

# UNIVERSITY OF ARKANSAS MASTER PLAN SUMMARY 

February 2009

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This document reports on planning efforts leading to policy recommendations and physical interventions that will allow the University to reach its goal of becoming a world-class institution.

FM Planning Group directs a broad range of planning issues, including land use and master planning, campus development standards, landscape design, transportation planning, resource allocation oversight, and facilities assessments. This group is the source for strategic and physical planning at the University of Arkansas, and ensures that all projects support the academic goals of the University and promote the highest physical potential of the Fayetteville campus.

FACILITIES MANAGEMENT PLANNING GRロUP H T T P : / / P L A N N I N G. U A R K. E D ப

FACILITIES MANAGEMENT PLANNING GRQUP

## INTRODUCTION

February 27, 2009
Dear University of Arkansas Board of Trustee Members,
During recent board meetings, several elements of our planning efforts have arisen in the discussions. In an effort to inform you of our progress, we are providing this summary of our current campus planning program. This booklet includes a series of topics that describes the development of our campus plan, briefly summarized and with examples from the actual planning documents.

Over the past five years, we have developed a mosaic of documents that cover most subjects commonly expected in a campus land use and development plan or campus master plan. These documents are posted on our campus planning website (http://planning.uark.edu) and are readily available to the public.

The intent of these summaries is to familiarize you with the extent of our efforts to provide a full range of planning tools for our institution. Our campus leadership can use this information for strategic and operational planning in support of our academic mission.

Planning, by its very nature, is not a static process, but a dynamic, ever-changing practice requiring adaptation and flexibility over time. There are some principles, however, that are fundamental and should be respected in future work. This plan reinforces many of the best ideas from the past, while also responding to current conditions and predicting future outcomes. Our campus planning mosaic, therefore, has distinct plans in many stages of development, review, and updating at any given time.

Your valuable time to review this summary is very much appreciated, and we hope that this has proven helpful for your future work. We would certainly appreciate your comments to improve our efforts; should you have any questions, please do not hesitate to call upon us. My email address is mrjo3@uark.edu, and my telephone number is 479-575-6601.


Associate Vice Chancellor for Facilities
University of Arkansas

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## PAST PLANNING AT THE UNIVERSITY


dates:
October 1925
consultants:
Jamieson \& Spearl

Because of the University's rural setting, the first buildings on the campus were scattered throughout the landscape in an informal way. Dormitories, classroom buildings, and athletic fields were built as money became available, loosely filling the rectangle formed by Dickson and Maple Streets in one direction, and Arkansas and Garland Avenues in the other. These buildings were not conceived as part of a larger group, leading to a disorganized and unfocussed academic setting.

In the early 1920's, the University commissioned the architectural firm Jamieson \& Spearl to design a long-range plan for the campus. The Plan called for the demolition of all existing buildings and the construction of an urbane campus of interconnected Gothic buildings, similar to the work then taking place at Yale and Princeton, among others. The proposal, illustrated in paintings of both plan and perspective, showed a tightly structured grouping of academic quadrangles with space to house 8,000 students. The arrangement of buildings was principally orthogonal, although adjustments were made along the edge of the campus plateau, where the hillside falls steeply away.
masterplan intentions:

- Collegiate Gothic architecture
- buildings create quadrangles and courtyards
- buildings align in an ordered way
- topography and views are celebrated
- simple landscape of lawns, ivy, and canopy trees
- high aspirations for architectural quality

The Plan guided construction for many years, with a total of ten buildings in the Gothic style built more or less according to the initial vision. The Greek Theatre and the stadium were also placed as directed by the Plan, each taking advantage of a natural declivity adjacent to the plateau. Most importantly, the 1925 Plan, though not fully realized, set up a basic geometric structure for the campus that would persist for some years-even when the Gothic style was abandoned. By the 1960's, however, the ordered arrangement of buildings envisioned by the plan was abandoned, and new buildings were placed without reference to a broader vision. Buildings were planned in an ad-hoc manner, filling up vacant spaces without regard to the overall campus structure, obscuring vistas, blocking major paths, and creating unusable, leftover land.



dates:
September 1998
consultants:
Sasaki Associates
Foster | Witsell Evans \& Rasco

In the late 1990's, the University hired Sasaki Associates of Boston/San Francisco to reintroduce planning to the campus. The 1998 Plan was not a physical master plan in the manner of the 1925 Plan, which presented a complete aesthetic and spatial vision for the campus, but rather a catalogue and analysis of existing physical conditions and space needs, and a resulting series of policy recommendations.

The plan projected space needs for a campus of 20,000 students, reviewed existing buildings for possible restoration, renovation, or demolition, and proposed general sites for new buildings. It presented a list of future buildings with associated programs, but recognized that any plan that goes beyond general principles is a "working tool" that will be reshaped as conditions change:

In order to be effective, the Campus Master Plan must be implemented, monitored, interpreted, enforced, and, if necessary, modified over time. This requires an ongoing process, because no plan can be prescriptive enough to anticipate future events in detail, if at all.

A portion of the plan was devoted to laying out a series of basic design principles for landscapes, building arrangement, building materials and colors, etc. Its role in physical planning was described as the following:

To provide guidelines to direct the physical and environmental growth of the campus, ensuring cohesive land use and provisions for open space, new building locations, support facility locations and compatibility with the City of Fayetteville . . The guidelines include recommendations for a vocabulary of building and site material, scale and relationships that strive to ameliorate current visual discord and make the future campus more coherent and beautiful.

- Campus edges should be distinguished by gateways, landscape, and design character that is consistent with the character of the campus but compatible with the diversity of the adjacent neighborhoods.

Principle 11: The campus and the adjacent community should be connected by open spaces, pedestrian and bicycle ways, and streets.

- Pedestrian routes that connect the campus with the off-campus population should be identified and enhanced in order to encourage more walking and bicycle traffic in lieu of automobile commuting.

Principle 12: On-campus land uses should be developed to be compatible with adjacent urban neighborhoods and should minimize adverse effects. Densities and design quality should also be compatible.

## Character of Buildings in the Campus Setting

Principle 13: New development should be primarily urban in character. Urban buildings are those which create, reinforce, and define the public open spaces of the campus by delineating the boundaries of these spaces.

- Their facades and spatial form places emphasis on the public outdoor space which the building fronts, rather than on particular parts of the building's program.

Principle 14: Development should balance individual expressiveness with contextual responsibility. Buildings should enhance and elaborate the civic qualities of the public outdoor spaces of the campus.

- While every building ought to have its own identity and personality, buildings should also express a general consensus about architectural design and about the spatial structure and architectural character of their district. By their agreement with each other about the general parameters and intentions of architectural design, these buildings establish the architectural character of their district as a whole.

Principle 15: Landmark buildings are exceptional and should be judiciously located at crucial nodes in the plan of the campus. This special status should be considered for buildings with a program that is public in character.


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## CURRENT PLANNING AT THE UNIVERSITY




## CAMPUS PLAN


dates:
2004 - present

The current Campus Plan, created and administered by Facilities Management Planning Group, identifies new and infill building sites, sets building alignments and massing, integrates transportation projects, and ties real estate acquisitions to a physical plan for campus development. The plan is tied to a capital strategic plan for construction with associated budgets for new buildings, renovation, restoration, and demolition, as well as streets, trails, and landscapes. The plan shows the full buildout potential of the central campus, and demonstrates that the University has ample room for development within the campus growth boundary.

The urban design strategy of the plan is instructed by earlier planning efforts, particularly the 1925 Plan, and seeks to create a coherent and structured campus environment that promotes the academic mission of the University. The plan encourages new buildings and additions on infill sites as a way of optimizing the use of land resources, while simultaneously improving the campus landscape by better defining outdoor spaces and removing parking and drives from pedestrian areas.

The plan integrates information from the Housing Plan, the Transportation Plan, the Preservation Plan, the Facilities Condition Assessment, etc. into a single vision for physical development.


## EXCERPT | CAMPUS PLAN



## opposite

The Campus Plan illustrates how infill development (shown in yellow) can make best use of the University's land resources. Without expanding the central campus, almost 3,000,000 sf of new construction is possible within the Historic Core, Mcllroy Hill, Evergreen Hill, Maple Hill, Rose Hill, and Athletic Valley districts.

Some of the major ideas include:

- 3 to 4 story buildings respect historic scale of campus
- buildings arranged around quadrangles and courtyards
- infill missing parts of existing buildings
- wooded hillsides/greenspace create coherent edges for districts
- connect streets to provide more complete vehicular network
- create transition of scale between campus and neighborhoods
- parking eliminated from pedestrian districts
- parking garages at perimeter of campus


## above

The Historic Core is the only area of the campus with an historically strongly-established order (established by the 1925 plan). Most building projects after the 1950's have done little to strengthen or clarify that order. Future growth in the Historic Core should follow a simple strategy of completing the unfinished courtyard spaces, such as at the School of Agriculture or Fine Arts Center. The plan above shows the potential sites that could be filled in with this strategy. New construction is shown in red. Critical building alignments are shown by the red hatch.



