefabricated cisterns used for storage in garage levels and corners and under ramps will need to be adjusted according to supply flow and demand.

Bioswales and other permeable natural surfaces are ideal for stormwater management. Also, the panel recom-

mends that Broward County consider applying geothermal systems where practical because these systems use less water than typical cooling-tower systems.

The Everglades and Wetlands Stewardship and Opportunity

Wetlands serve as natural water-filtration systems, waterstorage areas that provide flood protection, and important aquifer recharge areas or areas where groundwater is replenished. In addition, wetlands have recreational, historical, scientific, and cultural values; provide places to hunt, fish, canoe, boat, bird-watch, and photograph wildlife; and provide natural scenic vistas for nature lovers and artists.

Home to a wide range of animals and insects, wetlands provide large volumes of food that attract many animal species. Many U.S. breeding bird populations—including ducks, geese, hawks, woodpeckers, wading birds, and songbirds—feed, nest, and raise their young in wetlands. Fish use inland and coastal wetland areas for spawning and nursery areas.

The Florida Quality Developments program was created to encourage development that has been thoughtfully planned to consider the protection of Florida's natural amenities, the cost to local government of providing services to a growing community, and the high quality of life Floridians desire. The South Florida Regional Council oversees the Florida Quality Developments program and is charged with reviewing projects deemed developments of regional impact (DRIs)-defined by Florida law as "any development which, because of its character, magnitude, or location, would have a substantial effect upon the health, safety or welfare of citizens of more than one county." DRIs typically include projects within two miles of an Everglades Protection Area, such as the project proposed by the panel at the arena site. Potential developers should review DRI guidelines and consider DRI viability as they shape their final proposal for the site.

ULI Building Healthy Places Initiative

The panel recommends that west Broward County integrate principles for building healthy places into its vision of the region to connect placemaking efforts. Launched in July 2013, the ULI Building Healthy Places Initiative is a multifaceted program that uses research, publications, and advisory activities to leverage the power of the Institute's global networks to shape projects and places in ways that improve the health of people and communities.

The initiative's publication *Building Healthy Places Toolkit: Strategies for Enhancing Health in the Built Environment* provides developers, owners, property managers, designers, investors, and others involved in real estate decision making with strategies and recommendations for creating places that offer communities a healthy and socially engaging environment that is both conducive to physical activity and supplied with healthy food and drinking water. The report outlines 21 recommendations for promoting health at both the building and the project levels and provides an extensive review of existing health literature and practical solutions implemented across the world. These recommendations, where applicable, should be incorporated into the vision for Downtown West Broward.



Connectivity

WESTERN BROWARD COUNTY is an automobiledominated environment, and most of the infrastructure in the immediate vicinity of the BB&T site favors automobile traffic.

The study area would benefit from a comprehensive branded wayfinding system for vehicles, bicycles, and pedestrians. New wayfinding would direct motorists from the Sawgrass Expressway to major destinations, help pedestrians find their way, and guide bicyclists from regional bike accommodations to the local bike network. Sunrise's Leisure Services Master Plan includes several useful implementation ideas that should be considered as part of a future development vision. The panel strongly recommends that the city pursue a regional wayfinding signage program.

Vehicles

The Sawgrass Expressway provides regional access to and from the BB&T site, and I-75 and I-595 provide regional access to and from the greater western Broward County area. The Sawgrass Expressway's interchanges with Sunrise Boulevard and Oakland Park Boulevard experience weekday peak-period congestion. Sunrise Boulevard has long delays and queues during weekday peak periods, especially between the Sawgrass Expressway and Flamingo Road. However, NW 136th Avenue/Panther Parkway has surplus capacity during the weekday peak periods.

After Panthers hockey games and concerts, the mass exodus of people causes delays along NW 136th Avenue/ Panther Parkway. Most people interviewed by the panel indicated that event-related congestion was relatively minor to the south, whereas the NW 136th Avenue/Panther Parkway intersections with Pat Salerno Drive and Flamingo Road experienced longer delays. However, limited opportunity and limited local support exist for adding throughlanes to the existing surface streets.

Florida's Turnpike Authority is studying capacity expansion options for the adjacent Sawgrass Expressway. Its preliminary evaluation supports expanding the main line from three to five lanes in each direction. Five lanes would include three general-purpose lanes and two express lanes. The project also includes a new interchange at NW Eighth Street, as well as major interchange improvements at Sunrise Boulevard and Oakland Park Boulevard.

Sunrise and the BB&T Arena also support adding new ramps to and from the north at the Pat Salerno interchange. Although the new ramps might ease congestion at the ramps on Oakland Park Boulevard and Sunrise Boulevard, they would provide only partial benefit to the turnpike and would increase the interchange costs from \$45 million to \$57 million. Although not opposed to the ramps, the Turnpike Authority is not interested in absorbing the additional cost if the new ramps would be of limited benefit.

Recommendations

The panel recommends the following infrastructure improvements to accommodate future traffic growth from redevelopment of the BB&T site and continued development in the region:

An example showing how a quarter-mile segment of Panther Parkway could be narrowed to a four-lane divided roadway.



- Support Florida's turnpike expansion plans and interchange improvements for the Sawgrass Expressway.
- Continue to support the northern ramps at the Pat Salerno Drive interchange, but recognize that that support will be a political and financial decision.
- Narrow the travel lanes along NW 136th Avenue/Panther Parkway between Sunrise Boulevard and Flamingo Road. Eliminate one travel lane in each direction between Red Snapper Road/Gate 6 and Orange Grove Road/Gate 5 to provide a four-lane divided roadway. This modified roadway section will create a safer environment for vehicles, pedestrians, and bicycles.
- Require a comprehensive traffic evaluation of the BB&T redevelopment project as part of the approval process. The traffic study should incorporate the findings of Sunrise's forthcoming transit-oriented development traffic study.
- Implement an adaptive signal system to maximize the efficiency of both the existing and the planned roadway geometry.
- Promote access management strategies to improve safety and maximize the efficiency of the existing/ planned geometry.

