



THE UNIVERSITY OF MISSISSIPPI
MEDICAL CENTER
EDUCATION • RESEARCH • HEALTHCARE

CAMPUS MASTER PLAN
Executive Summary
August 2017

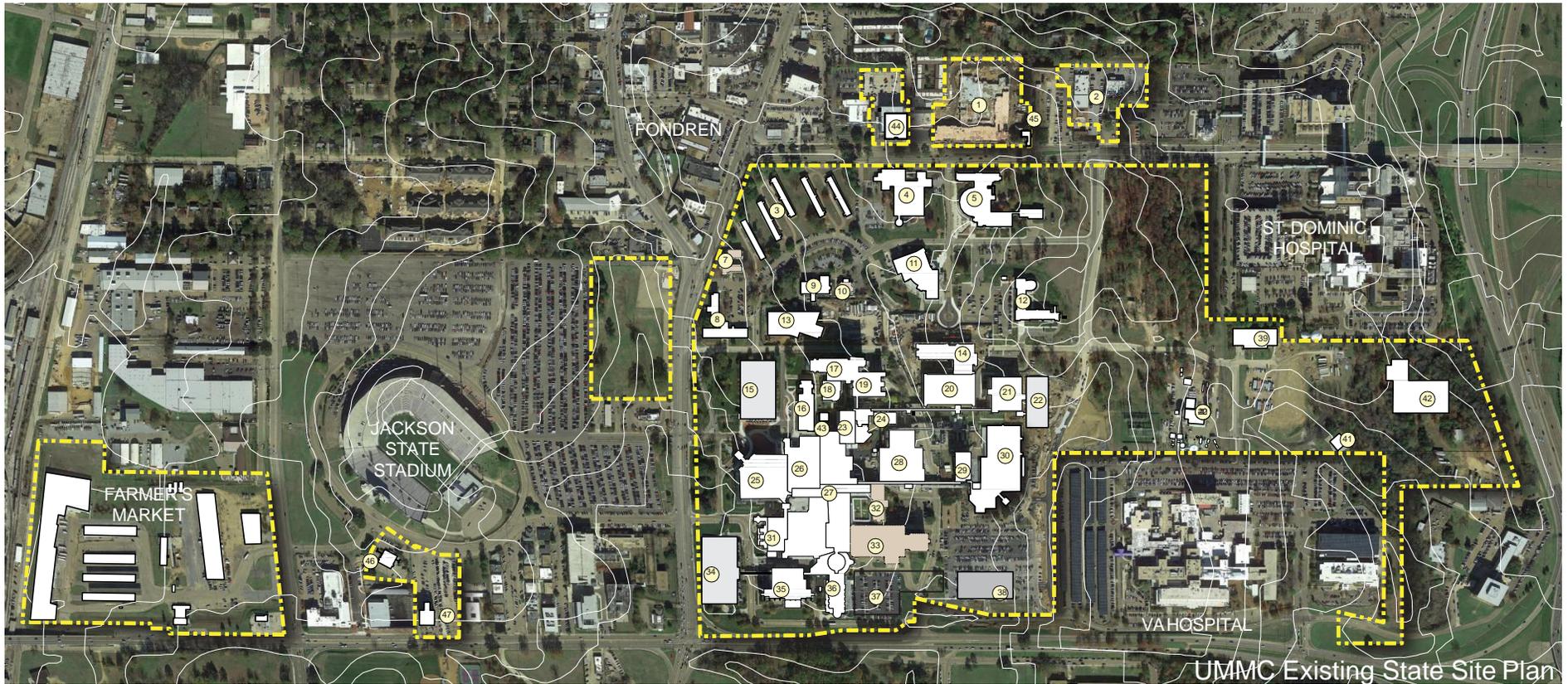
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01. Executive Summary

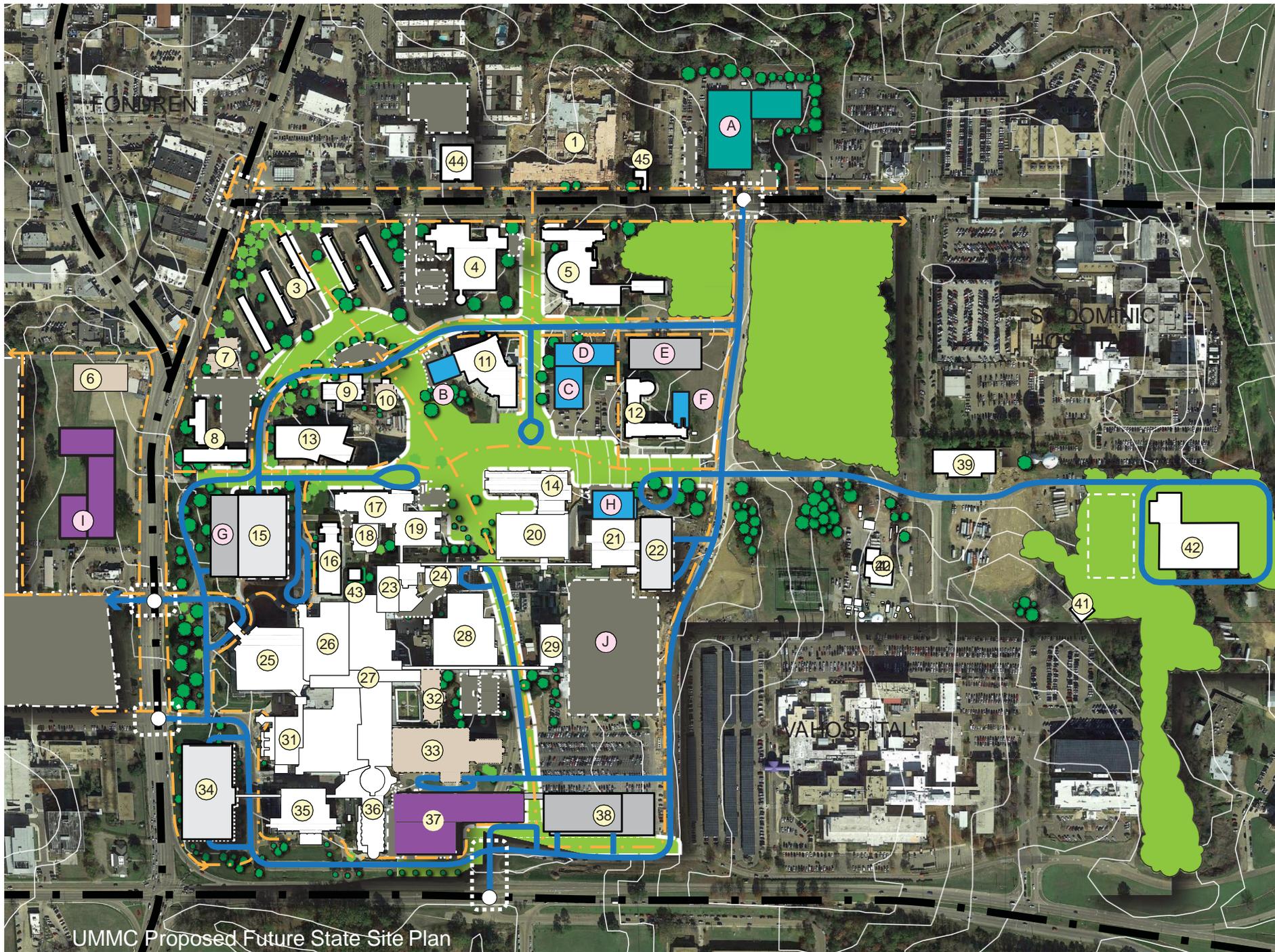




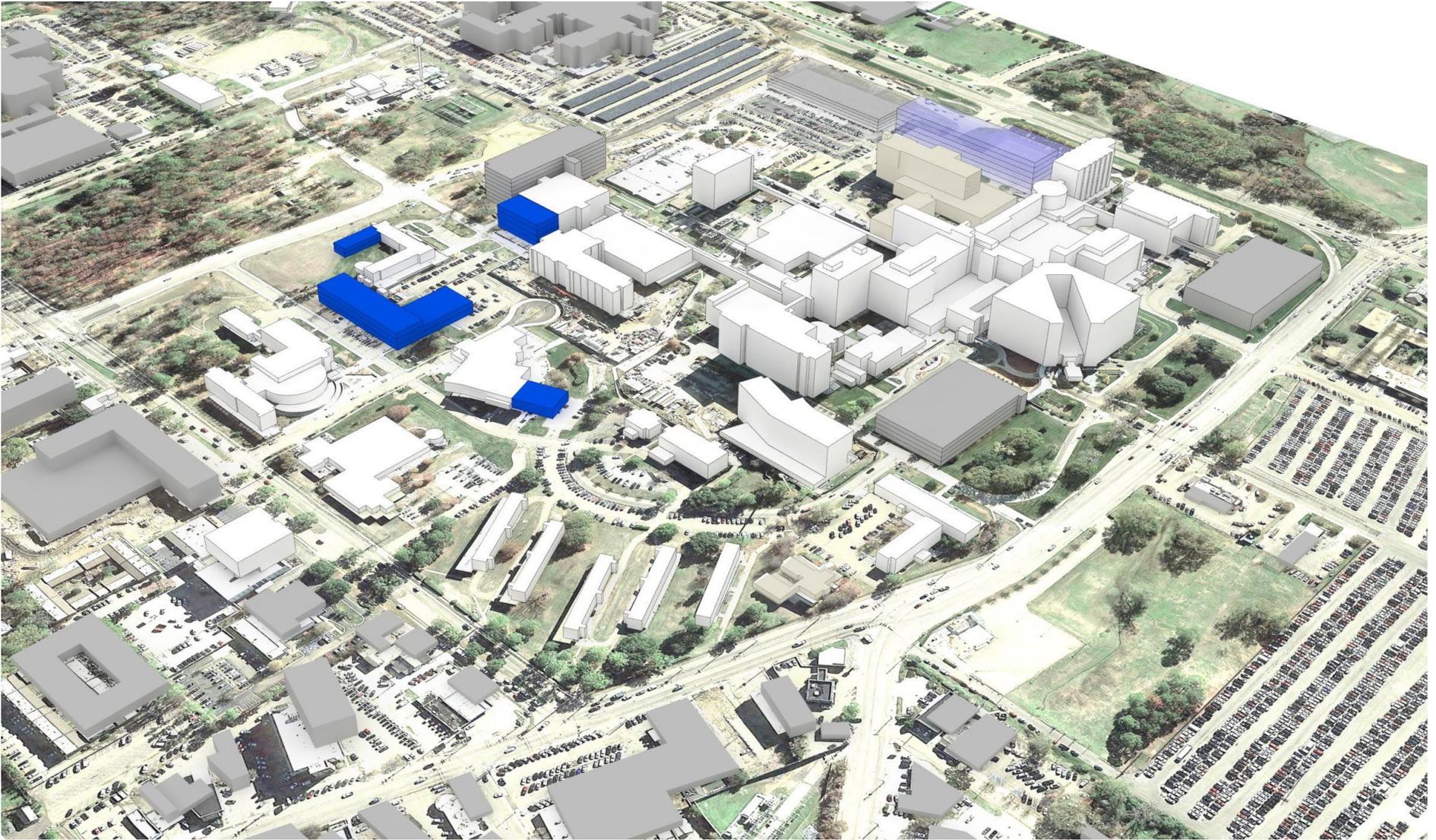
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UMMC Proposed Future State Site Plan



Executive Summary

CannonDesign was hired by the University of Mississippi Medical Center in 2016 to update the institution's 2010 Master Plan. The University of Mississippi Medical Center has a long and distinguished history of excellence in medical education, research and clinical care. Since the Main Hospital's construction in the 1950's the campus has seen steady growth accommodated through a variety of construction projects.

Since the last master plan process, the University of Mississippi Medical Center has undertaken several large scale construction projects, including the Cardiovascular Institute, Translational Research Building, School of Medicine Building as well as a new parking garage. In addition to these completed projects, the University is in the midst of a large expansion of Children's of Mississippi Hospital and Clinics. The Campus Master plan presented herein incorporates all of these completed and ongoing projects as well as recently completed Sitelines reports and parking and traffic study.

The scope of this Campus Master Plan includes all UMMC facilities in the Jackson Metro Area. On campus the analysis was focused on the educational and clinical missions.

This master plan process outlined the following high-level objectives:

- Provide a framework for future decision-making - not a single definitive strategy
- Provide information to make smart decisions about the best use of facility assets
- Identify issues, magnitude and priorities backed by data analysis
- Allow the University of Mississippi Medical Center to apply the following principles in support of the master plan:
 - Invest in campus utility infrastructure as a fundamental requirement
 - Buildings on campus will require 24/7 operations with redundancy and should accommodate vertical expansion
 - Occupancy, renovation and new construction within the 250 yard envelope should have a clinical purpose and continue to decant non-essential functions from the main campus
 - Close coordination between construction and business planning
 - Use of space and furniture standards will ensure maximized flexibility and fiscal responsibility
 - Limited traditional office space
 - Limited parking
 - Continue to strategically expand outpatient and inpatient services throughout the state through collaboration and partnerships
 - Have a 10-20 year vision

Master Planning Process

Throughout the Campus Master Plan process, CannonDesign interacted with many members of UMMC, assuring a breadth of representation and collaboration.