## DESIGN AND CONSTRUCTION GUIDE


dates:
2004 - present

Campus buildings and landscapes must meet the academic requirements of the University, adhere to planning objectives, and maximize the long-term value of the state and private funds invested. Architects, engineers, and contractors working on campus are expected to develop projects that meet campus goals, and the Design and Construction Guide for Buildings and Landscapes is a tool to assist their efforts. The guide simplifies a consultant's work by outlining general expectations, which are flexible and broad in scope, and delineating specific requirements and specifications that must be strictly followed. Clearly laying out these guidelines and policies at the beginning of each project makes designing for the University as consistent, predictable, and unambiguous a process as possible. It also guarantees a more coherent campus environment, and simplifies campus maintenance.

The guide is periodically updated to assure the best value to the University in maintainability, sustainability, durability, and quality in our buildings and landscapes. In addition to university experiences in designing, constructing, using, and maintaining facilities at the Fayetteville campus, feedback from our capital project consultants concerning their experiences with new materials and techniques is important to the ongoing success of the University's guidelines. Our consultants are encouraged to provide comments to Facilities Management to improve future editions of the guide.


Minimizing the visual impact of drainage structures - Because most attention in hardscape/landscape design is paid to those elements which are seen and used by the general public, oftentimes drainage and other civil engineering structures are left unintegrated with the overall design. The result can be disjointed and ugly. In order to minimize the visual importance of drainage inlets, the designer should consider the following: In large paving areasterraces, etc-trench drains are preferred over box inlets. In lawn areas, all inlets should be detailed without an exposed concrete collar. see campus landscape standards for inlet detail


Design of site stairs - site stairs are a common feature on the hilly UA campus. In order to minimize their visual impact, all stairs should be designed to be flush with adjacent grade. "Cheek walls" are not allowed.


Retaining walls - retaining walls, when necessary, should be no higher than 5 ft from grade. When the change in elevation is greater than 5 ft , retaining walls should be combined with slope regrading-see below. Local materialsi.e. sandstone or limestone-should be used for walls in prominent locations. Service areas, and other locations hidden from general view, may be of concrete, although some allowance should be made for ivy or other plant material to cover the surface.


Construction of curved walks - care must be taken during the construction of curved walks (curved in either plan or section) to make sure that they are not constructed in "facets," but instead as true curves.


## EXCERPT | DESIGN AND CONSTRUCTION GUIDE

The University has only a few examples of quads designed and built as a single architectural composition as the 1925 Campus Plan intended. From these examples, however, several basic types of quads can be identified, types which may prove useful in future building. see examples below


The 1998 Campus Master Plan recognized the importance of reinvigorating the planning strategy of the 1925 Campus Plan. The Plan rejected the post-WWII move toward "object" buildings randomly placed within large swaths of parking, and called for a return to arranging buildings to delimit green outdoor spaces.
from the 1998 Campus Master Plan:
Principle 18: Buildings should have a civic role that strengthens the civic structure of the campus by defining its spaces. Campus buildings must provide definition and enclosure for outdoor public spaces and help give them their distinctive memorable qualities. Buildings must define, reinforce, enhance, and articulate these spaces by their siting and massing and by the materials and design of their facades. Campus buildings are to be primarily space-defining buildings, rather than space-occupying buildings.

Principle 20: Many of the pre-1950 buildings of the core campus exemplify desirable principles of architectural and urban design, are worth preserving and warrant close study, both for their specific design solutions and campus contribution. [excerpt]


HANDRAIL A (decorative posts) - Classic CAD file available for download at http://planning.uark.edu


[^0]
## EXCERPT | DESIGN AND CONSTRUCTION GUIDE

LANDSCAPE STANDARDS
UNIVERSITY OF ARKANSAS


SENIOR WALK
CAD file available for download at http://planning.uark.edu

01.07.2008
b22 Landscape Standards

## HOUSING PLAN


dates:
June 2005 - October 2006
consultants:
Hanbury Evans Wright Vlattas + Company
Brailsford \& Dunlavey

Clearly, the Steering Committee sees a greater role in the future for academically integrated living/learning environments that each have a unique mission and identity and help to develop a strong sense of community in their residents.

This desire for diversity of living units and academic offerings, combined in a variety of community types, is in direct contrast to the units and designs of the existing residential buildings.

The Housing Plan was developed in response to increased enrollment, changing student expectations, and a broadened mission for housing on campus. The primary goals of the plan are to:

- create more diversity of unit types and living arrangements within the housing system
- update, refresh, and renovate existing buildings deemed valuable for the system's future needs
- identify and create a plan that permits the demolition of buildings whose conditions or layout are not able to be corrected with reasonable effort or funds
- enhance the nature of student community development and academic success
- enhance the role of housing as a positive factor in the recruitment of students
- create a series of actions, over a defined timeline, that are financially feasible and supportive of the above.

The consultants studied existing buildings for renovation possibilities, and suggested demolition for those buildings that could not be reconfigured to meet the goals listed above. In addition, the team studied two campus districts, Maple Hill and Mcllroy Hill, testing them for the amount of new construction (i.e. number of beds) they could reasonably hold while respecting the historic scale and character of the surrounding campus.

The plan was phased to balance new construction and demolition over time, so that as student accommodations are removed they are replaced, and the total number of beds remains adequate for student demand.

## Clearly, the Steering Committee sees a greater role in the future for academically integrated living/learning environments that each have a unique mission and identity and help to develop a strong sense of community in their residents.

This desire for diversity of living units and academic offerings, combined in a variety of community types, is in direct contrast to the units and designs of the existing residential buildings.

Bed Capacity by Unit Type / Existing

|  | Traditional | Suites | Apartments |
| :---: | :---: | :---: | :---: |
| Buchanan-Droke | 92 |  |  |
| Futrall | 243 |  |  |
| Gibson | 94 |  |  |
| Gladson-Ripley | 100 |  |  |
| Gregson | 200 |  |  |
| Holcombe | 144 |  |  |
| Humphreys | 440 |  |  |
| Pomfret | 809 |  |  |
| Reid | 455 |  |  |
| Walton |  | 138 |  |
| Yocum | 536 |  |  |
| Carlson Terrace |  |  | 300 |
| NW Quad |  | 603 |  |
| Totals | 3,113 | 741 | 300 |
| Percent of Total | 75\% | 18\% | 7\% |
| Traditional $=$ Double Rooms, Hall Baths |  |  |  |
| Suites = Shared Baths, Sometimes with a Living Room/New Quad |  |  |  |
| Apartments $=$ With Living Room and Kitchen |  |  |  |

The Brailsford and Dunlavey Market Study (Appendix B) also demonstrates the vast discrepancy between the existing inventory of traditional rooms with shared baths and the overwhelming market desire for private bedrooms and apartment style units.

## Replacement Value and Recommended Disposition

The planning team has estimated a cost (in 2006 dollars) to replace each of the existing residence halls, based on costs experienced in the construction of the Northwest Quad. These costs have then been used to judge the advisability of replacement versus renovation. The following scenario has begun to emerge:

The University should expect to lose approximately 330 beds of capacity through the demolition of Buchanan-Droke, Gladson-Ripley, and Bud Walton, and 300 apartments through the eventual demolition of Carlson Terrace

The University should further evaluate the feasibility of replacing Yocum, Humphreys and Futrall. If renovated, these buildings might lose $10 \%$ to $20 \%$ of their capacity to mechanical chases, bathroom expansion, the creation of floor lounges, and ADA upgrades.