Transit

The area is well served by Broward County Transit. Four local routes serve Sawgrass Mills, and three of the four routes experience very strong ridership. The county plans to convert these successful routes to bus rapid transit within ten years. Two express routes operate from the park-and-ride lot located on the BB&T site and experience strong ridership.

The existing transit ridership base is predominantly transit dependent: most riders own one or no vehicles, and they have lower household incomes. This demographic mix is different from that associated with the recent and planned office and residential developments in the area, such as the American Express regional headquarters or Metropica. The possibility of light rail in Sunrise was previously evaluated but rejected in part because projected ridership levels could not justify the costs. In addition, the estimated light-rail travel times were not significantly shorter than the travel times provided by local bus service, and future congestion on I-595 was expected to be relatively mild.

Recommendations

The panel recommends the following transit improvements to enhance connectivity and accommodate regional growth:

- Support the county's bus rapid-transit implementation plan.
- Continue to evaluate light rail as a long-term solution if projected ridership increases significantly.
- Develop local transit circulation system(s) to supplement the county's bus routes and provide connectivity between major destinations in western Broward County. These circulation systems could operate in a number of ways: one overall loop, or separate loops on the north (BB&T, Sawgrass Mills, and Metropica) and on the south (Sawgrass International Corporate Park), with a connector between them. The circulation system should be incorporated as the new developments are constructed and completed.
- Locate a county transit center on the BB&T site to take advantage of the existing park-and-ride lot, available land, and proposed land use interactions.

Pedestrians

The BB&T site has sidewalks along its frontage on both NW 136th Avenue and Pat Salerno Drive and has good regional pedestrian connectivity. However, minimal connectivity exists between the adjacent streets and the BB&T Center. To date, pedestrian demand at the BB&T Center has been limited because of a lack of nearby compatible land uses.

Similarly, the Sawgrass Mills site has limited pedestrian traffic from the adjacent streets except when special events are held at the BB&T Center. Some associated

pedestrian flow exists between the two facilities. The mall has sidewalks along one side of each of its access roads, but connectivity is limited between the ring road and the mall building.

Florida has the second-worst pedestrian fatality rate in the country and the second-highest number of pedestrians killed in motor vehicle crashes (588 in 2014). Broward County has the second-highest number of pedestrian fatalities in Florida; Miami-Dade has the highest number, with 57 pedestrian fatalities in 2014. These sobering statistics further emphasize the need to improve pedestrian safety.

Recommendations

The panel recommends the following improvements to increase safety, enhance connectivity, and accommodate regional growth:

- Design internal pedestrian connectivity on the BB&T site among the proposed land uses.
- Incorporate a multiuse trail on the perimeter of the site as an amenity for the residents, office workers, and hotel guests. The large site size will allow a trail of more than two miles.
- Improve pedestrian crossings along NW 136th Avenue/ Panther Parkway.
 - Narrow NW 136th Avenue/Panther Parkway to improve its safety.
 - Conduct a study to determine the feasibility of lower speed limits.
 - Use midblock pedestrian-crossing treatments that align with the proposed plaza and pedestrian bridge across the Sawgrass Mills pond. These treatments could include enhanced crosswalks, pedestrian crossings on speed tables (if speed limits are lowered), high-intensity activated crosswalk (HAWK) signals, rectangular rapid-flashing beacons (RRFBs), or pedestrian bridges.



The BP Bridge in Chicago is an example of a high-quality pedestrian bridge that connects and enhances the surrounding landscape.

In addition, as pedestrian activity increases, the mall should consider adding sidewalks on the other side of access roads, and it should consider providing links between the ring road and the building.

Bicycles

The immediate vicinity of the BB&T Center has minimal bicycle accommodations. NW 136th Avenue/Panther Parkway, Sunrise Boulevard, and Flamingo Road are shown on bike maps as having outside travel lanes widened for bicycle travel, but because the lanes appear to be only one to two feet wide along high-speed, high-volume roadways, only the most confident riders would feel comfortable using them.

Florida has the highest rate of bicyclist deaths in the country—0.57 per 100,000 people, more than double the nationwide rate. Like the poor pedestrian safety record, the high bicycle fatality rate indicates an opportunity to make significant safety strides through design, enforcement, and outreach.

The city has begun implementing a citywide bike plan, and Broward County is in the early stages of adopting "complete streets" initiatives.

Recommendations

The panel recommends the following bicycle improvements to enhance connectivity and accommodate regional growth:



The panel recommends that the city continue to implement its bike plan, which includes bike lanes along NW 136th Avenue/ Panther Parkway.

Proposed Bikeways

- Bike boulevard
- – Bike lane
- Buffered bike lane
- Multipurpose path

Existing Bikeways

- Existing bike lane
- Existing multipurpose path
- Continue to implement Sunrise's bike plan.
- Follow and implement Broward County's complete streets initiatives.
- Evaluate the potential for a bike-sharing program to serve as a long-term strategy as the developments are constructed. The program could be an affiliate of Broward B-cycle or of a separate entity.

Site Scenarios and Revenue Generation

GIVEN THE COUNTY'S OWNERSHIP of the site, the panel concluded that the best way to represent the economic potential of the site was to pool four revenue streams: valuation tax, retail sales tax, tourist development tax, and potential participation in net operating income. The "Potential Revenue Sources" table outlines how these revenue streams are calculated.

The results shown in this section are derived from income calculated for 2021 through 2040. The panel decided that two decades (from grand opening through full site stabilization) was an appropriate period to cap the data.

Development Scenarios

Because the Panthers lease is set to expire in 2028, the panel created optional development scenarios to determine the site's full buildout potential. The scenarios recognize that (a) the Panthers may decide to leave, which would be determined well ahead of the expiration of the lease; and (b) casino and gaming still have to overcome legislative hurdles for entitlement; however, this requirement does not apply to potential existing venue relocations.

The panel modeled three scenarios:

- Scenario A: The Panthers extend their lease and the arena stays; the casino/gaming component is included.
- Scenario B: The Panthers extend their lease and the arena stays; additional office space and apartments replace the casino/gaming component.
- Scenario C: The Panthers leave and the arena is demolished; additional office space and apartments replace the arena component; the casino/gaming component is included.