Master Planning Executive Committee

Hospital Leadership - met quarterly

Provided project oversight, final decision-making and approvals, set project goals

Master Planning Working Group

Team that met monthly in between the MP Executive Committee

Responsible for working on the details to pull the master plan together

Stakeholders

Clinical, Academic and Facilities leadership

Provided feedback for individual areas, reviewed and validated data received

Master Planning Committee:

Jonathan Wilson, PhD, Chief Administrative Officer

Ivory Bogan, Executive Director, Facilities Management

Franklin Campbell, COO, Strategic and Business Planning

Reatha Clark, M.D., COO, Business Operations

Kevin Cook, CEO, Health Systems

Guy Giesecke, PhD, CEO, Children's Hospital

Dr. Charles O'Mara, M.D., Associate Vice Chancellor for Clinical Affairs

Brian Rutledge, PhD, Chief of Staff, Office of the Vice Chancellor

Richard Summers, M.D., Associate Vice Chancellor Research

LouAnn Woodward, M.D., Vice Chancellor for Health Affairs, Dean School of Medicine

Patrick Casey, Executive Director, Planning, Design and Construction

Ralph Didlake, M.D., Associate Vice Chancellor for Academic Affairs

Ellen Swoger, Associate Chief Information Officer

Bruce Fairbanks, CFO

Travis Bradburn, Chief Development Officer

Tom Fortner, Chief Public Affairs and Communications

Dan Jones, M.D., Interim Chair, Department of Medicine

Rondah Marks, Chief Marketing Officer

Jeff Walker, Chief Legal Officer

Scott Stringer, M.D., Department Chair School of Medicine

Elizabeth Youngblood, CEO Adult Hospitals

Paul Veregge, M.D., Chief Information Officer

Master Plan Working Group:

Trish McDaniel, COO University Hospitals

Leslie Musshafen, Executive Director Research

Al Faulk, Director IT, Healthcare Operations

Loretta Jackson, M.D., Vice Dean of Medical Education, School of Medicine

Franklin Campbell, Chief of Strategic & Business Planning

Larry Lineberry, Assistant Director Facilities

Ruth Willis, Director, Business Operations

Coleman Bond, Director of Construction

Marilyn Johnson, Senior Manager of Real Estate William

Wood, Senior Director, Ambulatory Operations Diane

Bebe, M.D., Chair Department of Family Medicine

George Russell, M.D., Department Chair, School of Medicine, Orthopedic Surgery

Timothy McGowen, M.D., Chairman, School of Medicine, Radiology

Rick Barr, M.D., Chair, Department of Pediatrics

Terri Gillespie, Chief Nursing Executive & Chief Nursing

Officer, Adult Hospitals

Susan Shands-Jones, Assistant Professor

Emily Lewis, Chief, Payor Finance Director

Michelle Welander, Chief Nursing & Clinical Services Officer

Michael Stamps, Chief of Police

Alan Jones, M.D., Chair, Emergency Medicine

Jack McLaughlin, Director Imaging Services

Karen Dowling, Chief Ambulatory Operations Director

Laura Taylor, Healthcare Architect

Brian Reddoch, Construction Project Manager

Brooks Moore, Program Manager Real Estate

Arthur Jones, Construction Project Manager

Chris Rhodes, Construction Project Manager

Amy Trim, AutocadTech

Nathaniel McKenney, Construction Coordinator

Gabriel McKenney, Construction Coordinator

Virgil Lamkin, Project Manager

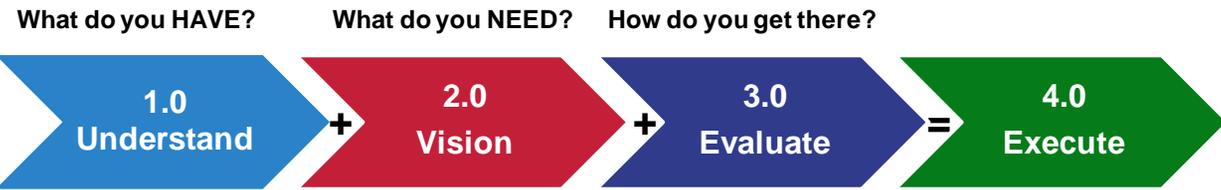
Henry Heitmann, Director, Physical Facilities and Institutional Services

Jim Baxter, Director, Facilities

Donnie Denton, Supervisor & Senior Safety Officer

John McCullouch, Director of Facilities

Nazar Keer, Project Manager, Planning Design and Construction

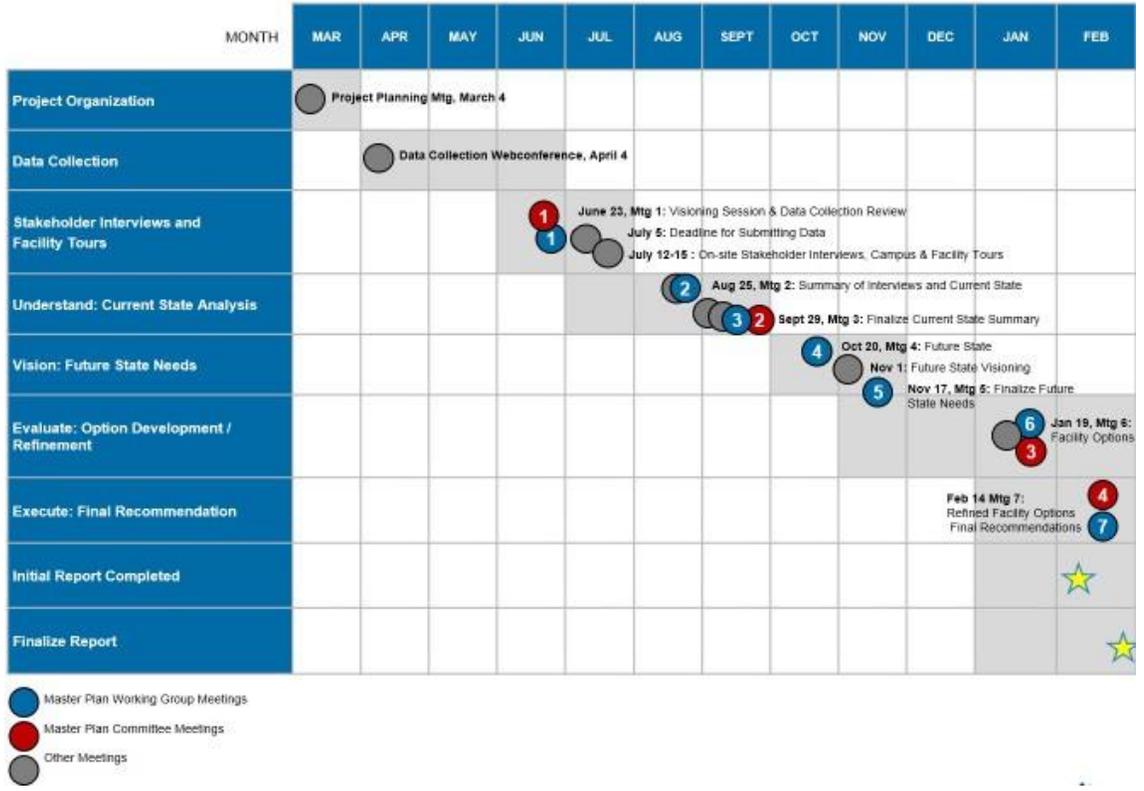


- Current State Assessment:**
- Campus Visits
 - Facility Tours
 - Site/Parking
 - Buildings
 - Departments
 - Space Need
 - Capacity & Utilization
 - Gap Analysis

- Future State Assessment**
- Volume Projections
 - Bed Model
 - Buildings
 - Departments
 - Services
 - Locations
 - Adjacencies
 - Gap Analysis

- Option Assessment**
- Scenario Analysis
 - On Campus vs Off Campus
 - Facility Re-Use
 - Concept Refinement

- Final Recommendation and Approval**
- Framework for future decision-making



UMMC Mission and Vision

The Campus Master Plan built upon the Mission and Vision of the University of Mississippi Medical Center as well as the UMMC 2020 Strategic Vision.

Mission

The mission of the University of Mississippi Medical Center is to improve the health and well-being of patients and the community through excellent training for health care professionals, engagement in innovative research, and the delivery of state-of-the-art health care.

Vision

The University of Mississippi Medical Center will be a premier academic health sciences system that is recognized nationally for high-quality clinical care, for innovative research and for training committed health care professionals who work together to improve health outcomes and eliminate health care disparities.

2020 Strategic Plan

- Transform academic programs to better prepare learners for the new health-care paradigm
- Advance health-care science through new discoveries and technology management
- Maintain financial strength in an evolving health-care paradigm in order to support the mission of the Medical Center
- Cultivate an engaged, effective, professional and diverse workforce and leadership team
- Be the leader in the delivery of value based care (quality, service, cost)
- Promote a culture of patient and family-centered care
- Improve the health status of our state through increased access, population health management and expanded breadth/depth of services
- Foster a network of collaborative partnerships and advance advocacy efforts to improve health in Mississippi
- Integrate and align across missions and entities
- Create an environment of scholarship, trust, accountability, equity, safety, quality and service excellence



Master Plan Principles

In addition to the already established Mission, Vision and Strategic Plan, CannonDesign worked with the University of Mississippi Medical center to establish Guiding principles to assist in the decision-making during the design process in order to prioritize critical decisions pertaining to purpose, environment priority and budget.

UMMC's Vision is to be the leader in healthcare and medical education by providing quality, patient-centered care for the state of Mississippi.

The Campus Master Plan process must:

1. Determine the **best use of existing facilities** while identifying intentionality for investments in new facilities
2. Improve **patient access** to services while optimizing operational efficiencies through consolidation of service lines and simplifying hospital navigation
3. Improve and make the **patient experience** consistent and seamless across the system
4. Plan for the **strong growth** in the pediatric and geriatric population
5. Focus on **academic expansion** that fosters student collaboration and enables attainment of clinical experience
6. Consider **potential partnerships** and augmentation of potential research studies that bolster UMMC's multidisciplinary programs
7. Tailor design and experience to **champion medical care** that addresses population health needs

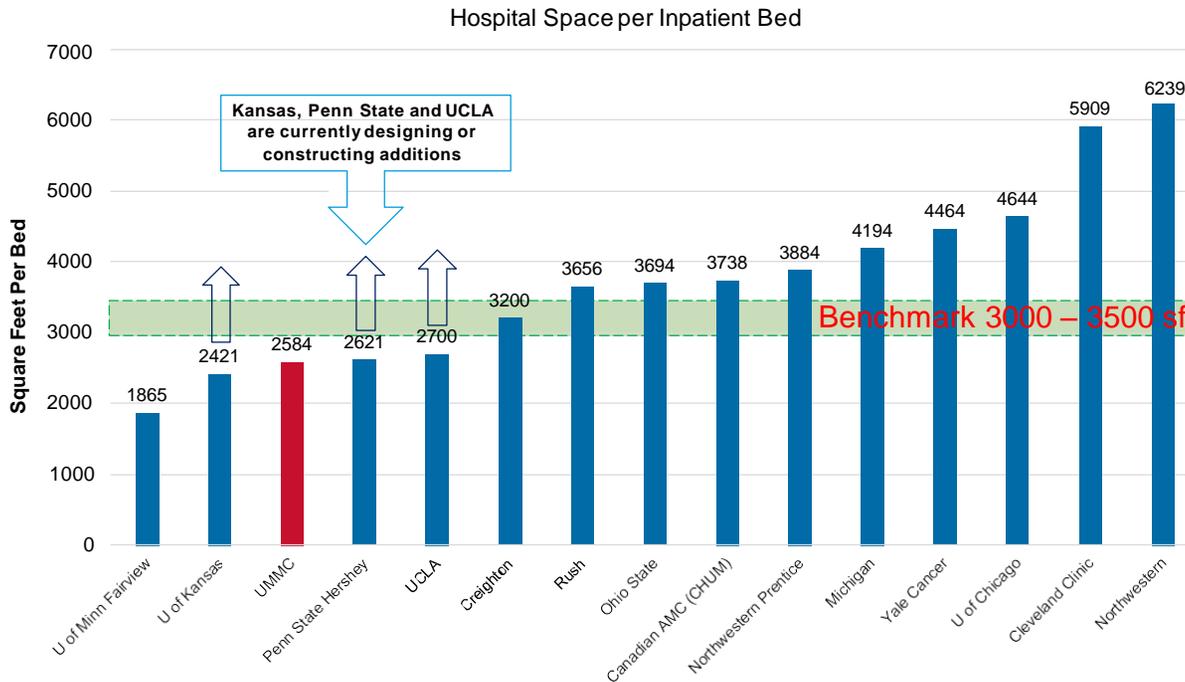
Facility Evaluation

Facility Evaluation

In evaluating the condition of the buildings on campus, facility assessment criteria were applied to facilities to establish the current state and identify key issues. These factors evaluated included: building age, building shell condition, structure, vertical circulation, wayfinding, building adjacencies, functional appropriateness, flexibility and future expandability. Based on the evaluation, the buildings that scored the lowest are located deep in the heart of the main hospital.

