CAMPUS PLAN

2013

SBC # 166/003-04-2011

DOBER LIDSKY MATHEY / LOSE & ASSOCIATES, INC. / I.C. THOMASSON ASSOCIATES, INC.

Austin Peay State University

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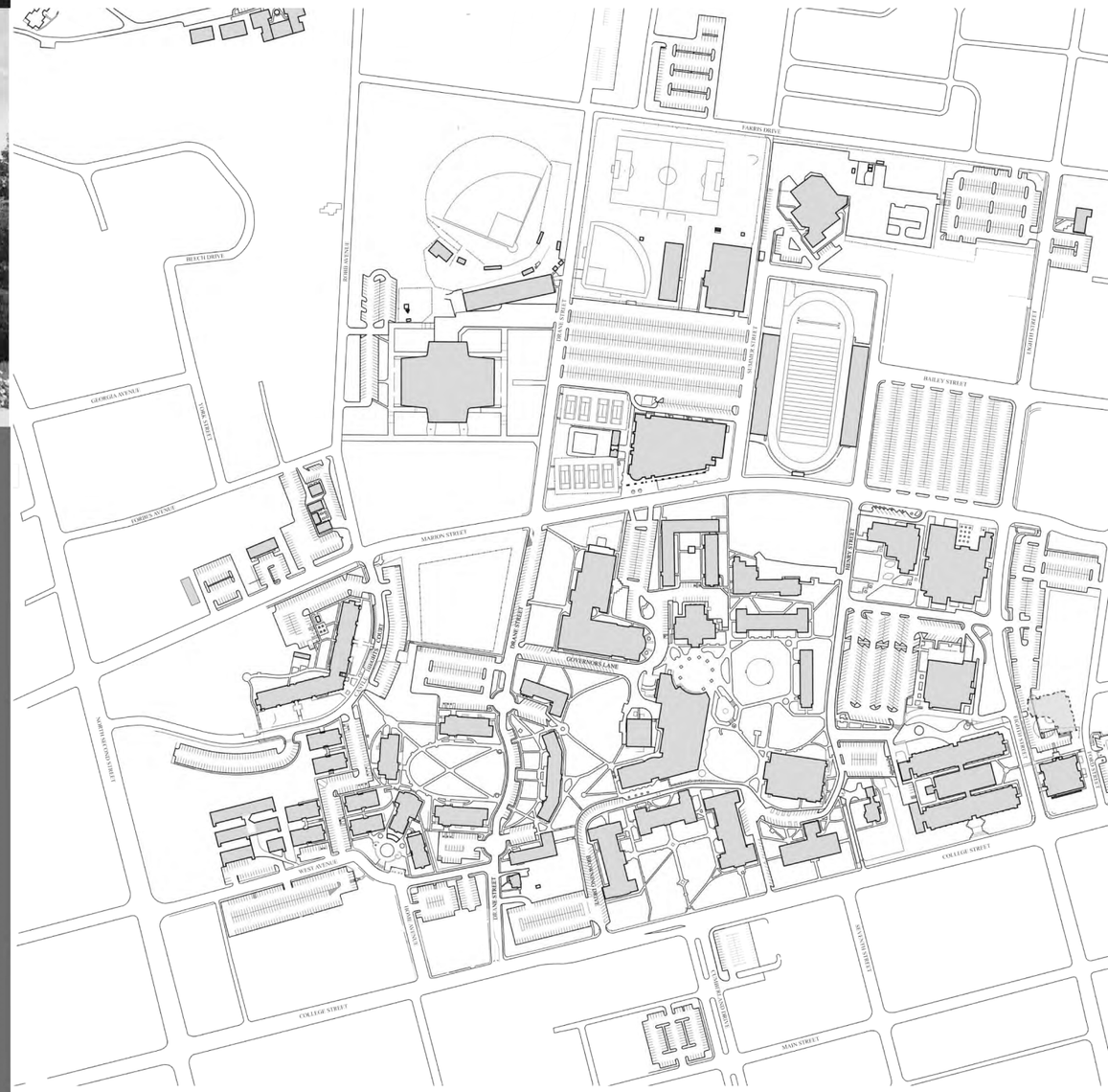
Austin Peay State University



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CAMPUS PLAN OVERVIEW

Section One

EXECUTIVE SUMMARY

Austin Peay State University is located in Clarksville, Tennessee, the state's fifth largest and youngest city. The school is named after former Tennessee Governor Austin Peay, a Clarksville native. Austin Peay is a four-year public university offering over 56 majors and 63 different concentrations.

Austin Peay State University is located on an urban campus that for over 180 years has been used for educational purposes and on which the buildings of five colleges have stood. The University also owns and leases satellite facilities for the Austin Peay Center at Ft. Campbell located in Ft. Campbell, Kentucky.

The University began as Austin Peay Normal School when it was created as a two-year junior college and teacher-training institution by Act of the General Assembly of 1927, and named in honor of Governor Austin Peay. Limited in purposes and resources initially, the school gradually grew in stature over the years to take its place among the colleges and universities under the control of the State Board of Education.

In 1939 the State Board of Education authorized the school to inaugurate a curriculum leading to the Bachelor of Science degree. By Act of the Tennessee Legislature of February 4, 1943, the name of the school was changed to Austin Peay State College. In 1951 the State Board authorized the College to confer the Bachelor of Arts degree and, in 1952, to offer graduate study leading to the degree of Master of Arts in Education. The State Board of Education conferred university status on the College in 1966 and in 1967 the State Board of Education authorized the University to confer the Master of Arts and the Master of Science degrees. The following year associate degrees were approved.

The State Board of Education relinquished its governance of higher education institutions to the Tennessee State Board of Regents (TBR) in 1972 and in 1974 the TBR authorized the Bachelor of Fine Arts and the Education Specialist Degrees. The Bachelor of Business Administration degree was approved as a replacement for traditional B.A. and B.S. degrees in various fields of business and the Bachelor of Science in Nursing degree were approved in 1979. The TBR approved the Master of Music degree and Master Arts in Education in 1983, and in 2001 authorized the Bachelor of Professional Studies.

An extension of Austin Peay State University's main campus is located at Fort Campbell, Kentucky, known as the Austin Peay Center at Fort Campbell.

Between 2000 and 2006, APSU's enrollment increased 30 percent, making it one of Tennessee's fastest-growing universities. In 2009 APSU grew to a head count enrollment of 10,000 students for the first time in their history.

Over the past year, APSU has engaged in a comprehensive campus planning process. The objective of this initiative has been to develop a plan for the future that addresses programmatic, facility, and campus needs for the next 15 years. The resulting Campus Plan, summarized in this report, describes the physical resources that exist, the additional facilities or campus improvements that will be required, and how the University foresees addressing these projected needs.

The Campus Plan represents much more than a layout for determining sites of future buildings, landscape improvements, and modifications to circulation. It also reflects APSU's vision to instill values for life and focus on academic excellence related to the needs of the region, state, and a global society.

CAMPUS PLAN OVERVIEW

Input from the many APSU constituents who have participated in the planning process is reflected in the 2013 Campus Plan. The plan provides a framework for decision making that includes descriptions of context, land use, building use, topography, pedestrian and vehicular circulation and parking, landscape, campus design, development constraints and opportunities, and sequence.

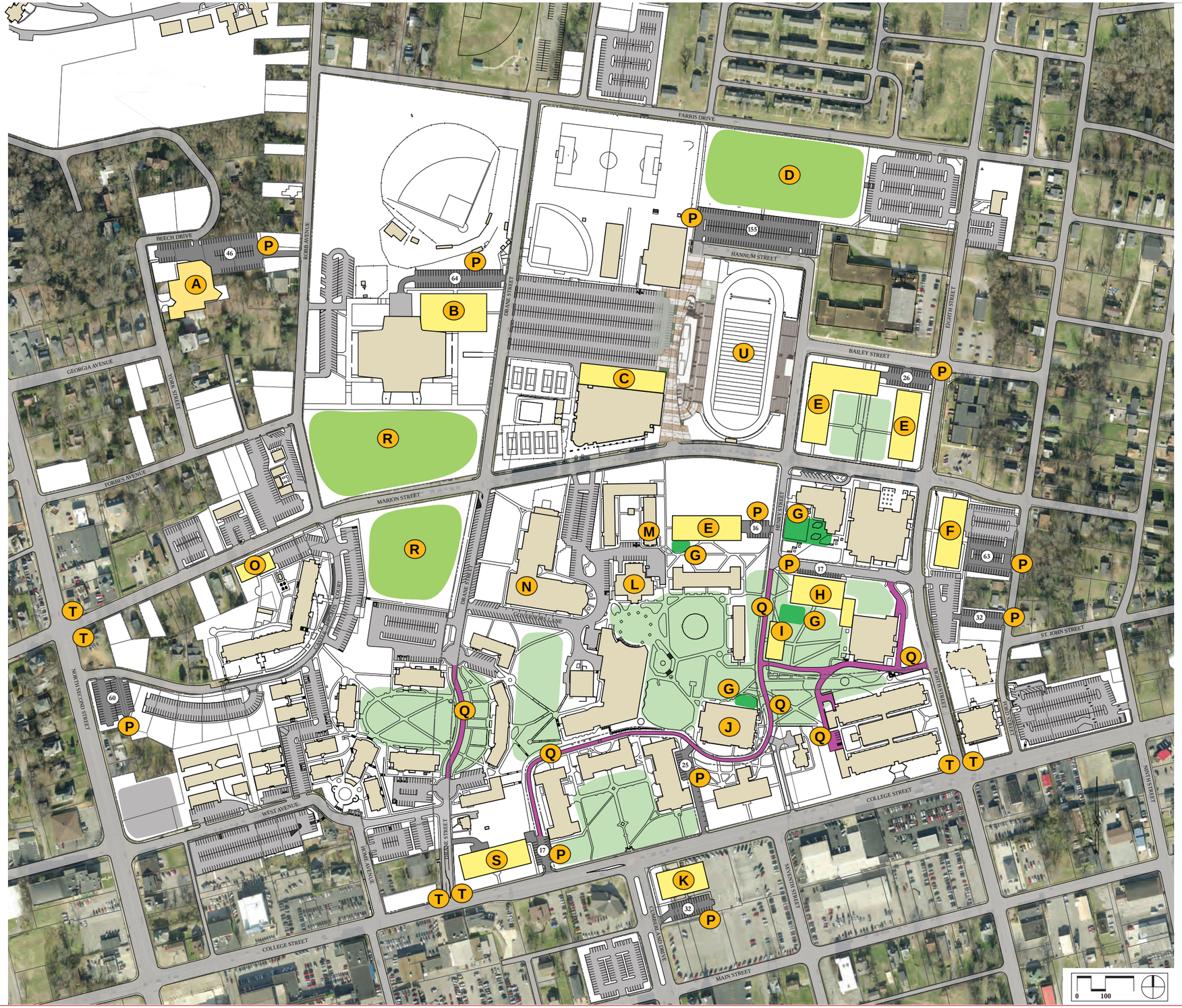
Please refer to **Drawing 1.1**—Concept Plan on page 5. The Campus Plan described in this report is summarized here by brief descriptions of key proposed projects listed by location and not in any priority.

Drawing 1.1 Site Number Key - (Note: List is shown by campus location only—not any priority)

A. Relocate the Shasteen Building Physical Plant to the campus perimeter.
B. Expand the Winfield Dunn Center to include a practice gymnasium.
C. Expand the Foy Fitness Center.
D. Construct an athletic practice field on the site vacated by the Shasteen Physical Plant facility. This site could also accommodate a multi-purpose field house.
E. Construct academic buildings on College Street, on the Marks Building site, and east of Governors Stadium.
F. Construct a Health Sciences Building on the corner of Eight Street and Marion Street.
G. Create four outdoor student seminar areas: south side of Kimbrough College of Business, north side of Woodward Library, between the new academic building and Harned Hall, and between the new Student Success Complex and Trahern expansion wing.
H. Expand Arts and renovate the Margaret Trahern Building.
I. Construct a Student Success Center to provide students and faculty large lecture hall and formal instructional space and a natural place to gather for scholarly and creative purposes. It is to be a place that by its existence will promote teaching and learning success by intentionally exposing freshmen and sophomore students enrolled in classes offered in the lecture halls to support services and student-engagement, high-impact practices.
J. Renovate and possibly expand the Woodward Library.
K. Construct a bookstore relocated from the Catherine Evans Harvill Building to the campus perimeter on College Street.
L. Relocate the Honors Program from the Memorial Health Building to the Catherine Evans Harvill Building.
M. Relocate Honors student housing to a location to be determined.
N. Expand student union space to accommodate more student life activities with the renovation of the Memorial Health Building. The concept includes multi-purpose meeting and conference rooms, student organizations, clubs, dining venues, and a commuter student area with a lounge, locker rooms, and showers.
O. Construct a residence hall north of the Castle Heights Residence Hall.
P. Construct surface parking throughout the campus. With the provision of surface lots only, there is a net loss of about 600 parking spaces.
Q. Landscape and transform road use for Browning Drive and portions of Henry and Drane streets from vehicular to pedestrian use and allowing for emergency and service vehicles only.
R. Upgrade the practice field on the south side of the Dunn Center by improving drainage, leveling the fields, and installing lighting.
S. Construct a mixed-use building to house Admissions, Financial Aid, and academic use.
T. Construct campus gateway signage at the intersections of Drane and College streets and Eighth and College streets.
U. Close Summer Street and renovate Governors Stadium.

Drawing 1.1:

CONCEPT PLAN



CONCEPT PLAN

Austin Peay State University

Campus Plan 2013

LEGEND

- PROPOSED BUILDINGS
- NEW PARKING
- EMERGENCY AND SERVICE VEH. ONLY
- CAMPUS OPEN SPACE
- ATHLETIC
- SEMINAR GATHERING
- (#) NEW PARKING SPACE

PROPOSED PROJECTS LISTED BY LOCATION
(NOT BY PRIORITY)

- (A) PHYSICAL PLANT RELOCATION
- (B) DUNN EXPANSION-PRACTICE GYM
- (C) FOY EXPANSION
- (D) PRACTICE FIELD
- (E) ACADEMIC BUILDING
- (F) HEALTH SCIENCES BUILDING
- (G) OUTDOOR STUDENT SEMINAR AREA
- (H) ARTS EXPANSION/TRAHERN RENOVATION
- (I) STUDENT SUCCESS COMPLEX
- (J) LIBRARY RENOVATION & POSSIBLE EXPANSION
- (K) BOOKSTORE RELOCATION
- (L) HONORS PROGRAM RELOCATION
- (M) HONORS HOUSING
- (N) MEMORIAL HEALTH RENOVATION FOR STUDENT LIFE ACTIVITIES - SEE PAGE 4 LIST
- (O) RESIDENCE HALL
- (P) SURFACE PARKING
- (Q) TRANSFORM ROAD USE FOR PEDESTRIANS, EMERGENCY AND SERVICE VEHICLES ONLY
- (R) UPGRADES FOR PRACTICE & INTRAMURAL FIELDS
- (S) MIXED-USE BUILDING FOR ADMISSIONS/FINANCIAL AID AND ACADEMIC FUNCTIONS
- (T) CAMPUS GATEWAY
- (U) GOVERNORS STADIUM RENOVATION & SUMMER ST. CLOSING

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Section Two

PLANNING PROCESS

MISSION, VISION, AND PRIORITIES

CAMPUS ANALYSIS
- Environs
- University Property / Potential and Opportunistic Land Acquisition
- Predominant Use
- Pedestrian Circulation
- Vehicular Circulation
- Students in Residence
- Student Contact Hours
- Campus Landscape
- Topography
- Facilities Assessment

CLASSROOM USAGE

OFFICES

PEER COMPARISONS

PROJECTIONS

SUMMARY OF INFRASTRUCTURE CONDITIONS AND FUTURE IMPROVEMENTS

Section Two

PLANNING PROCESS

The planning process at Austin Peay State University (APSU) involved many stakeholders in open meetings, department meetings, and one-on-one meetings.

The project's primary consultant was DOBER LIDSKY MATHEY (DLM). Landscape, open space, circulation, and storm water analysis were addressed by Lose & Associates, Inc. Assessment of campus-wide utility infrastructure was provided by I.C. Thomasson Associates, while both Lose & Associates and I.C. Thomasson Associates provided a campus-wide facilities assessment.

There were five steps, which are described graphically in **Diagram 2.1**. The foundation for the planning was an understanding of the College's mission and vision. Preliminary assumptions were identified based on these factors.

The first step was a review of the University's mission and the articulation of planning assumptions. Projected changes in enrollment, staffing, and curriculum were factored into the planning. One key assumption is that the undergraduate enrollment will grow 2 percent annually for the next 10 years. Another assumption is that the Tennessee Board of Regents has approved Library renovations as well as Trahern renovations and additions. APSU's space inventory was the basis for these studies and for comparisons to TBR peer institutions and THEC space standards.

Concurrently, an assessment and analysis of the campus was conducted for both site and buildings and of the environs. The University provided a campus base map that indicated paths, streets, topography, building locations, and University-owned property. The base map is an essential tool for campus planning and should be kept up-to-date as plans are implemented.

Diagram 2.1

Facility needs were then defined and alternative concept plans developed. The Campus Plan is a synthesis of the various concept plans that were explored.

In addition, four task forces were created to focus on specific areas of need at the University. Meetings were held with deans, faculty, staff, and students. The reports derived from their research are found in Appendix One. The task forces with their members follow:

- **Athletics and Recreation**
  - David Loos/Director of Athletics
  - Cheryl Holt/Asst. Director of Athletics, Senior Women's Administrator
  - David Davenport/Director of University Recreation and the Foy Fitness Center
  - Bruce Myers/Chair of Computer Science & IT, Faculty Athletic Representative
  - Sean Bailey/Student Athlete Advisory Council
  - Patrick Grady/Student Government Association Representative
- **Learning Spaces**
  - Chad Brooks/Associate Professor of Biology
  - Jack Deibert/Professor of Geology, Faculty Senate Representative
  - Loretta Griffy/Director of Title III Programs, Associate Professor of Mathematics, Academic Affairs Representative
  - Barry Jones/Associate Professor of Art, Academic Affairs Representative
  - Thomas King/Professor of Music, Academic Affairs Representative
  - Beth Robinson/Director of Financial Systems & Reporting, Staff Senate Representative
  - Jeff Walton/Office Manager of IT Help Desk, Finance & Administration Representative
  - Joe Weber/Director of Woodward Library
  - Alexandra Wills/Asst. Director of Student Life & Engagement, Student Affairs Representative
- **Student Residence and Dining Services**
  - Joe Mills/Asst. VP and Director of Housing/Residence Life, Chair of Dining Services
  - Ashlee Spearman/Director of Student Transitions
  - Tim Hurst/Asst. VP for Finance
  - Tom Hutchins/Director of Physical Plant Operations
  - Phyllis Camilleri/Professor of Geology
  - Emily Hallman/Student Residence Hall Association Representative
  - Kelsey Smith/Student Government Association Representative
  - Brena Andring/Student Government Association Representative
- **Parking**
  - Terence Calloway/Chair
  - Pat Walton/Sr. Administrative Assistant, Staff Representative
  - Lynette Taylor/Director of Disability Services, Student Affairs Representative
  - Robert Sirk/Professor and Chair of Geosciences, Faculty Representative
  - Ryan Givens/Residential Student
  - Jane Stevens/Commuter Student
  - Christos Frentzos/Roads & Safety Comm. Representative
  - Alvin Westerman/Director of Facilities Planning and Projects

MISSION, VISION, AND PRIORITIES

Underlying all campus planning is an institution's mission, vision for the future, and stated values. APSU's mission is to provide opportunities that support regional needs.

APSU Mission Statement

"Austin Peay State University is a comprehensive university committed to raising the educational attainment of the citizenry, developing programs and services that address regional needs, and providing collaborative opportunities that connect university expertise with private and public resources. Collectively, these endeavors contribute significantly to the intellectual, economic, social, physical, and cultural development of the region. APSU prepares students to be engaged and productive citizens, while recognizing that society and the market place require global awareness and continuous learning. This mission will be accomplished by:

Offering undergraduate, graduate, and student support programs designed to promote critical thinking, communication skills, creativity, and leadership;

- *Expanding access opportunities and services to traditional and nontraditional students, including the use of multiple delivery systems, flexible scheduling, and satellite locations;*
- *Promoting equal access, diversity, an appreciation of all cultures, and respect for all persons;*
- *Serving the military community at Fort Campbell through complete academic programs;*
- *Providing academic services that support student persistence to graduation;*
- *Fostering a positive campus environment that encourages active participation in university life; and*
- *Developing programs (credit and noncredit), conducting research, and providing services that contribute significantly to the quality of life, learning, and workforce development needs of the region."*

The University's vision focuses on interdisciplinary teaching and learning to gain the tools needed for living in a global economy.