The three scenarios yielded substantially different valuations. Scenario C yielded the highest valuation because of

Revenue source	Applicable rate	Applicable property types	Calculation methodology
Property tax	2.18%	All	Applicable rate is per \$100 assessed value. Value is calculated by applying a cap rate to projected NOI, and excludes land value.
Retail sales tax	0.2%	Retail, hotels, family lodging, casino/gaming	State sales tax is 6%, the state keeps 5.5%, and the remaining 0.5% is split—60% to the city and 40% to the county. This gives Broward County a total of 0.2 cent for each dollar spent on retail sales.
Tourist development tax	5%	Hotels	5% county levy on short-term rentals and hotel/motel reservations. Calculation is based on rooms occupied in a given year multiplied by the nightly rental rate.
NOI participation	2%	Residential, retail, office, hotels	City would receive 2% of estimated NOI per a participa- tion agreement. NOI calculated by subtracting operating expenses from rental income per unit/square foot/room based on property type.

Potential Revenue Sources

Source: ULI panel.

NOI = net operating income.

Potential Revenue Streams of Three Development Scenarios

Scenario A: Arena Stays, with Casino and Lodging

	Current	Future	Cumulative	Discounted to 2016
Potential revenue stream	2012–2028	2029–2040	2012–2040	6%
Capitalized property tax (2.175%)	\$41,051,000	\$263,101,000	\$304,152,000	\$102,824,000
Retail sales tax (0.2%)	\$750,000	\$2,707,000	\$3,457,000	\$1,285,000
Tourist development tax (5%)	\$16,638,000	\$69,936,000	\$86,574,000	\$41,663,000
Subtotal	58,439,000	335,744,000	394,183,000	145,772,000
NOI participation (2%)	1,872,000	18,161,000	20,033,000	6,535,000
Total	\$60,311,000	\$353,905,000	\$414,216,000	\$152,307,000

Scenario B: Arena Stays, No Casino, More Office Space and Apartments

	Current	Future	Cumulative	Discounted to 2016
Potential revenue stream	2012–2028	2029–2040	2012–2040	6%
Capitalized property tax (2.175%)	\$30,284,000	\$265,341,000	\$295,625,000	\$95,413,000
Retail sales tax (0.2%)	\$634,000	\$3,074,000	\$3,708,000	\$1,303,000
Tourist development tax (5%)	\$10,166,000	\$47,138,000	\$57,304,000	\$27,371,000
Subtotal	41,084,000	315,553,000	356,637,000	124,087,000
NOI participation (2%)	1,872,000	21,812,000	23,684,000	7,471,000
Total	\$42,956,000	\$337,365,000	\$380,321,000	\$131,558,000

Scenario C: No Arena, More Office Space and Apartments, Casino

	Current	Future	Cumulative	Discounted to 2016
Potential revenue stream	2012–2028	2029–2040	2012–2040	6%
Capitalized property tax (2.175%)	\$41,051,000	\$297,030,000	\$338,081,000	\$111,496,000
Retail sales tax (0.2%)	\$750,000	\$2,707,000	\$3,457,000	\$1,285,000
Tourist development tax (5%)	\$16,638,000	\$69,936,000	\$86,574,000	\$41,663,000
Subtotal	58,439,000	369,673,000	428,112,000	154,444,000
NOI participation (2%)	1,872,000	21,606,000	23,478,000	7,415,000
Total	\$60,311,000	\$391,279,000	\$451,590,000	\$161,859,000

Source: ULI panel.

the inclusion of a gaming component in addition to office and apartments that would replace the arena. Scenario B yielded the lowest valuation because the arena would remain in place and revenue would be reduced by the lack of a gaming component. By far the largest revenue source is property taxes, which are charged at a rate of 2.175 percent per \$100 of assessed value.

The table below illustrates the revenue stream that is allocated to the county, as well as unallocated revenues spread among the public entities. The primary difference is the retail sales tax, which is 6 percent. The state keeps 5.5 percent, and the remaining 0.5 percent is split 40/60 between the county and the cities. This would effectively give Broward County 0.2 percent of retail sales tax revenues. However, if the county created a special district, it might receive a higher share of tax revenue.

Worth noting: the models do not take into consideration reductions in revenues occurring because of an economic downturn; they escalate all revenues 2 percent annually. The scenarios also exclude a tax on prospective gaming revenues.

Each property type was individually evaluated according to a set of assumptions for rental rates, operating expenses, development expenses, and capitalization rates. The assumptions were derived from 2016 market data and information gathered from stakeholder interviews. The substantial cost associated with structured parking, current rental rates, and density limitations have rendered

Potential revenue stream	Scenario A	Scenario B	Scenario C
Capitalized property tax (2.175%)	\$102,824,000	\$95,413,000	\$111,496,000
Retail sales tax (0.2%)	1,285,000	1,303,000	1,285,000
Tourist development tax (5%)	41,663,000	27,371,000	41,663,000
Subtotal	145,772,000	124,087,000	154,444,000
NOI participation (2%)	6,535,000	7,471,000	7,415,000
Total	\$152,307,000	\$131,558,000	\$161,859,000

Revenue Streams—Allocated and Unallocated

Revenue Allocated to County

Revenue Spread among Public Entities

Potential revenue stream	Scenario A	Scenario B	Scenario C
Capitalized property tax (2.175%)	\$102,824,000	95,413,000	111,496,000
Retail sales tax (0.2%)	38,539,000	39,094,000	38,539,000
Tourist development tax (5%)	41,663,000	27,371,000	41,663,000
Subtotal	183,026,000	161,878,000	191,698,000
NOI participation (2%)	6,535,000	7,471,000	7,415,000
Total	\$189,561,000	\$169,349,000	\$199,113,000

Source: ULI panel.