Key observations from the facility assessment:

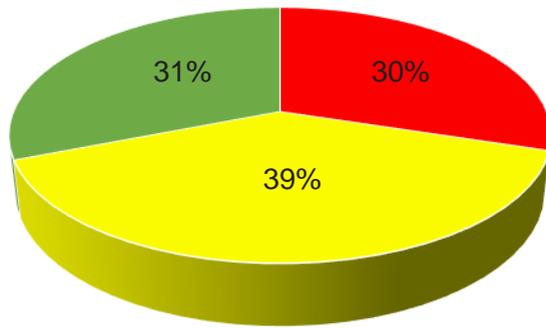
- Ambulatory Pavilion building is in need of replacement
- Clinical services should continue to be decanted from the Original Hospital Building
- All on-campus trailers should be removed
- Student Apartments are a potential area for long term future development
- The Stadium Site and the Farmer's market are an important opportunity for future growth
- The Farmer's Market and the Medical Mall could be an opportunity as location to address Population Health care management programs



Overall, UMMC's Hospital is smaller when benchmarked against other academic medical centers

In the next few years UMMC has multiple infrastructure upgrades planned that will be crucial to maintaining the operations of the facilities, including but not limited to:

- Elevator Upgrades
- Upgrade Guyton Mechanical System
- Replace Emergency Generators #12, 13, 14
- New Boiler Room #1
- Replace AHU serving adult OR
- Install new SHRP Chiller, cooling tower, condenser
- Replace Chiller #3
- Replace Cooling Tower #5
- Upgrade/Replace aging pumps



Percentage of square footage by condition



Building Name	Condition
Original Hospital Bldg.	Red
Physical Facilities Bldg.	Red
University Rehab Center	Yellow
Apartments (A-E)	Red
Office Annex	Red
Research Wing	Red
SHRP	Green
School of Nursing	Yellow
Batson Children's Original	Red
Alumni House	Red
Motor Pool & Storage	Yellow
Talent Acquisition	Red
Lecture Halls	Yellow
School of Dentistry	Yellow
Clinical Sciences Building	Yellow
Learning Resource Center	Yellow
Acute Services Wing	Yellow
Computer Facility (DIS)	Yellow
MRI Building	Yellow
UMC Pavilion	Red
Batson Children's New	Green
Laundry Building	Yellow
Research Building	Red
Lakeland Complex	Red
Critical Care Tower	Green
Medical Mall	Yellow
Medical Tower	Yellow
Risk Management Bldg	Yellow
Nelson Student Union	Yellow
Wiser Hospital	Yellow
Children's of MS Specialty	Yellow
Classroom Building	Green
Adult Hospital	Green
Guyton Research Ext.	Green
School of Pharmacy	Green
Cardiovascular Institute	Green
Lakeland Medical Building	Green

- **Good**
Fully Compliant
- **Satisfactory**
Limited Upgrade Required
- **Marginal**
Significant Upgrade Required
- **Undetermined or N/A**

Infrastructure Upgrades

Infrastructure Design Guidelines

The Master Plan goal for UMMC is to provide sufficient facilities to support the UMMC Strategic Plan. This includes construction and renovation of facilities on campus as well as expansion of off-campus facilities. This growth is planned to be achieved over the next 10 years with significant facilities being recently completed and/or under construction. Parking Garage C was completed and opened in 2016. The new Translational Research Facility and School of Medicine will be completed and opened in 2017. A major expansion of the Children's Hospital will be completed in 2020.

As the master plan is constantly evolving, these guidelines will be updated accordingly. They should be treated as a living document and modification will be made to address future revisions to the master plan.

Storm Water Management and Design

The Campus Strategic Plan provided a broad outline for a storm water management plan that would address the challenges of the off campus and on campus storm water runoff. The plan addressed existing storm water controls and an improvements to be incorporated on the campus as the various new projects are built. A new detention area was recently installed in the area east of Parking Garage C. The analysis and design of the storm water systems incorporates this area and will continue to address other areas as required for future Campus improvements.

The current strategy for dealing with the Lakeland runoff is to maintain the underground storm water piping system between Lakeland Drive and Woodrow Wilson. Once the storm water enters the underground pipes south of the Student Union, it discharges on the south side of Woodrow Wilson.

Mitigation efforts to minimize the impact of storm water from the existing primary runoff areas and the impact upon the Belhaven neighborhood are best addressed on the south side of Woodrow Wilson with an appropriate storm water management detention area on the City of Jackson property.

In addition to the water discharging from the culvert, storm water from the stadium area is also collected in the swale along Woodrow Wilson Drive. That water arrives via a series of storm water pipes and surface runoff directed into the swale on the south side of and parallel to Woodrow Wilson. The combined amounts of storm water then migrate to the Pearl River via the Belhaven College campus and Belhaven Neighborhood.

Design Standards

- Detention Basins 100 year event
- Pipe Sizing 100 year event
- Provide detention to address water quantity requirements, first 1.5" of rain
- Provide detention to address required discharge flow volumes and velocities

Design Strategy - Improved Watersheds

Watershed-Zone 1 (North Half)

Storm water will be collected in the existing inlets and routed west to the existing box culvert. Where possible the storm water on the eastern side of the zone will be collected and routed to the new north-south pipe along the East University Drive.

Watershed-Zone 1 (South Half)

One detention area is provided southeast of Garage C. This detention area collects the water from both the north and south halves of Zone 2. Water from the north half is collected in a storm sewer located along the east side of the road. It is channeled to the southern half and collected in the surface detention area along with water from the southern half and the Garage C project. The underground roadway work and detention area was recently installed as part of the East University Roadway Phase 1 & Phase 2 projects.

The new East University Drive connector to Lakeland Drive from Garage "C" will capture and convey the storm water between it and the ridge to the east. This water is piped into the detention area. Water from the detention area is combined with the water from the southern portion of the new East University Drive roadway. The roadway runoff water is collected in the underground piping and combined with the other water, including the VA runoff from the east side of the roadway (Zone 8).

Watershed-Zone 2

New facilities located in this area will have their storm water piped directly into the existing 8'x8' box culvert. Since the area is currently all paved, the development of new facilities will not add to the storm water quantities.

New facilities located in Zone 2 may also have their storm water routed to a detention area when possible. Otherwise, the water will be routed directly to the existing 8'x8' box culvert.

Watershed-Zone 3

This zone is almost completely developed. Future expansion projects will need to be integrated into the existing storm water system. No specific storm water system improvements are anticipated for this area at this time.

Watershed –Zones 4, 5 & 6

All future development in the northwest section of zone 6 shall provide for predevelopment levels of onsite storm water detention. Storm water associated with each new development must be managed on each individual site before it is discharged into the campus system. Detention areas should be required on each developed site or combined if possible.

A new detention area may be provided in zone 4 when that area is developed. Storm water from the northeastern side, zone 5, may be routed west to a future detention pond and then into the box culvert.

Watershed –Zone 7

This area is south of zone 1. The contours direct the runoff water to the east. It currently surface drains to an inlet culvert pseudo detention area near the Hazardous Materials building. At that point it flows into the underground storm system that traverses the VA property to the southeast.

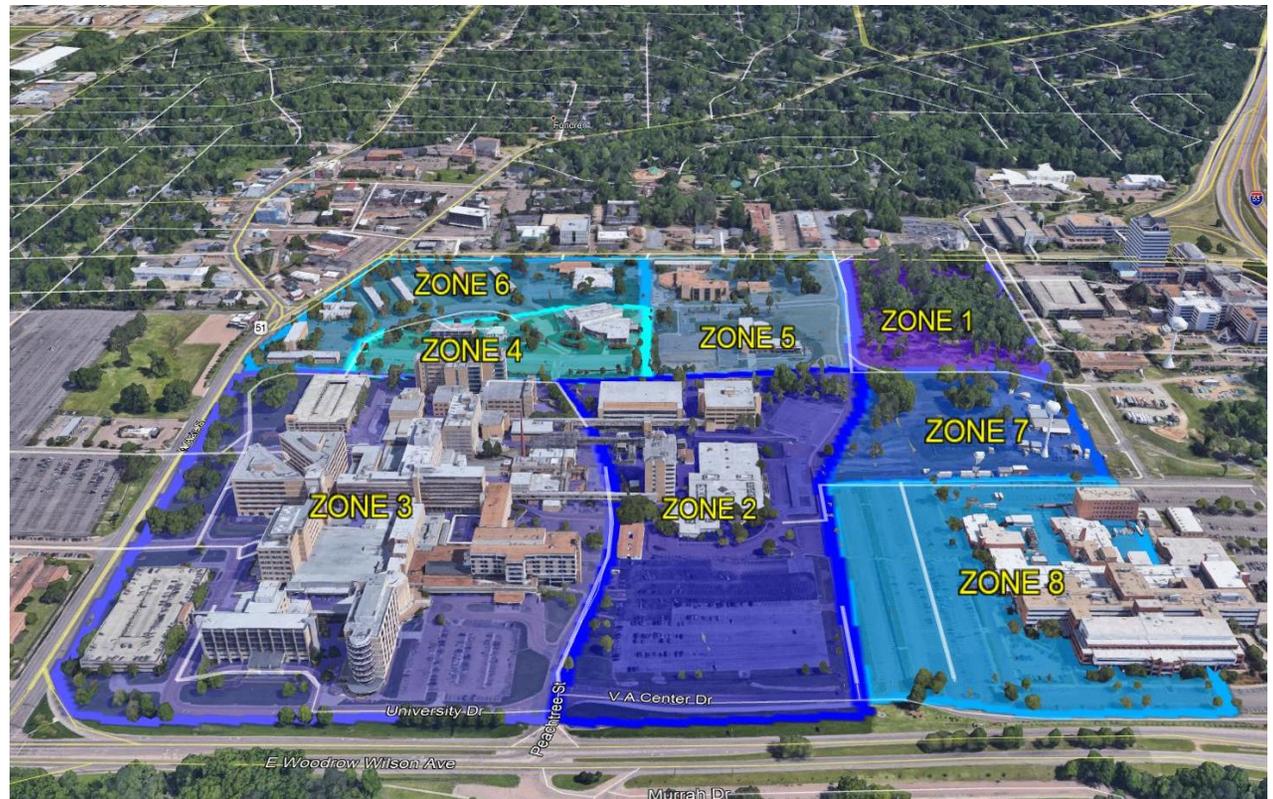
Watershed –Zone 8

This area is east of zone 2 and includes the portion of the VA property that drains onto the UMMC property. Some of this runoff water flows directly onto the southern portion of East University Drive and into the newly designed storm sewer. A portion of the runoff, surface drains into the swale along the north side of Woodrow Wilson Blvd. It then runs westward and into the culvert that goes beneath Woodrow Wilson Blvd.

Campus Utility Infrastructure

For facilities not currently served by central plant, it is proposed that UMMC install HVAC systems at each new building, rather than enlarging existing systems in a Central Plant configuration. This solution is proposed based on consideration of energy efficiency and operational flexibility.

UMMC continues to address all utility and infrastructure needs to maintain existing systems in good working order as well as providing sufficient capacity to support the planned campus growth.

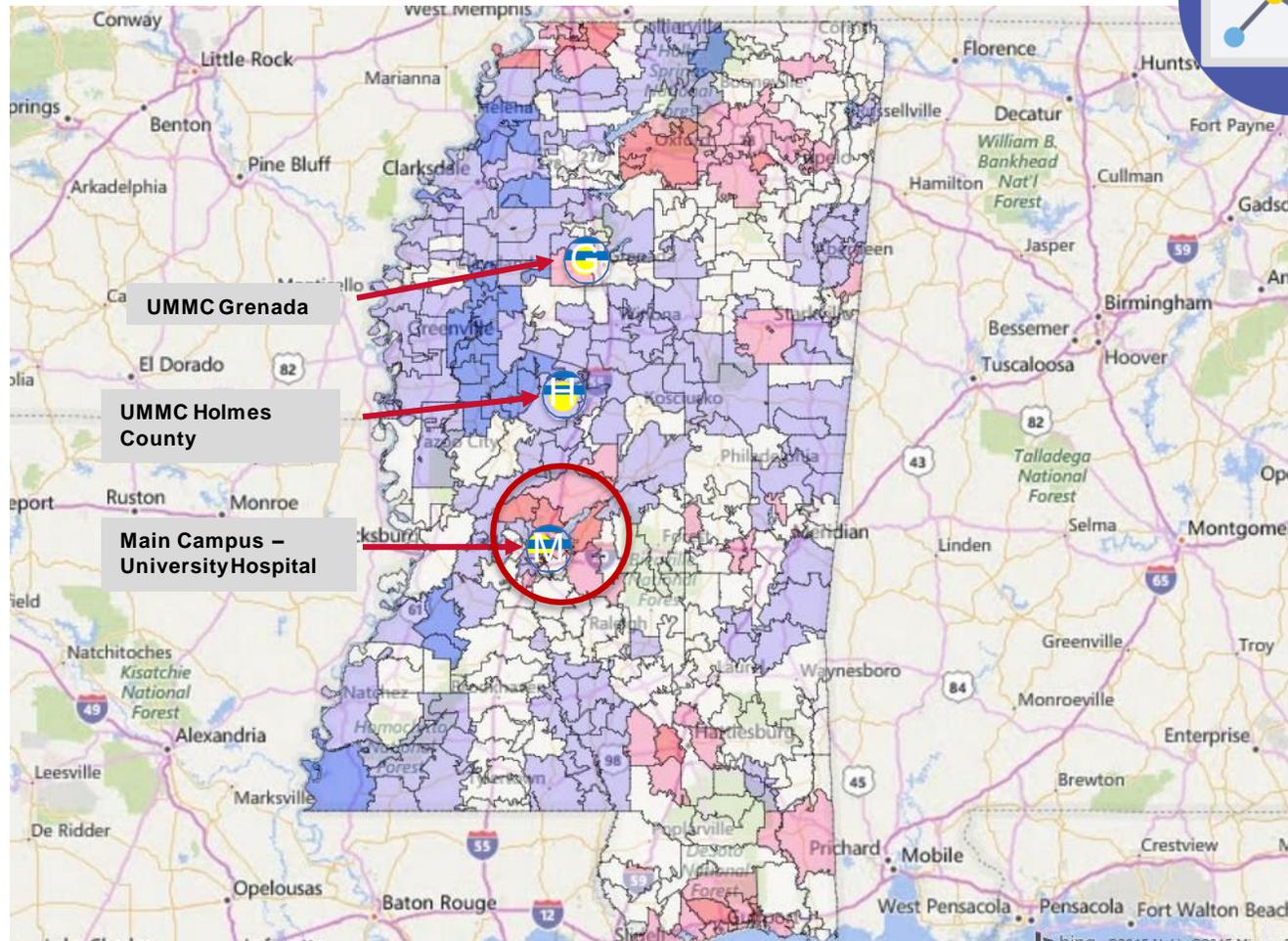
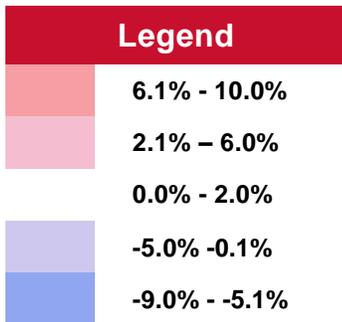


