



UF Health Heart & Vascular Hospital and UF Health Neuromedicine Hospital

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mission

extending lives

As the nation's population ages, we are witnessing an alarming surge in the incidence of heart disease, stroke, dementia, and many other serious neurological conditions. Aspiring to elevate patient health and well-being through family engagement and team-based care, UF Health is leading the fight against these disorders with compassion, state-of-the-art diagnostic tools, and ever-advancing surgical and non-surgical techniques.



STREAMLINING CARE

UF Health is recognized as one of the best hospitals in Florida and is ranked among the nation's top 50 healthcare facilities in six specialties by U.S. News & World Report. With the addition of these new facilities, UF Health becomes the Southeast's most advanced
healthcare facility for the care of patients with heart,
vascular, and neurological illnesses. Heart, vascular,
and neuromedicine care specialists now enjoy facilitiesoffering streamli
comprehensive of
services, suppor
available today.

offering streamlined access to highly specialized, comprehensive outpatient treatments and inpatient services, supported by the most advanced technologies available today.

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project vision & goals

SETTING SMART GOALS

Elevating the total patient experience was at the heart of every design decision made throughout this project. With that in mind, the following goals fostered ideas and shaped the overall design of the hospitals.

1

2

ENHANCE THE IDENTITY OF UF HEALTH

Promote UF Health's desire to grow from a regional academic medical center to an international academic health science center and enable the robust growth of their reputable health system.

DELIVER A GOLD STANDARD OF CARE

Pioneer and deliver premier treatments for complex conditions, providing compassionate care and leveraging the latest scientific discoveries, evolving pedagogies, and technical mastery.

3

IMPROVE PATIENT OUTCOMES

Streamline team-based medicine, reduce patient stress, and promote family engagement, while utilizing advanced technologies to support healthier outcomes.

GROW AND CHANGE THE UF HEALTH SYSTEM

Facilitate collaboration, cross-disciplinary problemsolving, and resource sharing to elevate UF Health's ability to treat specialized conditions long into the future.



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UF Health Heart & Vascular Hospital and UF Health Neuromedicine Hospital

Date Completed: December 2017 Total Building Area (Sq. Ft.): 520,000 Total Beds: 216 (55% ICU) Certifications: 4 Green Globes

RECOGNITION

AlA Tampa Bay, Merit Award Healthcare Design, Honorable Mention Green Building Initiative, 4 Green Globes

UF HEALTH VISION

Together we strive to create unstoppable momentum toward the goal of improving individual and community health through discovery; clinical and translational science and technology; exceptional education; and patient-centered, innovative, high-quality health care.

HOSPITAL FEATURES

- 20 Operating Rooms
 - 5 Cardiovascular General
 - 5 Neurosurgical General (2 with intraoperative MRI)
 - 2 Neurosurgical Hybrid
 - 1 Cardiac Hybrid
 - 2 Vascular Hybrid
 - 5 Electrophysiology and Catheterization
- 216 Private Rooms
 - 72 Heart and Vascular ICUs
 - 48 Heart and Vascular Med/Surg
 - 48 Neurosurgical ICU
 - 48 Neurological Med/Surg
- 51 Exam Rooms
 - 31 Neuromedicine
 - 20 Heart and Vascular
- 38 Pre/Post-Op Rooms
- 16 PACU Beds
- Outpatient Lab
- Pre-Surgery Clinic
- Outpatient Pulmonary Stations
- Radiology Suite
- Roof Terrace
- Central Park
- Hope Café
- Inpatient Rehab Gym
- Dialysis Unit

design

project approach



ORGANIZING THE WORK

At project kickoff, the health system reassembled the core team from the phase I Cancer Hospital, who had a history of working together, and commenced with a "lessons learned" review of phase I, establishing recurring partnering sessions. To benchmark and learn from the types of facilities being offered elsewhere, the team, which included lead MDs and surgeons, took tours of peer institutions, with the focus mainly on ICUs and ORs. A decision on a sustainability platform (Green Globes) was made early, and costing exercises, including team engagement in managing cost events, became another recurring event. Flad's approach to the project supported UF Health's schedule and their desire to house the most sophisticated medical technology the market can offer. By employing a centralized digital design modeling expert to coordinate a holistic, live model across all design and construction teams, Flad was able to accelerate design of the factors that were more predictable up front, completing a four-and-a-half-year project timeline three months ahead of schedule. In all, the design process engaged more than 200 people. Operationalize

the Concept

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PROCESS

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SUCCEEDING ACROSS DISCIPLINES

The entire delivery team established a way of working that addressed design complexity with client standards agreed upon by architects, consultants, and builders at the beginning of the project.