Property type	Scale	Average price/rent	Capitalized value	Total market value
Residential-apartments	1,000 units	\$1,950/month	\$225,000/unit	\$225,000,000
Entertainment retail	84,000 sq ft	\$15/sq ft/year	\$520/sq ft	\$43,680,000
Hotel-boutique	120 rooms	\$180/night	\$160,000/room	\$19,200,000
Hotel—executive	320 rooms	\$240/night	\$235,000/room	\$75,200,000
Family lodging	400 rooms	\$300/night	\$256,000/room	\$102,400,000
Casino/gaming	500 rooms	\$180/night	\$201,000/room	\$100,500,000
Office-mid-rise	320,000 sq ft	\$26/sq ft/year	\$289/sq ft	\$92,480,000
Office—high rise	800,000 sq ft	\$32/sq ft/year	\$427/sq ft	\$341,600,000

Valuations by Property Type in the Study Area

Source: ULI panel.

the land value to be very low, if not negligible. Therefore, land value was excluded in the calculations for capitalized values.

Additional Revenue Sources

Apart from redeveloping the arena site and adding new uses, Broward County and Sunrise should discuss the land valuation of parking spaces as it pertains to the value of the site. In suburban areas in transition, financing tools to support parking structures for a public project or for private incentives are a major concern. The panel suggests that the offset for getting optimal density on the site is to include the land in the deal on a deferred basis to allow potential private developers to build the type and style of properties that are ideal for the BB&T Center redevelopment strategy. By providing any developers with land, the county will have the leverage to require a participating ground lease. Currently, the site has about 7,500 parking stalls and a 20,000-seat arena with no other amenities to capture additional revenue. Typically, arena-goers attend events and then immediately leave when they are over. Because people tend to arrive at and leave the parking lot all at once, traffic jams occur at several intersections. The arena seeks to retain some people on site by providing other recreational experiences that will further support additional development on the site.

Development Strategies

THE DEVELOPMENT POTENTIAL discussed in previous sections of this report suggests that limited initial demand exists for new development on the site. However, over time, more opportunities will arise for developing a variety of uses on the site at varying densities. This will be accomplished through three building phases (discussed further in the "Implementation" section of this report).

To create a stronger sense of place and establish a new west Broward County downtown, four design elements were proposed by the panel: (a) the Primer, (b) the Anchor, (c) the District, and (d) the Center.

The Primer

The panel recommends starting development with a main street—oriented core area directly in front of the arena to create a stronger sense of place. This initial mixed-use development would consist of an entertainment core with about 40,000 square feet of sports- and entertainmentoriented restaurants and retail outlets, 250 rental apartments, and a 150-room boutique hotel.

This development would be configured in two low-rise buildings of five to six stories facing each other across a main street and a central green and placed perpendicular to Panther Parkway. This placement would create visual connections between the arena at one end and Sawgrass Mills mall on the other.

The new central green would provide a robust pedestrian connection directly across Panther Parkway to the mall and encourage before- and after-event movement to the mall's food and beverage improvements—the Oasis—on the northwest side of the mall. Outdoor dining areas, a fountain, and other landscape features could be included. This central spine would provide a strong visual connection to the existing Oasis area now being redeveloped.







A sketch of the proposed entertainment core.



Cross-sectional rendering of the proposed plaza.

The central green could either be on grade with the street or rise ten feet above it to afford a better view of the mall, capture the environment in a unique space, and begin to raise the entertainment environment near the entry level of the BB&T Center. Cars would have access to the raised deck, with parallel parking and garage access. The primary parking circulation could be from the rear of the buildings to pedestrian cores at the corners and center of the long plaza.

Programming for the central green could include public movies, farmers markets, fashion shows, cultural events, and food festivals.

The entertainment-oriented restaurants and retail outlets at the first level could consist of sports bars, brew pubs, live entertainment venues, sports-related apparel stores, a sports-oriented museum and event space, a Panthers restaurant and store, ice cream and/or dessert shops, and other supporting retail outlets.



South-facing overhead shot of Mizner Park in Boca Raton, Florida, exemplifying pedestrian-friendly, mixed-use development with a central plaza.

The apartments could be located on four or five stories above the retail stories in one of the buildings. The boutique hotel or a second residential concept could be located on four or six stories in the other the building, mirroring the structure/typology of the building across from it. The two buildings could also take an L shape, which would



Rendering of potential fourstory mixed-use development with first-floor retail space and dynamic public space.

better activate the pedestrian streetscape by presenting a strong facade and signage presence on Panther Parkway.

The Anchor

Though the second phase will be dependent on market demand, the panel believes that a full casino, a large music/venue experience, or a hotel/indoor waterpark—or all of these—could be successful on the property. These anchors should focus on celebrating and attracting the cultural diversity of the surrounding tri-county area, in particular the Afro-Caribbean, French Acadian, and Latin populations, and should incorporate the cultural traditions of the Everglades.

Typical large casino developments range from ten to 20 acres and include a strong amenity component to attract families and a diverse live entertainment program to support nightlife. Expectations would be for a 300- to 600-room hotel, a spa, and a resort with a large gaming floor and indoor/outdoor amenities.

Several family-oriented vacation-resort concepts are missing from the market and may provide an excellent synergy with the mall visitors and the need for a contained family waterpark amenity. This concept would range from eight to 15 acres and include child-oriented indoor and outdoor waterpark areas and integrated services focused on family-friendly events.

Several new music concepts exist that combine venues of various sizes that can accommodate comedy, theater, small music performances, and community events. These tend to be plaza developments that require good visibility and considerable parking. They can also be excellent





Site Values by Land Use

A variety of constraints and opportunities shape the context in which Broward County and future development partners need to determine the ideal location for each potential land use. The best location for each element of the redevelopment is dependent on the site's geography, infrastructure, viewshed, regional context, connectivity, and constraints specific to each land use.

The panel divided the arena site and produced a grade from A+ to F, representing the best to worst use at each location.

Grade values for placement of different uses at the site.







Riders using the Capital Bikeshare bikes along the Potomac River in Washington, D.C.

venues for public movies, farmers markets, fashion shows, cultural events, and food festivals.

An additional possibility exists for a midsize outdoor concert pavilion backing up to the wetlands. For example, a four- to six-acre, 4,000-seat pavilion would offer an excellent outdoor complement to the BB&T Center programming; such a pavilion would be similar to the Merriweather Post Pavilion in Columbia, Maryland, though it would be smaller in scale.