UMMC CAMPUS WATERSHED MAP

Population & Demographics

The greater Jackson Metro Area is expected to see upwards of 5%-9% growth in the next 5 years, along with areas of Northern Mississippi

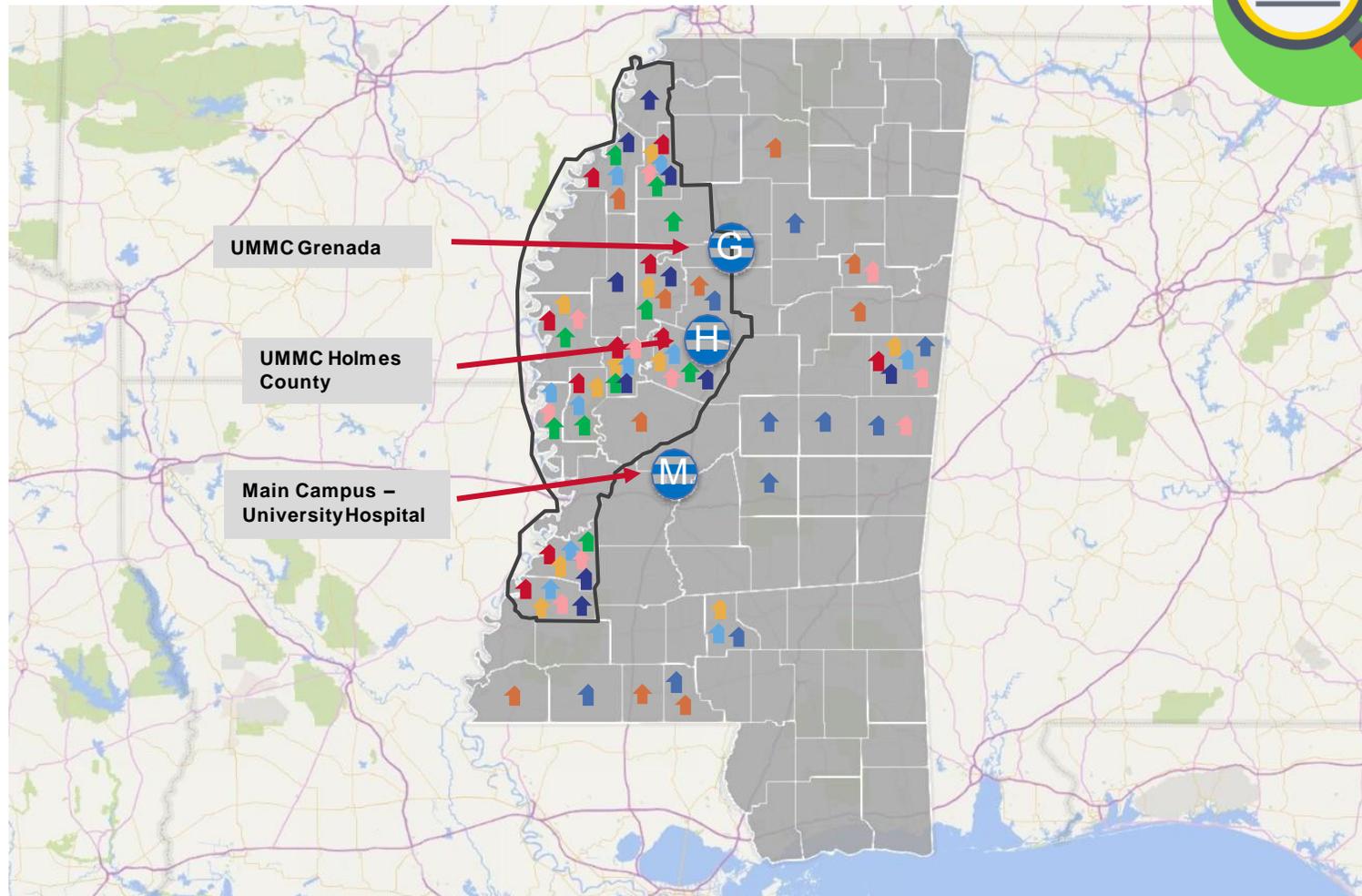
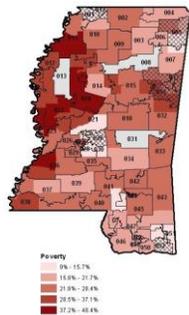
Mississippi Population Growth by Zip Code
5-Year Projections, 2016 - 2021



Source: Nielsen Claritas Database, CannonDesign Analysis, 2016

The counties located in the Northwestern portion of the state of Mississippi rank highest in most of the population health identifiers

Mississippi, County Health Rankings Population Health Hotspots – Top 10 Worst Counties, 2016



Source: 2016 County Health Rankings, CannonDesign Analysis, 2016

Education Assessment

Education Future State Assessment

The Future state assessment phase was used to determine how much additional space will be needed on-campus to meet the academic goals of UMMC's growing programs. Current student population numbers and classroom utilization data were used to determine current deficiencies in each of the Schools. Over- laid upon this analysis were strategic goals

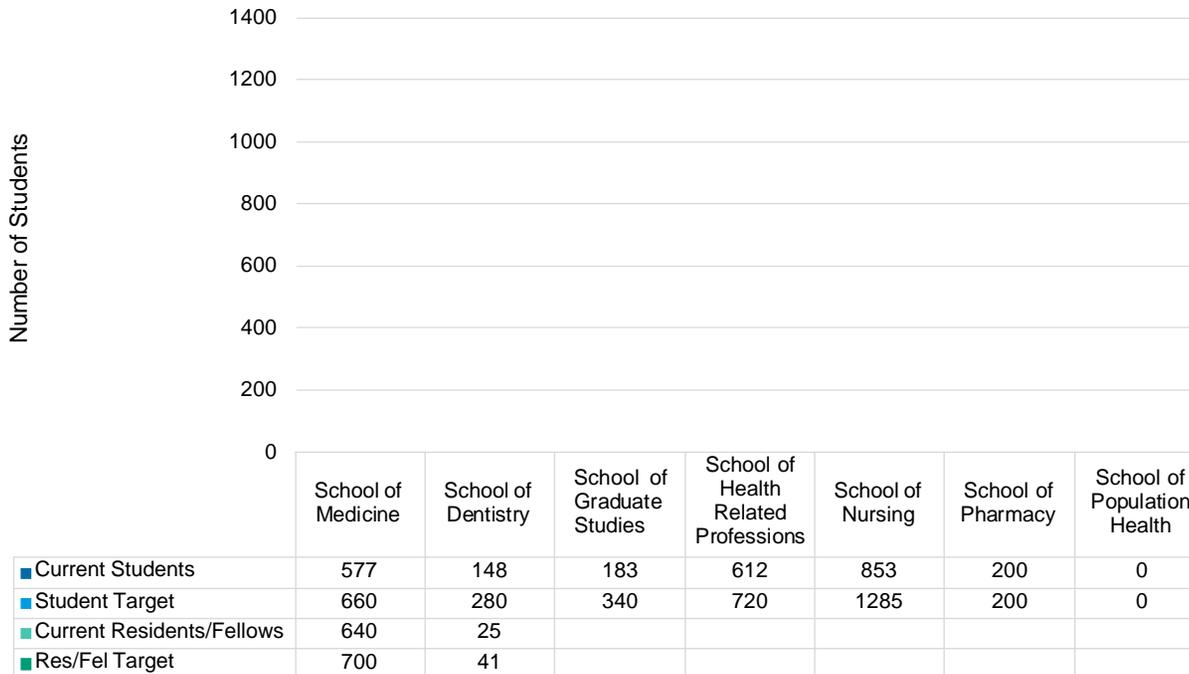
and planned changes in teaching pedagogy as discussed with the Deans of each of the schools to determine how these goals have space implications. Based upon these goals and student population projections, classroom space benchmarks were applied to determine the amount of new space that will need to be added to the campus.

Programmatic Drivers

Through analysis of classroom space and discussions with key leaders in each of the Schools, the following issues were identified that will be drivers of future Education space on campus:

- School of Nursing has experienced significant growth in the past 5-10 years and anticipates future growth. The influx of students combined with a changing pedagogy demands new space aligned with the quantity of students and new teaching methodologies
- Current School of Dentistry and Dental Clinic have ADA compliance issues
- The education mission lacks a gathering space large enough for interprofessional programs
- The conference room spaces in the Student Union are at capacity, leaving few options on campus for gatherings
- Multiple schools expressed a need for classroom spaces to hold 40-50 students, there are currently very few in this size range.
- Current plans for the new School of Population health don't accommodate growth beyond a 5 year projection
- Current School of Pharmacy operates well but is at capacity - an increase in students may trigger the need for more space
- Current dining facilities in the Student Union are at capacity and will not be able to accommodate an increase in student population on campus

Current and Future Student Enrollment



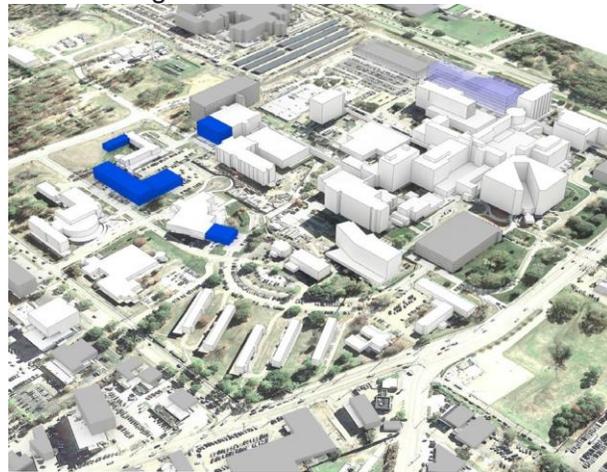
Proposed Education Campus Plan

1. School of Nursing Building

Anticipating an influx in student population in teaching pedagogy, a new **90,000-110,000 SF** School of Nursing is recommended

2. Interdisciplinary Building / School of Population Health / School of Graduate Studies & Health Sciences

Connected to the School of Nursing and in close proximity to other schools, the **75,000 SF** interdisciplinary building will hold share multipurpose, classroom and student study space. Long term the School of Population Health should be relocated to a floor of this new building.