As part of the initial visioning with the owners, we interviewed UF Health leadership, faculty chairs, and key clinical stakeholders to understand the needs of specific patient types, in keeping with the patient care model embraced by UF Health caregivers. Each of the planning discussions focused on the unique needs of patients, their families, and the providers who treat them.



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Flad can communicate with passion in an assertive way while simultaneously asking the right questions, listen to newly emerging needs, and fashion the right project that addresses the right problem. It's not about one firm or another, it is about the people across the table from you.

Brad Pollitt, MA, AIA, Vice President of Facilities, UF Health Shands



- 1. Cardiac hybrid OR setup
- 2. Main lobby rendering
- 3. Third floor outdoor terrace rendering
- 4. OR Cranio setup
- 5. Vascular hybrid OR setup
- 6. Patient room rendering

TEST RUN

To enhance understanding of the feel of spaces and how they would support clinical functions, 3D and virtual reality imaging were provided for clinical faculty and stakeholders to gain a true-to-life sense of the spaces they would occupy. Images 1, 4, and 5 depict surgical layouts customized for different physicians.





the master plan



CAMPUS MASTER PLAN

- 1. New Gateway // Hospital Entry
- 2. Heart and Vascular and Neuromedicine Hospitals
- 3. Cancer Hospital
- 4. Tower Bridge // Roof Terrace
- 5. Garden Outlook
- 6. Garden of Hope
- 7. Stormwater Pond
- 8. Employee Respite Garden
- 9. Children's Hospital
- 10. Outdoor Dining and Terraces
- 11. Parking Structures
- 12. Central Utility Plant
- 13. Bike and Walking Path
- 14. Underground Staff Pathway





The UF Health Heart & Vascular Hospital and UF Health Neuromedicine Hospital (phase II of the master plan) are collocated on the South Campus and connect to the UF Health Cancer Hospital (phase I of the master plan) by a two-story pedestrian bridge located above

the entrance drive. The bridge creates a gateway into the welcoming landscape of the campus's central park, which enhances the patient, staff, and visitor experience while providing stormwater management and reintroducing a native habitat.



THE CAMPUS HEART

The layout of the central park mimics the shape of capillaries, while the trails represent neurological pathways. Its patterns inspired the organization of alcoves and resting spots, as well. Conceived using evidence-based design with patients, families, and staff in mind, the central park is a place to experience moments of reflection, regeneration, and physical rehabilitation, elevating hope and healing.





THE TWO HOSPITALS

Standing eight stories tall, the new hospitals establish a fresh identity for the medical campus that represents UF Health's advanced and personalized approach to providing care. Locating ORs and patient rooms horizontally across the tower floors fosters collaboration through shared resources.

The design, utilizing terracotta, brick, and glass, brings modern appeal and adds architectural diversity to the south campus, while creating a seamless and respectful integration with the oncology tower.

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Our master plan and visioning efforts created the framework for transforming the entire campus. The overall image of UF Health is elevated through the addition of the central park and towers, as they present a new gateway and face that visually and programmatically represents forward-thinking healthcare.

Brad Pollitt, MA, AIA, Vice President of Facilities, UF Health Shands

the surgery departments across all three towers, houses pre- and post-op services, with surgical platforms on each end. A staff lounge along its south edge provides an area of relief, with views inward to the central park, while the bridge is crowned on level 3 by a terrace offering respite to patients, staff, and visitors. A tunnel at the ground to the North Campus under Archer Road.





The pedestrian bridge physically connects the UF Health Shands Cancer Hospital to the two new hospitals and provides a formal "gateway" to the campus.

program areas

BUILDING LAYOUT

Level 1

Reception, Heart and Vascular & Neuromedicine clinics, imaging, amenities, and lobby core connecting the main entrance and the secondary entrance that provides a covered walkway to the parking deck

Level 2

Operating suites, heart and vascular procedure rooms, surgical support, family waiting, and the sanctuary

Level 3

Pedestrian terrace connection to the Cancer Hospital, indoor and outdoor dining, mechanical areas, and rooftop garden

Levels 4-8

Inpatient ICU and med/surg rooms, clinical team areas, and support cores

Level 8

In addition to one wing of patient beds, floor 8 houses the executive suite and board/conference area

ground level - support services, mechanical areas, amd staff meeting space







ICUs

ICU rooms have new bedside technology, such as ceiling-mounted lifts to enhance patient safety and wall-mounted dialysis connections for ease and seamless care. These spaces, and general medicalsurgical rooms, are modular to allow for future flexibility.