The University should plan to renovate Pomfret, Reid and Holcombe ( 1,400 beds) for continued use, with loss of perhaps $10 \%$ of capacity when renovated, at no more than $75 \%$ of replacement value. Gibson, Gregson, and the Northwest Quad should receive annual minor upgrades and maintenance.

|  | gsf | beds | on per bed basis at \$72,000/bed | on per gsf basis at \$220/gsf |
| :---: | :---: | :---: | :---: | :---: |
| Buchanan-Droke | 21,163 | 92 | \$6,624,000 | \$4,655,860 |
| Gladson-Ripley | 21,163 | 100 | \$7,200,000 | \$4,655,860 |
| Walton | 79,586 | 138 | \$9,936,000 | \$17,508,920 |
| Total |  | 330 | \$23,760,000 | \$26,820,640 |
| Carlson Terrace | 167,475 | 300 |  | \$36,844,500 |
| Yocum | 107,014 | 536 | \$38,592,000 | \$23,543,080 |
| Humphreys | 101,414 | 440 | \$31,680,000 | \$22,311,080 |
| Futrall | 50,015 | 243 | \$17,496,000 | \$11,003,300 |
| Total |  |  | \$87,768,000 | \$56,857,460 |
| Pomfret | 179,209 | 809 | \$58,248,000 | \$39,425,980 |
| Reid | 95,235 | 455 | \$32,760,000 | \$20,951,700 |
| Total |  |  | \$91,008,000 | \$60,377,680 |
| Gibson | 31,488 | 94 | \$6,768,000 | \$6,927,360 |
| Gregson | 66,103 | 200 | \$14,400,000 | \$14,542,660 |
| Holcombe | 52,558 | 144 | \$10,368,000 | \$11,562,760 |
| Total |  |  | \$31,536,000 | \$33,032,780 |
| GRAND TOTAL |  |  | \$234,072,000 | \$213,933,060 |

[^1]$\$ 72,000$ per bed replacement cost is based on Northwest Quad project cost ( $\$ 43,000,000$ for 603 beds)
$\$ 220$ per gsf project cost for replacement is based on NW Quad project costs escalated to 2006
20 | Hanbury Evans Wright Vlattas + Company

Figure 4: Potential reconfiguration of
Futrall Hall floor plan


## EXCERPT | HOUSING PLAN



## Phase II Projects



Phase III Projects


## TRANSPORTATION PLAN


dates:
August 2004 - November 2005
consultants:
Martin Alexiou Bryson
[The] Campus Transportation Plan, therefore, provides a strategy to address the University's current and future transportation needs. The Plan reflects the University's commitment to sustainable and responsible growth. It focuses on transportation plans and policies that meet the growth challenge while addressing the sustainability goal and enhancing the campus environment.

The Transportation Plan was developed to create a comprehensive campus strategy for all modes of transportation on and around the campus, with the idea that transportation is about moving people, not just moving vehicles. The team studied basic automobilecentered problems such as parking demand, level of service (LOS) at intersections, traffic patterns, trip distribution, commuter routes, etc. and also investigated the campus and surrounding area for pedestrian paths, transit routes, bicycle routes, and trails.
some aspects of the plan:

- travel demand management (TDM) to reduce the need to construct new parking
- pedestrian friendly streets
- improved/extended transit to reduce need for cars on campus
- accommodating bicycles
- completing pedestrian networks
- more efficient use of existing parking
- proper parking priorities which respect campus green spaces, pedestrian safety, and the University's history and character.
- park and ride/remote parking to conserve central campus for academic use

In making numeric projections, the team looked beyond the 2010 Commission's goal of 22,500 students toward a full campus buildout of approximately 28,000 students. The proposals in the plan also took into account future physical changes, such as removal of all parking in the Historic Core, the city's master trail plan, major growth areas surrounding the campus, etc. in order to make the plan relevant in the long term.

University transportation policy shall, above all, further the academic mission of the University of Arkansas and contribute to the intellectual and physical development of its students, faculty, and staff.
peers in the Southeastern Conference (Table 3.2). The opening of the HAPF will increase this ratio.

Table 3.2: Parking Spaces per Person - Peer Comparison

|  | Ratio |
| :--- | :---: |
| Arkansas (2004) | 0.44 |
| Peer average * | 0.42 |
| Peer range * | $0.21-0.57$ |

Many campuses experiencing major growth have committed to reducing this ratio as they grow. These campuses include:

- University of North Carolina at Chapel Hill
- University of Wisconsin-Madison
- University of Maryland
- University of Washington (Seattle)
- University of Kentucky
- University of Chicago

These campuses are promoting alternative commuting modes, including transit, ridesharing, park-and-ride, cycling, and other strategies to reduce reliance on driving and parking on the campus.

## Existing Parking Demand

The peak parking demand on campus is estimated to be 7,270 spaces (Fall 2004). This is based on parking occupancy counts undertaken in 2000, 2001, and 2004, and factoring in demand to account for student growth in that period. This leaves 2,100 spaces unoccupied on a daily basis. Therefore, with the opening of the HAPF there is an abundance of parking on the campus. However, parking nearer the core of the campus is typically filled, while some remote lots have plenty of available parking. If the known use of off-campus parking $(1,180$ spaces) is included, the total University demand is closer to 8,450 spaces.

## Existing Parking Allocation and Pricing

The University's parking lots are currently all allocated to particular types of users (Figure 3.7). This is a common system among universities. In general, the spaces at the heart of campus are reserved. Further out, most lots are allocated to resident students (in clusters close to the residence halls) and to faculty/staff. The peripheral parking lots on the southern, western and north-eastern fringes are allocated to commuter-students. One exception is Lot 44 (commonly referred to as the Stadium Lot or "The Pit") which is unusually close to the core of the campus, and cheap, for student commuter parking.

The largest remote lot (referred to as an "off-campus" lot) is Lot 56 on 6th Street,

## EXCERPT | TRANSPORTATION PLAN

## Future Parking Demand

Parking demand is a reflection of commuting patterns, a function of housing availability, availability of alternative commute modes, and the relative costs of these compared to driving and parking. These factors could reduce demand for parking without any action by the University.

Projected student enrollment can be used to estimate future parking demand, assuming continued availability of parking and no change in current travel habits (i.e., the current ratio of spaces used per person is maintained). The Fall 2004 enrollment was 17,400 students. The 2010 Initiative anticipates growth to 22,500 , close to a 30 percent increase. While no projections have been developed for beyond the 2010 Initiative timeframe, it is conceivable that the University could ultimately (at build-out) have 25,000 , and possibly up to 30,000 , students. Assuming 28,000 students for planning purposes would result in an approximate increase of 60 percent in parking demand.

Therefore, the future parking demand (including people parking off-campus and assuming current parking ratios are maintained), is estimated to be:

17,400 students (current conditions): $\quad 8,450$ spaces
22,500 students (2010 Initiative): 10,985 spaces
28,000 students (at build-out): $\quad 13,520$ spaces

## Future Parking Shortfalls

Based on the projected parking losses, and the potential growth in demand, future parking shortfalls are estimated accordingly:

|  | Effective Supply | Demand | Shortfall (effective <br> spaces) |
| :--- | :--- | :--- | :--- |
| 2010 Initiative | 8,560 | 10,985 | 2,425 |
| Build-out | 8,100 | 13,520 | 5,420 |

The future demand includes people currently parking off-campus. Over time it can be expected that some on-street parking, as well as private and public lots now available to students, mostly free of charge, will be eliminated or restricted. This is a common phenomenon in areas experiencing growth, where demand for parking rises, parking lots disappear with development, and on-street parking is removed for safety or capacity reasons or is more rigidly controlled.

For this study, it is assumed that by the end of the 2010 Initiative timeframe only 800 of the 1,180 off-campus spaces that are now used will be available, dropping to 600 available by build-out of the Campus Master Plan. Factoring in theses losses, and converting the effective supply to actual spaces needed, results in the following shortfalls:

|  | Effective Shortfall (with <br> off-campus spaces) | Actual Space Shortfall |
| :--- | :--- | :--- |
| 2010 Initiative | 1,625 | 1,805 |
| Build-out | 4,820 | 5,355 |




## SIGNAGE AND WAYFINDING PLAN



## University of Arkansas

Signage and Wayfinding Master Plan
20 October 2005
$\qquad$
dates:
August 2004 - present
consultants:
Cloud Gehshan Associates
Martin Alexiou Bryson

An effective sign program stems from addressing the needs of an institution's audience. Across the board, those who use the University of Arkansas campus require unambiguous and up-to-date direction to and from facilities, identification of facilities, appropriate entrance information, units and services located within a particular facility, and street addresses.

The initial phase of the Signage and Wayfinding Plan was commissioned as part of the Transportation Plan in order to provide a framework of signage types that would be necessary to improve and unify the University's wayfinding system. The second phase of the plan included the development of a specific wayfinding strategy to lead visitors, for example, from Interstate 540 to the campus, from the campus edge to parking, and from parking to individual destinations. The team worked with groups from across campus, including Administration, University Advancement, Admissions, Athletics, Student Affairs, Facilities Management, etc. to develop specific signage designs that would complement the character of campus architecture and landscape, project the University's identity, and withstand changes in fashion through time. Sign types that were designed as part of the plan are:

- interstate trailblazer
- vehicular directional
- parking lot identification
- neighborhood gateway
- pedestrian directional
- pedestrian map station
- building identification
- building-mounted letters
- donor recognition (interior)
- accessible entry
- information
- regulatory
- razed building marker
- tobacco free

Funding for implementation has not been identified.


University of Arkansas
Signage and Wayfinding Master Plan

## Wayfinding Approach (continued)

It is recommended that the city pick up the university's system - this maintains a consistent look and feel, and avoids the cost of designing another competing system. On approaches, both the city and university should be listed up to decision points where they split off in different directions. After that, the signs would be the same but the directions would be university of downtown specific as appropriate.
3. Provide un-staffed information kiosks in the Square and along Dickson Street with both university and city maps as static displays and in take-away brochure form.