○ Proposed Vehicular Campus Entry

▭ Pedestrianized Intersections

— Proposed Campus Pedestrian Network

— Proposed Campus Vehicular Network

— Proposed Limited access Vehicular

3. Student Union Expansion

An addition to the student union will allow the kitchen and dining services to expand to meet the demands of the increasing student population on-campus

4. School of Pharmacy Expansion Space is available for an additional wing of administrative support should future growth require the space

5. School of Dentistry Expansion

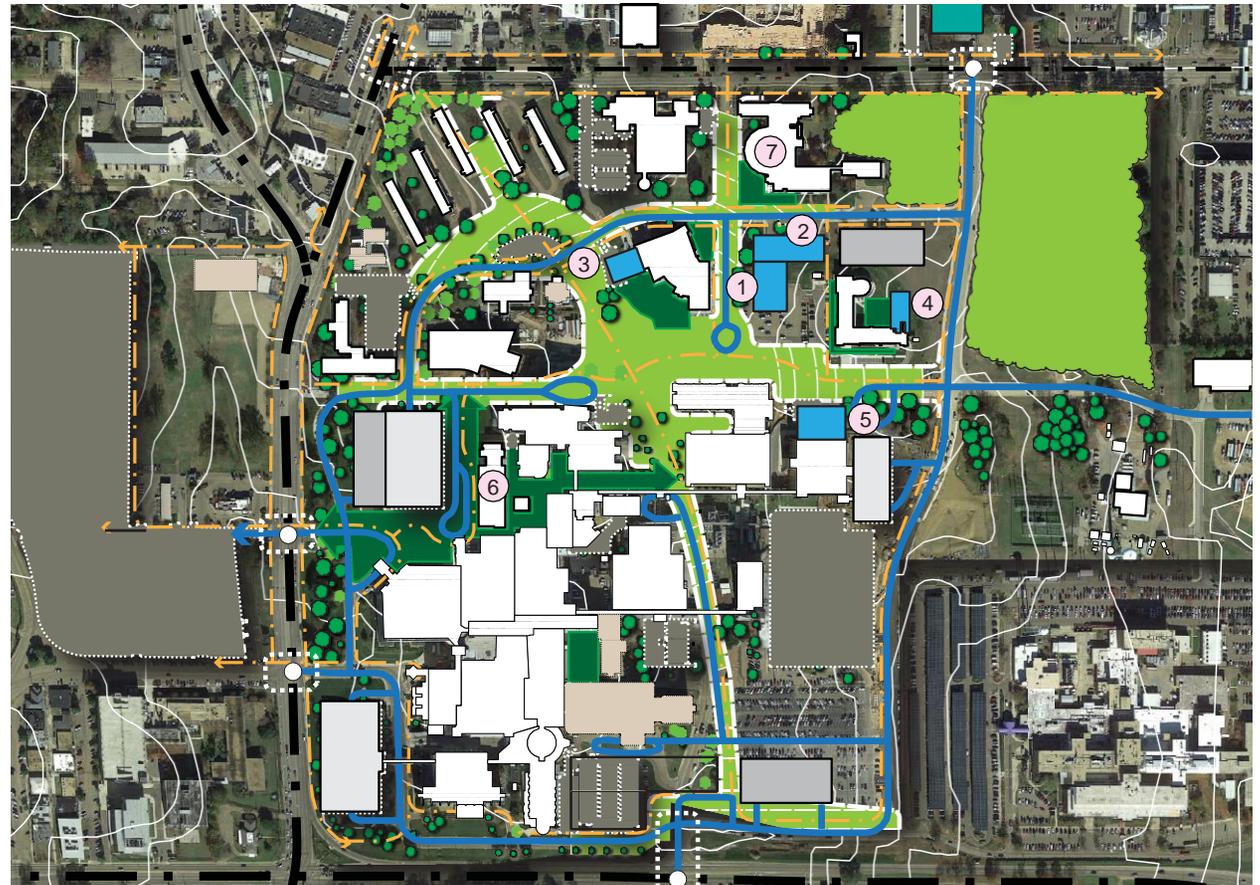
Dental clinic addition to be built and create breathing room on tight classes and labs. The existing building will be renovated in phases to reconcile current ADA compliance issues.

6. Clinical Trials

The former school of Nursing is ideally located between the clinical and research platforms to be converted to a clinical trials building, with the potential to hold both outpatient clinical trials as well as research. Alternately this building could be re-purposed as hospital administration.

7. SHRP Vertical Expansion

Additional space to support growing programs and class lab needs, including PT/OT lab space



Clinical Assessment

Clinical Future State Assessment

The Future State Assessment phase was used to calibrate future volume projections with the University of Mississippi's strategic initiatives and translate the resulting custom volume projections into key room needs for each department. By applying customized benchmarks to these key rooms, future space needs for each department were determined which ultimately informed the space needs for the overall facility. The need for additional space may arise from two different sets of cri-

teria: First, if the department is below national benchmark averages for DGSF based on the current number of key rooms, that department should be right-sized to make up for lack of space in the existing conditions. This space need is considered a "Current Need." If the department is adequately sized based on the current number of key rooms, but is forecasted for volume growth that results in additional key rooms, the resulting increase in space is considered a "Future Need." In addition to need from lack of space or addition of key rooms,

there were some departments that have been identified which currently are perceived to have an excess of space due to fragmentation of key services in the department; a consolidation of these services may be recommended to achieve efficiencies within the department. A single department may require additional space based on Current Need, Future Need, or a combination of both.

Forecast Methodology

CannonDesign began the Future State Assessment by applying ten-year forecasted growth rates developed by Advisory Board – a third-party health care analytics firm – to UM-MC's 2016 baseline volumes. These forecasts were then discussed with University of Mississippi Medical Center Leadership to understand how departmental-specific strategies and operational parameters would impact future volumes and space need.

1. Current State

Current Volumes (FY2016)

FY 2016 Patient Volumes through Patient-Level and Summary data, validated by each service line and department through individualized meetings

2. Advisory Board Growth

Baseline Growth Projections (FY2026)

FY 2026 Projected Patient Volumes determined by Advisory Board market growth rates based on factors in the following categories: Epidemiology, New Technologies / Procedures, Lifestyle Factors, Physician Considerations, and Regulatory / Reimbursement

3. Future State Visioning with Leadership

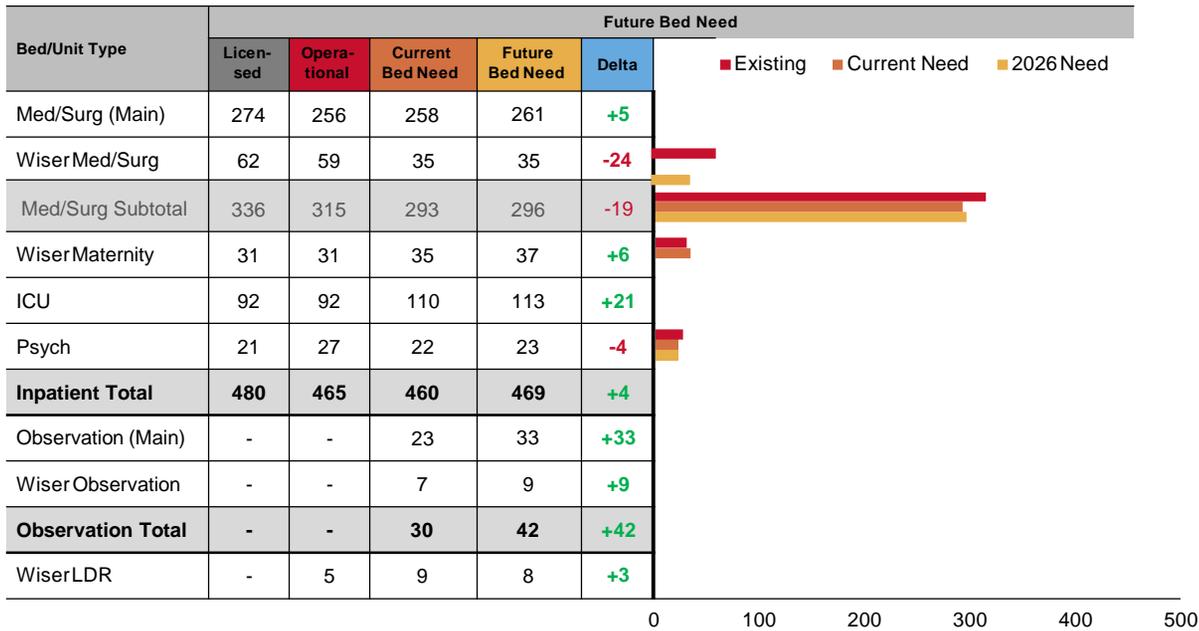
Strategic Growth Factors (Variance from Baseline Growth)

Future State Visioning session with Master Planning Committee Leadership determining adjusted future service line growth and market capture based on strategic investment and potential competitor closures and investments

4. Operational and Utilization Considerations

Operational/Utilization Impact (Change/Improvement from Current to Benchmark)

Recommendations made across operational metrics based on peer benchmarks; Utilization targets applied based on department and service; Ambulatory clinics projected to utilize 6 room turns per day; Decision to continue with current operations in projection model across Inpatient LOS, Avoidable Admissions, Surgical Turnaround Times, and Procedural Hours of Operations



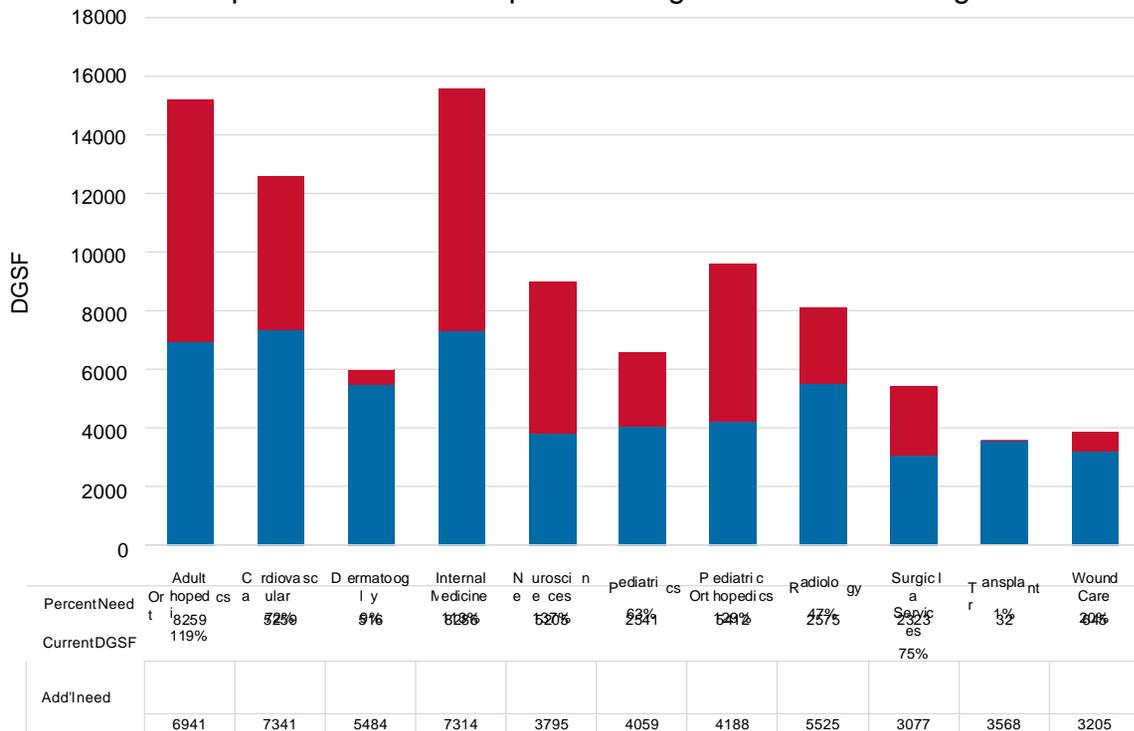
Key Programmatic Drivers

During the current state assessment a count of licensed beds was collected and compared to existing operational beds by location and acuity. Current bed needs reflect the beds recommended for current volumes for each bed type and acuity. Future bed needs reflect the required beds needed to accommodate future forecasted volumes by acuity and bed type.

From the future projection analysis and key room forecasting, programmatic space needs were identified. These identified drivers serve as the basis for the master plan, rooted in data analysis they provide a framework for future capital endeavors. The master plan serves to find a solution(s) to each of these identified programmatic needs.

- Observation future demand is projected to require 42 new beds between the Main Hospital and Wiser Women’s Hospital
- ICU projections show a future need of 21 additional critical care beds
- Ambulatory Clinics in the Pavilion are undersized and in need of replacement
- Emergency Department is at capacity and future demand requires additional rooms
- While Imaging volumes don’t anticipate an increase in key rooms, the department is disjointed and in need of consolidation
- Lab loses efficiencies by its fragmented layout and is in need of consolidation
- Surgery volumes predict they will outgrow their space with a critical need for additional prep and recovery spaces
- Wiser Women’s Hospital requires additional LDRs to accommodate both current volumes and future projections
- Children’s Hospital is at capacity and an expansion is planned

Departmental Gross Square Footage – Pavilion Building



Ambulatory Strategy

The ambulatory strategy of the Master Plan was led by two key decisions: that the majority of clinical services would be vacated from the Jackson Medical Mall, and that the Pavilion Building is in dire need of replacement. These decisions led to the development of an overarching ambulatory strategy to identify where each service would ideally be located.

To provide a framework for the Ambulatory Services strategy, the following set of guiding principles was created.

General Strategies

- Primary / Secondary services will usually be off-campus near the patient population to be served
- Tertiary/Quaternary services will usually be on-campus and connected to the health system
- The ambulatory clinic should be flexible in design with adequate office and support space for providers
- Special consideration will be given for Alternative Strategies in regards to:
 - Certain sub-specialties
 - Specific Patient Populations
 - Financial aspects (eg hospital based billing, 430B)
 - Training and educational requirements

Ambulatory services are separated into five key locations, each with an overarching service line strategy. Individual sub-specialty locations can be shifted as necessary. All clinic facilities will be designed with the utmost flexibility and adaptability.

On Campus Ambulatory Building 110,000 BGSF

The proposed on campus Ambulatory Clinic Facility is designed around an estimated clinic demand of 64 exam rooms. The building is assumed to be a flexible clinic design with modules of 12 exam rooms and 3 modules per floor. An option is available to build out an additional floor as shell space to provide maximum future flexibility. This new ambulatory clinic would also include imaging services to replace those in the Pavilion and the Jackson Medical Mall. In addition, an urgent care is proposed within the ambulatory building to take volume off the main emergency department.