For this second phase, the panel recommends a flexible approach to uses for the remaining parcels. Sites should be determined according to user needs as well as city and county planning preferences. These uses could be linked to the initial phase or developed on separate parcels, but every effort should be made to tie together all uses on the site as they are developed.

The District

Additional office, apartment, and condominium development could follow in the third phase, with concentrations beginning along Panther Parkway, subject to environmental considerations. This phase should be developed according to a grid street-and-block system, creating an attractive pedestrian-friendly environment at the interior of the site. Other entertainment, recreation, and neighborhood sports—oriented uses could also be accommodated on the site during this phase, and the plan should remain flexible to accommodate users who may require a large site with frontage along one of the main roads.

This phase should allow for a new district to arise from the first two phases as the market dictates. The new neighborhood will be integrated with the BB&T Center but will not be dependent on the center for its success. The growing developments near the site will require ongoing pedestrian connections and a considerable investment in transit.

As a well-anchored live/work/play district, the new neighborhood will be dependent on the considerable supporting retail and service amenities in the mall and Metropica developments. The new neighborhood will also be dependent on some supplemental on-site retail and service amenities to maintain a walkable environment. Furthermore, it will be dependent on the Sawgrass office park connections for a walk/bike-to-work culture that reduces automobile traffic and raises the quality of life.

The Center

The final use for the BB&T Center arena will be dependent on whether the Panthers renew the lease. If at some future time the arena is deemed to be no longer a viable facility, it could be demolished, opening up considerable opportunity for additional development while also eliminating the need for arena parking. This site has the potential to become a tech/biotech/innovation office complex, a medical research and tourism center, or a technology or medical campus.

Implementation

A DETAILED AND RIGOROUS implementation process will be required to transform the hypothetical design concepts presented here into reality. Although this project has many moving parts and it is impossible to control all the variables many of which are beyond the reach of property owners, elected officials, and other stakeholders—the panel believes that specific concrete actions can be taken to organize those moving parts and send Broward County on the path toward successful redevelopment of the BB&T Center site.

Expectations

Understanding and adjusting expectations is key. Although the sponsors have emphasized the importance of im-



Sawgrass Mills mall faces potential competition from the proposed megamall to the south, American Dream Miami. mediately generating new tax revenue from the site, the panel believes it is perhaps more important to develop the site to maximize the value and tax revenues of the entire district—including tax revenues from the mall and other existing office, hotel, residential, and development properties in the district—over the long term. Any new development on the site should create synergy among all these uses.

The public sector will need to adjust its revenue expectations for development of the arena site. The arena is aging and isolated, and it could become obsolete if the hockey team leaves in 2028 at the end of its current lease. To prevent the Panthers from leaving, efforts should be made to strengthen the arena environment and its surroundings, even if this proposed development generates minimal new net revenues from the arena site in the near term.

In addition, development on the arena site should at least maintain and possibly strengthen the position of Sawgrass Mills mall in the region. The county and city together with the principals of Sawgrass Mills mall should seek to improve on their existing relationship and should continue their dialogue as development options are pursued.

Even though development of the site may require county and city investment that does not pay immediate returns, this investment should be made anyway as part of a long-term growth strategy and as a way to keep asset values and tax revenues in the area from deteriorating. For example, significant investment in structured parking will be needed both to serve the new development and to replace the lost surface-level parking needed by the arena. This presents significant risk for both the public sector and potential developers, and to minimize that risk, all parties must understand expectations. Meeting or exceeding these expectations will enhance both the physical product and the relationships that are built because of the project.

Organizational Structure

The panel recommends the creation of the Downtown West Broward District Leadership Council, composed of a core group of stakeholders, including county, city, and state figures, as well as property owners and business leaders. This council will be charged with moving the development process forward by focusing long-term planning and funding on redevelopment and promotion of the BB&T Center site and the broader "Broward West" district.

The council will be a key forum for conveying the passion of local leaders. It should be of a manageable size and independent of city and county government, although both governments should be represented in its membership. Given that the city and county have approval authority over development of the site through the DRI process and the future land use map, the council should facilitate creation of a "green tape" task force to seek ways to streamline development review and permitting.

A primary mission for the council should be to actively seek and engage stakeholders from across the residential, institutional, tourist, and business communities. Ultimately, the council could become a downtown development authority, but it can serve many functions in the short term, specifically by taking steps to get all the stakeholders marching to the same tune. The council should agree on measureable goals for the development—goals that will become an indispensable tool in evaluating specific development proposals.

Public Participation

Many ambitious and worthy projects have never seen the light of day because of local opposition; often this opposition is based on fear of change, misconceptions, or false information. For this reason, a robust public participation process is critical to presenting the redevelopment of the BB&T Center site as a valuable asset to communities in Sunrise and throughout Broward County.

The county, city, and council should design a program that reaches a wide range of stakeholders and that communicates factual, accurate information in a timely manner; it also should include the opportunity for stakeholders to give meaningful feedback. Instead of a series of public meetings and hearings, a multidimensional process that includes social media as well as traditional media outlets can be used for public outreach, marketing, and feedback.

Due Diligence

Potential developers will be more willing to take on this project if they are provided with sufficient detailed background information to understand the risks and rewards. The quality of development proposals is directly related to the amount of risk the developer will take on. It is for this reason that key early action items are assembling all the relevant studies and identifying information gaps. Providing accurate and detailed information about the site will assure potential partners and developers that Sunrise and Broward County are committed to the project.

Master Developer

A request for qualifications (RFQ) should be issued to identify a master developer for the site that would be responsible for refining concept plans. These plans should be consistent with a clearly articulated vision and with goals defined by the council and articulated to the county. Responses to the RFQ must demonstrate experience in implementing projects of similar size and scope—particularly experience demonstrating technical, relational, and financial ability.

The criteria for evaluating the RFQs must be agreed upon in advance and should be included in the RFQ, thus enabling a potential developer to understand the desired direction of the project and, most important, the level of commitment to a fair and open process. The RFQ should have a tight time frame that facilitates expedited review and the issuance of invitations to chosen developers to respond to a full request for proposals (RFP). Providing a detailed scope of work and set of expectations will allow the master developer to secure financing and development partners to make the site plan a reality.