## Facility Naming

The main objective is to provide a scheme for identification that will provide a unique name for each building, satisfying the needs of both the user and those whose generosity provided resources for the facility. The following proposed policies are recommended:

## Proposed Policy 1

Provide appropriate recognition of donors or patrons within the building.
Donors for University buildings or other persons deemed worthy of recognition should have an appropriate place where their contributions can be recognized. The ideal location is in the main lobby of the named building; alternate locations would be an important hallway or other area where people congregate. Formal recognition of their contributions must display the full, formal building name. Other details of the individual's contribution may also be displayed, for instance "In memory of," or "Given on the 50th anniversary of ......." Depending on the nature of the gift, there could be interpretive information about the donor(s) or programs, or drawings/photos of the individuals. The wall area should be properly lit so the attribution is attractive both day and night.

## Proposed Policy 2

Each building has 2 names: a formal name and a shortened name.
The formal name for the building reflects the full name of the donor and facility and should appear in the build-
ing lobby and on official documents; the shortened name will be used in common parlance and on exterior signage. It is preferable for the University to officially establish a shortened name than for the general community to come up with its own abbreviations or nicknames that may or may not be appropriate The shorter name will also be most helpful for those trying to find the building. Generally speaking, the shortened name eliminates first names, middle initials and suffixes.

It is best to avoid having two totally different names for a building (e.g., "Epley Hall" and the "Band Building") as this will create much confusion for visitors as well as staff creating web or print materials or giving directions.

Existing University of Arkansas Policy for Naming Opportunities (Fayetteville Policies and Procedures 213.1) states that student living and dining quarters be designated "halls" or "commons," buildings occupied by laboratories as "laboratory," and buildings occupied by offices and classrooms as "building."

## Proposed Policy 3

Buildings that are joined or appear to the casual observer as a single building, should be identified as a single building.
When buildings are joined together, or a new structure is appended to an existing building, it appears to the observer that they are entering one facility. Even if the co-joined buildings are given separate names, an overarching name should be created to match what visitors and others see. It is recommended that a name using the terms "complex" or "center" be employed (note that this will also create another development opportunity for the University). Names of the separate sub-buildings should be retained and placed appropriately within each of the sub-buildings. At entrances, the name of the sub-building might be displayed along with the center/ complex name to reinforce the latter. There is nothing inherently wrong in connecting buildings if there is some coordination with an information system that reflects the hierarchy of the whole.



EXCERPT | SIGNAGE AND WAYFINDING PLAN


## PRESERVATION PLAN



University of Arkansas
Campus Preservation Master Plan

December 2008
dates:
April 2007 - February 2009
consultants:
Ruby Architects
Lord Aeck \& Sargent
The Jaeger Company

Our historic resources are the physical images of our collective memories. They instill a sense of who we were, who we are and who we strive to be. Preserving these resources through continued use helps ensure their role as vital parts of our communities.

In April 2007, Facilities Management Planning Group applied for a Campus Heritage Grant from the Getty Foundation of Los Angeles. The Campus Heritage Grant was funded to help institutions of higher education understand the significance of their historic resources on their campuses and plan for their longterm preservation. According to the Getty Foundation:

American colleges and universities are frequently unique repositories of some of the country's finest historic architecture and designed landscapes. While other buildings may have had a variety of owners and uses over the years, campus buildings have for the most part remained under the same stewardship, which presents wonderful opportunities for preservation and education.

The grant was awarded to the University in June 2007, allowing the University to hire a team preservation architects to carry out the work plan as developed by the Planning Group.

The Preservation Plan documents the University's historic buildings and landscapes, their state of repair, and the integrity of their historic fabric, and provides guidelines for their preservation. Specifically, the plan presents correct repair and maintenance practices, identifies problems with past campus practices, and recommends specific treatment for each historic building. Because of this, the plan will serve as a reference guide for project planning and day-to-day decisions.

The plan also serves as a brief "history lesson" about the physical development of the University. The team researched the history of the campus and of each building to add a layer of historical narrative to the document, allowing the reader to understand the context in which each building was created, and giving additional significant to certain buildings or landscapes that might otherwise be forgotten.

The final intention of the Preservation Plan is to give the University the tools it needs to make responsible and far-sighted decisions regarding its physical heritage.
RECOMMENDED NRHP ELIGIBILITY OF IDENTIFIED ARCHITECTURAL RESOURCES - CENTRAL CAMPUS

Treatment Guidelines
Repair and Replacement of Windows and Doors
When the most responsible course of action results in the replacement of historic windows, new units should, at a minimum, match the original historic frame and muntin molding profiles as closely as possible. Many historic frame and muntin molding profiles as closely as possible. Many
manufacturers have stock profiles available that are based on historic precedent or can custom fabricate components to match an historic condition. The use of applied or "snap-on" muntins, like those installed at Peabody and Gregson Halls are not an appropriate preservation treatment and should be avoided. A good example of a successful metal window replacement project at the University is the rehabilitation of the Chemistry Building. In this case, care was taken to match the historic pane configuration, and the frame and muntin dimensions of the original steel units. The University's Design and Construction Guide also provides some general criteria for facilities managers to consider
when conducting a window replacement project.

Figure 90. Care was taken to replicate the characterisics of the historic windows in these
replacement units installed as part of the rehabilitation of the Chemistry
Energy efficiency in many cases is a driving force for replacing historic windows and doors, but offen a reasonable level of efficiency can be achieved through repair and weather-stripping. When it is found that repair alone cannot achieve the necessary results, consideration should be given to the installation of applied secondary interior glazing or
interior storm windows. The installation of interior storm windows is
Windows and doors are important character-defining features of historic buildings and the decision to replace them should only be practical or feasible. The exposure of these elements to weather makes them especially vulnerable to deterioration if they are not properly maintained. Decreased operability, leaky panes, corrosion, peeling layers of paint, and deteriorated glazing offen result as these building components age. The labor-intensive and sometimes costly steps to make repairs can discourage owners or facilities managers from acting achieve more energy-efficient facilities can also influence the decision to replace historic windows and doors with new units.
The original window frames and sashes of historic buildings were, in most cases, constructed of built-up layers of wood millwork, and composed panes of glass separaled by wood muntins like those seen in the Agricultural Annex, Academic Support Building, and some of the As new technologies became available after 1900 and architectural styles evolved, steel and later aluminum windows were more widely used, specifically in commercial and institutional applications. Among the University's historic resources a wide variety of both wood and metal windows are present. Window types range from traditional wood double-hung units to many examples of metal fixed, pivot, projecting, sliding, and casement windows.
The scale, proportion, and detailing of these distinct window types contribute to the historic and architectural character of the buildings in which they are installed. In addrion, the constration of he window assemblies and the materials used are often indicative of the resources
and technologies available at the time of construction. In the case of historic wood windows, these are frequently composed of old-growth lumber and are well constructed, resulting in an assembly that is durable and long lasting if properly maintained. The distinct shadow lines created by the decorative profiles of the window frames and muntins are assets that are rarely captured by replacement units. Therefore, in keeping with the Secretary of the Interior Standards, the restoration or repair of historic windows and their components should be a priority
 replacement.

 facing west. The building features a mansard roof and a foundation of locally-quarried brown sandstone. Towers are located at the southeast and northeast corners of the building's façade, with the north
counterpart. Due to the unforeseen costs of roof repairs, the clock works were not installed initially, however a clock face was painted on the south tower as an economical means to complete the design.
 walls and fireproof stairways, an elevator and sprinkler system were installed. A botany greenhouse was added on the south side of the Old Main grounds in 1953, but was removed in the mid 1970s.



 RESOURCE SIGNIFICANCE




STATEMENT OF INTEGRITY
Despite undergoing several rehabilitations that have resulted in the loss of
some historic fabric Old
 significance as a fine example of the Second Empire Style and as the firs
permanent building constructed on the University of Arkansas campus.
RESOURCE FEATURES


## ARKANSAS RESEARCH AND TECHNOLOGY PARK PLAN

| the arkansas research \& technology park |
| :---: |

## dates:

2002 - present
consultants:
Center for Business and Economic Research

The Arkansas Research \& Technology Park will serve as the bridge between university research and its commercialization, creating new opportunities for university-industry partnerships that engage our students and faculty.

The Arkansas Research and Technology Park was conceived as an institution meant to bring economic and social benefits to the entire state of Arkansas, drawing upon the experience and expertise of the many research entities housed on the University of Arkansas campus. Supported by funds from the UA Graduate School, the City of Fayetteville, and private institutions, an intense two-month economic and planning study was undertaken by the University's Center for Business and Economic Research (CBER) and the Community Design Center (with staff now at Facilities Management).