Key Program Elements:

Clinics:

- 72 Exam Rooms

Imaging:

- 4 Gen Rad, 2 CT, 3 MRI, 1 US, 1 Mammo, 1 PET CT, 1 Gamma Knife

Urgent Care:

- 9-12 Exam Rooms

Additional Services to consider:

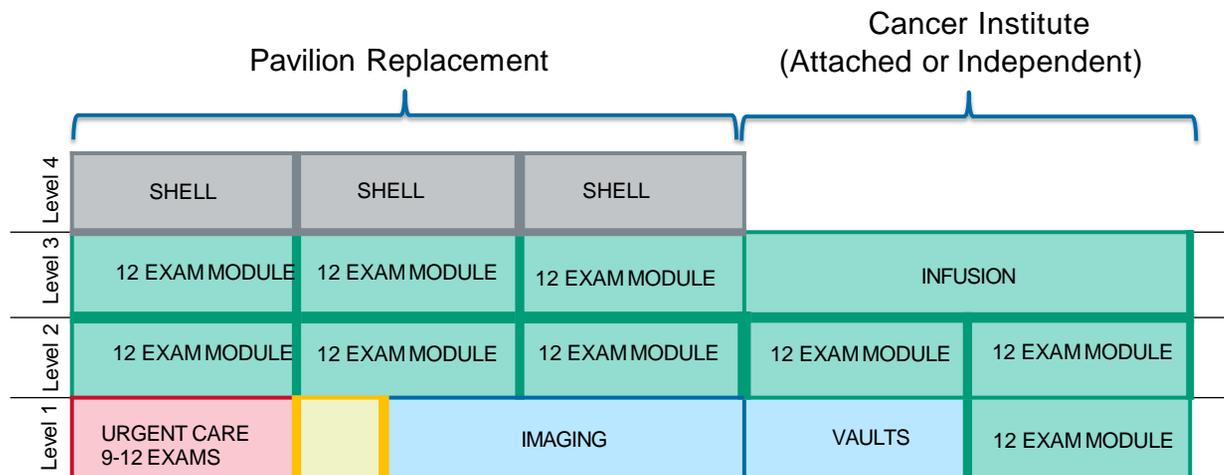
- Outpatient Pharmacy, Coffee/Cafe, Retail

Cancer Institute 70,000 BGSF

In addition to the new ambulatory building, all Cancer Services will be relocated from the Jackson Medical Mall into a new Cancer Institute aligning with UMMC's service line strategy plans for Oncology. The site Cancer Institute may either be co-located with the outpatient clinics to allow for shared imaging services. Or if needed, the Cancer Institute may be an independent building.

Key Program Elements:

- 36 Exam Rooms
- 24 Infusion Stations
- 2 Linear Accelerators

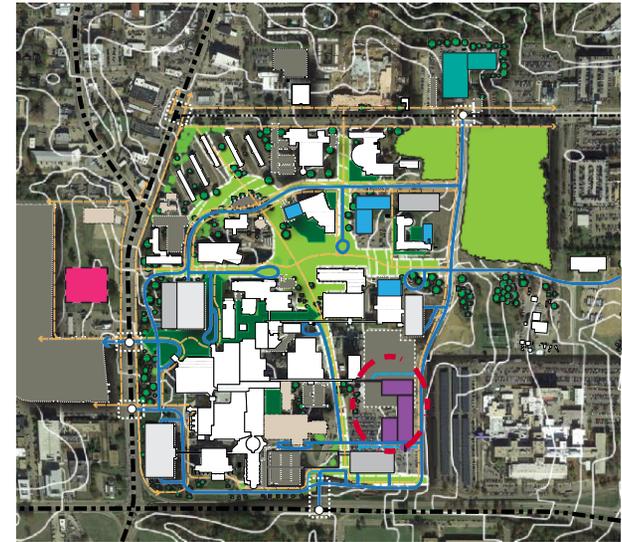


Site Options

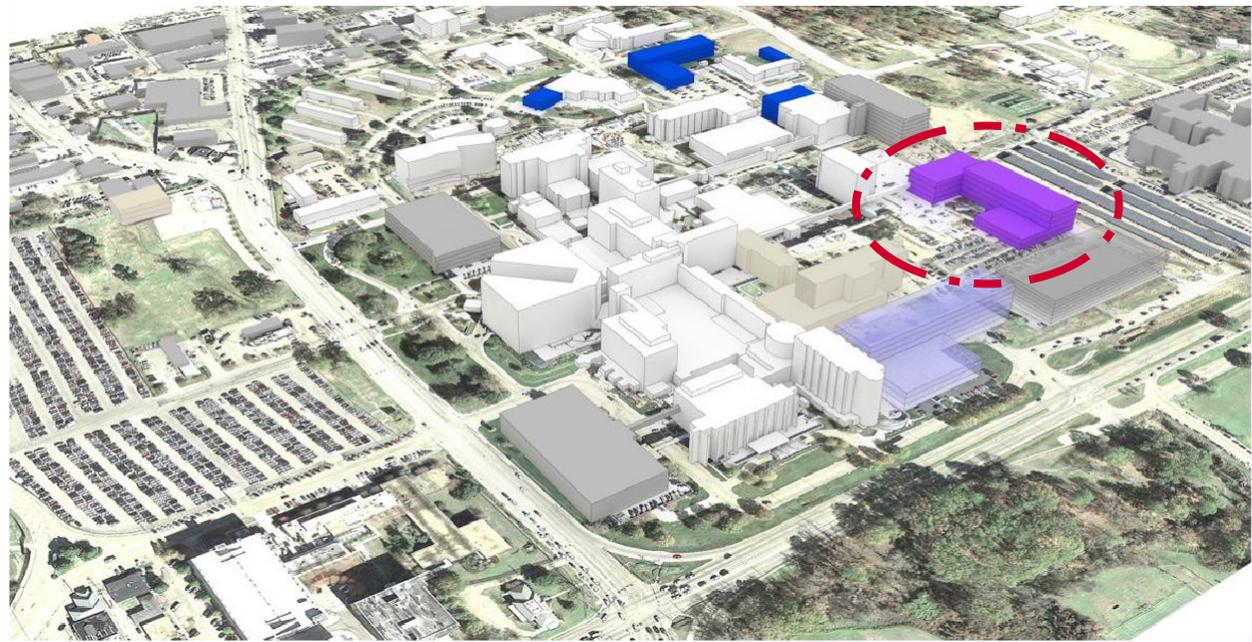
Two site options are recommended within the framework of the master plan. Each option was carefully located within 250 yards of the Main Hospital to comply with CMS billing regulations.

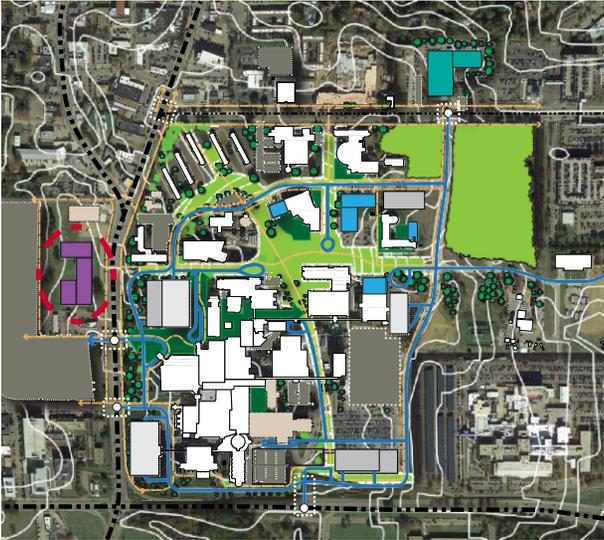
Site Option 1 is located behind the pediatric parking garage on the main campus. The building here would be built in phases with the ambulatory portion being constructed first, then the pavilion building being demolished to allow room for the Cancer Institute to be built. This option sits on land that is currently leased as parking to Methodist Hospital.

Site Option 2 sits on land owned by UMMC on the opposite side of State Street from the Main Hospital. While not as connected to the rest of main campus, this option allows for easy patient access. Buildings shown in tan are buildings not owned by UMMC, including ACS Hope Lodge adjacent to the proposed ambulatory building.

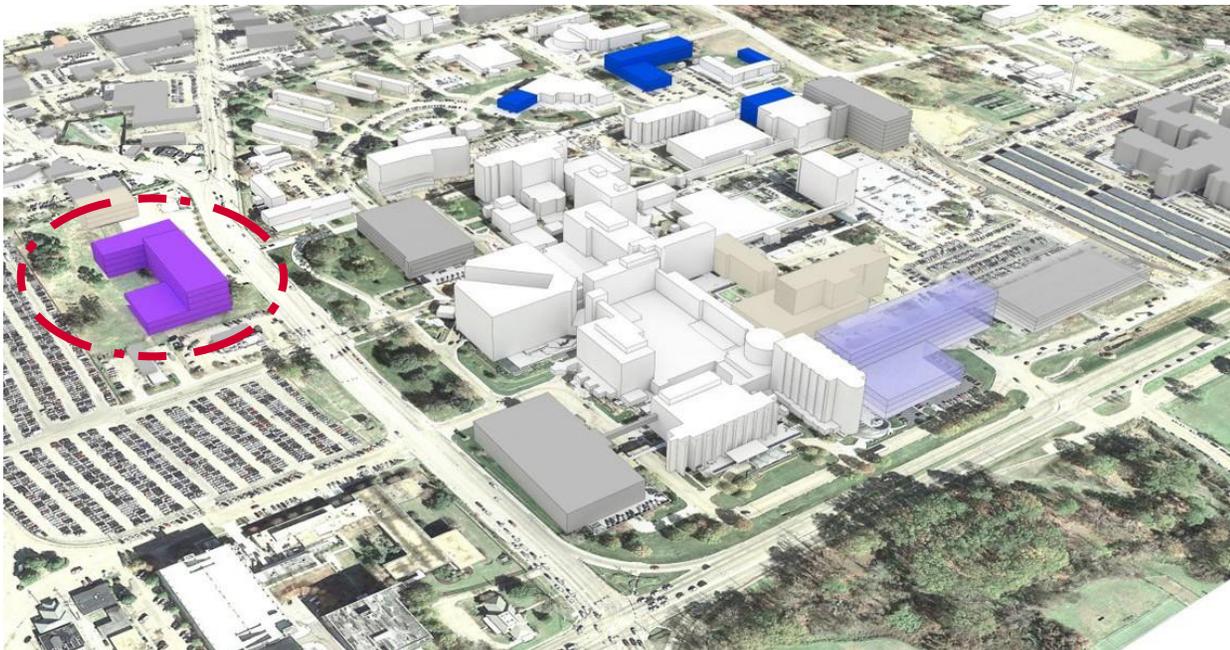


**Ambulatory Building Site Option 1
Behind Peds**





**Ambulatory Building Site Option 2
Fronting North State Street**



Imaging and Lab Consolidation

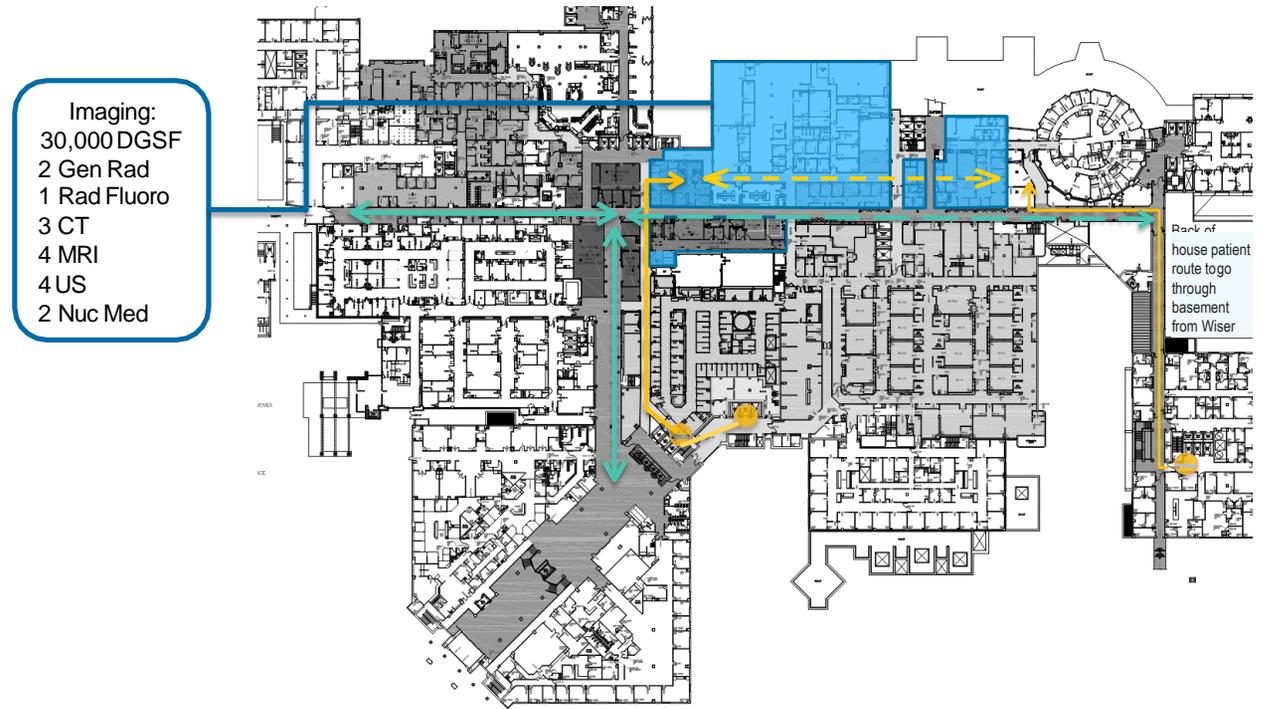
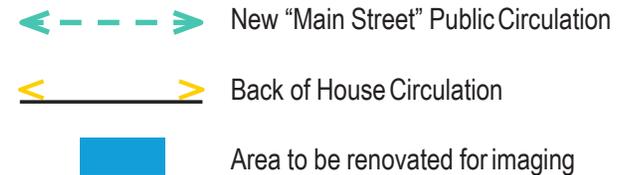
Both the imaging and lab departments are dispersed throughout the main hospital and each department's ability to fully consolidate is dependent on the other.