Vision Statement

"APSU's vision is to create a collaborative, integrative learning community, instilling in students habits of critical inquiry as they gain knowledge, skills, and values for life and work in a global society."

To achieve the University's vision, the University 2010-2015 Strategic Plan focuses on seven key priorities with defined goals set by both TBR and APSU:

- Access
- Student Success
- Quality
- Resourcefulness and Efficiency
  - Process Re-engineering
  - Sustainability
  - Employee Excellence

CAMPUS ANALYSIS

The 10 drawings that follow summarize the analysis of the physical campus that is an essential part of the planning process.

1. Environs
2. University Property / Potential and Opportunistic Land Acquisition
3. Predominant Use
4. Pedestrian Circulation
5. Vehicular Circulation
6. Students in Residence
7. Student Contact Hours
8. Campus Landscape
9. Topography
10. Facilities Assessment

The drawings range from an environs map which locates the campus, to maps that show University property and potential land acquisition, pedestrian and vehicular circulation in and around the campus, and maps that summarize intensity of classroom and residence use, building use and condition, topography and existing landscape. The first is **Environs Drawing 2.1**.

ENVIRONS

A map of the main campus and surrounding areas is shown on **Drawing 2.1,** highlighting the immediate surrounds of the Clarksville campus. Land that is APSU property is shown in dark blue. The University buildings are indicated in white. A locus map is inserted within Drawing 2.1 indicating the University's location northwest of Nashville, a distance of about 50 miles.

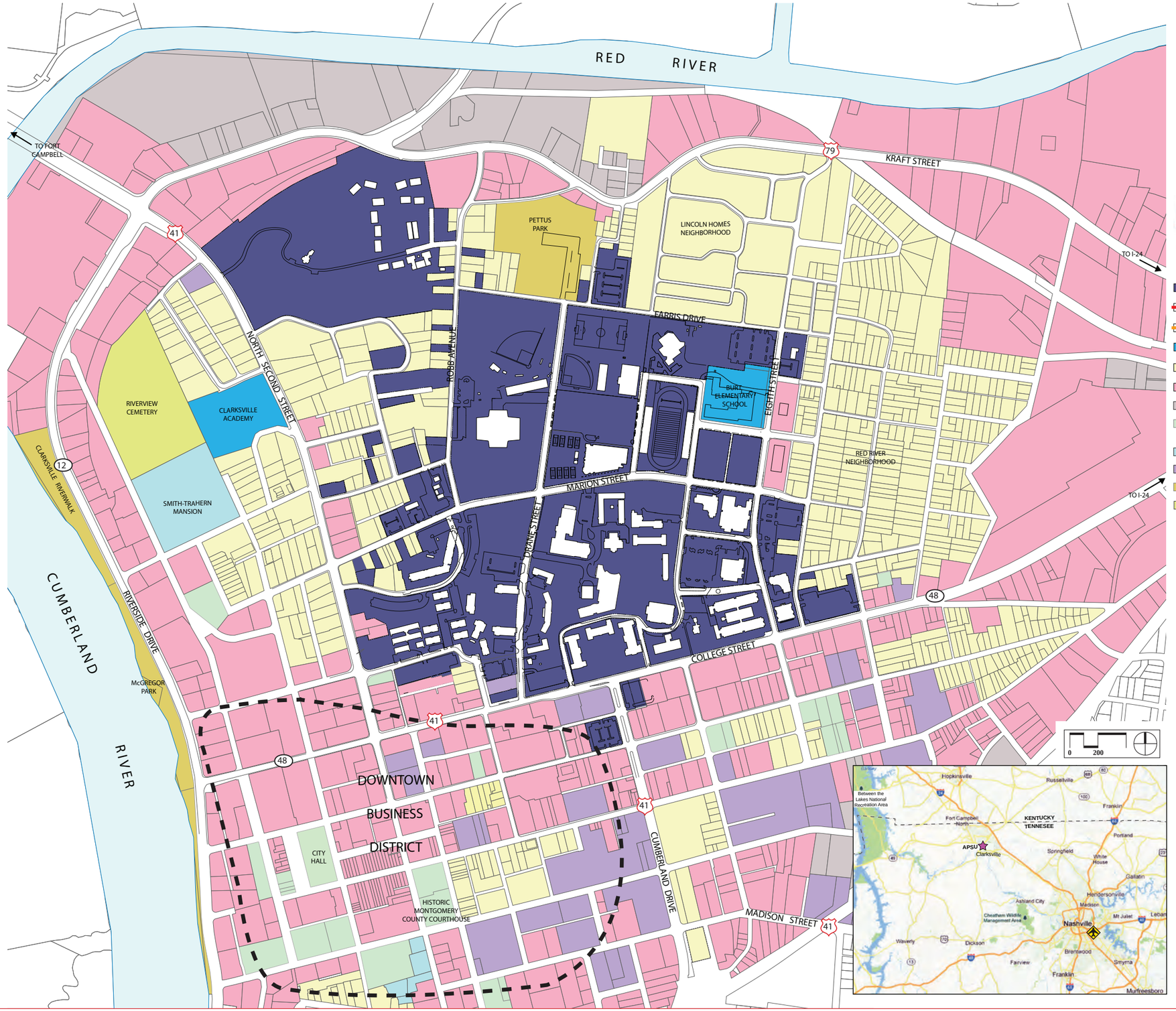
The APSU main campus is located 45 minutes from Nashville in downtown Clarksville, Tennessee and is surrounded by four major arteries, U.S. Highway #79 and #41, and two state routes #12 and #48.

The campus is just to the north of downtown Clarksville and within easy walking distance. The City offers a diversity of restaurants, shops, and resources, however, a stronger link and more attractions for students would be welcomed.

The campus is mostly adjacent to residential areas to the east, north, and west, colored yellow and commercial is primarily to the south, shown in pink. Pettus Park, a municipal property, is to the north located on Farris Drive and is indicated in light green. There are two private educational institutions near the APSU campus, colored medium blue —Burt Elementary School is adjacent to the campus on the eastern edge and Clarksville Academy is to the west of the campus on North Second Street.

Drawing 2.1:

ENVIRONS



ENVIRONS

Austin Peay State University

Campus Plan 2013

- APSU PROPERTY
- US ROUTE
- STATE ROUTE
- EDUCATIONAL
- RESIDENTIAL
- COMMERCIAL
- MANUFACTURING
- MUNCIPAL/ COMMUNITY
- CULTURAL
- RELIGIOUS
- PARKS/OPEN SPACE
- CEMETERY

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UNIVERSITY PROPERTY / POTENTIAL AND OPPORTUNISTIC LAND ACQUISITION

University-owned land is colored dark blue on this drawing and the University buildings are tan. The current size of the campus is 182 acres.

The primary boundaries of the campus are Farris Drive to the north and Eighth Street to the east. APSU also owns land north of Farris and on the east side of Eighth Street. Robb Avenue and North Second Street are the primary boundaries on the west, with University-owned parcels on the west side of Robb. College Street defines the south edge which includes two parcels of land located south of College Street. Another parcel is located on College Street to the east between Ford and Ninth streets. There are several University-owned contiguous parcels to the northwest—this area is referred to as Emerald Hill. The University's main entrance is located on the south side of the campus on College Street.

Two roadways run through the campus—Marion Street runs east and west and Drane Street runs north and south. The core of the campus lies between College, Marion, Drane, and Eighth streets. Academic and support buildings are situated in the campus core.

The APSU Environmental Education Center (EEC), otherwise known as the APSU Farm, is located within Clarksville off Pickens Road. It is comprised of approximately 442 acres and supports the University's academic programs. Fort Campbell is located about 10 miles north of the main campus. At the time of the publication of this report, the University is in the process of purchasing property located on Strawberry Alley in downtown Clarksville.

The areas of land that the University should consider for acquisition in a long-range plan are shown in light green. Properties that have a high priority for acquisition are colored dark green and are located on the campus edges to the east, west, and south.

APSU has the fewest number of acres in the TBR University system with 0.022 acres/student. University of Memphis in comparison has over 1,100 acres with 0.068 acres/student.

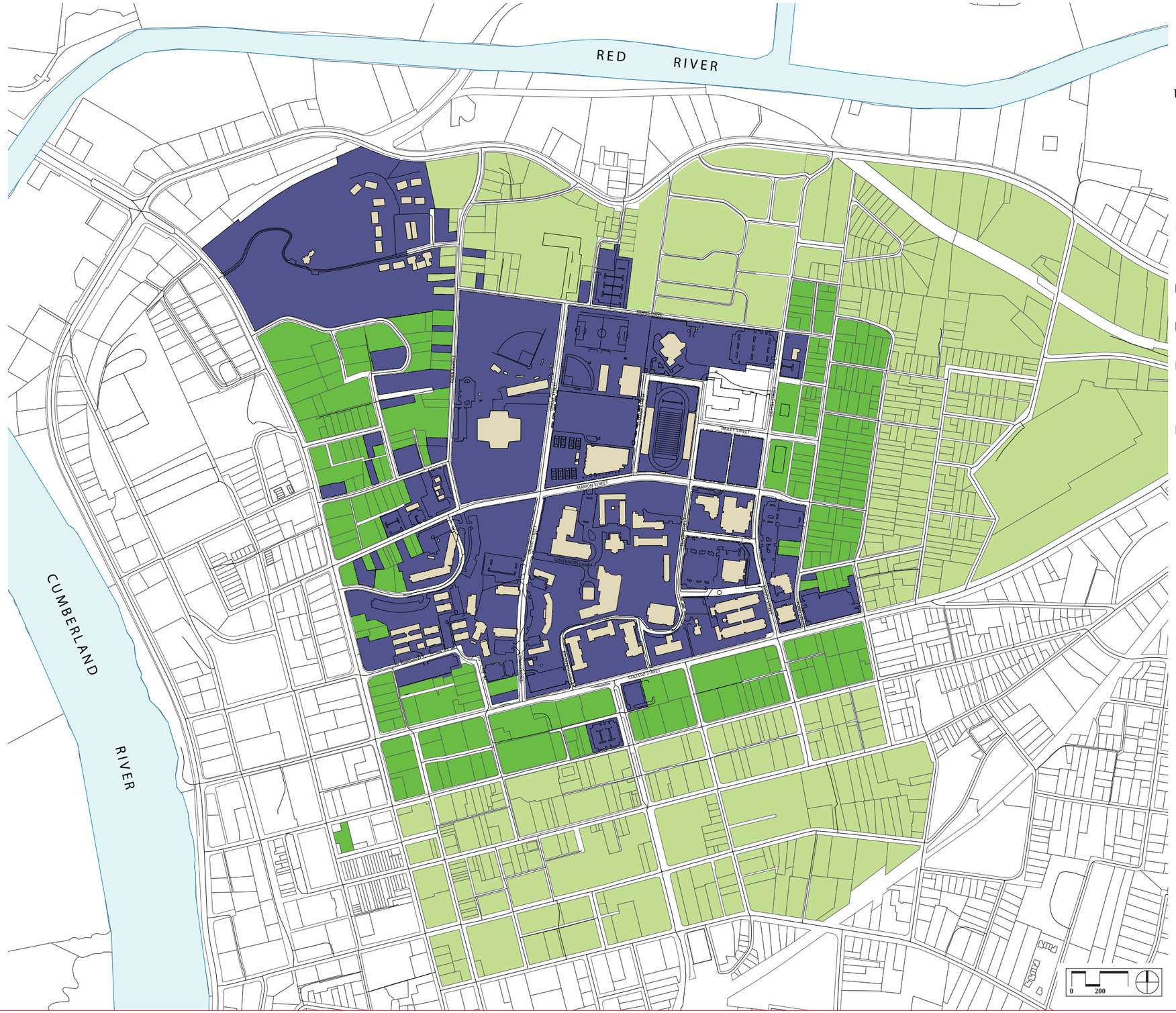
The dearth of land impacts current and future parking, play fields, open space, and building sites.

Drawing 2.2:

UNIVERSITY PROPERTY /

POTENTIAL AND OPPORTUNISTIC

LAND ACQUISITION



UNIVERSITY PROPERTY
POTENTIAL AND
OPPORTUNISTIC
LAND ACQUISITION

Austin Peay State University

Campus Plan 2013

- UNIVERSITY BUILDINGS
- UNIVERSITY PROPERTY
- HIGH PRIORITY POTENTIAL AND OPPORTUNISTIC LAND ACQUISITION
- LONG RANGE POTENTIAL AND OPPORTUNISTIC LAND ACQUISITION

UNIVERSITY PROPERTY SHOWN ON THIS MAP TOTALS 182 ACRES

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PREDOMINANT USE

Predominant use of campus buildings are shown on **Drawing 2.3**. The campus buildings are color-coded in eight distinct categories. The distribution of buildings is for the most part in the southern area of campus located on the higher elevations and consist of academic, library, administrative, student life, and residential. The northern area of campus contains predominantly athletic facilities, play fields, and parking.

Academic buildings, colored red, are found predominantly in the southern area of the campus—along the south edge on College Street, the southeast area on Eighth Street, and in the campus core.

In the southwest area of campus are McReynolds and the Center for Teaching and Learning, each accessed by Drane Street. The McCord and Clement buildings are located on College Street and are each accessed by Browning Drive, and Claxton is to the east of Clement and is accessed by Henry Street. Sundquist Science Complex is located on the corner of College and Eighth streets and the Hemlock Building is located on the opposite corner on College. The new Maynard Math and Computer Science Building is just north of Hemlock on Eighth Street. The Margaret F. Trahern Building is situated just to the north of Sundquist and the Music/Mass Communication and Kimbrough buildings are just to the north of Trahern. West of Kimbrough there are two academic buildings in the campus core, Marks and Harned halls. There is also an academic presence in the Woodward Library, the Dunn Center, and Memorial Health which houses Honors. On the western edge of campus, the Marion Street Apartments have been converted to academic use.

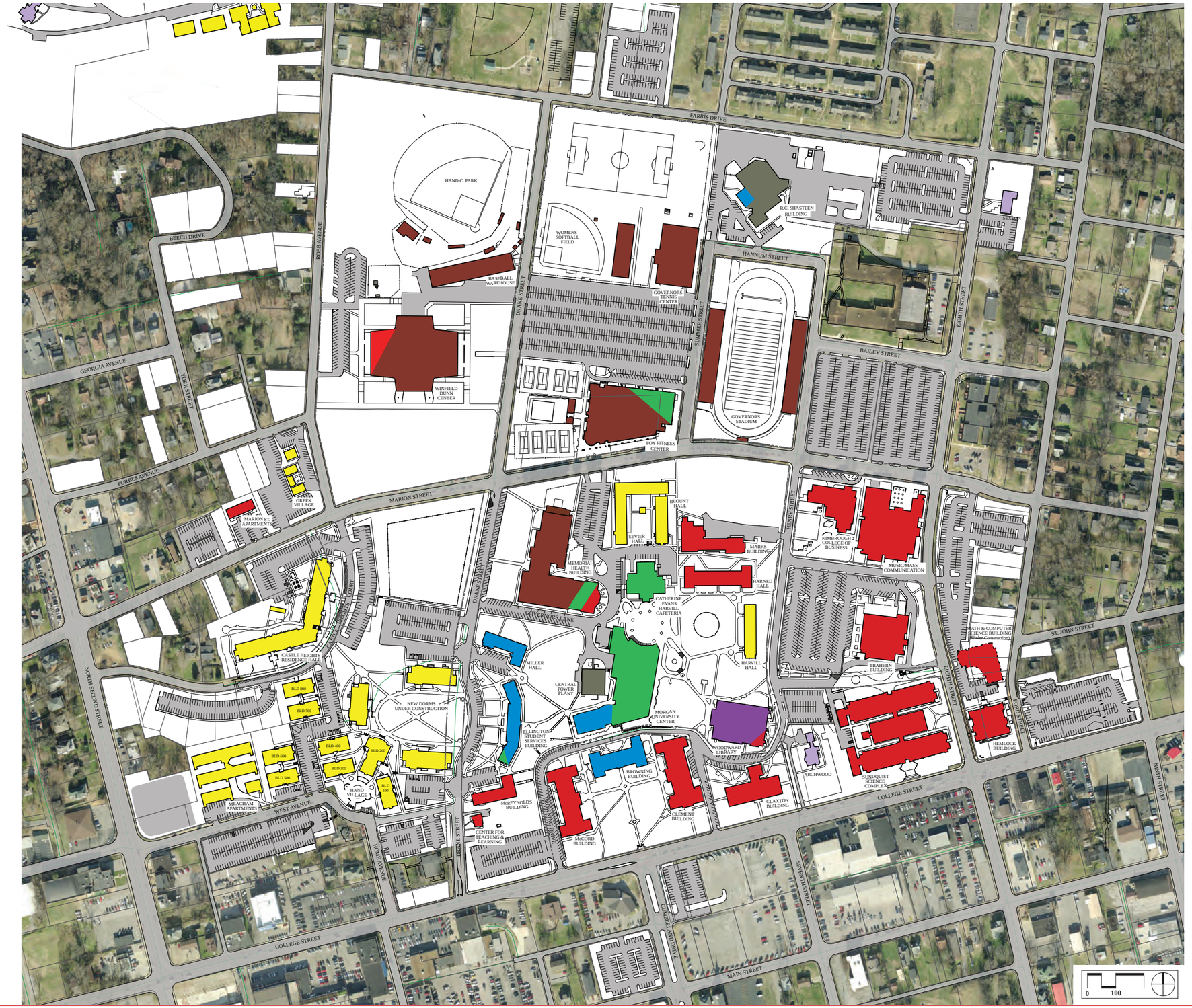
The Woodward Library is situated in the campus core and is colored purple.

Administrative use is shown in blue and is predominantly located near the campus core. The Browning Building houses executive offices among other administrative functions and is located on College Street, accessed by Browning Drive. Miller Hall is west of the campus core and is partially used by Auxiliary Services and Academic Administration. Ellington Building is a mixed-use facility with administrative functions and lies north and northwest of Browning. The Shasteen Building found on the north edge of campus, is a University support facility which houses the Public Safety, Physical Plant and the offices for University Facilities Planning and Projects.

Student life buildings are green and most are located in or near the campus core. Situated in the campus core is the Morgan University Center which serves as the student center and houses several dining venues, student gathering areas/lounges, and a convenience store. Also in the campus core is the Catherine Evans Harvill Building which contains the campus bookstore and a dining venue. Memorial Health is a mixed-use facility with intramural recreational activities, ROTC, and the Honors Program.


Drawing 2.3:

PREDOMINANT USE



PREDOMINANT USE

Austin Peay State University

Campus Plan 2013

- ACADEMIC
- ADMINISTRATIVE
- STUDENT LIFE
- LIBRARY
- STUDENT RESIDENCE
- ATHLETIC/RECREATION
- SUPPORT SERVICES
- SPECIAL

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Student Health Services are found within the Ellington Student Services Building just west of the campus core area. The Foy Fitness Center is a mixed-use facility and is found just outside the core on the north side of Marion Street.

Student residences are shown in yellow and are predominantly located in the southwestern area of campus, and four are located near the campus core. On the northwest edge of the campus an area known as Emerald Hill contains married/ family student apartments, shown on **Drawing 2.3A**.

The northern area of campus contains predominantly athletic facilities, play fields, and parking and the facilities are shown in brown. The Memorial Health Building in the campus core contains athletic uses as well as the Dunn Center and Foy Fitness Center north of Marion Street. Other athletic facilities include the Baseball Warehouse and associated field facilities directly north of the Baseball Warehouse. North of the Foy Fitness Center are the Governors Tennis Center, soccer and softball field facilities. West of Foy includes the pool and its facilities. East of Foy and Summer Street is the football venue, Governors Stadium. The only dedicated intramural field is located south of the intersection of Marion Street and Drane Street.