The study focusses on making a compelling case for the ARTP, based on economic and physical precedents, and offers projections as to the physical and economic viability of the new complex. The plan is composed of two elements: the economic projections made by CBER in Arkansas Research and Technology Park: A Strategic Analysis, and the physical planning document which included:

- inventory and analysis of the site, including buildings, topography, property ownership, existing tree cover and vegetation, infrastructure, hydrology, utilities, soil characteristics, etc.
- property acquisition needed for future growth
- conceptual master plans, including estimates of required areas, circulation patterns, entry and exit points, general landscaping recommendations, and a general indication of physical design quality
- visualizations of the conceptual schemes, illustrating how the natural assets of the existing site, together with adjacent property acquisitions, should be enhanced through a well-developed plan
- descriptions and illustrations of desirable architectural design characteristics that need to be considered and incorporated in the project

The physical master plan was updated in 2005, and continues to be developed in response to changing conditions. The Planning Group has recently worked with consulting engineers to implement the first phase of the infrastructural framework.

## Why Develop the Arkansas Research and Technology Park (ARTP)?

In terms of preparedness for an information-based economy, Arkansas lags behind the rest of the country. The Milken Institute produces a New Economy Index, which ranks states by combining factors that influence success in an information economy. The following chart details the position of Arkansas relative to the other 49 states in the year 2000.

Table 1: The Milken New Economy Index and Component Parts ${ }^{1}$

| Year 2000 Measurement | Arkansas' Rank |
| :--- | :---: |
| Milken New Economy Index | $50^{\text {th }}$ |
| Percent of population with at least bachelor degrees | $49^{\text {th }}$ |
| Percent of population with advanced degrees | $49^{\text {th }}$ |
| Level of doctoral scientists and engineers | $47^{\text {th }}$ |
| Exports as a percentage of gross state product | $40^{\text {th }}$ |
| Per capita federal research and development dollars | $49^{\text {th }}$ |
| Per capita industry research and development dollars | $45^{\text {th }}$ |
| Per capita academic research and development dollars | $44^{\text {th }}$ |
| SBIR awards per 100,000 | $48^{\text {th }}$ |
| Business starts | $35^{\text {th }}$ |
| Venture capital investment | $44^{\text {th }}$ |
| Initial public offering proceeds | $41^{\text {st }}$ |

The abysmal position of Arkansas in most of these rankings is in great part a "chicken and egg" problem. The state has great difficulty in attracting high quality jobs because of the relatively poor educational status of its workforce. However, because of the lack of high quality jobs, the best and brightest citizens of Arkansas are often drawn out of the state to obtain the jobs that are most suitable for their skills.

Information technology, cluster development ${ }^{2}$, and labor skills are considered the three most important elements for a region to stay competitive in the $21^{\text {st }}$ century economy. ${ }^{3}$ If Arkansas wants to engage fully in tomorrow's economic prosperity, it must build an economic development engine that has the power to attract and keep skilled labor, induce cluster presence, and create clean-industry employment. Because research parks provide the infrastructure and atmosphere to encourage research and development, creating the Arkansas Research and Technology Park (ARTP) is a crucial step in this direction.

The industries that have traditionally supported the Arkansas economy are faltering under the stresses of globalization. In order to assure that the infrastructure necessary for providing a good

[^2]

## INTEGRATED PLANNING

# GIS MAPPING: CAMPUS ARBORETA, UTILITIES, ETC. 


dates:
2005 - present
consultants:
Center for Advanced Spatial Technologies Biological Sciences Department

GIS services include a variety of projects and products that make access and analysis of campus data readily available. FM Planning Group collaborates with the Center for Advanced Spatial Technologies (CAST) at the University of Arkansas on a series of GIS-enabled projects, including documenting the physical location of utilities and other campus features. These data can be shown on base maps and aerial photographs of campus, which can be printed or used interactively via the web.

What is GIS? Geographic Information Systems is a system of hardware and software used for storage, retrieval, mapping, and analysis of geographic data. The data can be used to create maps, charts, and 3D models of the earth's surface. Spatial data are referenced to a geographic coordinate system (Latitude) Longitude, UTM, State Plane, etc.) Attribute data can be associated with geographic locations, displayed, and analyzed using various GIS-based tools. GIS applications can be used in a wide variety of disciplines from scientific investigations, planning, resource management or emergency response to commercial and media applications.

The Arboretum Mapping Project was designed to locate and identify all trees within the two campus arboreta: the Old Main Arboretum and the Maple Hill Arboretum. The locations of all 480 trees within the arboreta were collected using a GPS data logger. Attributes such as common and scientific names, the diameter of the tree trunks, and presence of a tag or monument were documented. Photographs were also taken of each tree. All data was incorporated within a GIS system and used in a web mapping application, which can be queried along with other datasets (such as aerial photography and roads).

Other mapping services include an ongoing survey for University utilities and infrastructure. The project started in the summer of 2003, and consists of surveying all the utilities on campus using a GPS grade unit. The collected data are used for creating a geodatabase that includes sewer manholes, storm manholes, culverts, ditches, outflows, storm grates, water meters, fire hydrants, fire stands, utility tunnels, light poles, and dates on the senior walk. This information, in relation with other data, is aiding the campus in developing a storm water management system.

CAMPUS MAPPING: SURVEY SYSTEM, CAMPUS MAP, ETC.

dates:
2004 - present
consultants:
Center for Advanced Spatial Technologies
McClelland Consulting Engineers
Development Consultants Inc

## CONTROL MONUMENT SYSTEM

The Planning Group, in consultation with McClelland Engineers, developed a system of monumentation for land surveys. Placed at 16 locations on the central campus and ARTP, these monuments are the control points for all campus land surveys.

Since these markers were set in 2005, all topographic and planimetric surveys performed for the University of Arkansas in Fayetteville now conform (at minimum) to U.S. National Map Accuracy Standards for maps larger than 1:20,000. All observable, above ground, man-made, and natural features within the survey limits are accurately shown, as well as any indications of sub-terrain structures (tunnels, drains, utilities markings, etc.) Topographic surveys are performed on the ground and information gathered to generate accurate one-foot contours. All surveys are horizontally tied to at least two UA control monuments and vertically tied to at least one UA control monument.

## CAMPUS MAP

In addition, prior surveys have been updated to the proper coordinate system and tied to NAD83 State Plane Coordinates. This has allowed the Planning Group to develop the firstever, accurate base map of the Fayetteville campus. Useful in setting building alignments for future construction, this detailed information can also now be used in conjunction within the GIS data in developing an interactive campus map, in cooperation with University Relations, which will be online this year. With the abundance of data tied to the map, the interactive application will serve the needs of University Relations, Admissions, Transit and Parking, Housing, Central Utilities, Operations, University Police, the Fayetteville Fire Department, Emergency Services, and others. The map viewer will allow the user to control what data to see, and also whether to show that data over a base map or digital aerial photography.

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## PROPERTY OWNERSHIP AND ACQUISITION


dates:
2004 - present

## consultants:

Center for Advanced Spatial Technologies

Facilities Management Planning Group maps University-owned parcels and those that may be desirable for purchase. By overlaying parcel data with topography, land use, building footprints, etc., the Planning Group can make informed recommendations for property purchases in keeping with the documented and projected needs of the growing campus.

The Board of Trustees was provided a map of the proposed purchases and a projected growth boundary for north, central, and south campus in September 2008. Those recommendations were based on a coherent strategy, developed by the Planning Group, in support of the University's strategic goals.

The growth boundary as shown:

- limits incursions into viable residential neighborhoods to the degree possible
- offers possibilities for improved transportation routes by including land for future street connections
- protects viewsheds of Old Main and other parts of campus by including land that, if developed, would block those views
- respects natural topographic boundaries
- recognizes existing, and anticipates future, land use in the surrounding community
- creates consistent campus edges (as at major streets)
- includes green buffers and open space for transition between the city and the campus

The plan illustrates for campus administrators whether a property purchase or disposition contributes to the larger vision for campus, as demonstrated by the growth boundary.



# FACILITIES CONDITION ASSESSMENT 


dates:
2003 - present

Facilities Management Planning Group administers and maintains the Facilities Condition Assessment (FCA) database, which contains information about the physical condition of the different building components (foundations, roofs, mechanical systems) of Education and General Use (E\&G) buildings on campus.

Teams of architects and engineers survey about 20\% of the campus buildings every year, so that no building condition data is more than five years out of date. The teams report building system deficiencies and make cost estimates for renovations and repairs needed to eliminate the deficiencies. Additional updates are made to show major repairs and renovations as they occur, and cost estimates are adjusted annually for inflation.

## FCA

The Facilities Condition Assessment is a database of campus buildings with the physical condition of different building systems broken down by system classification (foundations, shell, interiors, services, special construction and demolition, and sitework). All building deficiencies are listed after visual inspection by teams of architects and engineers, both from within Facilities Management and contracted from the private sector. The teams estimate the costs of eliminating individual deficiencies as part of their data collection. A Facilities Condition Index ( FCl ) is calculated by dividing the total of a building's deficiencies, in dollars, by the Current Replacement Value (CRV) of the building.