Laboratory

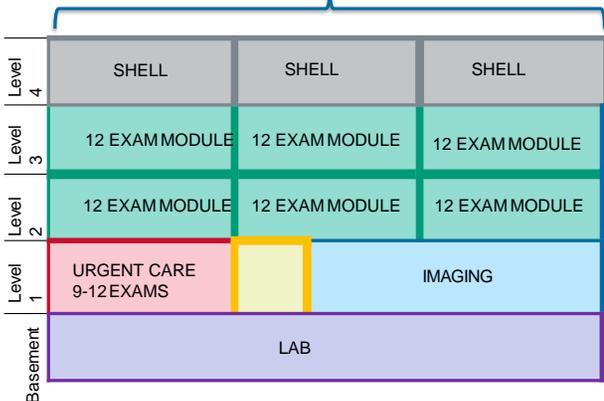
Lab services are located in 15 distinct locations throughout the Main Hospital leading to inefficiencies in both process and space utilization. Due to current constraints in the main hospital, there is limited possibility for growth or consolidation. When the new ambulatory building is built on campus, a basement level can be added providing up to 40,000 DGSF of space for the relocation and consolidation of the lab. Both proposed sites for the ambulatory building could be connected to the Main Hospital via pneumatic tubes.

Imaging

After the lab has relocated into new construction, the core lab on level one will be vacated. This space, in addition to surrounding space that will become vacant with a proposed first floor "Main Street" will allow all imaging services (with the exception of IR) to be collocated on the first floor. Back of house corridors will be maintained in any design proposal to allow for the separation of public and private paths of travel.



Pavilion Replacement



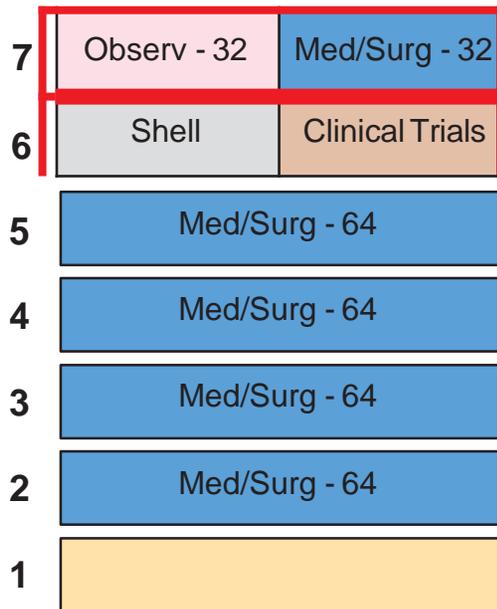
Proposed Future Adult Bed Stacking

Bed Summary	2026 Bed Needs	Planned Beds
Med/Surg(Main)	261	288
Med/Surg(Wiser)	35	59
ICU/Step-Down	113	112
Maternity	37	31
Psych(existing)	23	27
Total Beds	469	517
Observation and LDR		
Observation	42	32
LDR	8	10

Adult Inpatient Realignment

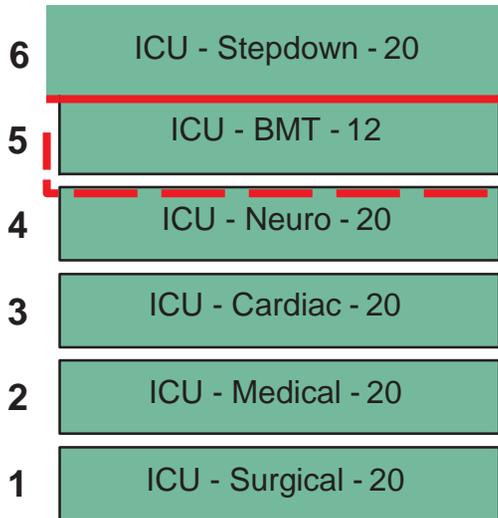
To meet the current and 10 year projected need for beds, it is recommended that the shell floors in Wallace Cornerly and the Adult Hospital be fit out. This will provide an additional 84 beds on campus and will alleviate the current concerns of boarding patients. These 64 additional beds should ease some of the overflow capacity in Wiser and allow it to return to being a predominately Women’s services tower. The Current overflow LDR rooms on Wiser 2 should be renovated to provide a total of 10 right-sized LDR rooms.

Shell Floor Fit Out for Observation and Med/Surg Units



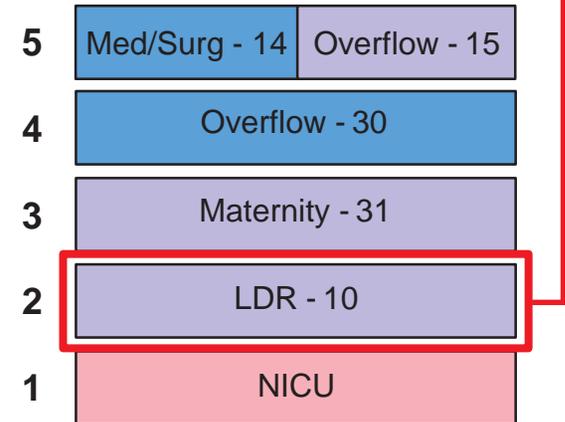
Adult Hospital: **384**

6th Floor - Shell Fit Out for ICU
5th Floor - Consider Relocation of BMT to increase ICU Beds



Wallace Cornerly: **112**

LDR Renovated to Add More Beds



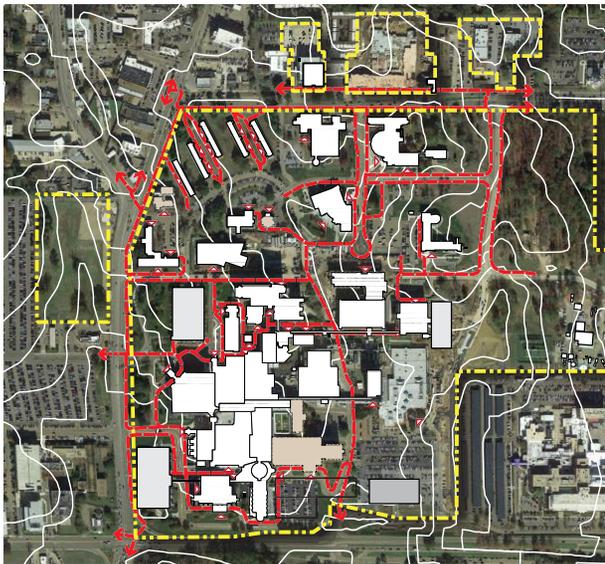
Wiser Women's: **90**

Campus Planning

The Campus Planning effort began with an analysis of UMMC's current campus and a discovery of the shortfalls that need to be overcome with the new campus plan. The campus plan builds upon zoning that was created with the 2010 master plan and creates a framework to guide future building endeavors.

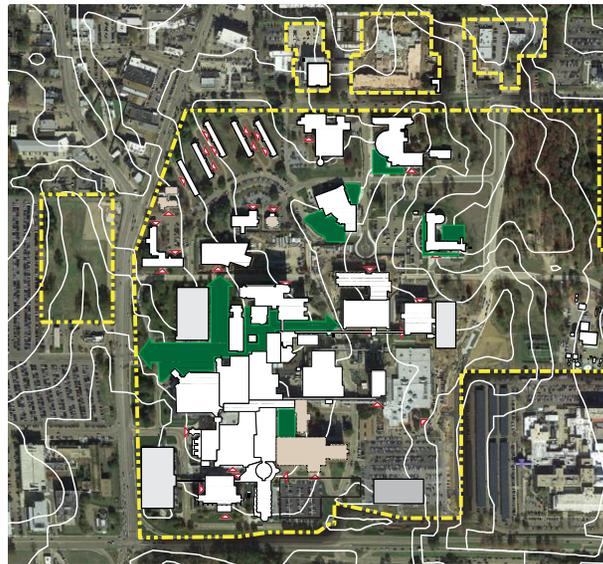
The campus plan used the following strategies to ensure its success within the guiding principles:

- Strategic Campus Decisions to make the best use of existing facilities
- Ensure Clear and Ease of Wayfinding to improve patient access and student/visitor experience
- Create an environment that reflects the brand and identity of UMMC
- Create an environment that encourages informal interactions to foster student collaboration and multidisciplinary partnerships
- Create an inviting atmosphere for patients, students and visitors



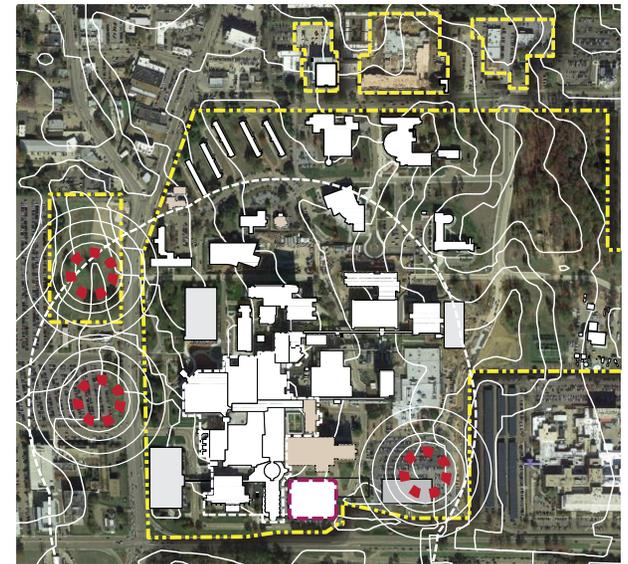
Existing Pedestrian Network

The current UMMC campus is challenging for pedestrians to navigate, with no clear sidewalk system or overarching wayfinding strategy



Existing Green Space

UMMC has some green space on campus, but most of it is in areas that aren't user-friendly and lack cohesion

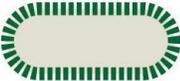


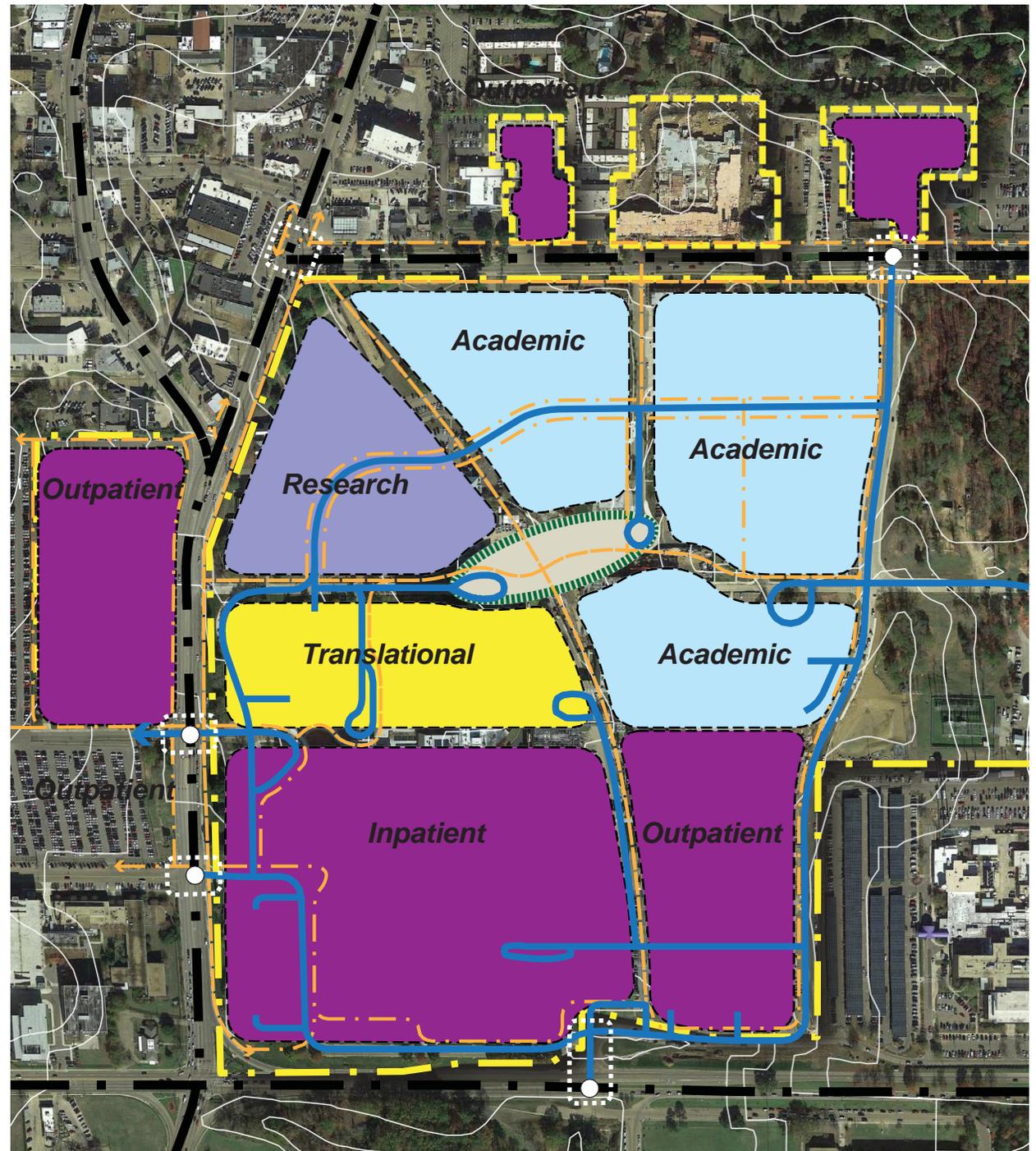
Potential Development Sites within 250 yd