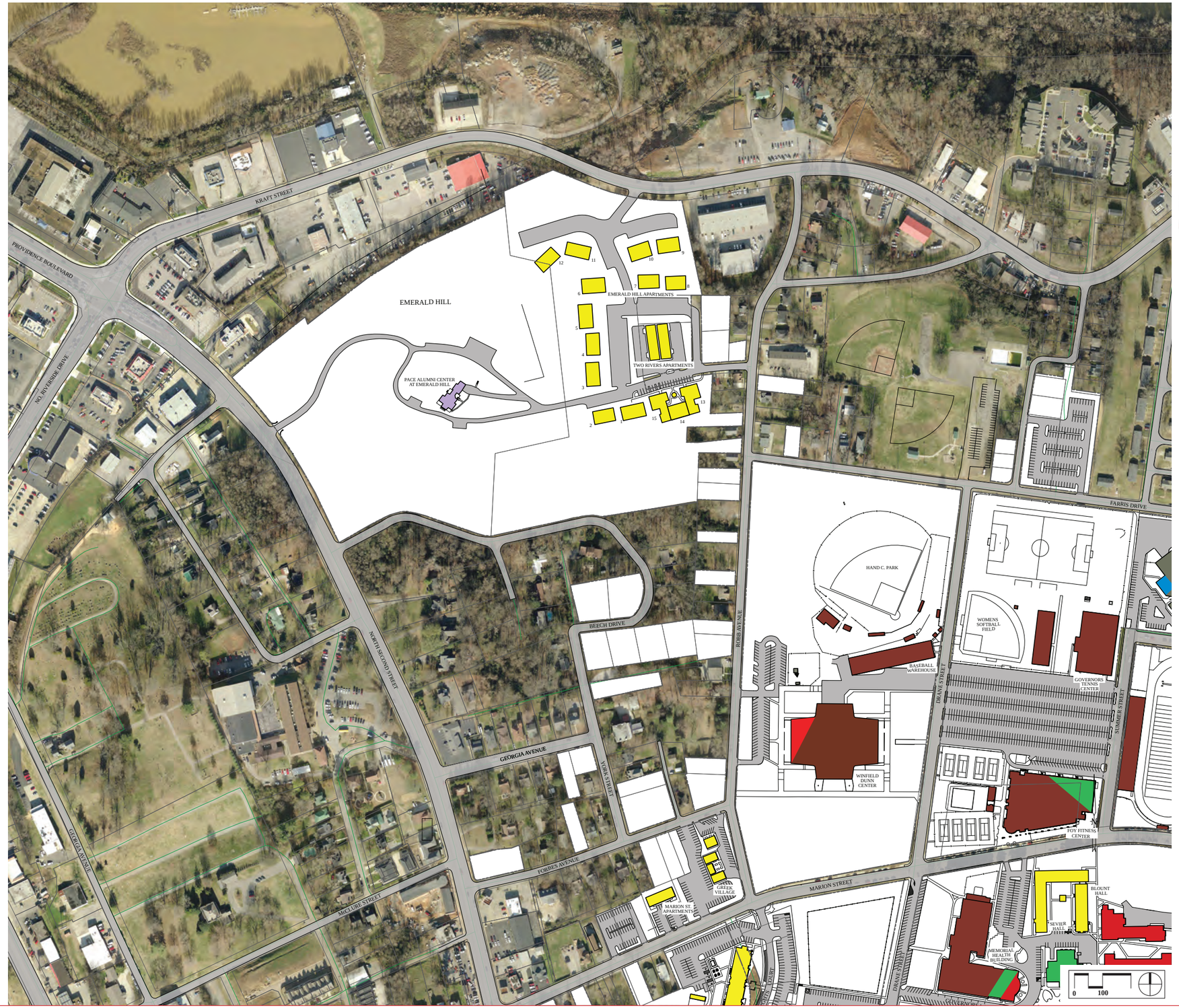
Special facilities are shown in lavender and include Archwood, the University president's residence located on College Street, and the Sexton Building on the northeast corner of the campus which houses a children's daycare operation. The Pace Alumni Center is found on Emerald Hill to the northwest, shown on **Drawing 2.3A**.

Physical Plant and Support Services are shown in gray. The campus's central power plant is found in the central southern portion of campus. The Shasteen Building is a campus support service facility and is located on the north edge of the campus.




Drawing 2.3A:

PREDOMINANT USE - Emerald Hill



PREDOMINANT USE
Emerald Hill

Austin Peay State University

Campus Plan 2013

- ACADEMIC
- ADMINISTRATIVE
- STUDENT LIFE
- LIBRARY
- STUDENT RESIDENCE
- ATHLETIC
- PHYSICAL PLANT
- SPECIAL

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PEDESTRIAN CIRCULATION

Paved surfaces that are used exclusively for pedestrian walkways and outdoor gathering places are shown in solid red on **Drawing 2.4**. Shared pedestrian and vehicular use is shown in purple.

The circle superimposed on the map represents a five-minute walking distance from the center to the outer edge, based on a walking rate of three miles per hour. The circle is centered on the Woodward Library entrance, the center of academic activity. Distances between buildings within the circle can be walked in ten minutes or less. This measure is the usual break between two consecutive classes. Most University buildings are within ten minutes from the library. A second circle of the same diameter shown in gray demonstrates that most of the entire campus lies within it; this implies that the campus can be walked in about ten minutes from one end to the other.

Handicap-accessible entrances are marked by a wheelchair symbol. Emergency phone locations are denoted by a blue circle with dark blue cross marks.

For an institution with an enrollment of more than a 10,000 head count of students, the campus is remarkably compact. The path system connects most campus buildings. However, there are significant gaps between the core and the academic buildings on the east side—notably Sundquist, Trahern, Kimbrough, and Music/Mass Communications. There is a pedestrian/vehicular conflict on Browning Drive between McCord, Browning, Clement, and Claxton buildings and the Morgan University Center and these are shown with a black circle with green cross marks. It should also be noted that the sidewalks along Browning Drive have been narrowed with the installation of planters, making it even more difficult for pedestrians to navigate. The portion of Browning Drive between the north side of McCord and east to Claxton should be considered for closing in order to create a much-needed wide pedestrian walkway connection between the campus core and McCord, Browning, Clement, and Claxton.

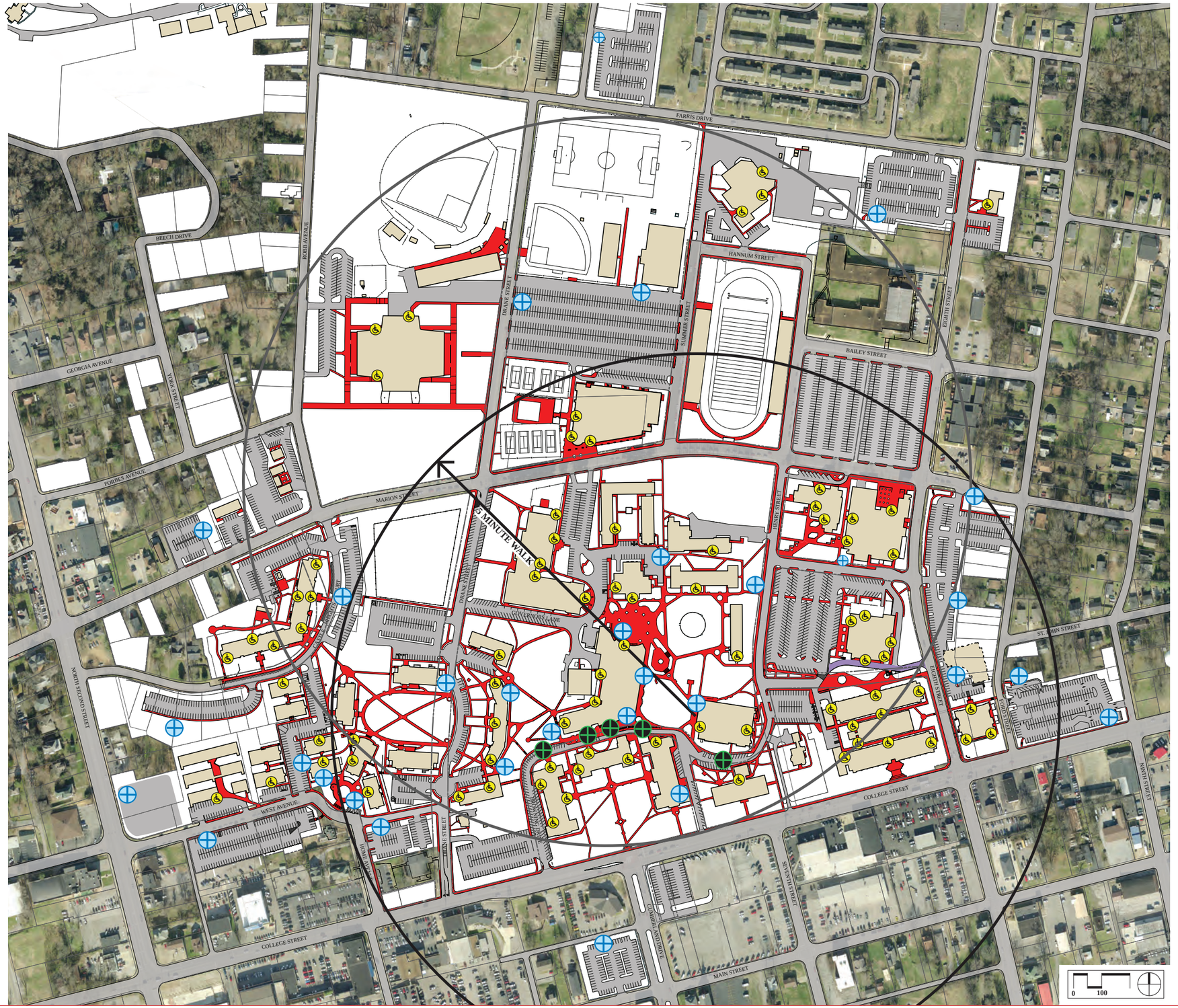
A potential barrier to utilizing the large existing parking lots on the north end of the campus is the lack of inviting pedestrian corridors connecting the parking lots to the core of the campus. Sidewalk improvements and streetscape enhancements along Drane, Summer, Henry, and Eighth streets north of Marion Street would make the parking lots to the north more attractive to pedestrians.

The pedestrian route from the Eighth Street and Farris Drive parking lot creates a negative pedestrian experience. Pedestrians are routed through a narrow opening between two fences if they choose to take the shortest route to the main section of the campus. Improvements are needed to make this path safe and aesthetically pleasing to maximize use of the surface lot. Some landscaping improvements will be addressed in the summer of 2013.

Pedestrian safety and comfort could be enhanced by replacing all floodlights throughout the campus with full-cut-off fixtures with shielded light sources. By reducing glare and creating a more even distribution of pedestrian and security lighting, actual and perceived safety can be increased.

Drawing 2.4:

PEDESTRIAN CIRCULATION



PEDESTRIAN CIRCULATION

Austin Peay State University

Campus Plan 2013

- UNIVERSITY BUILDINGS
- PAVED WALKS
- SHARED PEDESTRIAN/ VEHICULAR
- HANDICAPPED ENTRANCES
- EMERGENCY PHONE
- PEDESTRIAN/ VEHICULAR CONFLICT

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VEHICULAR CIRCULATION

Vehicular circulation is shown on **Drawing 2.5**. The APSU main campus is located 45 minutes from Nashville in downtown Clarksville, Tennessee and is surrounded by four major arteries—U.S. Highway #79 and #41 shown in red and two state routes, #12 and #48, colored orange. Primary accesses to the campus are College Street and North Second Street and are highlighted in red. Marion Street and Eighth Street are secondary access points, also highlighted in red. City streets within the campus and surrounding neighborhoods are indicated in yellow. Paved campus roads and student parking are shown in orange. Faculty and staff parking are indicated in magenta. Several parking lots under construction at the time of the publishing of this report are colored brown. Shared pedestrian and vehicular roadways are colored lavender. One-way traffic flows are indicated with black arrows drawn in the direction of the driving flow.

Restricted vehicular access points are indicated with a pink star. Defined service entrances are marked with a blue circle denoted with the letter “S”. The University trolley route is drawn in a green-dashed line with directional arrows showing the driving circuit. The trolley stops are indicated with a green circle denoted with the letter “T”.

Numbered white circles indicate parking space counts within parking lots. Numbered blue rectangles denote parking space counts along a street or in a leased a parking lot. There are two parking lots the University leases—one to the north at Pettus Park and the other is located in downtown Clarksville at the Baptist Church.

The area of campus with the greatest potential of pedestrian/vehicular conflicts is the one-way section of Browning Drive to Henry Street through the core of campus. Browning Drive begins on the west side of McCord and winds between Browning and the Morgan University Center, an area of heavy pedestrian traffic. It continues its course through the campus core and wraps around two sides of the library before connecting to Henry Street and continuing north. This alignment is currently open to all vehicular traffic and serves relatively few parking spaces. This provides an incentive for students, visitors, and faculty and staff to make unnecessary trips to circle through the core of campus while searching for one of the rare empty parking spaces along Browning Drive. To increase safety and promote sustainability, the University should explore alternatives that direct motorists to areas of ample parking and discourage drivers from circling through the campus searching for a close place to park. By limiting traffic on Browning Drive to only emergency and service vehicles, the University can improve safety and encourage behaviors that conserve natural resources and energy. A similar phenomenon occurs because of the 24 parking spaces along Drane Street opposite the new quadrangle and student housing. Closing the section of Drane Street to the east of the new quadrangle would discourage cut-through traffic and reduce wasted vehicular trips. These solutions would promote the University’s goals for increased safety and environmental sustainability.

There is also limited area for gathering and waiting at trolley stops throughout campus. Shelters to protect students from inclement weather or to clearly identify a trolley stop should be considered. To encourage greater use of the trolley system, site furnishings and plaza spaces are needed throughout the campus.

Table 2.1 displays a comparison with parking spaces, enrollments, and acreage with five TBR universities. There are approximately 4,011 parking spaces on campus, and with street and leased spaces included there were 4,663 for approximately 5,664 FTE on-ground students in the fall of 2012. This translates to 82 spaces per 100 FTE students. When comparing colleges and universities in the DLM database, the average is 54 spaces per 100 FTE students and the five TBR universities’ mean is 69 spaces per 100 FTE students, well below the APSU ratio.

To promote pedestrian activity and safety, reduce vehicular congestion, and achieve other environmental sustainability goals, the University should relocate most of the vehicular parking from the campus core to the periphery. This will create opportunities to redevelop surface parking lots for new campus buildings and useful and beautiful open spaces. This shift may affect the route and optimal frequency of the campus trolley service as demand for the trolley is likely to increase.

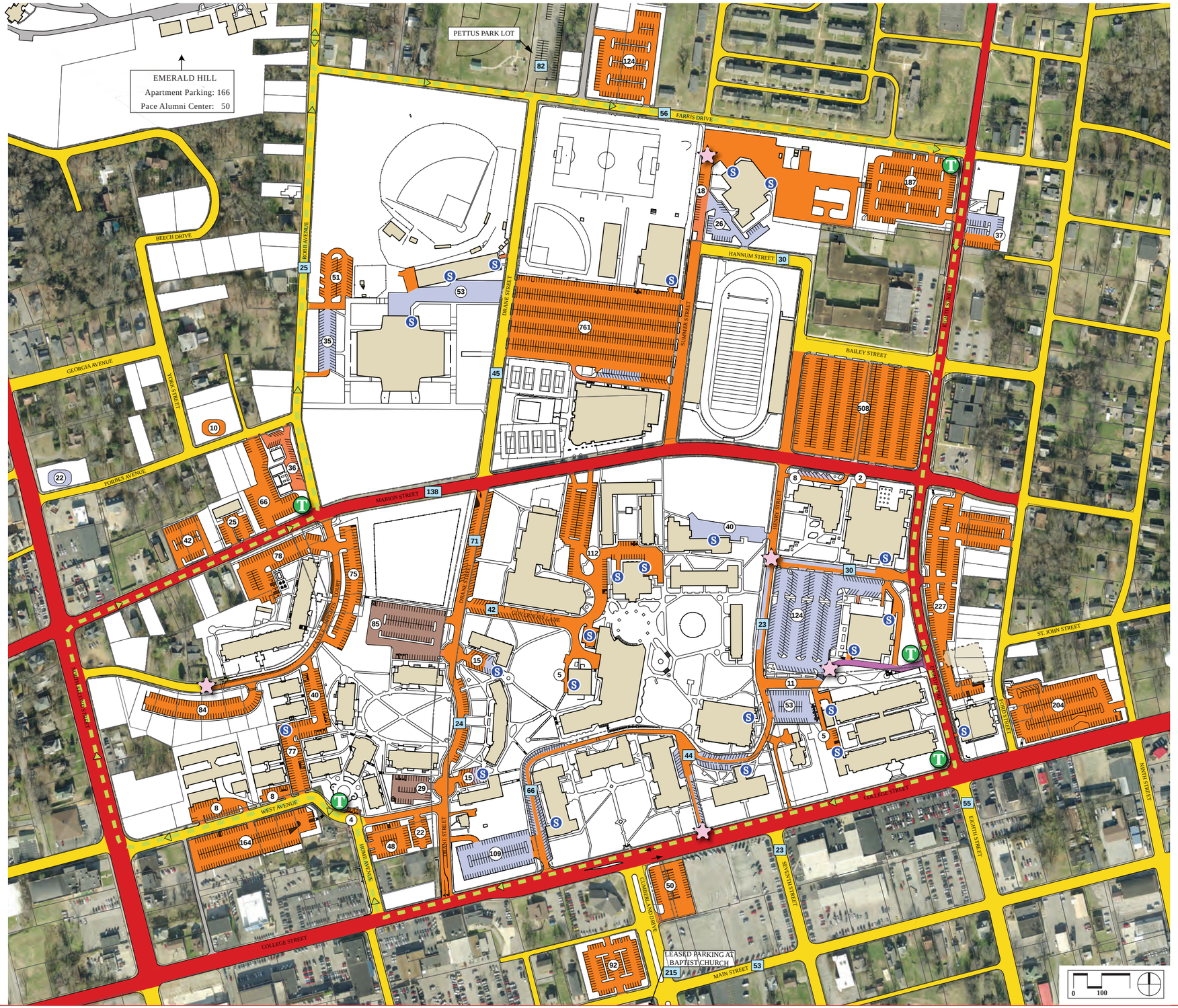
Another related issue is the number of visitor parking spaces located in the campus core. The parking lot off Browning Drive offers few visitor parking spaces. This area serves as the front door to campus and is adjacent to major administrative functions including the Admissions office and as such, prospective students may be better served if more spaces were dedicated to visitor parking.

Table 2.1: Parking Spaces, Enrollments, and Acreage Compared - Fall 2012

Institution	Parking Spaces	FTE Students	Spaces / 100 FTE Stu	Total Acres	Spaces / Acre	FTE Faculty	Spaces / 100 Faculty
Eastern Tennessee SU	7,393	9,628	77	366	20.2	1,087	680
Middle Tennessee SU	10,681	18,544	58	500	21.4	1,210	883
Tennessee SU	4,977	6,149	81	450	11.1	470	1,059
Tennessee Technical U	5,577	8,488	66	235	23.7	511	1,091
U Memphis	9,200	14,032	66	1,160	7.9	1,098	838
Means:	**7,566**	**11,368**	**69**	**542**	**16.9**	**875**	**910**
Medians:	**7,393**	**9,628**	**66**	**450**	**20.2**	**1,087**	**883**
Austin Peay SU	**4,663**	**5,664**	**82**	**182**	**25.6**	**521**	**895**
		Fall 2012					

Drawing 2.5:

VEHICULAR CIRCULATION



VEHICULAR CIRCULATION

Austin Peay State University

Campus Plan 2013

- UNIVERSITY BUILDINGS
- THROUGH STREETS
- NEIGHBORHOOD STREETS
- PAVED CAMPUS ROADS & PARKING
- UNDER CONSTRUCTION
- FACULTY AND STAFF PARKING
- SHARED PEDESTRIAN/ VEHICULAR
- RESTRICTED ACCESS
- SERVICE ACCESS
- ONE WAY TRAFFIC
- TROLLEY ROUTE
- TROLLEY STOP
- PARKING LOT COUNT
- STREET & LEASED PARKING COUNT

CAMPUS PARKING: 4,011
PARKING ON STREET and LEASED BY APSU: 652
TOTAL SPACES: 4,663

114 Handicapped Spaces on Campus
(included in total count)

82 Spaces per 100 FTE Student
(Fall 2012)

DOBER LIDSKY MATHEY CREATING CAMPUS SOLUTIONS

LOSE & ASSOCIATES, INC.

I. C. Thomasson Associates, Inc. Consulting Engineers

STUDENTS IN RESIDENCE

Approximately 1,410 students lived on campus in the fall of 2012. This drawing shows the locations of student residences and the number of beds in each building based on these data. With the current housing capacity at 1,453 beds (excludes new construction), there was a surplus of 43 beds. When construction of three residences is completed, the occupancy will be increased by 404 to 1,857 beds.

Student housing types include traditional, suites, and apartments. All housing is colored yellow, with the exception of housing under construction which is shown in orange. All other University buildings are shown in tan. Student housing is predominantly located in the southeast sector of the campus.