Programming and Civic Engagement

Downtown districts and town centers work best when the community embraces the development and views it as its own.

The leadership council should reserve the right to bring civic and community events to the town center plaza on a regular basis, and it should reserve the right to manage with other public entities, the master developer, and tenants in the project—the programming of events. Community groups should be encouraged to schedule events in the plaza, including fun runs, fitness classes, art fairs, farmers

Key Elements of an RFQ

The Gainesville, Florida, Power District lists the following as key elements that should be included in a response to a request for qualifications:

General Information

- Contact information;
- A development team organizational chart;
- Résumés of team members demonstrating experience in projects of similar size and scope;
- A description of each team member's role in the proposed project, including a specific explanation of the team leaders' relevant experience;
- At least two examples of projects that are similar in size, scope, and complexity and that demonstrate the team's competency to undertake this project; examples should include location, year built, and contact information; and
- Experience with complex environmental challenges.

Financial Information

- Documentation describing the team's ability to secure financing, including the financial structure envisioned;
- An example of the financial structure of a previously completed project, including funding sources such as developer equity, debt, loan sources, and other financial instruments; and

markets, holiday markets, moonlight movies, or high school band performances. The master developer and local merchants should also be encouraged to program events in the space to maximize the number and quality of events.

Balancing these events among the various stakeholders will bring local residents to the development and establish it as an important civic realm.

Implementation Milestones

Redevelopment of the arena site will require a long-term, patient approach that will take more than 20 years. The development will undoubtedly face several market cycles and downturns over that time.

Letters of reference for the lead developer and key team members that include contact information.

Conceptual Approach

- A narrative discussion demonstrating that the team understands the site opportunities and constraints as presented by the technical studies and the developer's due diligence;
- A discussion of development strategies;
- A discussion of land use/tenant mix combinations that achieve the goals as set forth in the RFQ;
- A conceptual site plan showing potential phasing and massing and layout, including public spaces, infrastructure, and parking; and
- A general schedule for design development, permitting, and construction.

Criteria Assessment

- Relevant experience and qualifications;
- Strength of financial ability;
- Strength of references;
- Ability to achieve stated project goals;
- Uniqueness of design/approach; and
- Phasing and implementation schedule.



The current BB&T Plaza event planning system aims to encourage constant interaction among community members. With good infrastructure and the right mix of uses, the BB&T Center's public space can be embraced by the community as a town center.

The county should not expect to see any new property tax revenues or income from the site for at least five years. For the purposes of this report, the timeline for the development of the project has been divided into four periods:

- Predevelopment—2016–2018;
- Phase I—2018–2021;
- Phase II—2021–2028; and
- Phase III—2028–2040.

Each phase is important, but the first two phases are especially critical because they will establish the framework and the initial public realm that will shape the image and reality of the project going forward.

Predevelopment (2016–2018)

The county and city should start the development process immediately, beginning by assembling a core group—including officials from the county and city, property owners, and business leaders—to establish the Downtown West Broward Leadership Council, or something similar in nature. With input from this council, the city and county should select a master developer.

Phase I (2018–2021)

Once the master developer is chosen, the responsibility for moving the project forward will largely shift to that entity, but it is incumbent upon the leadership council, the county, and the city to ensure that the master developer performs as expected and desired. This phase includes construction and completion of the main street–oriented core area.

Phase II (2021-2028)

Once the first phase is developed, the leadership council should work closely with the developer to ensure that the first phase is successful; the two entities should work together to market, program, and activate the new entertainment center and public plaza. Developing a varied program of events will require considerable effort at first, but as the project matures, community groups should start to bring event ideas to the center. Construction of multifamily rental properties is completed.

Phase III (2028-2040)

Once a decision is made about whether the hockey team will stay or go, the county, with input from the leadership council, should proceed with either upgrading the arena as necessary if the hockey team stays or redeveloping the arena site for new uses and activities if the team leaves. At that time, the leadership council and the developer can solidify plans for additional office and apartment development based on the outcome of the arena lease and the three scenarios laid out by the panel.

Proposed Impementation Timeline and Project Milestones

Development stage	Year	Milestone
Predevelopment (2016–2018)	2016	Leadership council begins work as champion for project; tasks include developing a brand for the district.
		With input from leadership council, county contracts with consultant with expertise in public/ private development and land leases to assist with development and execution of RFQ and RFP and with negotiating an agreement with master developer.
	2017	Leadership council advises city and county about type of public entity—such as downtown development authority or special district—that could or should be established to oversee development.
		Development studies undertaken as needed to assess potential, constraints, and feasibility of panel's proposed plan. Parking studies are especially important: consultants and designers engaged to assess shared parking opportunities and planning solutions that optimize shared parking over both short and long terms. Revised concept plan acceptable to key constituents developed with guidance from consultants.
		With input from leadership council, county develops and issues RFQ outlining nature of proposed development.
		City and county begin streamlining approval process for development in west Broward development district, and proceed with DRI process, if required.
	2018	With input from leadership council, city and county select short list of master developers from RFQ submissions and request detailed proposals from two or three using RFP process.
Phase I (2018–2021)		Master developer begins detailed development planning, including hiring brokers to seek appropriate restaurant, entertainment, and hotel options for initial phase.
		County and city begin planning road and pedestrian improvements along Panther Parkway and at highway interchange, as well as other infrastructure improvements.
		Developer, with the assistance of county and city agencies, works to attract family-entertainment hotel and casino resort for eastern district, if legislation allows.
	2019	Developer begins construction of core mixed-use district, including restaurants, main-street entertainment plaza, boutique hotel, rental apartments, park/civic area, and parking areas.
	2021	Phase I core district completed and opened.
		Project begins generating property tax revenues.
Phase II (2021–2028)		Construction of family-entertainment hotel begins, perhaps with waterpark if/when feasible.
	2022	Construction of casino resort begins if/when feasible.
	2024	Construction of additional multifamily rental properties begins (if demand allows); construction of water retention/detention facility beneath soccer field begins.
		Family-entertainment hotel and soccer field facility completed.
		Florida Panthers affirm, extend, or terminate arena lease.
	2025	Casino resort project completed.
		Multifamily rental properties completed.
	2028	Original arena lease expires, if not extended.
Phase III (2028–2040)	2029	Improvements made to arena, or arena redeveloped or demolished, depending on Panthers decision.
	2030	Construction of Phase III rental apartment development begins.
	2033	Construction of Phase III office development begins.
	2036	Development of more office, apartment, or hotel development (or all of three) continues, as supported by market.
	2040	Project fully built out, though it may be completed sooner if Panthers and arena remain on site.