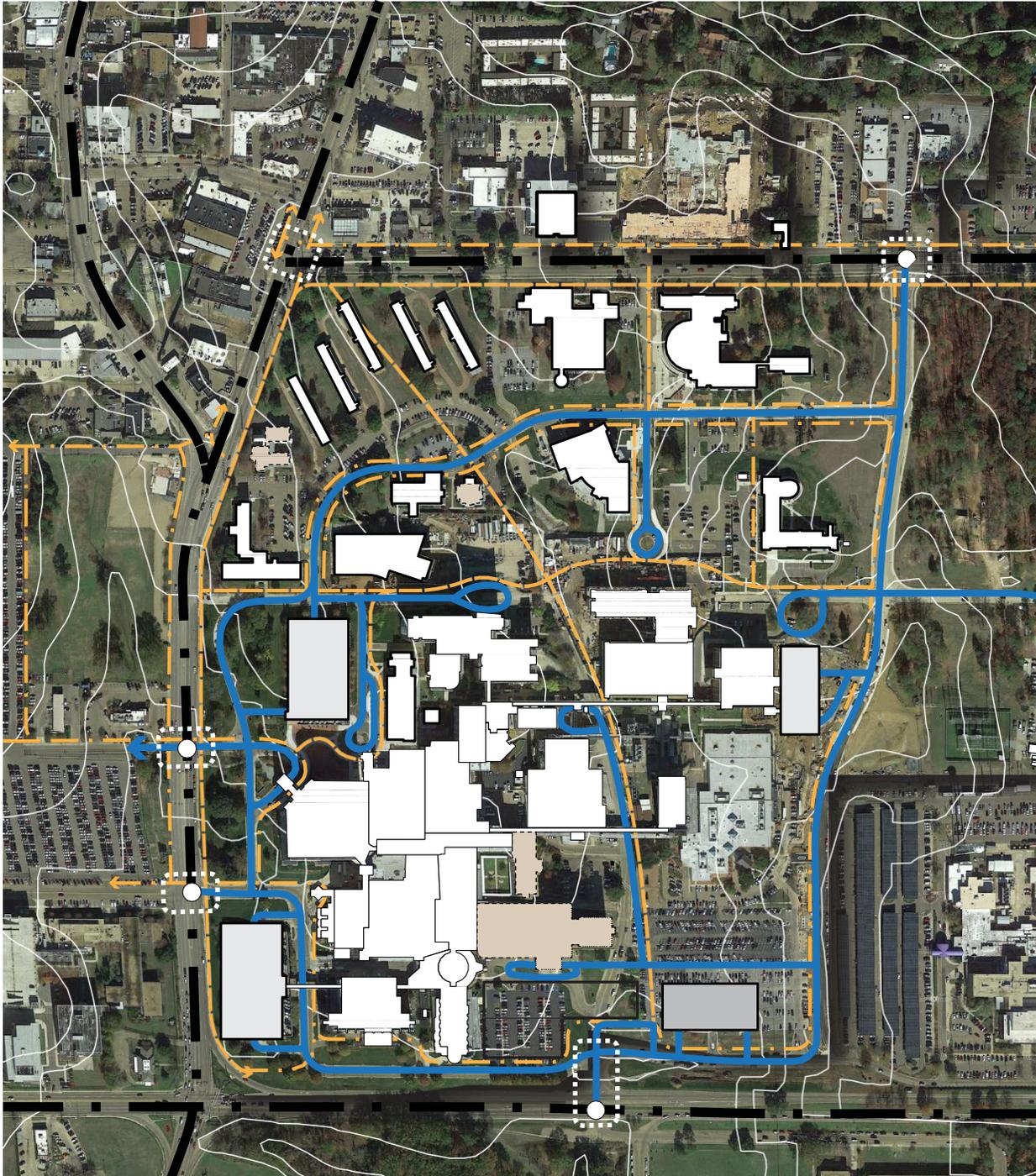
While there are many future development sites on campus and across State St. Only 3 of these fall within the 250 yd CMS regulation

Campus Zoning

To create a framework for locating future developments, the campus has been zoned into areas for each of the distinct missions. The zones are tied together by a central campus open space - which can be a combination of hard-scape and green space- to give the campus an identity.

-  Proposed Campus Center
-  Proposed Vehicular Campus Entry
-  Pedestrianized Intersections
-  Proposed Campus Pedestrian Network
-  Proposed Campus Vehicular Network
-  Proposed Limited access Vehicular





Pedestrian and Vehicular Paths

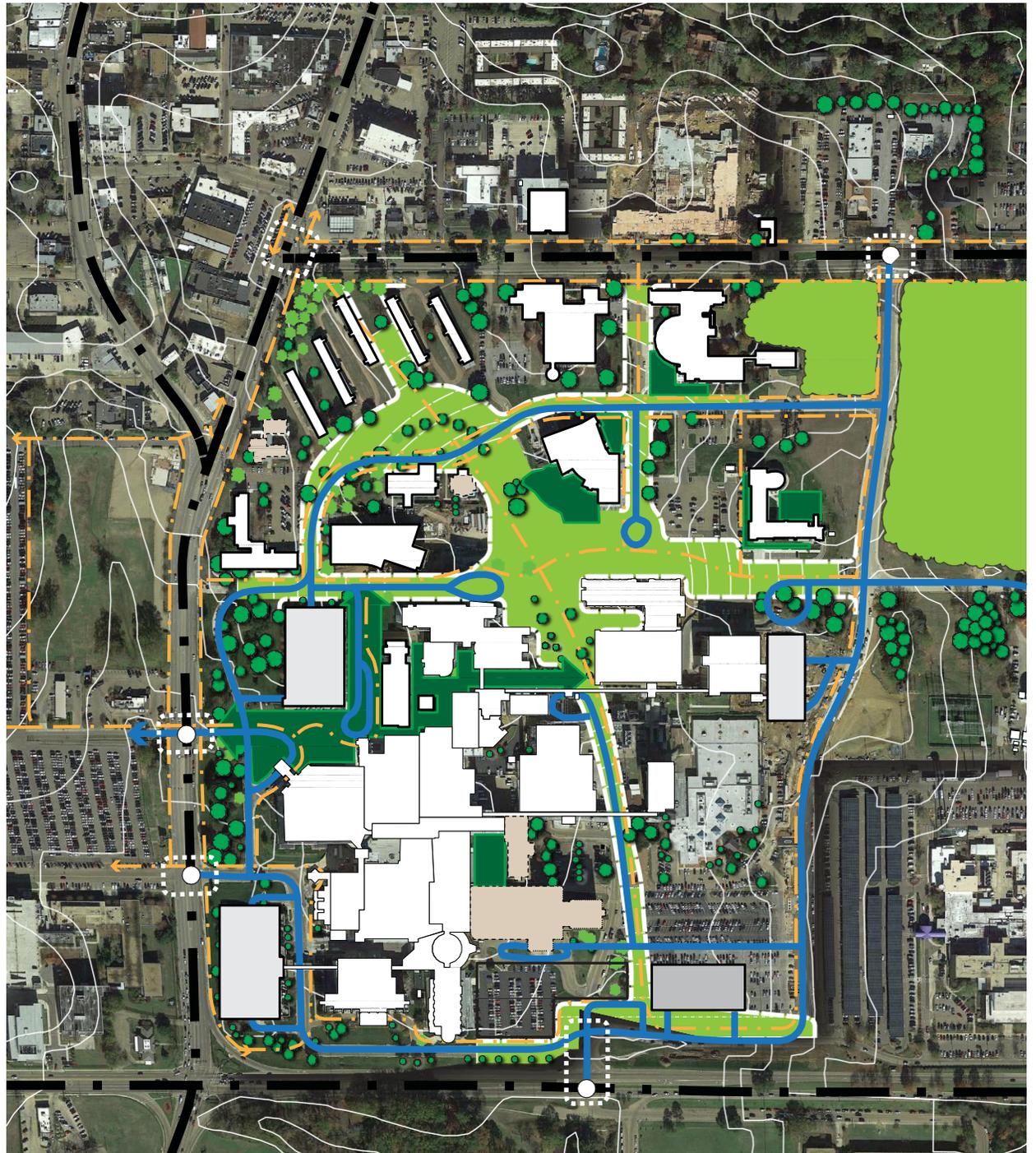
The Campus will continue to be encircled by a loop road, which will serve as the primary circulation path for the majority of people coming to campus. The roads on the interior of campus will be restricted and only used for deliveries and the campus shuttle system to make campus as pedestrian friendly as possible.

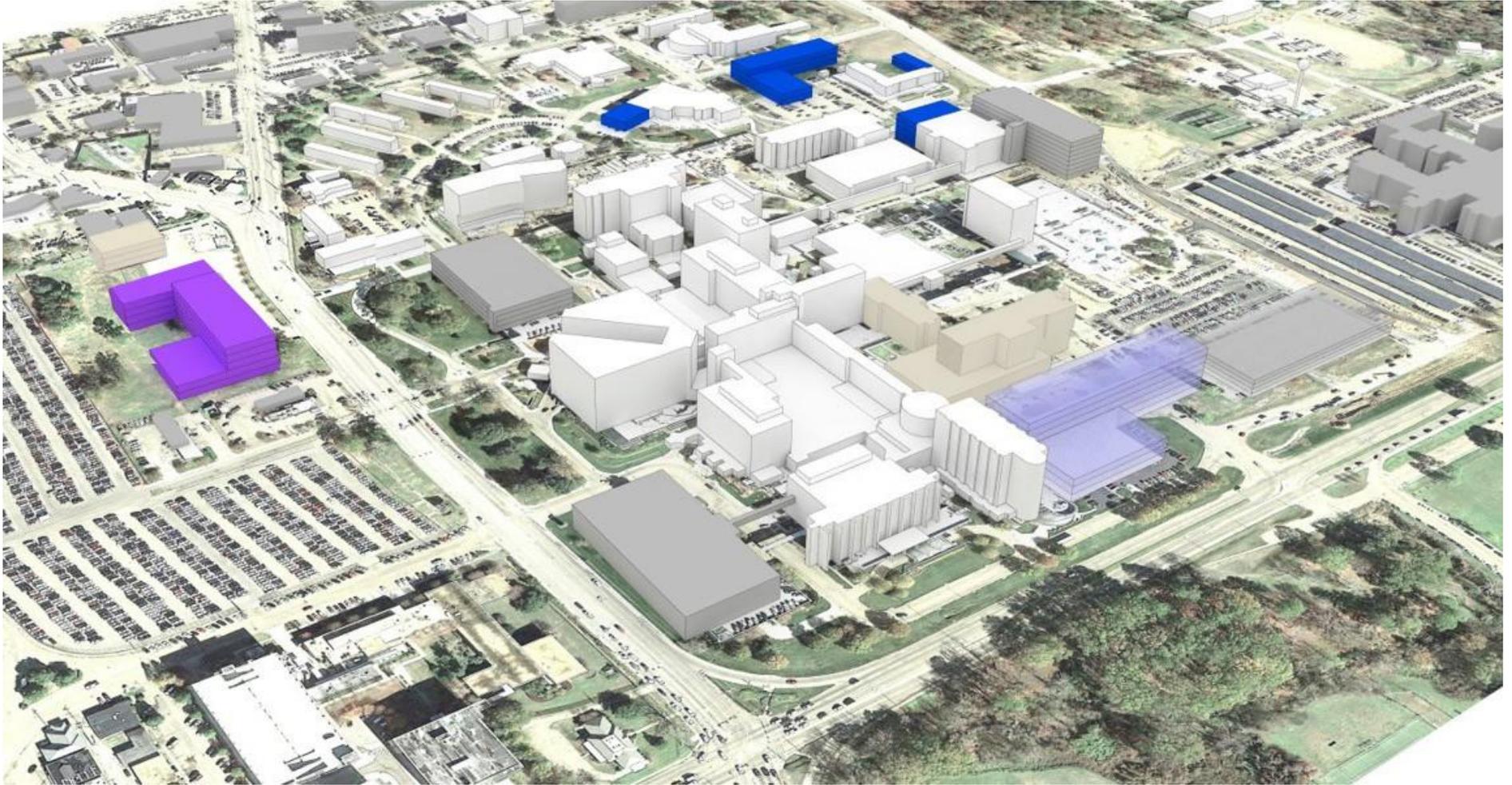
-  Proposed Vehicular Campus Entry
-  Pedestrianized Intersections
-  Proposed Campus Pedestrian Network
-  Proposed Campus Vehicular Network

Campus Green Space

A network of green space connected to the pedestrian paths helps to tie the various elements of campus together. In future development of the campus, these space just be preserved as open space to maintain a campus center and help with wayfinding.

-  Proposed Vehicular Campus Entry
-  Pedestrianized Intersections
-  Proposed Campus Pedestrian Network
-  Proposed Campus Vehicular Network





**Campus Master Plan
Final Recommendation
Showing Ambulatory Option 2**