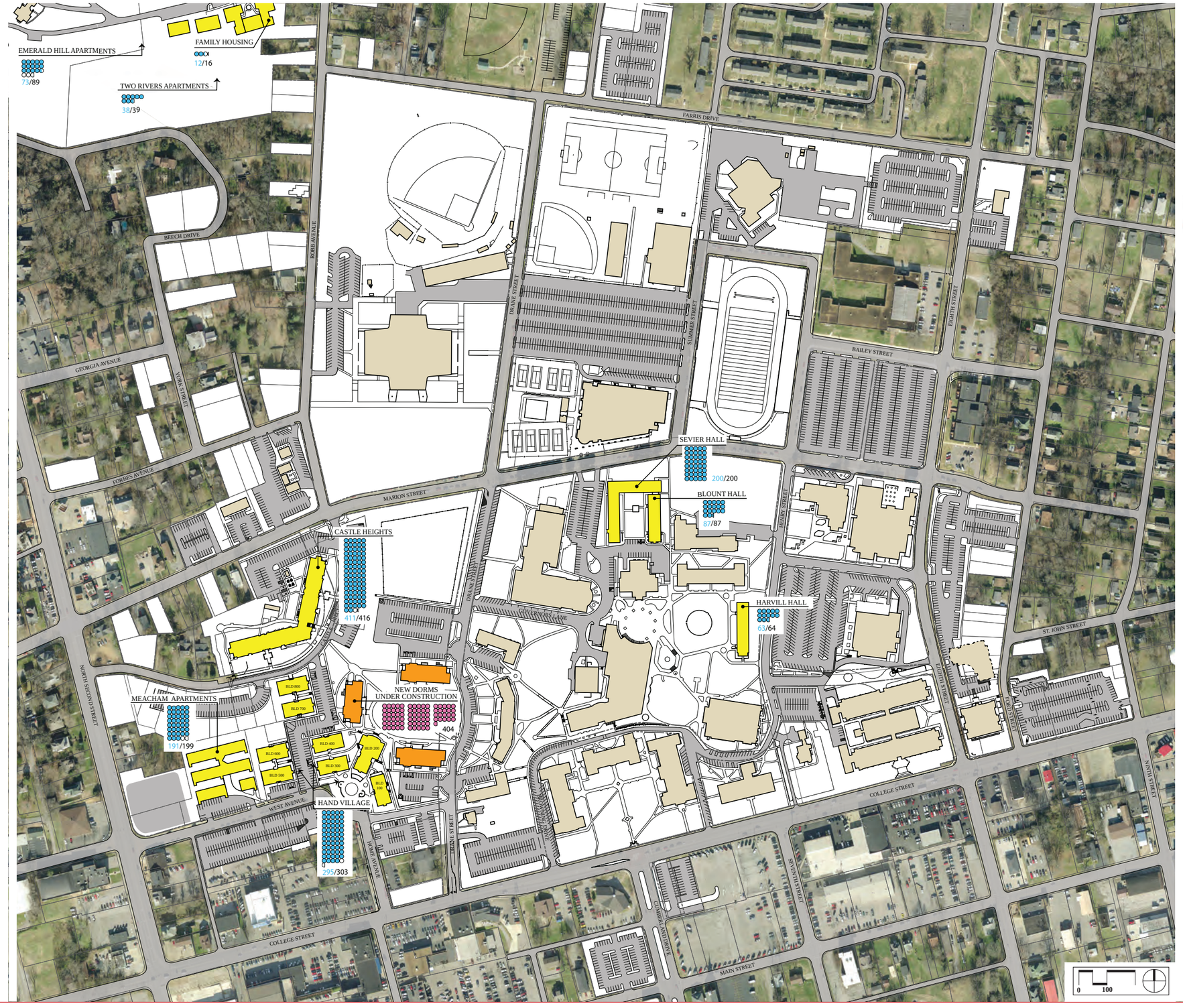
The occupancy is shown graphically, each dot representing five student beds and hall quantities are shown first with capacity followed with actual occupancy. The blue dots indicate occupied beds, white are unoccupied, and pink are under construction.





Drawing 2.6:

STUDENTS IN RESIDENCE



STUDENTS IN RESIDENCE

Austin Peay State University

Campus Plan 2013

- STUDENT RESIDENCE
- NEW RESIDENCES UNDER CONSTRUCTION
- OTHER UNIVERSITY BUILDINGS
- 1 DOT = 5 BEDS OCCUPIED
- 1 DOT = 5 BEDS UNOCCUPIED
- 1 DOT = 5 BEDS Under Construction

XX/XX = OCCUPANCY/ CAPACITY

FALL 2012 DATA

TOTAL RESIDENTIAL CURRENT CAPACITY:	1,407
NEW BEDS:	400
TOTAL CAPACITY:	**1,807**
TOTAL OCCUPANY:	**1,410**

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Consulting Engineers

STUDENT CONTACT HOURS

This analysis drawing shows where students were during an academic week in the fall, 2012 semester. All teaching facilities are colored red on this map. Densities of classrooms, laboratory and studio use are shown graphically. The basis of usage is weekly contact hours—the number of students enrolled in each class multiplied by the number of hours per week that class was scheduled. Each dot represents 100 contact hours, and the total for each building is calculated. Purple dots indicate classroom contact hours and pink are laboratory and studio.

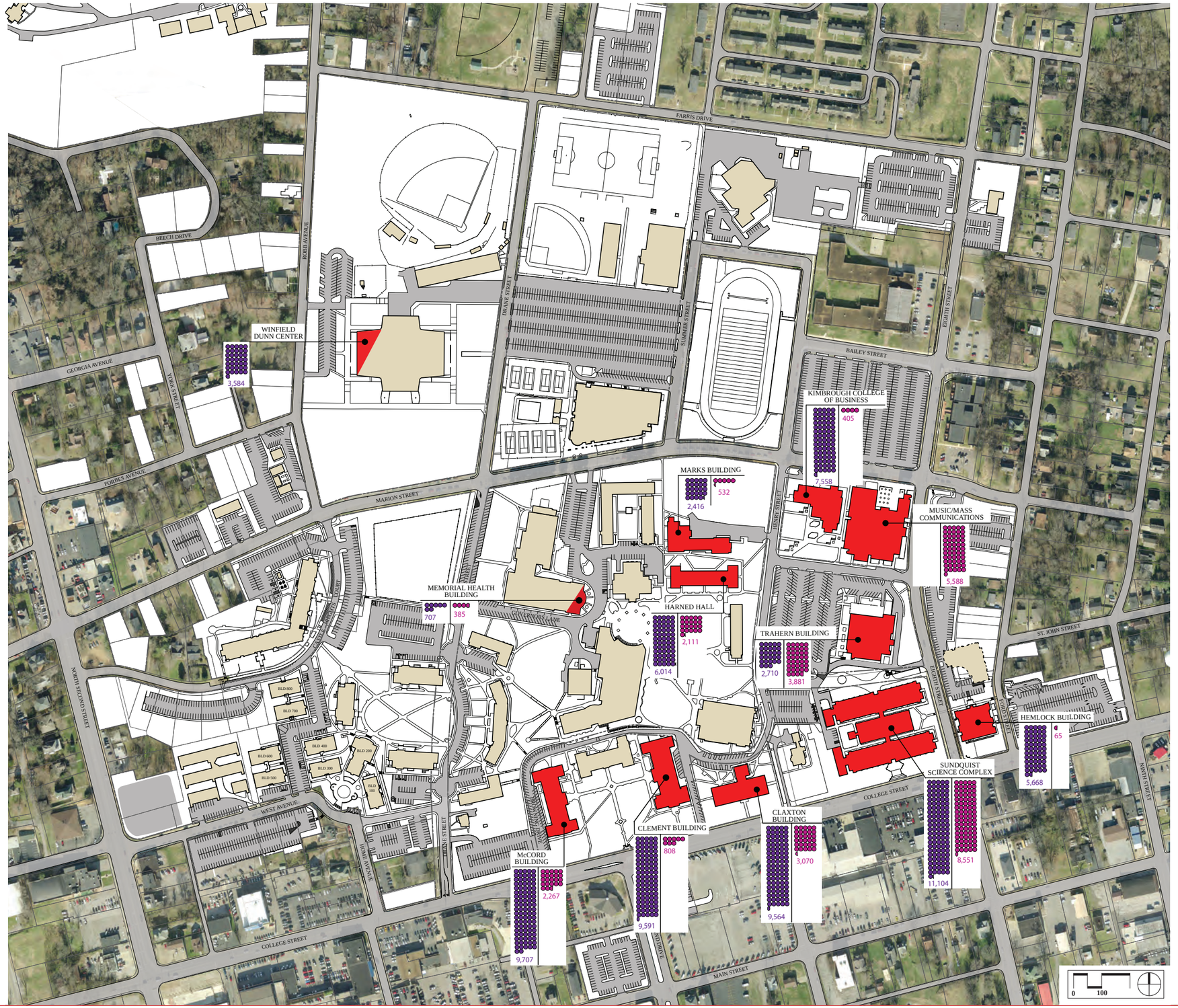
In the fall of 2011 APSU students spent about 96,300 student contact hours, excluding on-line classes, in scheduled learning activity—71 percent of those hours were in the classroom and 29 percent were in lab or studio spaces. Of the more than 68,600 weekly student contact hours in classrooms in 11 buildings, there were four buildings that were used most heavily—Sundquist with 16 percent of the total student contact hours, followed by McCord, Clement, Claxton each with 14 percent. Kimbrough, Harned, and Hemlock were next, with Kimbrough supporting 11, Harned with 9, and Hemlock with 8 percent of the classroom contact hours. Dunn, Trahern, and Marks followed with 5, 4, and 3 percent respectively. The least-used building for classroom learning was the Memorial Health building with 1 percent of the total classroom student contact hours.

There were 11 buildings supporting teaching labs in the fall of 2011. Sundquist supported the most laboratory/studio contact hours with 31 percent of the more than 27,600 contact hours. Music/Mass Communication, Trahern, and Claxton followed with 20, 14, and 11 percent of laboratory/studio contact hours respectively. McCord and Harned each supported 8 percent and Clement had 3 percent. Marks followed with 2 percent and Kimbrough and Memorial each supported 1 percent of the total laboratory/studio contact hours. Hemlock was the least-used with less than 1 percent of the total contact hours.

This analysis demonstrates that the bulk of student daytime academic activity is predominantly located in the south and southeast area of campus.

Drawing 2.7:

STUDENT CONTACT HOURS



STUDENT CONTACT HOURS

Austin Peay State University

Campus Plan 2013

- UNIVERSITY BUILDINGS
- ACADEMIC BUILDINGS
- 1 DOT = 100 CLASSROOM WEEKLY CONTACT HOURS
- 1 DOT = 100 LAB WEEKLY CONTACT HOURS

FALL 2011 DATA

CLASSROOM CONTACT HOURS: 68,623

LAB CONTACT HOURS: 27,663

TOTAL CONTACT HOURS PER WEEK: 96,286

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I.C. Thomasson Associates, Inc. — Consulting Engineers

CAMPUS LANDSCAPE

This drawing illustrates existing campus landscape elements and outdoor open space. The APSU campus is characterized by several large open areas that serve as open landscape between buildings, quadrangles and gathering spaces, and athletic and recreation fields. The 2013 Campus Plan identifies landscapes and open spaces that will be preserved and are shown on **Drawing 2.8** on page 31.

In this drawing University buildings are colored tan. There are three quadrangles on campus and are highlighted in light green. The historic first quad at the APSU campus is found on the south edge of the campus on College Street and is surrounded by three of the older and iconic APSU buildings, McCord, Browning, and Clement. This area serves as the quintessential campus quadrangle which includes the main entrance gate to the campus.

This area should be preserved and sustained by maintaining the mature tree canopy, replacing canopy trees as necessary, and establishing a unifying plant pallet for the understory trees, shrubs, foundation plantings, and flowering plants.

The largest quad area is found in the campus core and is surrounded by Morgan University Center, Woodward Library, Harvill and Harned halls, and the Catherine E. Harvill Building. This area has several tree-lined walkways with lawns and several lawn sculptures. This quad is adjacent to two of the largest outdoor gathering spaces on campus as well as the new Japanese-inspired garden area. These outdoor areas are well-used and act as a hub for student activity on campus. However these areas could be enhanced by establishing a unifying design aesthetic. This could be accomplished primarily through standardizing seating, lighting, hardscape, and paving details. A unifying plant palette of native, drought-tolerant and non-invasive species should also be selected.

The third quad is found west of Ellington Building, and at the time of the publishing of this report, is under construction. This new quad will be surrounded by three new residences, and a portion of Hand Village. It provides a green space and a gathering area well-suited to this area of campus and is shown with proposed tree planting, colored lime green, in this quadrangle and in the vicinity around it.

Outdoor gathering spaces on campus are shown in yellow and these are areas where outdoor furnishings are provided and are enhanced with landscaping, making it conducive for people to gather. These areas are found going clockwise on the north side of Sundquist, the south of Kimbrough, a patio on the north side of Memorial, the pool area west of the Foy Fitness Center, the Greek housing courtyard on Robb Avenue, the north side of Castle Heights Residence Hall, and the center of Hand Village.

Three large under-utilized open spaces represent an opportunity to enhance the beauty, function, and sustainability of the campus. These spaces are the large open space on the south side of the Winfield Dunn Center along Marion Street, the wooded lot on the southwest corner of Marion Street and Henry Street and the open space south of Governors Lane between Miller Hall, Ellington Student Services Building, and Central Power Plant. The common characteristic of these open spaces is that they are used for stormwater management for detention and/or infiltration. The Winfield Dunn Center open space is currently used for some athletic practice activities and this capacity could be enhanced by re-grading the site and engineering the soils to drain more quickly to allow for better utilization. The lot located at the corner of Marion and Henry Street could be improved by removing tree limbs up to 12 feet above grade, grinding old stumps, and removing fallen trees. The space could be further enhanced with flowering understory trees such as dogwoods and redbuds. Sodding the area under the trees and maintaining a high-quality lawn space would make this a usable open space rather than an area collecting stormwater. These improvements will provide aesthetic improvements as well as promote a feeling of safety. The open space between Miller, Ellington, and the Central Power Plant could be further enhanced to feel more like a formal quadrangle by planting canopy trees, standardizing light fixtures, and installing seating.

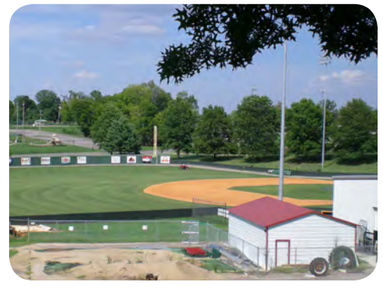
Another practice on campus is to create small landscape beds within large lawn spaces. In many cases these small beds are out of scale with the spaces in which they are placed and they create higher maintenance requirements. In addition, there are many areas on campus where above ground utility and mechanical systems are found in lawn areas with no landscaping to screen them from view. In several areas on campus there are clusters of utility or mechanical systems that could be placed in a single large bed. This would reduce maintenance by eliminating the need to trim around each of the utility structures and provide the opportunity to improve aesthetics by adding landscaping to screen them.

Overall the landscaping in and around parking areas is sparse or non-existent. Many parking lots have no landscape islands or beds along the perimeters of the lots. Best management practices recommend trees in parking lots to add visual clues as to where travel lanes are located and to reduce the heat-island effect of the pavement. In several lots the lack of plant beds around the perimeter of lots results in vehicles pulling onto the adjacent sidewalks and impacting pedestrian travel. Another common practice is the use of large areas of rip-rap around parking lots. This creates a very unpleasant aesthetic which could easily be corrected by using landscaping or rain gardens in these areas. While it is understood parking spaces are at a premium on campus, good landscaping and best management practice to improve the overall campus environment should perhaps not be sacrificed for a few dozen spaces. Implementation of best management practices for landscaping can also benefit on-going storm water improvements on campus as noted later in this master plan.

Athletic and recreational facilities are shown in lime green. These locations are predominantly located on the north side of campus, north of Marion Street. These areas include the baseball, softball, soccer fields, tennis courts, and the football stadium. A multi-use field for band practice among other uses is located on the south lawn of the Dunn Center. An intramural play field is the only athletic piece found south of Marion Street, just north of new residential parking area. The lawn area south of the Dunn Center also needs improvement. The installation of irrigation and resodding the area would create a much better surface for scheduled activities and pick-up activities of students.

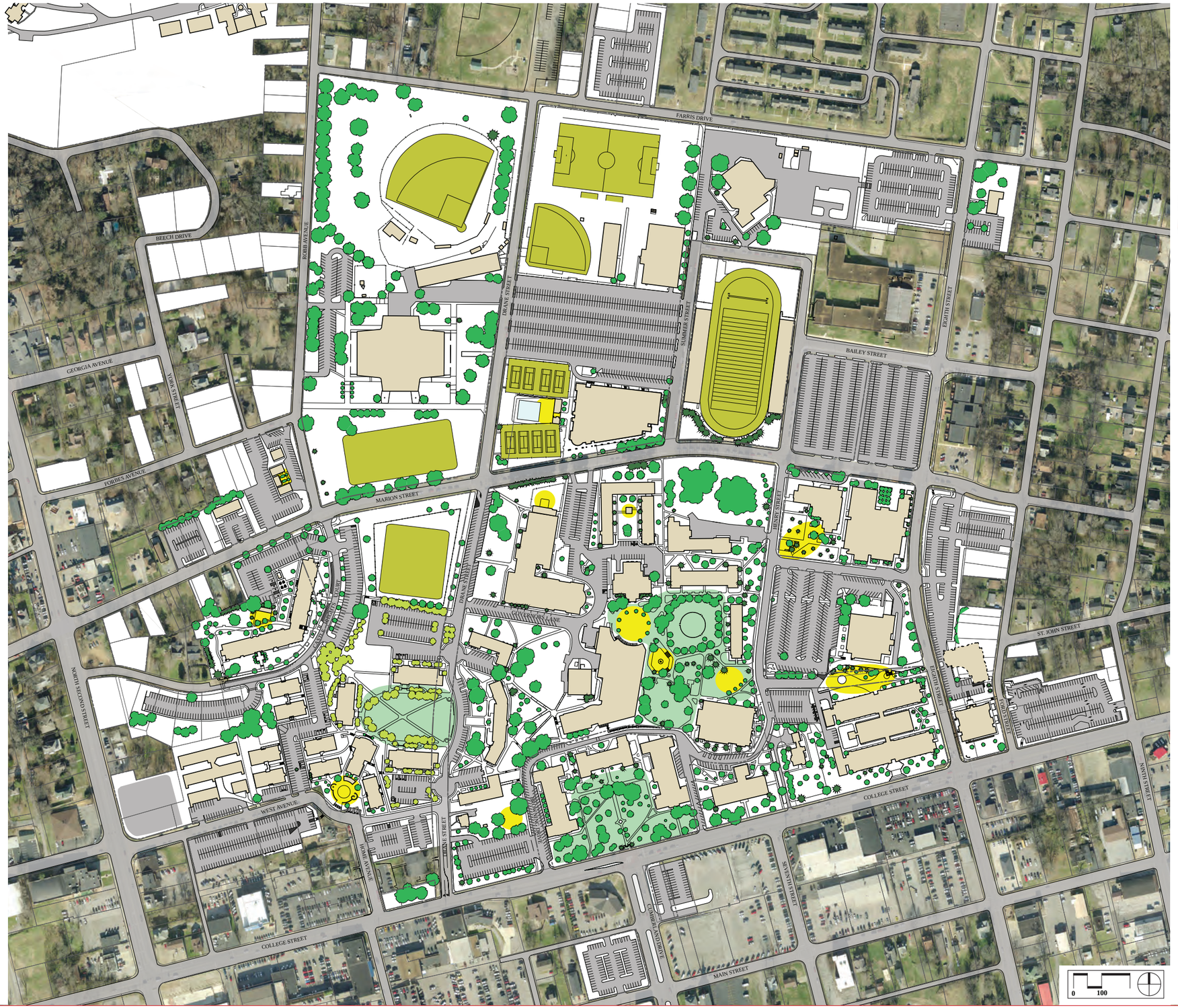
Another opportunity for student activity and intramural space that should be explored is entering into a lease agreement with the City of Clarksville for a portion of Pettus Park located just north of Farris Drive. This park is in need of upgrades and there have been discussions in the past between the city parks and recreation director and the APSU recreation director regarding a lease agreement that would allow the University to upgrade facilities in the park. If intramural facilities are not able to be shifted to the park, additional space will be needed on campus to support intramural activities.

The core of campus is generally well-served by open space. However, the east side of campus in the area between Henry and Eighth streets is notably under-served by open space. The large parking lots on the east side of Henry Street represent opportunities to connect the east side of campus to the core by replacing parking spaces with new campus buildings and well-designed, pedestrian-friendly open spaces.



Drawing 2.8:

CAMPUS LANDSCAPE



CAMPUS
LANDSCAPE

Austin Peay State University

Campus Plan 2013

- UNIVERSITY BUILDINGS
- CAMPUS QUADS
- GATHERING SPACES
- ATHLETIC AND RECREATIONAL FACILITIES
- DECIDUOUS TREES
- EVERGREEN TREES
- PROPOSED TREES
- POOL

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TOPOGRAPHY

This drawing illustrates the range of topographic elevations on the campus. Darker colors indicate lower elevations and lighter indicate higher elevations. Each color gradation represents a five foot change in grade. The closer the bands of color are to each other, the steeper the slope. Please refer to **Drawing 2.9**.