The FCA allows the Planning Group to rank building conditions by FCl so that priorities can be set for maintenance funding. The searchable database makes zeroing-in on problem areas possible, and improves efficiency in distributing funding for deferred maintenance, capital renewal, plant adaptation, and routine maintenance to maximize building performance and facility serviceability. This tool is crucial to portfolio management and evaluating investment quality.

## FAP

The Facilities Audit Program (FAP) is a biannual survey by the University System of all campuses. It is much less detailed, but similar to the FCA, in that it attempts to quantify the condition of buildings in dollar amounts. The difference is that FAP uses a depreciation model based on the age of building systems rather than visual inspections and institutional knowledge. The Planning Group completes this survey to assist comparisons among the main and branch campuses within the University of Arkansas system by system staff, and aid in their recommendations for allocation of funds system-wide.


## EXCERPT | FACILITIES CONDITION ASSESSMENT

| PNX | \$14,283.00 G | 30 | 90 |  | CR | Install an irirgation system | 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PNX | \$14,904.00 D | 30 | 40 |  | DM | Install new central HVAC system(s) serving the entire building. The multiple small systems do not adequately condition the building. | 5 |
| PNXS | \$15,55.00 B | 20 | 20 |  | CR | Replace fixed glass in main entry area and courtyard with insulated glass in thermal aluminum frames | 5 IBC,EnER |
| PNXS | \$22,604.40 D | 50 | 30 |  | DM | Installa a fire alarm system: Intiation and audio visual devices are insufficient in number. | 5 |
| PNXS | \$23,32.00 G | 20 | 30 |  | CR | Renovate exterior courtyard on west and center areas paving, landscaping and lighting | 5 |
| PNXS | \$26,703.00 D | 40 | 90 |  | CR | Fully sprinkler the facility; Sprinkers provide optimum protection from fire | 5 |
| PNXS | \$30,180.60 D | 50 | 30 |  | DM | Upgrade electrical distribution system in original building:: | 5 |
| PNXS | \$32,292.00 D | 20 | 90 |  | DM | Replace boiler and tank for domestic hot water are in poor condition. Existing are in poor condition | 8 |
| PNXS | \$34,76.00 G | 30 | 10 |  | CR | Install new water service lines fro domestic water and for spinklers. | 5 |
| PNX | \$35,10.00 C | 30 | 10 |  | DM | Refinish walls, replace partitions and celling in toilet areas. | 5 |
| PNXS | \$47,196.00 D | 20 | 10 |  | DM | Replace plumbing fixtures; They are very old and in poor condition. | 5 |
| PNXS | \$93,150.00 D | 50 | 20 |  | DM | Upgrade building lighting systems:: The updated systems will provide better illumination and much better energy efficiency. | 5 |
| PNX | \$114,750.00D | 10 | 10 |  | CR | Install an elevator; Provide access to all levels to all persons | 5 ADA |
| PNXS | \$121,500.00 B | 20 | 20 |  | CR | Replace office windows with more energy efficient windows - both levels | 5 IBC,ENER |
| Posc | \$2,250.00 B | 30 | 10 |  | PM | Benchmark roof data 2006 | 0 |
| POSC | \$6,147.90 C | 10 | 30 |  | PA | Solve the water leakage problem at the DI water tanks; mechanical penthouse; there is no pan below the tanks; add metal pan with drainage. | 1 |
| POSC | \$6,831.00 C | 10 | 20 |  | PA | Add card access; exterior and biotech lab; ighter security is needed; connect to existing system | 1 |
| Posc | \$7,161.07 C | 10 | 30 |  | PA | Solve the water leakage problem at the DI water tanks; mechanical penthouse; there is no pan below the tanks; add metal pan with drainage. | 1 |
| Posc | \$7,514.10 | 10 | 10 |  |  | Caukk paving joints; south lab wall promenade; joints are open; remove and reseal with elastomeric material. | 1 |
| POSC | \$7,956.75 C | 10 | 20 |  | PA | Add card access; exterior and biotech lab; ighter security is needed; connect to existing system | 1 |
| POSC | \$8,752.42 G | 10 | 10 |  | DM | Cauk paving joints; south lab wall promenade; joints are open; remove and reseal with elastomeric material. | 1 |
| POSC | \$9,153.54 B | 20 | 10 | 2 | CR | Replace vericical expansion joint; at lab-atruim exterior masonry; cracked and open; remove and replace | 1 |
| Posc | \$10,24.50 B | 20 | 20 |  | CR | Solve the water leakage problem below the windows; at the curved atrium wall; water leaks into the atrium; cut out the cauking, insert fashing with sides turned up. | 1 |
| POSC | \$10,24.50 D | 20 | 90 |  | DM | Plumbing and hydronic piping is leaking; Pipe joints must be tested and all fauty joints repaired. | 5 |
| POSC | \$10,662.04B | 20 | 10 | 2 |  | Replace vertical expansion joint; at lab-atuim exterior masonry; cracked and open; remove and replace | 1 |
| POSC | \$11,935.12 B | 20 | 20 |  | CR | Solve the water leakage problem below the windows; at the curved atrium wall; water leaks into the atrium; cut out the cauking, insert flashing wits sides turned up. | 1 |
| Posc | \$11,935.12 D | 20 | 90 |  | DM | Plumbing and hydronic piping is leaking; Pipe joints must be tested and all fauty joints repaired. | 5 |
| POSC | \$13,662.00 D | 30 | 70 |  | ом | Pressurization and air changes are not assured in labs; Lack of temperature control. Retroft caibrate controls. Duct leaks suspected at duct seal (Unalon SCH 80). An building balance must be conducted on airwater side systems of the heatAC. | 1 |
| POSC | \$15,993.50 D | 30 | 70 |  | DM | Pressurization and air changes are not assured in labs; Lack of temperature control. Retrofit cailibate controls. Duct leaks suspected at duct seal (Unalon SCH 80). An overal building balance must be conducted on air/water side systems of the heatAC. | 1 |
| POSC | \$16,394.40 B | 20 | 10 | 1 | CR | Solve louver leakage problem; mechanical penthouse; water leaks through the lowers into the penthouse and rains down on the tht floor, add metal pans below the inside of the lovvers to cath and drain the water. | 1 |
| Posc | \$19,096.20 B | 20 | 10 | 1 | CR | Solve louver leakage problem; mechanical penthouse; water leaks through the louvers into the penthouse an d rains down on the the floor; add metal pans below the inside of the louvers to catch and drain the water. | 1 |
| POSC | \$53,750.00 B | 30 | 10 |  | CR | Benchmark roof data 2006 | 0 |
| POSC | \$88,283.84D | 50 | 40 |  | PA | Ample emergency power is not provided; Additional emergency power must be provided to freezers and new equipment. | 5 |
| Posc | \$102,832.33D | 50 | 40 |  | PA | Ample emergency power is not provided; Additional emergency power must be provided to freezers and new equipment. | 5 |
| Posc | \$286,902.00 D | 30 | 60 |  | DM | Controls on freezers are obsolete; The controls must be upgraded and all processor contro boards functioning correctly. | 5 |
| Posc | \$334,183.45D | 30 | 60 |  | DM | Controls on freezers are obsolete; The controls must be upgraded and all processor contro boards functioning correctly. | 5 |
| PPRC | S636.54D | 50 | 40 |  | CR | Emergency egress lighing is not installed; battery powered fixtures should be installed. | 1 NFPA |
| PPRC | S795.67 D | 50 | 90 |  | CR | Install additional exit signs:. Exit itgn lighting is inadequate and does not meet life safety code reaurements. | 1 NFPA |
| PPRC | \$4,137.51 C | 30 | 10 | 1 | CR | Repaint Interior | 10 |
| PPRC | \$6,365.40 D | 50 | 30 |  | CR | Installa a fire alarm system:. Given the facility usage, this is seen as a high priority. | 1 |
| PPRC | \$6,365.40 B | 30 | 10 | 1 | CR | Reroof | 10 |
| PPRC | \$9,548.10 D | 50 | 20 |  | CR | Upgrade the lighting system;: Ilumination is insufficient for the tasks being periormed. | 1 |
| PPRC | \$13,208.20 G | 30 | 10 |  |  | Install water service piping for sprinklers. | 1 |
| PPRC | \$14,322.15D | 40 | 90 |  | CR | Fully sprinkler the facility; Sprinklers provide optimum protection from fire. | 1 |
| PPRC | \$15,913.50 G | 20 | 20 |  | CR | Refurbish Asphalt paving at building. | 10 |
| PTSC | \$0.00 D | 20 | 90 |  | CR | Install backlow prevention in the water piping senvice; it prevents cros-contamination between buildings. | 1 ARK |
| PTSC | \$875.00 B | 30 | 10 |  | PM | Benchmark roof datat 2006 | 0 |
| PTSC | \$2,645.00 C | 30 | 20 | 1 | CR | Replace tie where missing or damaged | 2 |
| PTSC | \$3,182.70 A | 10 | 30 | 1 | PA | Add approximately, $10^{\prime} \times 20^{\prime}$ 'Shaftichase to West exterior of Bldg. | 5 NFPA |
| PTSC | \$4,025.00 G | 20 | 30 | 2 | DM | Repair spalling surface of sidewalks | 30 |
| PTSC | \$4,830.00 C | 30 | 30 | 1 | ом | Suspended ACT has stains from plumbing leaks, replace. | 1 |
| PTSC | \$6,365.40 A | 10 | 10 | 1 | ом | Add approximately, $10^{\circ} \times 20^{\prime}$ Shaftichase to West exterior of Bldg. | 5 NFPA |
| PTSC | \$7,956.75 G | 20 | 40 |  | PA | Development of additional hood exhaust shaft will impact site. | 5 NFPA |
| PTSC | \$9,548.10 G | 20 | 30 | 1 | DM | Brick Pavers in commons area need reseating. | 1 ADA |
| PTSC | \$11,935.12D | 10 | 10 |  | DM | The elevator is not ADA compliant: An upgrade project should address this issue. | 5 ADA |
| PTSC | \$15,913.50 C | 10 | 10 | 2 | CR | Shat wall associated with hood chase. | 5 NFPA |
| PTSC | \$17,25.00 C | 10 | 30 | 2 | DM | Replace shelves below mirrors in toilets | 5 |
| PTSC | \$19,096.20 G | 40 | 20 |  | ом | Additional site lighting along the south side of the building and to the west. | 3 |
| PTSC | \$19,891.87 D | 20 | 30 | 2 | DM | Drain piping from the mechanical chase area need replacement:. They are currenty connected to roof drain piping and frequenty backup during heayy rains. | 1 |
| PTSC | \$23,870.25 G | 30 | 20 |  | DM | Replace the building sanitary sewer service. | 1 |
| PTSC | \$25,461.60 C | 10 | 30 | 1 | PA | Replace EWC with Handicap accessibie fixtures. | 1 ADA |
| PTSC | \$27,156.73 B | 30 | 20 | 1 | CR | Replace flasting and cant strips. | 5 |
| PTSC | \$35,009.69 G | 30 | 10 |  | CR | Install water service piping for sprinklers. | 4 NFPA |
| PTSC | \$35,009.69 D | 50 | 30 |  | DM | Install category 5 data cabling in administrative spaces; It will bring network operation to current standards. | 4 |
| PTSC | \$39,78.74G | 20 | 50 |  | CR | Refurbish/upgrade landscaping. | 5 |
| PTSC | \$42,489.04G | 30 | 90 |  | CR | Install an irrigation system. | 4 |
| PTSC | S47,740.49 B | 20 | 30 | 1 | CR | Replace entrance systems w alum, DG; install Card access readers on 6 Doors. | 3 |
| PTSC | S48,300.00 D | 20 | 30 | 1 | DM | Firish is faliling on plumbing trim in all toilets | 5 |
| PTSC | \$55,697.24D | 50 | 10 |  | dм | Install additional electrical distribution panels;: Existing panels are full and cannot support future load additions. | 3 |
| PTSC | \$55,697.24D | 50 | 20 |  | ом | Upgrade lighting fixures throughout the facility. Newer lighting equipment features better illumination and reduced energy consumption. | 4 |
| PTSC | \$55,697.24D | 50 | 20 |  | DM | Upgrade lighting fixtures throughout the facility. Newer lighting equipment features better illumination and reduced energy consumption. | 4 |
| PTSC | 576,344.79 B | 20 | 10 | 1 | PA | Exterior wall construction for shaftichase addition. | 5 |
| PTSC | 593,492.49 B | 20 | 20 | 1 | CR | Regasket windows. | 8 |
| PTSC | \$95,48.99C | 30 | 10 | 1 | dm | Repaint interiors throughout | 5 |
| PTSC | \$127,307.98B | 20 | 10 | 1 | CR | Reffrrish precast wall panels wi tuck pointing, seal coat and sealants. | 1 |
| PTSC | \$128,899.33 C |  |  | 1 |  | Upgrade door hardware to lever hdw, refurbish on as need basis. Instal 25 card access readers. | 1 |