PROTOTYPING

When the initial design evaluation was complete, both the ICU and med/surg patient rooms were prototyped on UF Health Shands Cancer Hospital and then built in a local warehouse at full-scale, allowing a hands-on review. Hundreds of staff members visited these mock-

PATIENT ROOMS

the clutter of visible devices and sterile finishes. Each patient room is equipped with an interactive infotainment system that allows patients to view their records, procedure schedule, and care team. It also

Patient rooms model a comfortable environment without allows them to order off a menu for meals and adjust room features and settings while gaining access to online health education programs. These features improve the patient and family experience and help provide better outcomes and faster recovery times.

Rooms are single occupancy and incorporate dedicated, comfortable family zones, while still providing ample space for clinical care by nurses and physicians.

ups to test the new rooms and give operational feedback. timely information to the patient about his or her care Refinements resulted, such as a more robust patient handling/lift system, a fan for patient use, and a larger TV/monitor. The concept of "infotainment" was evaluated from the hospitality industry and incorporated to provide

as well as provide a broad selection of multimedia options, from entertainment to web access.





Full "breakaway" glass doors and large charting windows provide critical visual oversight of ICU patients by the nursing staff.

OPERATING ROOM SUITE

The new UF Health buildings feature a combined 216 patient rooms, as well as 20 operating rooms, including advanced imaging hybrid ORs, located on a second-level surgery platform connecting both towers. The phased project represents a further step toward the cohesive vision put forward by the medical center to consolidate and align services that until now were scattered across the existing campus.





45



HYBRID OPERATING ROOMS

Our team collaborated with UF Health leaders to design hybrid ORs that include BiPlane technology, intraoperative MRI technology, real-time imaging during operations. The highly integrated, advanced

technologies can support both minimally invasive and reduce unnecessary patient movement and strain. Flexible diagnostic and surgical setups allow for better

adaptation to the rapid cycle of innovation in medicine. standard surgical procedures in the same room, helping This new OR model supports personalized interventions, promotes team-based medicine, and improves outcomes.





AMENITIES

A priority in the design of the buildings was creating a destination that would allow families to remain on campus, close to their loved ones. Simple touches, such as strategic furniture groupings and lounge settings designed to accommodate a variety of family unit sizes for various durations of stay, help create an atmosphere of flexibility and comfort.

Visitors experience seamless indoor/outdoor transitions through green roof terraces, healing gardens, and contemplation zones filled with amenities and technology-equipped, touch-down spaces. Spacious, light-filled waiting areas feature full-height windows with views to the campus's central park. The third floor features an open and light-filled dining facility and sweeping outdoor terraces, one of which connects to the Cancer Hospital via a rooftop walkway.

Dedicated staff amenity spaces include areas for daily personal tasks, team huddles, informal collaboration, and sanctuary; spaces designed to provide efficiency while allowing staff to break from the stress of their daily work without unnecessary travel time or delays.

- Garden of Rope

- 1. Garden of Hope Outlook
- 2. Indoor/Outdoor Dining
- 3. Sanctuary
- 4. Staff Lounge
- 5. Outpatient Clinic Waiting Area
- 6. Central Park Water Feature
- 7. Inpatient Waiting Area





The cafeteria offers a seamless indoor and outdoor dining experience.

ENHANCED EXPERIENCE & CONNECTION

For UF Health, it was imperative that every employee, patient, and family member who enters the integrated towers experience a sense of confidence and calm. The new buildings function as a high-performance hospital but have the welcoming qualities associated with high-end hotels. The hospitals provide a one-stop destination that addresses all patient needs and provides a continuum of compassionate, unified care for inpatient and outpatient experiences.





SPACES THAT PROMOTE WELL-BEING

Through research, staff interviews, and work sessions, the design team explored how the impact of routine design decisions can affect patient health and satisfaction. As is routine in healthcare design, it is essential to create a calming and healing environment. Additional considerations for neurological patients who can be especially sensitive to color, light, and sound presented a heightened design challenge. The resulting design is evidence-based, incorporating learned insights to provide a setting that is sympathetic to the unique needs of patients and their families. Shown here is the main lobby atrium, with outpatient clinic entries,

welcome desk, and coffee bar on the first level, and the Sanctuary overlook and adjacent waiting spaces on the second. Prioritized interior design elements and specialized materiality at major vertical circulation pathways provide a sense of openness, connection, and intuitive wayfinding.





wayfinding



INTUITIVE UNDERSTANDING

Because of the large expanses of exterior windows that showcase views and infuse daylight, the central gardens also provide an intuitive wayfinding element, continuously orienting guests to seamlessly navigate the site.