The topography is somewhat varied across this campus with a difference of more than 45 feet from the highest to the lowest elevation. The campus is also characterized by several karst features found at the lowest elevations across campus. These karst features are shown, in very dark brown, north of the Baseball Warehouse building, the north side of the Marks Building, and south of West Avenue across from the Meacham Apartments. Another area with a large depression is located west of the Memorial Health Building aligning with Drane Street continuing south to the McReynolds Building. The highest elevations are adjacent to the lowest and this occurs in two areas where there is a difference of 45 or more feet—the quadrangle surrounded by McCord, Browning, and Clement and the area surrounding the Dunn Center.

Most of the academic buildings are located on relatively higher and flatter elevations.

Austin Peay State University has received its Notice of Coverage from the State of Tennessee to operate as a Small MS4 with an effective date of July 2012. This permit requires the University to meet certain water quality requirements for stormwater discharges. Compliance is to be accomplished in a phased approach including education and outreach, public involvement, illicit discharge detection and elimination, construction site runoff control, permanent stormwater treatment, and pollution prevention.

The University has prepared an Internal Stormwater Management Plan which is available on the APSU website and describes each phase of the MS4 permit along with a timeline for implementation. The University, in conjunction with TBR, should continue to focus on development of a permanent water quality BMP that is suitable for the campus and its unique drainage characteristics.

Most of the stormwater on campus is conveyed across paved surfaces or contained within stormwater conveyances and eventually transferred to the City of Clarksville's stormwater system and ultimately to the Red River. The Red River is listed on the State of Tennessee's 303D impaired stream list and therefore additional water quality measures should be enforced to improve water quality in the river. A small portion of the University in the southwest quadrant of the campus drains to the city's combined sewer system. The University and the City of Clarksville should continue to work in conjunction to separate the sanitary and storm sewers in order to improve water quality and limit discharges directly into waters of the state during periods of intense or significant rainfall.

The area behind and adjacent to Meacham Apartments should continue to be studied by qualified professionals in order to minimize/eliminate the frequency of flooding, improve overall aesthetics, improve water quality, and limit safety concerns with the pond. The low-lying buildings adjacent to the pond are flooding on a frequent basis and settlement of the foundations is occurring.

Improving the drainage at Meacham apartments could consist of improving the pond to be an amenity for the campus and surrounding properties. However, as a minimum, the following improvements should be considered:

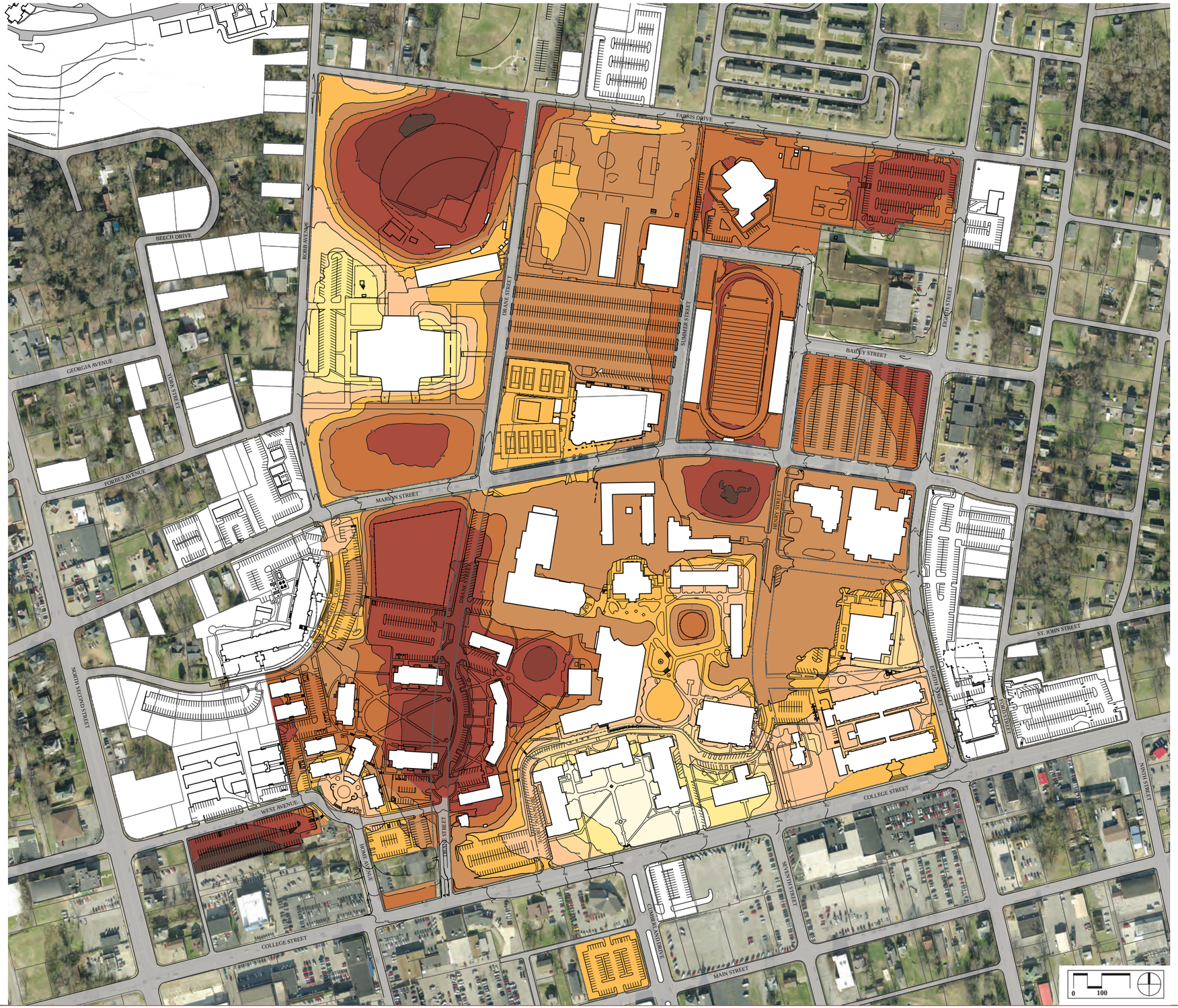
- pump down the pond and clean out debris and trash
- install stormwater injection well or stormwater pumping station
- construct a forebay upstream of the pond to capture large debris and trash which would allow for easier cleaning and maintenance of the pond
- construct a flood wall to protect Meacham Apartments
- reduce the amount of impervious area draining to the pond by introducing pervious pavement, rain gardens, bio-retention, cisterns, and other de-centralized infiltration techniques to reduce the amount of stormwater runoff and improve water quality to the pond
- the University must consider the karst topography prevalent on campus and location of an infiltration type BMP in relation to buildings

All storm inlets should have pedestrian- and bicycle-friendly grates around campus. Several inlets were noted during site observations to have grate openings parallel to travel areas which are hazardous to bicycles. Most of the dumpsters on the campus are not screened and appear to drain across paved surfaces to the storm system. The University should consider implementing a solid waste policy for their dumpsters in which all dumpster drains connect to the sanitary sewer systems, or require dumpster drains to remain permanently plugged to reduce the leaking waste to storm systems. Several of the stormwater outfalls around campus do not have adequate outlet protection and scouring is occurring at the end walls. Outlet protection at all outfalls should be provided to minimize erosion and scouring at the discharge locations. Guidance for sizing rip-rap outlet protection is provided by TDEC. In general, the campus should avoid draining parking lots at grade across sidewalks and into streets, and should require that impervious surfaces be treated for water quality and subsequently picked up in stormwater conveyances. Building downspouts should also be picked up in an underground system and piped to a selected discharge location to minimize the risk of future water intrusion and foundation concerns.

Austin Peay State University should consider conducting a campus-wide stormwater management study to improve the drainage and water quality on campus, limit the impacts of flooding, identify critical storage areas, and provide recommendations on the most appropriate permanent stormwater quality BMP to implement on campus.

Drawing 2.9:

TOPOGRAPHY



TOPOGRAPHY

Austin Peay State University

Campus Plan 2013

- ELEVATION 500' and ABOVE
- 495' - 500'
- 490' - 495'
- 485' - 490'
- 480' - 485'
- 475' - 480'
- 470' - 475'
- 465' - 470'
- 460' - 465'
- 455' - 460'
- 455' and BELOW

DOBER LIDSKY MATHEY
CREATING CAMPUS SOLUTIONS

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FACILITIES ASSESSMENT

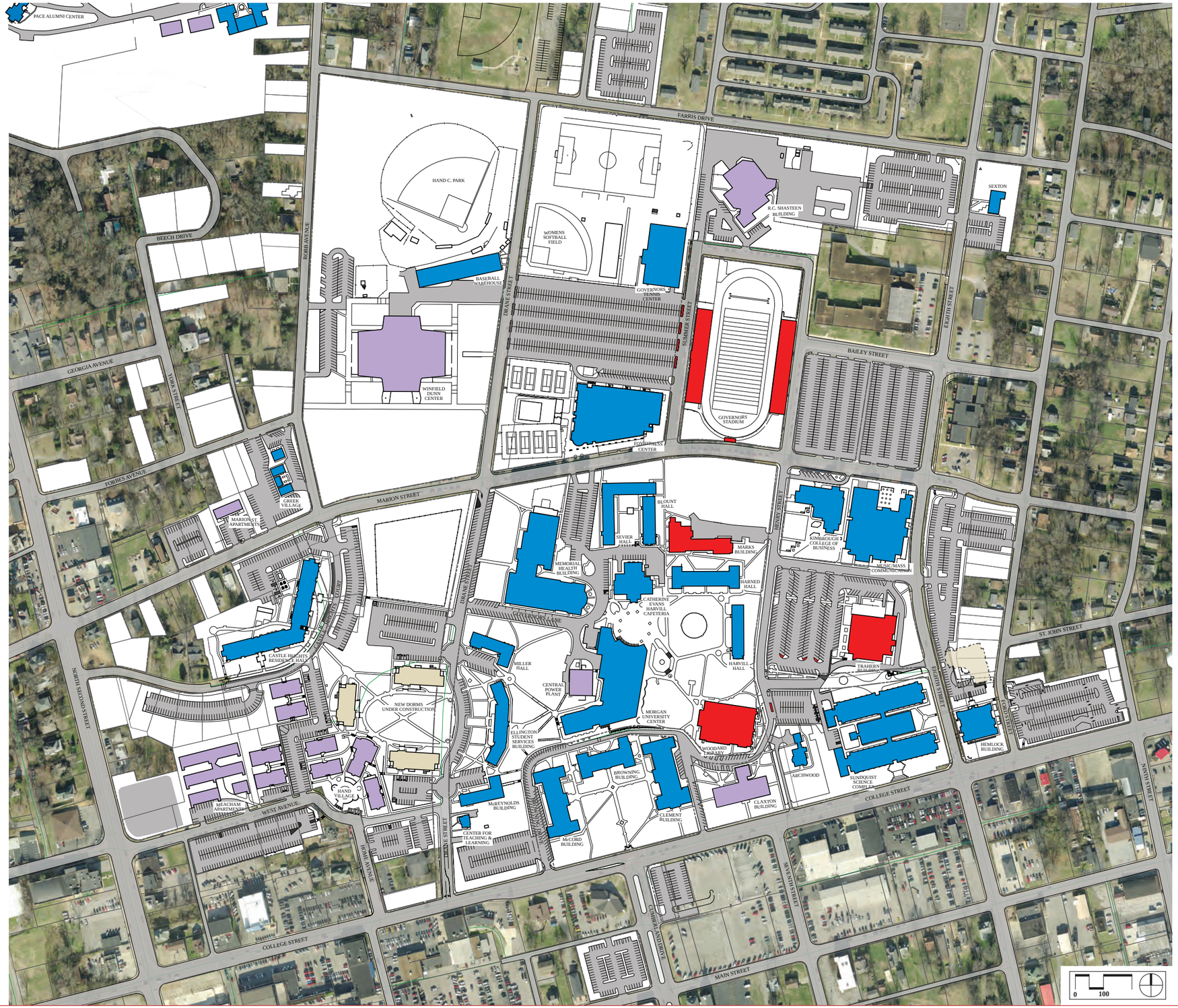
To plan for the long term use of buildings on campus it is necessary to be aware of the condition of the structures as well as the systems that serve them internally and externally. The master plan team surveyed each building on campus, taking note of the condition of the building substructure, shell, interior, mechanical, electrical, plumbing, and communications systems, and other general characteristics. A summary of the findings for each building is given in Appendix Two. This information is used to update the TBR Physical Facilities Survey and provides a useful tool for ranking the buildings most in need of maintenance. Based on the results of the survey, the structures with the greatest need for renovation or consideration for demolition are Governors Stadium, Marks, Trahern, and Woodward Library.

The TBR gives a value for each building system to total a score of 100, and this score is listed under the heading “Campus Review”. An acceptable rule of thumb is that new construction is typically recommended for a facility with a score below 70, because replacement is close to the costs associated with renovation. The exception to this is a structure that might be architecturally or culturally significant or one that is historically significant—on the National Register of Historic Places, for instance.

The Building Condition drawing shows an analysis of most campus buildings rated for current condition based on the recent findings. Blue indicates good condition with a score between 85 and 100. Fair condition scores between 70 and 84 and is colored purple. Poor condition is shown in red and scores below 70.

Drawing 2.10:

FACILITIES ASSESSMENT



FACILITIES ASSESSMENT

Austin Peay State University

Campus Plan 2013

CONDITION RATING

- GOOD (85-100)
- FAIR (70-84)
- POOR (below 70)

TO BE CONSTRUCTED

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CLASSROOM USAGE

There were 78 classrooms at APSU representing 11 percent of the total E&G space on campus during the fall of 2011. This category includes seminar rooms, classrooms, and auditoriums in which the Registrar schedules classes. These teaching spaces can be analyzed in different ways. The measures include how intensively they are being utilized, if they are the appropriate size for the scheduled class, and if the size is adequate for the number of students given the desired seating style.

How intensively a classroom is being utilized is in terms of usage hours per week. The Tennessee Higher Education Commission (THEC) Space Allocation Guideline target is 30 hours per week and APSU's usage hour average was on target at 29.4 hours per week during the fall of 2011. However, of the 11 buildings where classes are scheduled, 10 contained 37 classrooms with utilization rates above the target and ranged in size between 18 and 54 stations as well as 2 classrooms with 100 stations each found in Clement and Kimbrough. This data shows that approximately half the classrooms are close to or at capacity and half are above. With a target enrollment of 2 percent growth a year for the next several years, this data implies a need to add classrooms.

The next measure is seat occupancy—the size of the class relative to the capacity of the classroom. Normative standards and the THEC target is 60 percent compared to the overall APSU average of 80 percent. The small to medium size classrooms, those with 10 to 39 students and larger spaces for 50 and above, have average seat occupancies of 70 to 119 percent, which is significantly higher than normative standards and THEC guidelines. Classrooms seating from 40 to 49 average 55 percent, in the target range. Of the 78 classrooms at APSU, 24 have a station utilization rate of less than 60 percent. This data reveals that about 70 percent of the classrooms are being used above capacity.

The class size is determined by the desired teaching style. For room capacities of up to 40 seats, tablet-arm chair seating requires 18 to 22 NASF per student and table-and-chair seating 22 to 30 NASF. The NASF per station for each type gradually decreases as the capacity increases. The majority of classroom sizes range between 20 and 39 seats, comprising 63 percent of the classroom inventory. The mean area per station at APSU was 23 NASF during the fall of 2011, which is about midpoint of the combined ranges. Based on recent data relative to how students learn, there is a nationwide preference for the table-and-chair venue.

OFFICES

There are about 98,000 NASF of office space and 569 offices on the APSU campus as shown in **Table 2.2**. The office inventory ranges according to in the number of occupants per office, between 1 and 4.

Single-occupant offices make up 85 percent of the office space inventory, with an average size of 156 NASF, and 77 percent of the total NASF dedicated to offices on campus. Two-occupant offices make up 10 percent of the inventory with an average of 113 NASF per station and an average office space size of 226 NASF, making up 13 percent of the total office NASF. There are 18 three-occupant offices with each occupant averaging 114 NASF per station and an average office size of 343 NASF. Eight office spaces have 4 occupants each, with an average of 106 NASF per station and an average office size of 422 NASF.

The APSU mean office station size is 143 NASF and the mean office space size is 172 NASF.

Table 2.2: Office Space

Occupants/Office	No. of Spaces	NASF	No. Stations	NASF/Station	NASF/Office
1	487	75,750	487	156	156
2	56	12,658	112	113	226
3	18	6,167	54	114	343
4	8	3,377	32	106	422
Totals 1-4:	**569**	**97,952**	**685**	**143**	**172**

PEER COMPARISONS

Contrasting the amount of space at APSU to space at other state institutions administered by the Tennessee Board of Regents (TBR) is a way to put the University's facility resources into perspective. A comparison with five other TBR state universities is summarized in **Table 2.3** based on the fall of 2012. Data in this analysis, such as enrollment and number of faculty, gross square footage (GSF), number of student beds, acreage, and amounts of space per full-time equivalent (FTE) student and faculty, were compared.

Table 2.3: Campus Peer Comparison

Institution	City	St	FTE	Beds	Acres	FTE Fac	Maint Acres	GSF Total	GSF NR	GSF R	GSF R%	GSF/ FTE Stu	GSFNR/ FTE Fac	GSFNR/ FTE Stu	GSFR/ FTE Stu	GSFR/ Bed	Beds/ Acre	% Stu in Res	Stu/ Acre	FAR	S:F
East Tennessee SU	Johnson City	TN	9,628	2,478	366	1,087	366	3,250,957	2,408,761	842,196	26%	338	2,216	250	87	340	6.8	17%	26	0.20	8.9
Middle Tennessee SU	Murfreesboro	TN	18,544	3,294	500	1,210	500	4,677,795	3,451,859	1,225,936	26%	252	2,853	186	66	372	6.6	13%	37	0.21	15.3
Tennessee SU	Nashville	TN	6,149	3,225	450	470	450	2,620,675	1,943,473	677,202	26%	426	4,135	316	110	210	7.2	30%	14	0.13	13.1
Tennessee Technical U	Cookeville	TN	8,488	3,100	235	511	235	2,870,302	2,030,471	839,831	29%	338	3,974	239	99	271	13.2	29%	36	0.28	16.6
U Memphis	Memphis	TN	14,032	2,391	1,160	1,098	1,160	5,406,783	4,150,017	1,256,766	23%	385	3,780	296	90	526	2.1	11%	12	0.11	12.8
Means:			**11,368**	**2,898**	**542**	**875**	**542**	**3,765,302**	**2,796,916**	**968,386**	**26%**	**348**	**3,391**	**257**	**90**	**344**	**7.2**	**20%**	**25**	**0.19**	**13.3**
Medians:			**9,628**	**3,100**	**450**	**1,087**	**450**	**3,250,957**	**2,408,761**	**842,196**	**26%**	**338**	**3,780**	**250**	**90**	**340**	**6.8**	**17%**	**26**	**0.20**	**13.1**
Austin Peay State U	**Clarksville**	**TN**	**5,664**	***1407**	**182**	**521**	**182**	**1,970,091**	**1,414,418**	**555,673**	**28%**	**348**	**2,715**	**250**	**98**	**395**	**7.7**	**15%**	**31**	**0.25**	**10.9**

Field buildings are excluded from all GSF figures.
Parking decks are excluded from all GSF figures.
Percent students in residence is based on headcount students (not shown), not FTE.
All calculations using acres are based on Maintained Acres, not Total Acres. [but no maint acres figures available at this time]
Main campus buildings only, except TSU includes Avon Williams Campus.
GSF residential is intended to represent student residential only, and therefore the President's residence has been excluded from GSFR.
* Bedcount will increase to 1,807 at the completion of Phase II.

There were 5,664 FTE students, excluding on-line students, enrolled in the fall of 2012. This enrollment was half the mean, substantially lower than the peer mean sample. Also significantly lower was the bed capacity, at about half the mean and the acreage is one third of the peer mean. The number of FTE faculty was about 59 percent of the mean and 48 percent of the median peer sample. The total GSF is 52 percent of the mean and 61 percent of the median peer sample. Non-residential GSF numbers are also low, at half the mean sample and 59 percent of the median and the residential GSF is 57 percent of the mean and 66 percent of the median.

The GSF per FTE student equals the mean, and when the GSF per FTE student is separated into non-residential and residential, non-residential is just slightly below the mean but residential is 8 percent above both the mean and median. The amount of GSF per bed is 13 percent more than the mean and the number of beds per acre is within the range of the mean and the median. The FAR (floor area ratio), the ratio of the total floor area of buildings to the area of the campus, is higher by 5-6 percent more than both the mean and median and the second-highest FAR overall—evidence that the campus is more densely developed than most TBR peer campuses. The S:F data pertains to the student to faculty ratio. APSU is below the mean and median in comparison to its TBR peers.