# SPACE MANAGEMENT \| ROOM USE SURVEY SYSTEM (RUSS) 


dates:
2005 - present
consultants:
Center for Advanced Spatial Technologies

Facilities Management and CAST are collaborating on a project to gather data and develop software that will combine basic building information including age, condition of building systems, academic suitability, technological amenities, size and use of rooms, availability, evacuation routes and utility information.

The researchers and planners hope to merge all of this information into a three-dimensional program that would allow building executives, construction companies planning renovations, utility companies needing to make repairs, and emergency responders to access information quickly and easily.

RUSS is a web-based survey of Building Executives used to build the campus space inventory. The survey provides room-level facts concerning details such as departmental assignment and room classification (classroom, lab, office) and use (instruction, research, administration). This information is necessary in negotiating the University's Indirect Cost Proposal with the Department of Health and Human Services for reimbursement for space provided in support of grant-funded research. It also informs many planning decisions.

RUSS data provides a way to ensure baseline space standards are being met by departments, as well as for instructional and research space. These data are critical in accreditation for the colleges and academic departments, and are used for benchmarking efforts to identify relative strengths and weaknesses. Planning for "swing space," used for temporary displacement of building occupants during repairs and renovation, is also dependent on this knowledge.

Users can continuously update room data, and they can access and print floor plans of their buildings through the RUSS interface. Facilities Management maintenance workers and work estimators also use RUSS data and floor plans to assist in their work. The data has been helpful in emergency situations, and is also used by University Police in planning security for events.

Currently, the RUSS user can:

- select any building and display information such as the name of the building, its four letter code, the year built, and gross area.
- select individual floors to display plans.
- select individual rooms to display data about that room such as net area, departmental assignation, primary occupant, physical use (office, lab, classroom), and academic use (instruction, research, library).


## SPACE MANAGEMENT \| SPACE USE \& CAPACITY


dates:
2007 - present

ROOM SCHEDULING
R25 is a program used by the Registrar and the schedulers in the various colleges to create the schedule of classes. X 25 is a webbased system designed to analyze R25 data. Planning Group staff interprets R25 and X25 data and analysis to study the dynamics of classroom use rates. Needs and inefficiencies can be observed and corrected because of knowledge of use rates, and academic programming can be improved by decisions made from data delivered from this system.

Capitalizing on increasing classroom use in our existing space by using R25 and $\mathrm{X}_{25}$ can reduce the need for new construction, making this a useful program for physical planning, efficiency of utilities, and capital funding requests.

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## EXCERPT | SPACE USE \& CAPACITY



## CAPITAL BUDGETING


dates:
ongoing

## FINANCIAL PLANNING AND ANALYSIS

Facilities Management Planning Group is responsible for providing oversight of facility capital budgets for all university organizations, which includes budgeting and financial management functions to implement and monitor budget allocations and provide financial analysis focused on optimizing engagement of available resources. The Planning Group manages the university-wide budget development process and assists with the resolution of budget issues while ensuring compliance with university and state requirements.

## BIENNIUM FUNDING REQUESTS


dates:
ongoing

## ARKANSAS DEPARTMENT OF HIGHER EDUCATION

As an advocate for higher education in Arkansas, the ADHE mission is to promote a coordinated system of higher education to the state, and to provide orderly and effective development of each of the publicly supported colleges and universities in the state.

Every two years, the University of Arkansas is required to submit its list of capital projects and priorities. ADHE communicates the statewide capital funding priorities to each institution, and the project list is written in accordance with these priorities and the University's capital needs.

Facilities Management Planning Group now prepares this request, querying all academic deans for their input. Beginning with the 2007-2009 request, all project programs, locations, and budgets are tied to directly to the physical master plan so that any requested project will be viable in the described location. Once drafted, the report and funding priorities are presented to the Building Facilities committee for review, after which it is sent to the campus Executive Committee and Chancellor for approval.


## 3

## OZARK HALL (historic Business Administration Building) RESTORATION, RENOVATION, and ADDITION

Description of Project
Ozark Hall was constructed in 1940 with funds from the Public Works Administration and the Federal Government, and was listed on the National Register of Historic Places in 1992. The Collegiate Gothic building historically housed Business Administration, Mathematics, and Buildings and Grounds, and is constructed of reinforced masonry and Batesville limestone ashlar with Bedford white limestone moldings. The building placement and style were directed by the 1925 masterplan, though the actual orientation of the north-south wing is reversed from what was initially proposed.

While structurally intact, Ozark Hall requires modernization of its mechanical, electrical, and plumbing systems. The original steel windows were replaced in 1992 with frames that, though energy-efficient, detract from the historic character of the building. In order to restore the historic appearance of this important campus building, new windows that meet the profile and fenestration patterns of the original should be evaluated for installation.