3



2

5



- 2. Sub-waiting area
- 3. Staff hallway view of public elevator core
- 4. Sub-waiting area
- 5. Public elevator lobby



GRAPHIC CUES & COLORS

Consistent signage color coded by specialty, transparent retail-like storefronts, and subtle, integrated graphic patterning provide tactical cues to support building navigation. In a highly complex facility where no two zones are alike, the design and sensitive selection of materials combine to instinctively guide users to their destination, creating a pleasant and stress-free experience.





the intersection of art & medicine











Most of the art found within the hospitals, including paintings, photographs, and sculptures, were provided by local artists in celebration of the creative work of this region. The assortment of textures and custom graphic patterning were used to stimulate interest in and connection to regional natural elements, with the overall goal of providing serenity and community.



RECLAIMING NATURAL RESOURCES

In a show of how much importance was given to forging connections to local artistry, the owner had the foresight to properly harvest, plank, and store a pecan tree removed from the job site. Collaboration between the owner, design team, engineers, and a local woodworker led to the creation of custom reclaimed wood furniture, including a boardroom table replete with back-painted white glass and perimeter electrical and USB charging outlets. That table is where UF Health leaders come together to make critical decisions about the future of the organization. While outdoors, benches sit on the actual spot where the landmark tree once stood.

> Detail of custom-built pecan boardroom table. One of the strongest hardwoods native to the United States, pecan provides a natural elegance and form to this setting and compliments the elegant design of the interior space.





EXECUTIVE BOARDROOM

The executive boardroom and exterior balcony are perched above Archer Road, providing soaring views of the original hospital, the UF academic campus, Ben Hill Griffin Stadium, and the Paynes Prairie Preserve State Park.



HONORING THE COMMUNITY

Flad and UF Health co-developed an art wall concept that celebrates the generosity of supporters who help deliver great care to the region. Though abstracted, the installation could be interpreted as a giving tree that can grow over time. Its three-dimensional quality and bright shoots of green diamond shapes, or leaves, energize one's attention, with the leaves representing community donations (these can be added throughout the year). Located in a critical elliptical arrival point, the tree becomes an attraction that celebrates flourishing patient health and the growth of UF Health.



impact

sustainability

ENVIRONMENTAL METRICS

The entire UF Health campus embodies the values of excellence, compassion, and respect for the people and community it serves and the environment it creates for future generations. The Heart & Vascular Hospital and Neuromedicine Hospital became the first hospitals to achieve 4 Green Globes, the top sustainability rating bestowed by the Green Building Initiative, making them the most energy efficient and environmentally friendly hospitals in the U.S.

To achieve Green Globes, a project is assessed according to its performance in the areas of project management; policies and practices; site; energy; water; resources, building materials, and solid waste; emissions, effluents and other impacts; and indoor environment. Reviewed and verified by a third party, scores are tallied against a 1,000-point scale, with 85 percent the threshold for achieving four Globes. Despite the inherent challenges associated with sustainable strategy implementation in complex healthcare environments, the towers (among the largest and most complex hospitals) scored 88 percent.

Overall water savings, a vital aspect of Florida building operations, was one of the team's greatest sustainability successes. The combined water saving strategies and systems for cooling, fixtures, landscape, and process resulted in an overall water use index of 11 gallons per foot per year, as compared to the average for inpatient healthcare facilities of 50 gallons per foot per year.

1st hospital ever awarded 4 Green Globes



Dusk shot of hospital entrance from parking garage showing neuron wall details and staff hallway of patient floors.



LEADING WITH RESPONSIBLE DESIGN

UF Health set out to demonstrate leadership and excellence in sustainability by incorporating green principles into every decision, starting at the earliest stages of planning. Two key strategies include a new utility center that generates power on site; recycling heat into steam and chilled water, which would normally be thrown into the atmosphere; and amenities that support UF Health's bike-to-work program, which lessens vehicle traffic on area roads and eases pollution.