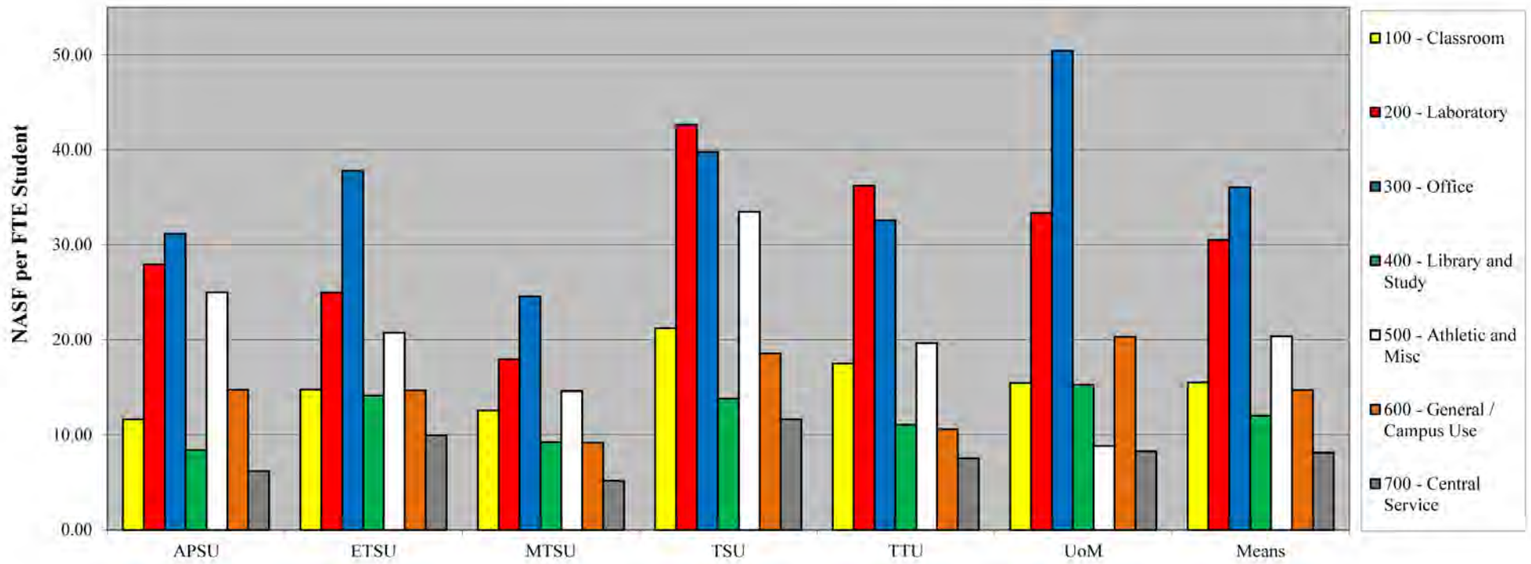
Another space comparison to the same five TBR universities was also conducted.[1] In this case the comparison was in terms of net assignable square feet (NASF) per FTE student at each institution in the fall of 2012 rather than GSF[2] in the same time period. This comparison is based on the seven THEC Space Guideline categories—classroom, laboratory, office, library and study, athletic and miscellaneous, general/campus use, and central service—and is shown in **Figure 2.1**. APSU is the lowest of its TBR peers in classroom NASF per student shown by the yellow bar, or about 25 percent below the mean; it is the third lowest in labs, the red bar, about 9 percent below the mean; it is second lowest in office space highlighted by the blue bar and about 14 percent below the mean sample; it is the lowest of its peers in library/study at 30 percent below the mean, shown by the green bar. It should be noted that the new Maynard Math and Computer Science Building is not included in this data.

1 TBR universities compared are East Tennessee State U (ETSU), Middle Tennessee State U (MTSU), Tennessee State U (TSU), Tennessee Technological U (TTU), and U of Memphis (UoM).

2 NASF is the amount of space that can be used for people or programs. The area of an assignable space is the area measured within its interior walls. GSF includes NASF plus all non-assignable space: stairs and corridors, public toilet rooms, mechanical and duct spaces, and the thickness of walls.

Figure 2.1: TBR Peer Comparison of NASF

	NASF per FTE Student						
	APSU	ETSU	MTSU	TSU	TTU	UoM	Means
100 - Classroom	11.60	14.74	12.56	21.20	17.51	15.45	15.51
200 - Laboratory	27.91	24.98	17.92	42.67	36.22	33.35	30.51
300 - Office	31.18	37.79	24.57	39.78	32.56	50.44	36.05
400 - Library and Study	8.38	14.14	9.24	13.79	11.08	15.27	11.98
500 - Athletic and Misc	25.00	20.76	14.61	33.50	19.63	8.83	20.39
600 - General / Campus Use	14.70	14.66	9.19	18.57	10.57	20.33	14.67
700 - Central Service	6.19	9.92	5.13	11.61	7.52	8.25	8.10
Totals:	124.96	136.99	93.22	181.12	135.09	151.92	137.22



PROJECTIONS

Table 2.4: Projections

2012 STUDENT FTE = 5,664				FUTURE I - Student FTE 6,254 5 Year Growth @ 2% per year		FUTURE II - Student FTE 6,904 10 Year Growth @ 2% per year		FUTURE III - Student FTE 7,623 15 Year Growth @ 2% per year	
A	B	C	B - C =	D	B - D =	E	B - E =	F	B - F =
APSU Campus	*Existing E & G	Modeled NASF	Difference	Modeled NASF	Difference	Modeled NASF	Difference	Modeled NASF	Difference
I - Classrooms	65,716	68,958	-3,242	76,288	-10,572	84,380	-18,664	92,540	-26,824
II - Lab/Studio	115,243	149,143	-33,900	162,793	-47,550	176,358	-61,115	197,022	-81,779
III - Open Lab	27,003	28,320	-1,317	31,268	-4,265	34,522	-7,519	38,115	-11,112
IV - Research	15838	8776	7062	9,690	6,148	10,698	5,140	11,812	4,026
V - Office	176,586	173,874	2,712	191,113	-14,527	211,302	-34,716	233,168	-56,582
VI - Library	47,492	62,270	-14,778	66,158	-18,666	70,341	-22,849	72,562	-25,070
VII - Physical Ed	127,105	130,304	-3,199	136,789	-9,684	143,949	-16,844	151,853	-24,748
Totals	**574,983**	**621,645**	**-46,662**	**674,099**	**-99,116**	**731,550**	**-156,567**	**797,072**	**-222,089**

*Does not include square footage for the Math & Computer Science Building (under construction) in the existing E&G square footages.

Another measure to determine adequacy of space, is to apply the THEC Space Allocation Guidelines to the campus space inventory. **Table 2.4** displays three future enrollment projections in 5 year intervals up to 15 years at a 2 percent growth rate with space requirements based on the THEC guidelines.

In the fall of 2012 there were 5,664 FTE students enrolled, excluding on-line enrollment. When the THEC space formula is applied with approximately 575,000 NASF of E&G space, there is an 8 percent, or about a 46,600 NASF space deficit according the modeled requirement.

Future I shows that with an increase of 590 FTE students to 6,254 following the first five years at a growth rate of 2 percent, the modeled NASF requirement is about 674,000, a 15 percent, or about a 99,000 NASF deficit of existing E&G space.

Ten years out Future II shows an increase from Future I of 650 FTE students to 6,904 and with the THEC modeled NASF requirement at about 731,500, there is a space deficit of 22 percent, or about 156,500 NASF of existing E&G space.

In fifteen years Future III is projected to almost 7,623 FTE students and based on the THEC guidelines the NASF requirement is about 797,000, a 28 percent, or approximately 222,000 NASF E&G space deficit.

In fifteen years the modeled 222,000 NASF increase translates to five to six new buildings required.

SUMMARY OF INFRASTRUCTURE CONDITIONS AND FUTURE IMPROVEMENTS

It is necessary to be aware of the condition and capacity of the existing utility infrastructure that serves the campus buildings and then to project and analyze the need for future expansion. These utilities would include steam, chilled water, electricity, data and communications, domestic water, sewer, and storm water. Please refer to Appendix Three for a description of the existing utility infrastructure as well as future needs.

Section Three

ILLUSTRATIVE CAMPUS PLAN

Section Three

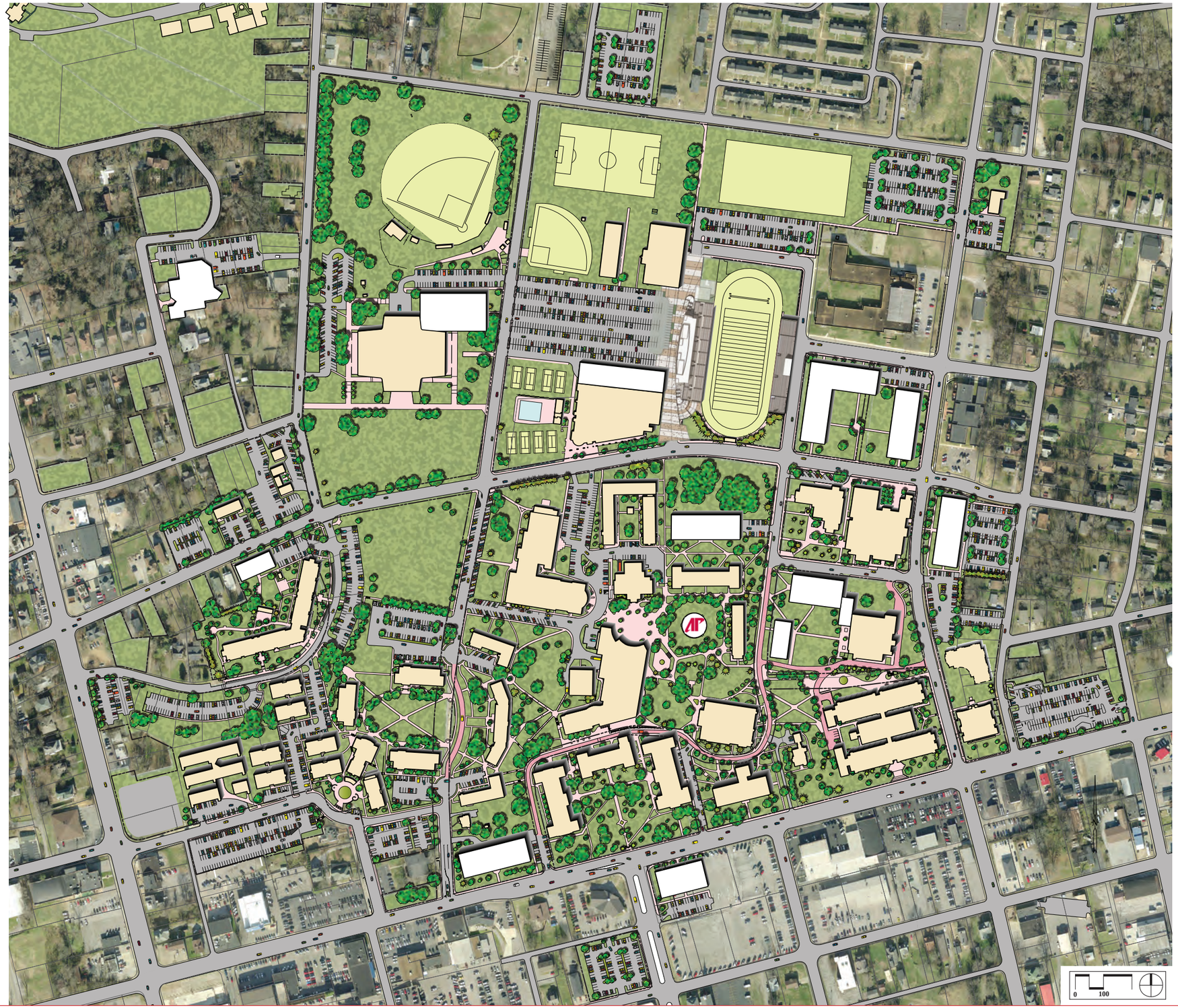
ILLUSTRATIVE CAMPUS PLAN

Drawing 3.1 is the Illustrative Campus Plan as a rendered air view of the campus as it might look when all the Campus Plan projects are complete. The vision of the Austin Peay State University campus expresses all of the ideas discussed during the planning process and collected from the several on-campus interviews, meetings, and review sessions.

The Campus Plan concept is illustrated on this drawing. It shows buildings and landscapes that were conceived through the campus design process. The architects for each of the construction projects will determine the final building form and position on each site. The University will also influence the final physical campus solution of the Campus Plan, as projects may need to be redirected in response to changing academic and programmatic requirements as well as funding opportunities.

Drawing 3.1:

ILLUSTRATIVE CAMPUS PLAN



ILLUSTRATIVE CAMPUS PLAN

Austin Peay State University

Campus Plan 2013

Dober Lidsky Mathey
Creating Campus Solutions

Lose & Associates, Inc.

I.C. Thomasson Associates, Inc.
Consulting Engineers

Appendix One

TASK FORCES

- ATHLETICS AND RECREATION
- LEARNING SPACES
- STUDENT RESIDENCES & DINING SERVICES
- PARKING

ATHLETICS AND RECREATION TASK FORCE REPORT

Members Serving on the Task Force: Dave Loos, Cheryl Holt, David Davenport,Bruce Myers, Sean Bailey, Patrick Grady

The following narrative is a description of the following physical resources needed to support the future needs of the athletic program. The structural areas addressed are prioritized from most to least important.

Build a separate indoor practice facility for men and women's basketball and volleyball. This facility would be used to relieve space issues as it relates to providing adequate practice and competition times for the three teams currently sharing one site. This would allow more flexibility in scheduling practices between the two facilities during peak times. It also would offer a practice area for the respective teams during summer and winter graduations along with campus events such as career fairs, Special Olympics, HHP classes, etc. In addition, this indoor practice facility would allow more flexibility in our student-athlete class scheduling, aiding them to graduate in a more-timely manner. It also would help eliminate the 6-8 p.m. practice times, allowing more opportunity for student-athletes to study. Practice facilities are becoming more and more prevalent at the mid-major level—Murray State just recently completed construction of one.

Build an indoor field house that would be utilized as a practice and training facility for all of our outdoor sports to include football, soccer, golf, softball, baseball and track and field. The structure would allow for a large practice/workout area surrounded by an indoor track. Such an area would provide an alternate practice site in case weather conditions dictate practices cannot be conducted outside. Our programs are currently hamstrung when inclement weather occurs. Our coaches either are trying to find space and time in the Dunn Center or calling about Foy or Red Barn use. It basically puts our student-athletes at a disadvantage as far as competition is concerned in relation to preparation and puts the respective program at a disadvantage as far as recruiting is concerned. It also would provide a possible indoor track facility for competition.

Build an outdoor (natural grass) practice field for football, thus reducing risk of injury to the players from continuous practice on artificial turf. Back in the mid-1990s, when it was decided to add soccer and move softball to its current on-campus site, those football practices fields—where the two respective fields reside—were eliminated as a result. However, it also was determined at the time to build a football practice facility behind Shasteen. A decision was made not to proceed with the football practice facility.

Athletic department reaction to other strategic planning ideas

Athletics supports the relocation of the Shasteen building and the redesign of that area for a much-needed indoor field house. Athletics also supports building a grass practice acility for football in that area if space allows.

Athletics does not support placing a playing field on top of a parking deck. In addition, athletics does not support placing a parking deck in the middle of the Foy parking lot. The Foy parking lot serves as access route from the Dunn Center to the other outdoor athletic facilities for the student-athletes and athletic staff.

Athletics does not support relocating the intramural field to the front lawn of the Dunn Center. When a the University was seeking an on-campus location for the softball field back in the late 1990s, the University determined the Dunn Center front lawn could not be used for that facility, "it was protecting the green" of the APSU campus. As a result, it forced the elimination of second practice football field.

LEARNING SPACES AT APSU TASK FORCE FALL 2012-SPRING 2013

Members: Chad Brooks, Jack Deibert, Loretta Griffy, Barry Jones, Thomas King, Beth Robinson, Jeff Walton, Joe Weber, Alexandra Wills

Following review of information obtained from campus forums, feedback surveys, consultation with colleagues and students, FS Exec consultation, Division of Facilities Planning and Projects, our planning consultant Art Lidsky and Task Force deliberation, it is clear that our campus needs to aggressively address the addition of learning spaces, both formal and informal, to accommodate our growing talented & diverse student population. Our task force considers learning spaces to be the infrastructure of opportunity designed to promote high quality engagement in the teaching and learning process. Many important ideas, concerns and wishes were brought forward and discussed, at times furiously. Of those, five seemed to reoccur with frequency. Brief talking points for each of these five ideas are provided below.

1 - Fine Arts Building: The purpose of this space is to provide our talented fine arts students and faculty sufficient formal classroom space, informal learning spaces, and additional performance spaces, both indoor and outdoor with attention to appropriate stage and floor materials. It will allow some redistribution of academic space across campus.

- *New building* to be located in the parking lot between Burt School and Music Mass Communications Building.
- House classrooms, performance spaces, student study space, faculty offices, meeting spaces and the like.

2 - University Success Complex: The purpose of this space is to provide students and faculty large lecture hall formal instructional space and a natural place to gather for scholarly and creative purposes. It is to be a place that by its existence will promote teaching and learning success by intentionally exposing freshmen and sophomore students enrolled in classes offered in the lecture halls to support services and student engagement high impact practices.

- *New building* or complex of buildings to be located where the library currently exists, part of the Trahern Parking Lot and, perhaps, where the honors dorm currently exists if necessary (don't panic, an idea for Honors Residential College is forthcoming).
- Large Lecture Halls & Technology Enhanced Large Teaching Hall (as many 85-100 flexible use lecture halls as possible)
- Learning Commons (information commons, research assistance, teaching computer labs, collections, database management, etc)
- Learning Commons (Writing Labs, Mathematics Labs, Tutoring Spaces, Transitions, etc)
- High Impact Practice Offices with class/meeting space (Undergraduate Research, International Education, Service Learning, Study Abroad, etc)
- Other Areas: Academic Advising Resource Center; Center for Teaching & Learning; Career & Internship Offices Indoor/Outdoor Cyber Coffee Café

3– Health Sciences/Healthcare Building: The purpose of this space is to prominently place our healthcare and healthcare related programs in a centralized location on campus to promote our excellence in this field and to provide students interested in entering the healthcare industry an obvious location for exploring options. It will allow some redistribution of academic space across campus.

- New building to be located at the end of the mathematics and science corridor (8th Street) on current or soon to be acquired property.
- Housing of health science and related disciplines (possible departments impacted: Nursing, Allied Health, Health & Human Performance, Social Work, etc.)

4 – Informal Learning Spaces: In this new age of learning, these spaces are of utmost importance. These spaces include all learning and engagement areas that are not formal classrooms. Every nook, cranny, hallway, and hillside should be intentionally repurposed with learning in mind. These informal learning spaces include comfortable space for quiet study, meeting spaces for group study, outdoor gathering spaces with writing surfaces, multipurpose porches, amphitheaters of various sizes, theatre-in-the-round, and the like.

5 – Better use of Catherine Evans Harvill Building (current Bookstore): This building is prime real estate on our campus and should be a teaching, learning and engagement space. It would be advantageous for a building that houses a bookstore to be on the periphery of campus so that it is easily accessible by students who may be purchasing a large number of books (drive up distribution), easily accessible to community members who may be seeking APSU fan apparel and products, and possibly a good location for an APSU Welcome Center. Possible areas of relocation for a building to house a bookstore include existing or soon to be acquired property off College or North Second Street. This would allow for redistribution of administrative and student support space (academic advisement, faculty/staff development, etc).

- Develop an Honors Quad composed of an Honors/PELP Commons & Honors Residential Halls.
- Repurpose the current Catherine Evans Harvill Building to be part of the Honors Quad.
- Designate Sevier & Blount Dorms as Honors Residential Halls (update & renovate as needed).
- Update and repurpose Harvill Honors Dorm for office and meeting spaces to facilitate faculty/student interaction.
- Renovate/expand Catherine Evans Harvill building so that the honors residential halls and honors commons buildings are adjacent with an outdoor multipurpose green space quad (remove the gazebo) between the two that can be used for gatherings, ceremonies, etc.

STUDENT RESIDENCE AND DINING SERVICES TASK FORCE/CAMPUS MASTER PLAN

Comments/Reactions for Master Planner
Subcommittee Meeting Jan 24, 2013

Will the ratio remain constant between the enrolled and those living on campus?

It is the belief of the committee that the growth of building new housing to maintain the 24% ratio of on campus students to FTE will not continue. We feel housing might expand by 200 beds in the next 15 years. Consequently we do not expect an increase of 600-700 beds. APSU will continue to require all freshmen to live on campus unless they live with parents or guardians.

Another important consideration is the current debt load on both the campus and the housing budget. New housing construction over the past 7 years has increased the debt load to the limit.

What type of housing should we consider? Suites/Apartments/Doubles

Based on surveys and student input, the committee supports the current philosophy of housing freshman in double occupancy rooms and then offering apartments and suites to upperclass students. The theory behind housing freshman students in double occupancy rooms is to get them connected to both the social aspect of campus and the total university community. Studies show that students who become more connected with campus environment will be retained at a higher rate thus increasing the graduation rate for campus.