Conclusion

THE STRATEGIC VISION OUTLINED in this report presents a series of options that will energize the BB&T Center site with a carefully planned mix of uses. The retail/entertainment component complements the existing arena and surrounding retail space, and the hotel component would cater to demand for hotel space from businesses that operate in the Sawgrass International Corporate Park. A casino/gaming component would present an interesting twist that could significantly affect the site's economic development potential should legislation be passed allowing such a use at the site.

It is essential to the overall success of the project that the city and county begin the development process immediately. The panel recommends that Broward County embrace five critical steps.

- 1. Construct a district around the idea of "Downtown West Broward." As a brand, Downtown West Broward is a tool for attracting potential investors, businesses, shoppers, and tourists to the area while giving the development site an identity in the county and the greater southeast Florida region. The label "Downtown West Broward" also allows the county to design a comprehensive plan for the study area with the downtown as the nexus.
- 2. Future-proof the arena site to 2040 and beyond, not only in terms of resilience, but also in terms of evaluating options for the site. Broward County must consider various land uses, changing dynamics concerning gaming in Florida, and the nature of the employment base. It is essential that the BB&T Center and all of Broward County advance toward the second half of the 21st century.
- 3. Seize immediate opportunities to limit crosscompetition with existing landowners and other private developers. Filling the gaps—public, civic, and private—identified in the marketplace will maximize the return on investment for both the county and potential



developers. The county will benefit financially and inject some much-needed vitality into west Broward County by providing a unique hotspot for residents and tourists.

- 4. Kick-start the community and the process using Broward County's ability to leverage the land. Recognizing the benefit of taking a long-term view, the county should consider trading the value of the land in the short term for growth and economic benefit in the long term.
- 5. Most important, establish "champions" for the site. The panel suggests creating a leadership council through which the public and private sectors work together to advocate for the district, provide input, and manage the process. The council would be the primary entity that facilitates the "green-taping" and streamlining of new development. The council must be a group that unites to work with the state government, especially to assure potential developers that demand-oriented improvements to transit and improvements to additional infrastructure, such as the freeway or the expressway, have been fully funded.

The panel is optimistic that its strategic vision will create valuable land use connections with surrounding developments and that the site will evolve to become the energizing magnet that west Broward County is seeking. The panel gives preference to retaining the Florida Panthers to market Downtown West Broward and Sunrise as a "majorleague city with major sports." However, Broward County must recognize that financially viable options exist for use of the arena and the site if the Panthers leave.

About the Panel

Richard M. Gollis

Panel Chair Newport Beach, California

Gollis is a cofounder and principal of the Concord Group, based in Newport Beach. As a founding partner, Gollis has crafted and cultivated the firm's unique approach to advisory services, integrating deep market knowledge with creative analytics to provide best-in-class solutions to a diverse range of clients.

Gollis's expertise in strategic market analysis, development programming, transaction due diligence, and valuation extends across all real estate asset classes. With a career in real estate spanning New England, Atlanta, and southern California, Gollis offers an exceptional breadth of experience that makes him a trusted adviser to private and public sector clients alike. He often works with cities in partnership with world-class developers and financial institutions on solving complex redevelopment challenges.

Respected as a thought leader in real estate, Gollis is often quoted in major publications and is frequently sought after as a speaker at key industry events. Gollis was elected trustee to the Urban Land Institute in 2012 and has been a governor of the ULI Foundation since 2006. He is also a past chair of the Community Development Council and juror for the Awards for Excellence and chair/past chair of ULI Orange County.

Gollis serves on the Advisory Board of Jamboree Housing Corporation, a leading community development organization specializing in affordable housing. In addition, he is currently cochair of the Advisory Board of the Department of Policy, Planning and Design at the University of California, Irvine.

A native of Boston, Gollis is a graduate of Brown University with a degree in international relations.

Pat Hawley

Brookfield, Wisconsin

Hawley is a traffic planning project manager with more than 20 years of experience. His expertise includes traffic planning, safety, access management, traffic impact/ site circulation, roundabouts, and parking. He manages projects as varied as site assessments and traffic impact studies for private developers, corridor studies for state departments of transportation, financial assessments for parking utilities, regional freeway planning efforts, and intersection safety assessments. He also serves as an expert witness on access cases.

Hawley has taught four three-credit transportation courses at Marquette University; he teaches short courses through the University of Wisconsin–Madison on transportation, parking, and site development; and he regularly guest lectures at Marquette University and the University of Wisconsin–Milwaukee. Hawley is the past president of the Wisconsin Parking Association and the Wisconsin section of the Institute of Transportation Engineers. He served for 11 years on the city of Delafield's Public Works Committee; he is a former committee member of the Transportation Research Board's Access Management Committee; and he is active with the Women's Transportation Seminar.

Hawley received a BS in civil engineering from Marquette University and an MS in civil engineering from Texas A&M University; both the BS and MS programs had an emphasis on transportation engineering. He is a registered professional engineer in Wisconsin, and he is certified nationally as a professional traffic operations engineer.

He has served on three previous ULI panels.

Matthew Hopkins

Bethesda, Maryland

A native and lifelong resident of the Washington, D.C., area, Hopkins has planned, designed, detailed, and construction contracted more than 5 million square feet of built architecture and development projects and has designed another 10 million square feet of development under entitlement in his nearly 25 years of experience. Hopkins has extensive experience in preliminary site analysis, development criteria, neighborhood/site/shell/ interiors/detail design, building and zoning code analysis, budgeting/estimating, value comparisons, construction management, Leadership in Energy and Environmental Design (LEED) analysis and implementation, and community/neighborhood planning.