Tree preservation and the use of native and adaptive species combine to ease the need for irrigation

Erosion control during construction prevents pollution and loss of habitat

More than 1.5 million gallons of condensate water is recovered and delivered to the pond each year

2

Smart cooling and integrated building management strategies reduce energy waste

Smart lighting strategies highlight moments of beauty and elevate the campus identity while reducing Lighting Power Density (LPD), energy use, and associated costs

3

93 percent of water used for irrigation is reclaimed, saving UF Health more than 1.4 million gallons of water each year

Use of chilled water sterilizers rather than conventional sterilizers saves UF Health more than two million gallons of water each year

Smart fixtures in patient rooms, public zones, and exterior gardens save the hospital more than 1.2 million gallons of water each year



4

5

Use of local and renewable materials at every opportunity, such as fly ash and reclaimed wood on site, reduce the hospital's carbon footprint and strain on natural resources

By leveraging natural gas, on-site generators, and heat reclamation, we can capture otherwise wasted energy and use it for creating chilled water and steam, reducing campus emissions

Employee incentive programs encourage people to bicycle to work, lessening vehicle traffic on area roads and easing pollution

6

Construction waste generated by the project was reduced through smart removal processes and recycling, decreasing transportation and disposal costs while conserving landfill space

POST-OCCUPANCY EVALUATION

A post-occupancy evaluation (POE), performed using a combination of direct observations, innovative sensor technology, and employee and patient interviews and surveys, will allow for the collection and analysis of data regarding space utilization, productivity, and other valuable metrics. For UF Health, a POE will help identify performance improvement opportunities and help understand the differences between existing UF Health buildings and the new hospitals. Both for the health system and for Flad, the POE will be helpful in assessing the impact of design on various spaces and informing future design strategies.



13-4

partnership

a shared legacy

THE POWER OF TOGETHER

Flad and UF Health have built a strong partnership, finding fresh ways of working together and responding to developing technologies and societal trends – with a goal to improve global health. Elevating health was at the heart of every design decision made throughout this project.

The timeline below is a snapshot of our last 20 years together.



Pharmacy

UF Health Shands Cancer Hospital

Shands Critical Care Center at

the University of Florida

New Emergency

Department

88

40 YEARS OF COLLABORATION

The Flad / UF Health partnership reflects more than 40 years of collaboration filled with lessons learned that help collectively generate new ideas, gain knowledge, and take calculated risks that lead to better patient outcomes.

Flad and UF Health view each other as experts in our respective fields and as thought leaders for our industry. Our work with UF Health is built on a foundation of trust and carried out through a shared, long-term vision of their future; one that is supported by elegant, intuitive, and purpose-driven design.





Rector Martin



The vision of the project is truly unfolding in this environment every day. The buildings' beautiful, experiential, and physical presence and surrounding healing gardens deliver nationally recognized highperformance, patient-centered healthcare.

David Guzick MD, PhD, Senior Vice President, Health Affairs President, UF Health

the team



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There is a solution for every project, and if you look hard enough, it can be found. In my mind, that is the great responsibility that architecture has and is sometimes overlooked – finding the right solution.

Flad Architects

Laura Stillman Principal-in-Charge Jeffrey Raasch Design Principal Patrick Spoden Project Manager David Provencher Project Management Support Tom Grove Senior Medical Planner **Deb Smith** Architect & Medical Planner Bill Bibo Architect & Medical Planner Chris Qualle Exterior Detailing Tom Schwabe Exterior Detailing Matthew Steindorf Exterior Detailing Greg Meyer Architect Randy Schmitgen Interior Designer Alana Schrader Interior Designer & Medical Planner Jamie Carley Interior Designer Jeff De Laura Landscape Architect Alissa Santurri Landscape Architect Jeff Morin Structural Engineer Cade Christiansen Structural Engineer Abby Albrecht Structural Engineer Justin Marshall BIM Coordinator

UF Health

Brad Pollitt Vice President, Facilities
Du Meyer Director of Ops & Equipment Planning
Dave Williams Sr. Project Manager
Colleen Warring Project Manager
Tina Mullen Director of Arts in Medicine
Robert Heisler Assistant Project Manager

Consultants

Skanska USA CM Affiliated Engineers, Inc. MEP Engineer Causseaux Hewett & Walpole, Inc. Civil Engineer Buford Davis & Associates Landscape Architect Finfrock Industries, Inc. Parking Garage Consultant WorkingBuildings Commissioning Williamson & Associates, Inc. Commissioning - Exteriors

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As architects, our responsibility is to create space that has a significant impact on people's lives. These specialty hospitals will allow physicians, nurses, and providers to save and extend more patients' lives, advance UF Health's research and education goals, and enable a new phase of robust growth for the health system.

Laura Stillman, Principal-in-Charge Flad Architects



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