Living and Learning Communities- should we create them?

- APSU currently offers the following LLC's.
- First Year Experience
- Wellness Living and Learning
- Service Learning
- Upperclass Honors
- Freshman Honors
- Leadership Living and Learning.

Staring in the Fall of 2013, a Sophomore Experience model will be introduced.

Do the following national trends apply to APSU Housing?

- Single Bedrooms- yes, we offer that option in Hand Village.
- Private or semi private bathrooms. Yes. All bathrooms in all housing areas meet this standard.
- Suites and Apartments. Yes. We offer these options.
- Living and Learning Environments. Yes. See list above.
- Social spaces, study spaces, lounges, fitness areas. Yes to all but fitness areas. In the last three housing projects (Hand Village, Castle Heights and Phase II) we have been very intentional in building social spaces, academic spaces and study areas/studentgathering areas. Housing has no fitness areas in any of its buildings. All students go to the Foy Center.
- Academic resources, computer labs, study spaces, small group collaboration spaces. Yes, we have partnerships with Academic Affairs in offering both classes and academic assistance in many housing areas on campus. Classes and tutoring are held in Castle Heights and we plan on expanding those efforts. There are currently no computer labs in housing. This is due to well over 97% of the on campus resident having their own pc's/laptops or other. The resources that would be dedicated to this function would be wasteful.
- Kitchens- Yes. We offer kitchens in all housing areas on campus.
- Laundry- Yes. Laundry facilities are offered in all housing areas on campus.
- Wireless Technology. Yes and No. Currently, wireless is not offered in Hand Village,Meacham Apartments or Emerald Hill Family Housing. Wireless access will be extended to Hand Village, Meacham Apartments and Emerald Hill Family Housing as budget becomes available. All other areas are wireless.
- Safe and secure environment- Yes.
- Size of rooms- Here are the square footages on the last two housing projects:
  o **Castle Heights**- 337 sq. ft per bed. 140,000 square feet.
  o **Phase II**- 340 sq. ft per bed. 136,000 square feet.
- The national average for median sq.ft is 350 sq. ft per bed. (2010 College Housing Report/College Planning and Management)
- Secure storage. We are not sure what this meant, but we do not offer secure storage in housing areas. We might need more clarification on this one.
- Parking. Yes, we offer parking for housing areas. Current ratio of spaces/housing students is : 761 spaces/1465 residents 52%. This includes Emerald Hill Family Housing.
- Vending- Yes. Vending is offered in all housing areas. We also have two convenience stores in housing- The Hand Stand in Hand Village and the Knight Stand in Castle Heights.

Should the Student Center (Morgan University Center) be expanded?

The committee feels the current UC should be expanded. Not only for dining areas, but also student meeting/gathering spaces. A current need is for rooms to hold 75-125 people. Some student groups have increased in size and thus the request.

Another comment that the committee wanted to share was the development of a FRONT DOOR for campus. We do not feel that APSU currently has a Front Door to campus. Where do visitors come to campus for information? How do they know where to park? Campus maps, directories etc. could be offered in this space.

We feel the UC can serve as this function with a fully operational ONE STOP Shop concept in the main lobby. The one challenge is parking for visitors or other to campus. APSU would need to designate parking close to the UC to facilitate this request.

Expansion of Dining Areas/Possible West side of campus.

The committee supports the notion of expansion of dining in both the UC and the west side of campus. We feel expansion of the current café seating area toward the Bookstore and an expansion east toward the Green Man is possible. The kitchen is currently sized for a much larger seating area than what was designed in the UC.

We also concur with an expansion of dining on the west side of campus in the residential area of campus. A planned dining space was designed as part of the Phase II housing project but was cut due to costs and lack of funding. The design was to have a stand alone building with three dining venues and approximately 300-325 seats.

The current Phase II project used the same site plan as originally planned. A space is still available for a future dining building just west of the Phase II north building. The committee supports this building once funding becomes available.

Committee Members:
Joe Mills, Ashlee Spearman, Tim Hurst, Tom Hutchins, Phyllis Camilleri, Emily Hallman, Kelsey Smith, Brenna Andring

Austin Peay State University

Terence M. Calloway, MJA / March 27, 2013

PARKING TASK FORCE SUMMARY REPORT

The parking task force has been asked could up with ideals and or solution to make parking on APSU campus more accessible for students, faculty and staff. Some of the things that had the parking task forced concerned are:

1. Austin Peay State University currently has 4,833 on grade parking spaces – 4,111 in parking lots and 722 on street parking. With the total, the University has 114 spaces reserved for ADA accessible parking.
2. The total number of spaces per 100 FTE students is 65, in comparison to the average number of spaces per 100 FTE students in the TBR system of 60. The average in our database is 54 spaces per 100 students
3. Over the next 15 years, the university anticipates that enrollment will increase to 9,900 FTE students. At the current rate of 65 spaces per 100 students, the University will need to add 1,600 spaces. At the TBR average the number to be added is 1,100 spaces.
4. An on-grade parking space costs about $2,000 per space, a deck costs $9,000 to $18,000 per space, and below ground parking costs $36,000 or more per space.
5. Currently the University has 18% of its land dedicated to parking. When enrollment reaches 9,900 students, the University will have 25% of its land in on-grade parking.
6. Adding parking to the existing campus will reduce the amount of open, landscaped space as ongrade parking is fitted into the existing pattern. Several parking lots in the center of the campus are prime locations for future academic buildings. Athletics lack practice/playfields andfacilities.
7. One option is parking decks (possibly with a playfield on roof), another is land acquisition.

The parking task forced had the following questions presented to them:

1. Are there any parking policies that could be modified to reduce the impact? (e.g. not allow residential students to have cars or not allow only freshmen and sophomores residential students to have cars).
2. As other TBR campuses add or consider adding parking decks, at what point will APSU
3. How likely will other means of transportation be a factor? (e.g. campus trolley)

After meeting with the parking group and Joe Mills was included in this group these are the answers that the parking group responded with:

1. One of the first things that was addressed in our meeting was there are plenty of parking spaces for people to park on campus, the issue that people have is there aren't enough parking spaces closet to the buildings in which they conduct their business. There was a study done that showed that a person could walk from the one end of campus to the other in less than 10minutes. The policies for parking are fine, again the issue isn't with parking spaces, the issue is with people wanting to park closest to a certain building and we can't accommodate everyone with that request. Joe Mills spoke up and stated that eliminating freshman and sophomore's from having cars on campus wouldn't have any impact on people parking closer and was against that ideal.
2. We spoke about the parking decks vs parking garage and thought that having a parking deck or garage was two-folded, the concept of having a garage would be nice but it would require us to add additional securities mea surement's to make sure that students and faculty and staff are safe. One topic that we discussed to eliminate people parking where they aren't authorized was placing the electronic arm bar at the entrance of parking lots, having your id card programed to only allow entry to that parking lot, we felt this would reduce the problem of people parking in the RED spaces like students and visitors. This would be done for every parking lot, thus elimi nating people not authorized for those lots.
3. We have discussed the trolley system in detail and one of the concerns about the trolley is there isn't a way for faculty staff and students to know the schedule of the trolley. We would like for a schedule to be displayed somewhere that allows people to know what time the trolley will be at certain stops. With the design of the campus if a student, faculty or staff member was waiting on the trolley for 15 minutes, they could walk anywhere on campus within 10 minutes so the trolley becomes useless. One of the recommendations was to have multiple trolley's throughout the campus, this way it's more inviting to the students to use, thus making them feel more comfortable parking further away from campus. We could have a red line trolley, a black line trolley and a white line trolley matching the colors of APSU. The more trolley's the greater the use is the thought and it encourages the students to utilize the entire campus to park.

This concludes our summary for the parking task force. The following people are a part of the parking task force:

1. Pat Walton
2. Lynette Taylor
3. Robert Sirk
4. Ryan Givens
5. Jane Stevens
6. Christos Frentzos
7. Alvin Westerman
8. Terence Calloway

Appendix Two

FACILITIES ASSESSMENT

EXAMPLE PHYSICAL FACILITIES SURVEY

Appendix Two

APSU FACILITIES ASSESSMENT SUMMARY

BUILDING	Bldg ID	Gross Square Feet	Construction Year	Campus Review
Archwood	A0041	8,311	1901	91.8
Ben S Kimbrough	A0071	32,000	1982	86.2
Blount Hall	A0030	22,675	1962	86.3
Browning	A0001	34,071	1948	86
C E H Building	A0028	18,400	1957	93.3
Castle Heights	A0132	142,524	2011	100
Claxton	A0034	41,597	1967	82.2
Clement	A0029	57,320	1959	97.5
Drane St. 325	A0098	3,309	1938	91.2
Dunn Center	A0060	131,970	1975	82.5
Ellington Hall	A0008	41,966	1951	89.2
Foy Recreation Center	A0114	83,104	2006	91.3
Governors Stadium	A0068	40,530	1946	65.2
Greek Village A-D	A0115-A0118	12,610	1995(A-C), 2002(D)	89.6
Hand Village	A0103	116,600	2003	84.4
Harvill Hall	A0027	18,520	1960	91.6
Hemlock	A0128	20,000	2010	97.8
Marion Street Apts.	A0109	6,000	1986	77.9
Marks	A0006	18,633	1942	69.2
McCord	A0017	52,222	1949	98
McReynolds	A0010	18,250	1957	94.5
Meacham Apartments	A0070	60,456	1981	79
Memorial Health	A0012	58,395	1953	86.6
Miller Hall	A0026	16,905	1960	87
Morgan University Center	A0096	107,737	2002	95.2
Music/Mass Communications	A0076	86,860	1990	93.1
Myra Harned Hall	A0011	52,932	1931	94.7
601 North Second Street	A0133	5,652	1988	94.9
Pace Alumni Center	A0061	8,509	1901	93.9
Powerhouse	A0013	7,895	1929	83.6
R C Shasteen Maintenance	A0067	24,500	1980	75
Sevier Hall	A0031	47,085	1967	85.3
Sexton	A0063	6,685	1978	94.7
Sundquist Science Complex	A0095	221,213	2001	92.2
Tennis Center	A0075	28,272	1985	88.7
Trahern	A0059	60,253	1975	64.6
Two Rivers Apartments	A0078	14,140	1984	86.6
Warehouse	A0058	18,604	1966	85.1
Woodward Library	A0032	80,614	1967	69.1

EXAMPLE PHYSICAL FACILITIES SURVEY

All detailed facility assessment information for all campus buildings are available at Physical Plant Services.

Tennessee Board of Regents
Physical Facilities Survey

Information Summary

Institution	APSU	Campus Updated Date	6/18/2003
Building Name	Browning	Team Leader	Ben Pratt
Building ID	A0001	Team Members	Mark McClain, David Lemons, Mike Ramsey
Primary Use	Administrative Offices		
Secondary Use	Computer/Telephone Servic		
Bldg Use Code	16	Team Insp Date	
		Architectural	
Gross Sq Ft	34,071	Structural	
Number of Floors	3	Code	
Const Year	1948	Mechanical Engr.	
		Electrical Engr.	
SBC Code Type		Environmental	

Rating Summary

		Value	Percent	Campus	Percent	Review
Substructure	Foundation	8	90	**7.2**	100	**8.0**
	Basement Construction	3	90	**2.7**	100	**3.0**
Shell	Superstructure	7	100	**7.0**	100	**7.0**
	Exterior Enclosure	7	100	**7.0**	100	**7.0**
	Roofing	7	100	**7.0**	100	**7.0**
Interiors	Interior Construction	6	100	**6.0**	100	**6.0**
	Stairs	3	90	**2.7**	100	**3.0**
	Interior Finishes	4	90	**3.6**	100	**4.0**
Systems	Conveying	3	100	**3.0**	100	**3.0**
	Plumbing	5	90	**4.5**	100	**5.0**
	HVAC	14	50	**7.0**	100	**14.0**
	Fire Protection	6	90	**5.4**	100	**6.0**
	Electrical	8	70	**5.6**	100	**8.0**
	Data & Communications	5	80	**4.0**	100	**5.0**
General	Equipment & Furnishings	1	100	**1.0**	100	**1.0**
	Special Construction	1	100	**1.0**	100	**1.0**
	Site Conditions	2	80	**1.6**	100	**2.0**
	Safety Standards	4	100	**4.0**	100	**4.0**
	Building Suitability	3	100	**3.0**	100	**3.0**
	Building Adaptability	3	90	**2.7**	100	**3.0**
		100		**86.0**		**100.0**

Building Summary

6/3/03 (RR)
* Constructed in 1948, Browning houses the Administration Offices, Computer Services, Telephone Services, and Human Resource Department. It is a 2-story plus basement building.
* Building condition information updated based on Master Plan Team survey Fall 2012 - Campus rating field used for results

Appendix Three

UTILITIES, INFRASTRUCTURE, AND COSTS

I. CONDITION AND CAPACITY OF EXISTING UTILITIES

II. FUTURE NEEDS FOR UTILITIES

III. POTENTIAL COST RANGES

Appendix Three

UTILITIES, INFRASTRUCTURE, AND COSTS

I. CONDITION AND CAPACITY OF EXISTING UTILITIES

1. STEAM

A majority of the larger buildings on campus are served by the campus central plant, which provides steam and chilled water. **Table 1** on the right lists the buildings currently on the central steam and chilled water systems along with gross square footage date and estimated steam and chilled water loads. These are used to determine the adequacy of each system's capacity. The total steam load for the campus is calculated to be approximately 38,000 pounds per hour (PPH).

The central plant was originally built in 1929 in the center of campus. The original coal-fired boilers were replaced in 1954 and then replaced again in a recent campus-wide energy upgrade. The new boilers, installed in 2010, are Cleaver Brooks. The "winter" boiler is 1200 boiler horse power (bhp), producing approximately 50,350 pph of steam. The "summer" boiler is 800 bhp at approximately 33,500 pounds per hour (PPH) of steam. Both are fire tube boilers operating at 100 PSIG. Some of the peripheral equipment, including feedwater pumps, condensate tank, were also replaced at that time. The area serving the starters and variable speed drives for all the motors is poorly cooled.

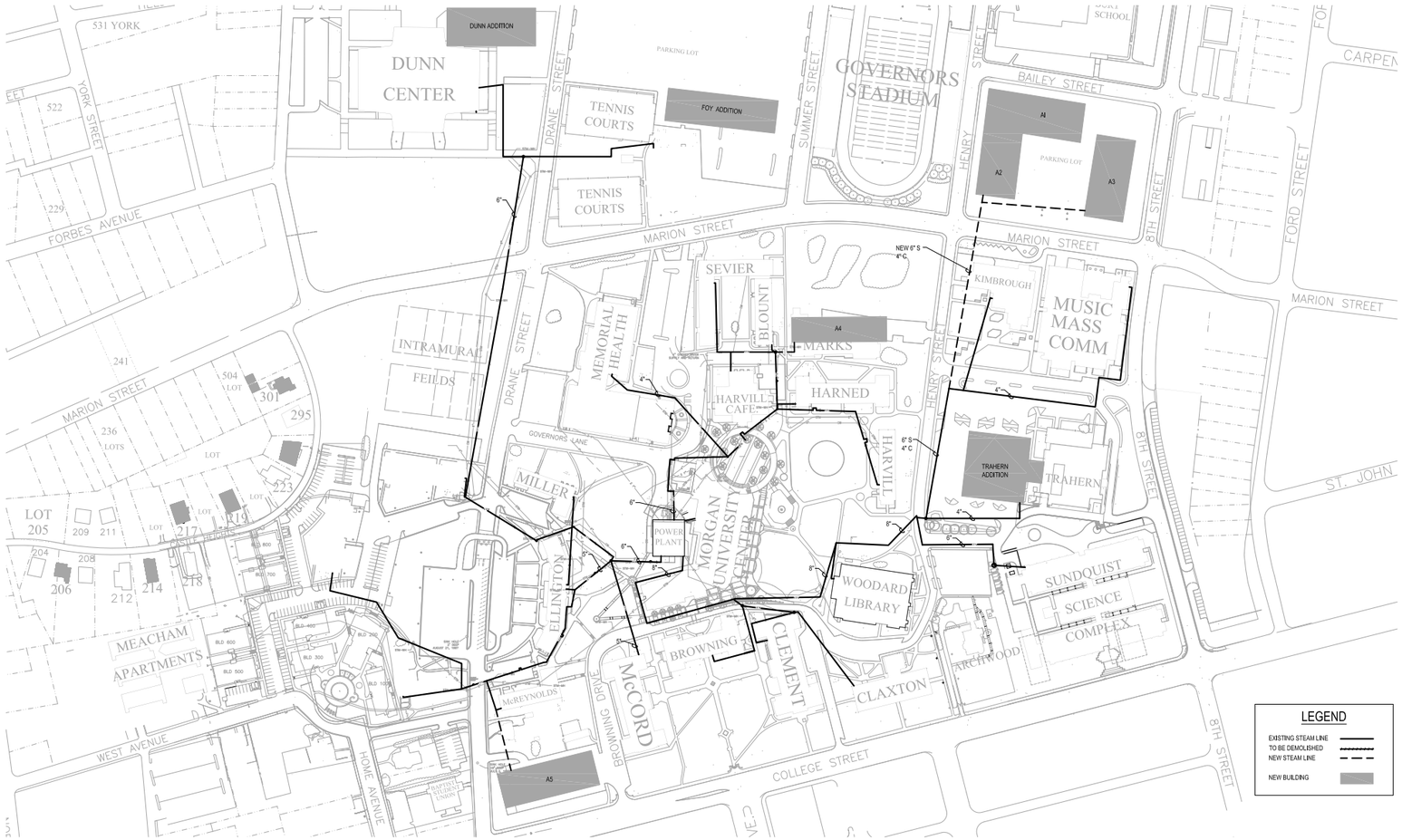
The total combined capacity of the two boilers is more than adequate for the current campus-heating load of 38,000 PPH. If one boiler were to be down in the peak of winter, there would still be enough capacity for freeze-protection for all buildings, but not enough to keep every building at a comfortable temperature.

The steam is distributed through four primary branches ranging in size from 4" to 8" as shown in **Drawing M-1** on page 53. The branches are designated North, East, West, and University Center (UC). Most of the piping is direct buried pre-insulated. Most of the oldest sections have been replaced in the past ten years. There is piping from the 1980's serving Kimbrough and Music/Mass Communication.