Many departments currently located in Ozark Hall will be relocated with the completion of other projects. The Center for Advanced Spatial Technologies recently moved to a new building, and the Eleanor Mann School of Nursing has proposed a possible relocation in 2009. With these changes taking place, it is an excellent time to embark on a total building renovation that would include a lecture hall addition to complete the south wing. It is anticipated that one 300-seat classroom could be accommodated, as well as wet and dry laboratories and additional faculty offices. In addition, the Graduate School will be able to move operations now located in the Dickson Street Annex and other Ozark Hall space into renovated space previously housed by the Mann School of Nursing.

Pertinent Data
Constructed: 1940 and 1947
Style:
Size:
Current Use:
Proposed Use:
\% Auxiliary:
Collegiate Gothic
68,266 sf exist'g + 17,370 sf new (3 floors at 5,790 sf)
Classroom, instruction, laboratory, and office

Replacement Costs: Estimated at $\$ 31$ million

## EXCERPT | BIENNIUM FUNDING REQUESTS

OZARK HALL (historic Business Administration Building)

| Estimated Project Costs |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A. | Building Construction |  |  | \$ | 16,933,760.00 |
| B. | Built-in equipment |  |  | \$ | 941,733.00 |
| C. | Architectural and Engineering Fees |  |  | \$ | 2,817,000.00 |
| D. | Contingencies |  |  | \$ | 3,507,112.00 |
| E. | Other Costs |  |  |  |  |
|  | Advertising | \$ | 500.00 |  |  |
|  | Land \& Right-of-Way | \$ | - |  |  |
|  | Surveys \& Borings | \$ | 94,167.00 |  |  |
|  | Site Improvements | \$ | 354,376.00 |  |  |
|  | Utilities | \$ | 367,106.00 |  |  |
|  | Parking Lots | \$ | - |  |  |
|  | Telephone/Remote Utility Fees | \$ | 936,326.00 |  |  |
|  | Total Other Costs |  |  | \$ | 1,752,475.00 |
|  | Movable Furniture and Equipment |  |  | \$ | 1,149,683.00 |
|  | Total Estimated Project Costs |  |  | \$ | 27,101,763.00 |


| Project Funding Sources |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Source of Funds |  | Amount |  | Percent of Costs |
| A. | State Funds | \$ | 27,101,763.00 | 100.00\% |
| B. | Federal Funds | \$ | - | 0.00\% |
| C. | Private Gifts/Grants | \$ | - | 0.00\% |
| D. | Bond Proceeds | \$ | - | 0.00\% |
| E. | Auxiliary Funds | \$ | - | 0.00\% |
| F. | Other Funds |  |  | 0.00\% |
|  | Total Funding | \$ | 27,101,763.00 | 100.00\% |

Describe commitments or funds already collected to finance this project:
There are no existing funds available for this project.

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## FUTURE BUILDINGS FROM THE CAMPUS PLAN



## PROJECT EXAMPLE \| OZARK HALL SOUTH WING


project: south wing of Ozark Hall
number of floors: 3
area: 17,340 gross sf
brief description:
Ozark Hall was constructed in 1940 with funds from the Public Works Administration and the Federal Government, and was listed on the National Register of Historic Places in 1992. The Collegiate Gothic building historically housed Business Administration, Mathematics, and Buildings and Grounds, and is constructed of load-bearing masonry and Batesville limestone ashlar with Indiana white limestone moldings. The building placement and style were directed by the 1925 masterplan, though the actual orientation of the north-south wing is reversed from what was initially proposed.

While structurally solid, Ozark Hall requires modernization of its mechanical, electrical, and plumbing systems. The original steel windows were replaced in 1992 with frames that
detract from the historic character of the building. In order to restore the historic appearance of this important campus building, new windows that meet the profile and fenestration patterns of the original should be evaluated for installation.

A new south wing to complete the building may be constructed separately or as part of total building renovation. The wing would complete the internal quadrangle that faces onto campus walk. This particular courtyard is suited for a low limestone wall and gate (shown in plan) that might enclose a garden complete with public art. Uses studied include a new home for the Honors College, or a 300 -seat lecture hall, wet and dry laboratories, and additional faculty offices.


## PROJECT EXAMPLE | COLLEGE OF AGRICULTURE BUILDING


project: new building for Bumpers College
number of floors: 3.5
area: 59,500 gross sf
brief description:
All of the plant-related departments in the Division of Agriculture and the Dale Bumpers College of Agricultural, Food, and Life Sciences are seriously constrained for laboratory, office, and classroom space. These units are housed in multiple locations, which seriously reduces program cohesiveness. In addition, a number of faculty and staff are housed at the Research and Extension Center nearly two miles from campus.

When the Plant Sciences building was completed in 1977, it was expected to be the first phase of much larger facility to house all of the associated programs in the plant sciences. Though the completion of the Rosen Center in 1995 marginally improved this gap, an estimated 60,000 square feet of new space is needed.

Constructing a new building in this location will require the removal of the Agricultural Annex, formerly used by both agriculture and home economics and as the student infirmary. The building is now a secondary space for the Dale Bumpers School, though it does not lend itself well to either classroom or laboratory use. The Agricultural Annex is one of the oldest remaining buildings on campus (completed in 1905), but it is small (14,492 sf), inefficient, and in very poor condition. Taking into account that the site could be much more efficiently developed and the building has comparably little historical importance, it is recommended that the Agricultural Annex be demolished and replaced, following complete recordation in accordance with US Department of the Interior standards.

## PROJECT EXAMPLE | COLLEGE OF EDUCATION BUILDING


project: new building for College of Education
number of floors: 2.5
area: 46,500 gross sf
brief description:
This building will complete the 1925 masterplan intentions of two buildings framing Old Main. Envisioned to be similar in materials, scale, and style to Ozark Hall, this building would also complement the architecture of Memorial Hall and create an internal quadrangle.

The new building could house faculty offices, instructional and research programs, outreach, and service components for the College of Education and Health Professions, the fastest-growing college at the University with a current enrollment exceeding 3,100 students. The site identified is close to Peabody Hall and the Graduate Education Building where the college holds classes today. In addition, the new facilities would replace those currently in use,
some of which have been cited as inadequate and inaccessible by accrediting bodies.

Constructing this building will require the removal of the Academic Support Building. While this building is one of the oldest remaining buildings on campus (completed in 1905), it is awkwardly situated, extremely small ( $12,475 \mathrm{sf}$ ), and has been badly modified over time. Since the building has comparably little historical importance, and because the site could be much more efficiently used, it is recommended that the building be demolished and replaced, following complete recordation in accordance with US Department of the Interior standards.


# PROJECT EXAMPLE | MCILROY HILL RESIDENTIAL COLLEGE 


project: two new residence halls in Mcllroy Hill district
number of floors: 4
area: 60,000 gross sf each
brief description:
The campus growth plan anticipates redevelopment of the Mcllroy Hill district to take advantage of its proximity to central campus and its prominent location on a plateau. Such a plan could be realized with or without the demolition of the high-rise dormitories, Humphreys and Yocum Halls, as suggested in the Housing Plan. As shown, the site could accommodate two new residence halls of 200-230 beds each, a new dining hall to replace Brough Commons, and new academic and outdoor space.

With the land available, the campus could develop a true residential college that is highly visible and convenient to the campus core. One possibility is relocating honors housing from Pomfret Hall to new residences along the ridgeline of the district, just south of Gregson

Hall and above the planned Oak Ridge Trail. Currently, there are about 450 first year students in the honors program; that number has the potential to grow to 500 to 600 , with total participation growing to as many as 2,000 students. About 800 live in Pomfret today. The Housing Plan states, "The University of Arkansas places an important emphasis on the Honors College in order to provide an enriched academic achievement path for exceptional students. The visibility and importance of this program should be reinforced by the visibility and nature of its physical facilities. While Pomfret Hall has many great attributes, the small student rooms, the perceptual barrier of distance and being "down the hill" from the academic core, and the hidden status of the program, do not live up to its importance."

University of Arkansas
Facilities Management Planning Group

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FACILITIES MANAGEMENT PLANNING GRQUP HTTP: / / PLANNING.UARK.ED U


[^0]:    01.07.2008
    b1 Landscape Standards

[^1]:    A = assess feasibility of demolition/replacement versus renovation
    $R=$ recommended for major renovation
    $\mathrm{M}=$ candidate for routine maintenance and minor renovations

[^2]:    ${ }^{1}$ Milkin Institute, http://www.milken-inst.org/poe.cfm?point=pub03.
    ${ }^{2}$ Cluster development can be defined as the focusing of development resources in specific industry areas in order to achieve the critical mass necessary to attract employers and retain employees.
    ${ }^{3}$ Labor Skill Imperative: U.S. Competitiveness; Council for U.S. Competitiveness, Washington D.C., 2001.