Hopkins is active in many industry organizations, including ULI; the American Institute of Architects; the American Planning Association; the National Council of Architectural Registration Boards; NAIOP, the Commercial Real Estate Development Association; the U.S. Green Building Council; Habitat for Humanity; and Associated Builders and Contractors. In addition, Hopkins is a planning commissioner for the city of Gaithersburg in the Maryland suburbs of Washington, D.C. An architect, certified planner, and LEED Building Design and Construction–accredited professional, he has given hundreds of presentations on the differing aspects of sustainable building and planning to the development industry and various jurisdictions.

Donna Lewis

Fernandina Beach, Florida

Lewis retired in 2015 after serving for 20 years as planning director for Mercer County, New Jersey. In her capacity as director, she oversaw transportation and infrastructure planning; open space, historic, and farmland preservation (administering a dedicated tax that generated \$15 million annually); land development review and redevelopment planning; and anything else that came along. Mercer County is geographically and economically diverse and includes Trenton, the state capital, and Princeton, a classic small town. The county also has large, contiguous agricultural areas and traditional suburbs. Planning for this diversity required specific knowledge and expertise in a wide variety of planning areas.

Lewis managed the award-winning restoration of the Louis Kahn Bath House in Ewing, New Jersey, on the former site of the Jewish Community Center; the bathhouse is included in the National Register of Historic Places and was featured in the movie *My Architect*, which was written and directed by Nathaniel Kahn, the son of the architect Louis Kahn. She was instrumental in the restoration and interpretation of the Petty's Run Archaeological Site, a pre–Revolutionary War steel furnace in Trenton, New Jersey, used to make weapons for the patriots.

Lewis also participated in the team that built Mercer County Waterfront Park, home of the AA Trenton Thunder, a New York Yankees affiliate.

She served on the Transportation Research Board (TRB) Transportation Needs of National Parks and Public Lands Committee and the TRB Access Management Committee. She has participated in two National Cooperative Highway Research panels and in the national scan of best practices in highway access management. She is a past member of the National Urban and Community Forestry Advisory Council, an advisory board to the U.S. Secretary of Agriculture. She also served on the Central Jersey Transportation Forum Steering Committee and the Delaware Valley Regional Planning Commission. Lewis has not only sponsored two ULI Advisory Services panels but also served on many Advisory Services panels and a ULI Land Use Policy Forum. She is skilled at negotiation and conflict resolution.

Lewis holds a BA in political science and English from the College of New Jersey and an MA in city and regional planning from Rutgers University. She is a New Jersey– licensed professional planner and a member of the American Institute of Certified Planners.

Rameez Munawar

Washington, D.C.

Munawar is currently a financial analyst at Columbia Property Trust in Washington, D.C. He is responsible for asset management, financial modeling, and acquisitions and dispositions of Class A office buildings in Washington, D.C., and Boston. In 18 months, his team has completed more than 300,000 square feet of leasing, acquired roughly \$589 million in assets totaling more than 893,000 square feet, and divested from roughly \$547 million in assets totaling more than 1.2 million square feet.

Munawar graduated from the University of Maryland with an MA in real estate development in 2014 and received a BS in architecture in 2012. During his time in the MRED program, Munawar won the 2014 ULI Hines Competition in Nashville and returned the following year as an adviser for the 2015 winning team in New Orleans.

Amber Richane

Los Angeles, California

With more than 16 years of experience in architecture, planning, interiors, and historic preservation for public and private entities, Richane leads CallisonRTKL's performancedriven design initiatives. She excels at assessing different development schemes for mixed-use projects by seeking functional design solutions and research-based design alternatives. A sustainable strategies leader in her market, her skills in examining urban densities, analyzing data, and determining efficiencies make her a valuable asset to any design team approaching large- or small-scale projects.

Richane has a BS in environmental design for interiors from Syracuse University and an MS in urban and environmental planning from the University of Virginia.

Dean Schwanke

Washington, D.C.

Schwanke is senior vice president of case studies and publications at the Urban Land Institute. In this role, he oversees the development of ULI case studies, textbooks, and other publications. Before this, he was senior vice president and executive director of the ULI Center for Capital Markets and Real Estate, which he planned and launched within ULI in 2009. He continues to support the work of the center and presents the findings of the annual *Emerging Trends in Real Estate* report.

For over 30 years, Schwanke has directed the development of more than 80 books and reports for ULI and has personally written or cowritten numerous books, including *Mixed-Use Development: Nine Case Studies of Complex Projects* (2016), *Mixed-Use Development Handbook* (2003), and *Resort Development Handbook* (1997). He has organized numerous conferences and made more than 100 presentations on a variety of topics, including placemaking, mixed-use development, and real estate capital markets. He has also served on several ULI Advisory Services panels.

He holds a BA from the University of Wisconsin–Madison and a master of planning degree from the University of Virginia.

Rives Taylor

Houston, Texas

Taylor directs Gensler's firmwide design performance teams and global design performance initiatives at all scales and is a recognized expert in resilient, high-performance, sustainable design. He has more than 30 years of experience in institutional and commercial architecture, with 20 years spent focusing on strategic planning, programming, and sustainable design, scaled from facility operations to campus and city planning. The approaches Taylor developed for Gensler not only affect the firm's extensive practice but also influence clients' building decisions worldwide; for example, design and construction standards for clients such as ExxonMobil, Deloitte, PNC, and Toyota are embedded in those clients' protocols and are followed worldwide.

In elevating both the why and how of resilient/sustainable design, Taylor casts a wide net, educating students, faculty, professionals, public officials, and the general public. As a faculty member of both Rice University and the University of Houston for 25 years, he has been engaged with both universities' centers on sustainable and resilient design and urban and regional planning. Taylor has written 150 articles for diverse publications such as *Urban Land*, *Wired, Fast Company*, and *Texas Architect* and has been an invited speaker at symposiums on five continents. He founded the Houston chapter of the U.S. Green Building Council and recently received the Center for Houston's Future's Impact Award.

A member of the prestigious American Institute of Architects Fellowship, Taylor holds a BA in architecture from Rice University and an MA from the Massachusetts Institute of Technology.





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