TABLE 1

Table #-1	APSU Masterplan Existing Building Data								
Bldg No.	Name	Use	Year	Gross SF	Class	Lab	CHW (TONS)	CHW GPM	STM (PPH)
30	Blount Hall	50	1962	22,675			60	144	950
1	Browning Admin	16	1948	34,071			100	240	1,430
28	C E H Bookstore	60	1957	18,400			50	120	770
34	Claxton	10	1967	41,597	9795	6541	120	288	1,750
29	Clement	10	1959	57,320	6315	5691	160	384	2,410
60	Dunn Conv Center	15	1975	131,970	6299	2302	380	912	5,560
8	Ellington Hall	16	1951	41,966			120	288	1,770
27	Harvill Hall	50	1960	18,520			50	120	780
71	Kimbrough	10	1982	32,000	6560	1936	90	216	1,350
17	McCord Science	11	1949	52,222	2382	22787	150	360	2,200
10	McReynolds	10	1957	18,250	1842	2469	50	120	770
12	Memorial Health	15	1953	58,395			170	408	2,460
26	Miller Hall	50	1960	16,905			50	120	710
76	Music/Mass-Comm	10	1990	86,860			250	600	3,660
11	Harned Hall	16	1931	52,932	3950	3321	150	360	2,230
13	Power House	30	1929	7,895			20	48	330
95	Sundquist Science Bldg	10	2001	221,213	16481	68213	630	1,512	9,310
31	Sevier Hall	50	1967	47,085			130	312	1,980
59	Trahern Art Drama	13	1975	60,253	3014		170	408	2,540
96	University Ctr	40	2002	107,737			310	744	4,540
32	Woodward Library	17	1967	80,614		1226	230	552	3,390
	EXISTING SUBTOTAL			1,208,880	56,638	114,486	3,440	8,256	50,890
	DIVERSIFIED AT			75%			2,580	6,192	38,168

DRAWING M-1



APSU MASTER PLAN - STEAM DISTRIBUTION

SCALE: 100' 50' 0' 100' 200'

NOT FOR CONSTRUCTION FOR REFERENCE ONLY

APSU MASTER PLAN - STEAM DISTRIBUTION

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CONSULTING ENGINEERS
NASHVILLE, TN. (615) 346-3400

DRAWN BY JWY	JOB No. 120270	SCALE SCALE	
CHECKED BY BMA	ISSUE DATE	SHEET No. M-1	
FILENAME 120270M1	PLOT DATE 6/3/13		

DATE	BY		DATE	BY		DATE	BY		DATE	BY		DATE	BY	
		8			7			6			5			4

DATE	BY		DATE	BY		DATE	BY	
		3			2			1

2. CHILLED WATER

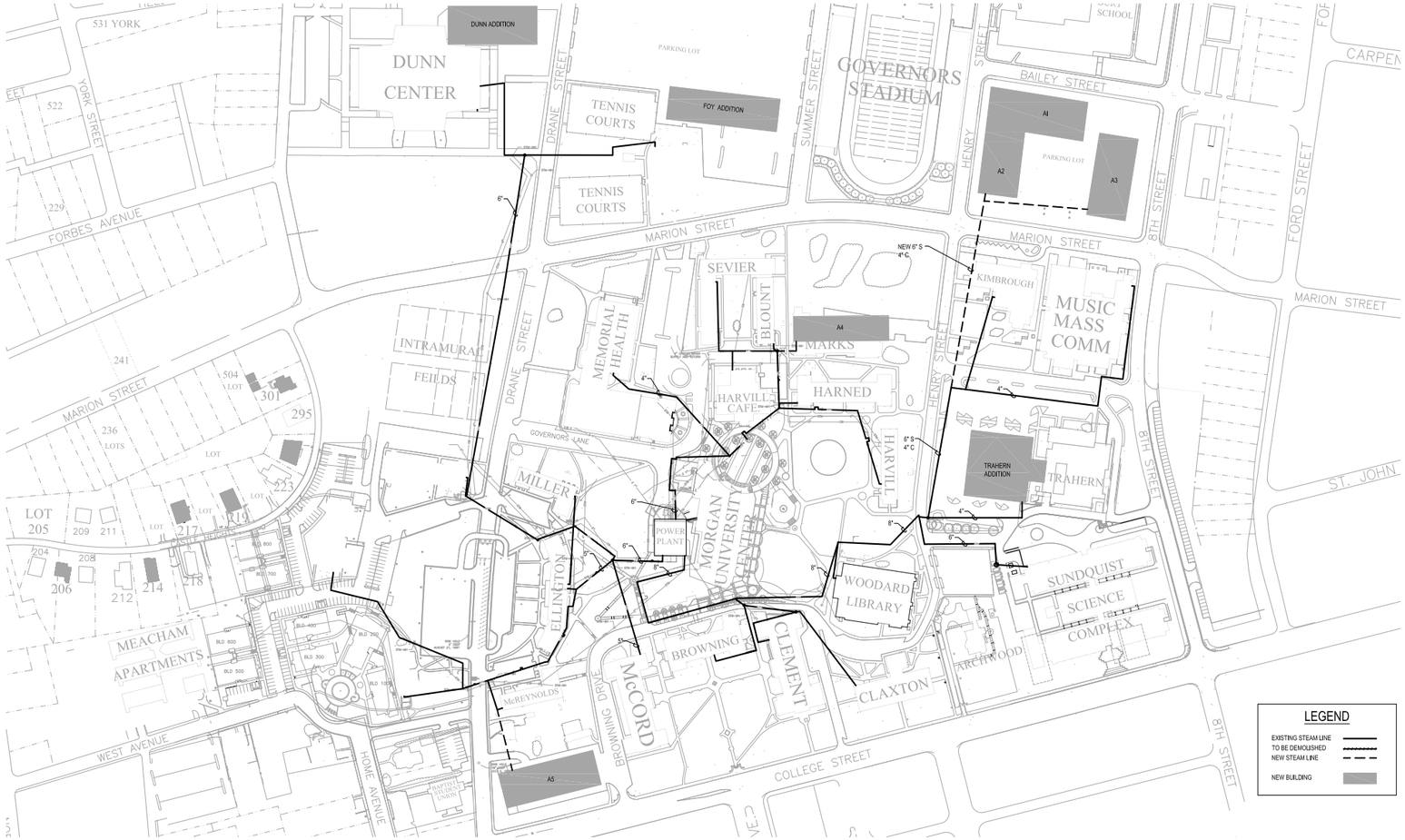
The Central Plant was enlarged in 1964 to include chilled water production equipment that now cools 21 of the campus's main buildings. There are currently two 1200-ton chillers and one 600-ton chiller for a combined capacity of 3000 tons. This is adequate to serve the diversified campus load of 2,580 tons, but leaves little room for growth and inadequate back-up capacity. The Foy Fitness Center and Hemlock Semi-conductor Building were designed with their own chiller and heat pumps due to lack of capacity at the central plant and the distance from it. The central plant chillers range in age from 7 to 15 years old and therefore should have a number of years of service left in their useful life. Two of the three cooling towers are almost 25 years old and beginning to show damage from corrosion. These will need to be replaced soon. There is no redundancy in the installed chilled water pumps. The system also needs a dirt/air separator to deal with sludge from older buildings that makes its way into the central system. An energy retrofit implemented in 2010 added controls to enable the plant to operate as a variable flow system. The plant still has primary and secondary chilled water pumps so that the system is not functioning as a true variable primary system. Some further study of the operational possibilities could make additional use of the energy-saving potential of the new control system.

An additional issue with the central plant is its location in the middle of campus, particularly now that the new University Center wraps closely around the plant on two sides. From an engineering standpoint, the center of campus is an ideal location because it minimizes the length of the distribution piping. This very functional distribution location, however, detracts aesthetically from the campus, and there is little room for further expansion.

Chilled water is distributed around campus through four primary branches ranging in size from 8 to 16 inches as shown in **Drawing M-2** on the following page. These are roughly parallel to the steam lines. A new 12" line was installed when the University Center was built. The east branch was largely replaced with a new 16" line when the Science Center was built. The lines to Miller and Dunn were replaced in 2011.

Austin Peay State University

DRAWING M-2



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DATE	BY	
		E
		D
		C
		B
		A

8 7 6 5 4 3 2 1

APSU MASTER PLAN - STEAM DISTRIBUTION

CLARKSVILLE, TENNESSEE

ICT I.C. THOMASSON ASSOCIATES, INC.
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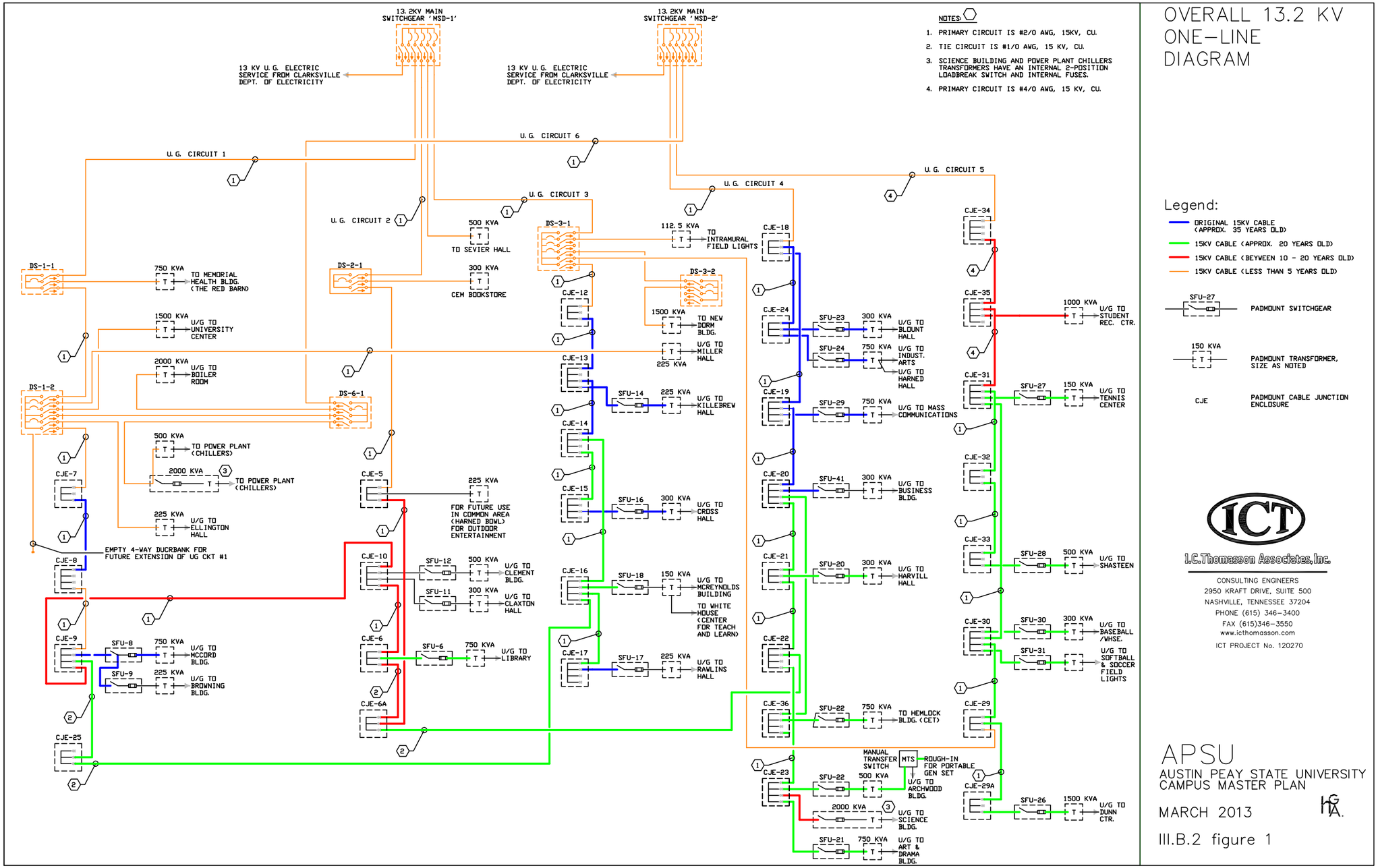
DRAWN BY	JWY	JOB No.	120270	SCALE	SCALE
CHECKED BY	BMA	ISSUE DATE		SHEET No.	M-1
FILENAME	120270M1	PLOT DATE	6/3/13		

3. ELECTRICAL

The APSU campus is fed from two (2) outdoor 15kV Vacuum Fault Interrupter (VFI) Switchgears on Marion Street. These switches feed the core campus, with the exception of the Hand Village Student Housing, Emerald Hill Apartments, Governor Stadium, and several small services. The campus 13.2kV power system is an underground distribution system that originates from the 15kV switchgears, and is owned by APSU. The 15kV VFI switchgear is fed from one (1) incoming service feeder from the Utility and there are six (6) main underground circuits that feed most of the campus facilities.

The six (6) distribution circuits include thirty (30) 15kV padmounted cable junction enclosures (CJE), six (6) VFI distribution switches and twenty-two (22) padmounted switches that distribute power to buildings via padmounted transformers. All six (6) underground circuits can be back-fed from at least one (1) of the other underground circuits in the event of a 15kV cable fault(s) or other system component failure. The backfeed circuits are made through the CJEs and/or the VFI distribution switches. The overall One-Line Diagram of the APSU primary electrical distribution system is shown on **Diagram III.B.2 Figure 1** on the following page. The Site Plan is shown on **Drawing III.B.2 Figure 2** on page 58.

DIAGRAM III.B.2 FIGURE 1



OVERALL 13.2 KV ONE-LINE DIAGRAM

Legend:

- ORIGINAL 15KV CABLE (APPROX. 35 YEARS OLD)
- 15KV CABLE (APPROX. 20 YEARS OLD)
- 15KV CABLE (BEYWEEN 10 - 20 YEARS OLD)
- 15KV CABLE (LESS THAN 5 YEARS OLD)

SFU-27 — PADMOUNT SWITCHGEAR

150 KVA — PADMOUNT TRANSFORMER, SIZE AS NOTED

CJE — PADMOUNT CABLE JUNCTION ENCLOSURE

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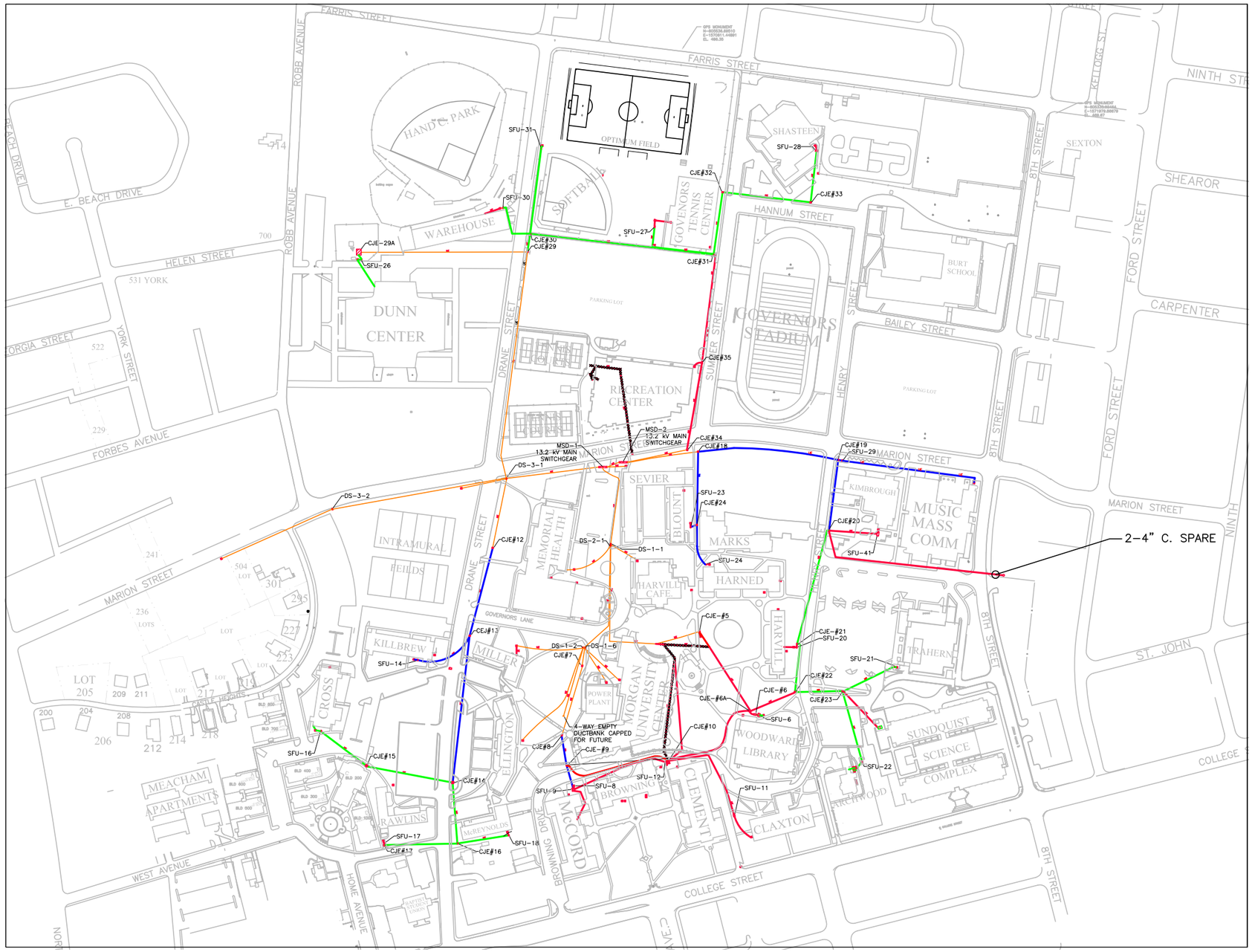
III.B.2 figure 1

DIAGRAM III.B.2 FIGURE 2



ELECTRICAL SITE PLAN

- ORIGINAL 15KV CABLE (APPROX. 35 YEARS OLD)
- 15KV CABLE (APPROXIMATE 20 YEARS OLD)
- 15KV CABLE (BETWEEN 10 - 20 YEARS OLD)
- 15KV CABLE (LESS THAN 5 YEARS OLD)
- UE DEMO UNDERGROUND ELECTRIC
- UE UNDERGROUND ELECTRIC
- TRANSFORMER PAD
- CJE (15kV) CABLE JUNCTION ENCLOSURE
- SFU (15kV) PAD MOUNTED SWITCH
- DS (15kV) VFI SWITCH
- T TRANSFORMER

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III.B.2 figure 2

3.1 Main 15kV VFI Switchgears

The two 15kV VFI switchgears were installed in a 2010 Electrical Upgrades project and are the undercover type (below grade). They are Owned and operated by APSU. Each VFI switchgear is rated for 900 Amps at 13.2kV and consists of one (1) incoming load interrupter switch and five (5) VFI taps that feed the six (6) underground circuits.

3.2 Primary 15kV Cable

Approximately 25 percent of the underground cable was replaced in 2010 and 2011 during the Electrical Upgrade projects. Out of the remaining 75 percent of the underground 15kV cable, approximately 40 percent of it is thirty-two (32) years old, 20 percent of the primary cable is between 15–20 years old and 15 percent of the primary cable is less than 15 years old. The original cable and some of the 20-year-old cable is installed in underground conduit that is direct-buried and not concrete-encased. The newest 15kV cable is installed in concrete-encased duct banks. The APSU electrical staff has noted that the some of the original direct-buried conduit is crumbling.

In addition to age, a potential problem with the 15kV cable on the five (5) circuits is capacity. The primary 15kV circuits consist of #2/0 Awg, 15kV, copper conductors, which have an ampacity of 255 Amps in underground ducts. As the campus has grown, the five (5) circuits have been tapped to feed the growth. While no individual circuit is in danger of being overloaded during normal operation, there is the possibility of a circuit becoming overloaded should it be required to carry one (1) or two (2) of the other primary circuits during an emergency situation.

3.3 Cable Junction Enclosures

Another problem with the primary distribution system is the condition of the terminations inside the padmount cable junction enclosures. Many of the loadbreak elbow terminations and their corona shields inside these enclosures are in decay. This can cause termination failures which require the electrical staff to isolate the fault and then tie the circuit with the failure to an adjacent circuit. The system will operate in this condition until the local Utility can make the repairs inside the CJE.

3.4 Campus Loading

There is one (1) primary (13.2kV) Utility meter for the main 15kV VFI switchgears that feed a majority of the APSU campus. Since there are no electrical power meters in the switchgears, the actual loads on the six (6) individual 13.2kV circuits are not known. However, the individual buildings are metered through an Emon metering system. The only demand data given by APSU is from the utility electric bills, which include the peak kilowatts (kW) for the primary meter. From this billing data, it is determined that the campus has a peak load of approximately 235 Amps at 13.2kV. This gives no indication of the power usage and load on each of the six (6) 13.2kV circuits, though.

3.5 Recommendations

Based on the conditions of the electrical distribution system as described in this section, there are two (2) recommended upgrades. They are listed in order of priority as follows:

Priority 1: Replace the oldest underground direct-buried distribution with new concrete-encased ductbanks and 15kV cable. The cable size should be increased to accommodate future loads.

Priority 2: Visually inspect all thirty (30) Cable Junction Enclosures (CJE) and replace as necessary. Estimate replacing twenty (20) CJEs.

4.1 Telecommunications

The existing telecommunications campus infrastructure at Austin Peay State University (APSU) consists of various counts of voice-grade copper cabling and single-mode and multi-mode fiber optic cabling along with numerous hand holes, pedestals, and pull points throughout the campus. The main data head end room and the main telephone head end room are both currently located in the Browning building. The main data head end will relocate to the Math & Computer building once construction is complete. Through compiling record documents from APSU, APSU contractors, and I.C. Thomasson Associates (ICT), these cables and counts are identified on the drawings associated with this master plan study.

The existing fiber optic cabling campus infrastructure seems to be functioning properly and is of sufficient strand count to meet the current needs of the University. From ICT's research, we have identified most of the fiber optic cabling campus infrastructure to be installed in conduit from building to building. However, a large percentage of the copper cabling campus infrastructure is direct buried. This means these cables are not placed in any protective housing or raceway. With construction and maintenance being an on-going process on campus, the copper cabling campus infrastructure is highly susceptible to damage. Damage to these cables could result in lost phone service to a building or buildings on campus which may affect the life-safety requirements of the spaces.

4.2. Recommendations

It is our recommendation that the direct buried copper cabling infrastructure be verified for not only exact location, but for utilization as well. After all cables have been located and verified that the cable is in use, these cables should be replaced with cabling housed in conduit as necessary within a maintenance budget. If the future plans for the campus is to convert to Voice-Over I/P, then replacement of the direct-buried copper cable is not required.

The existing fiber optic infrastructure is sufficient for the current needs of the University; however it is recommended the fiber optic strand count increase to meet the future needs of having multiple networks operating concurrently on campus. It is also recommended that the University continue to install both single-mode and multi-mode fiber optic cable to meet the diverse needs of the networks such as Building Automation, Fire Alarm, Safety & Security, and potentially a guest wireless network.

5. NATURAL GAS

Natural gas is delivered to the campus by way of a 4" high pressure (100 psi) steel pipe running along Marion Street and various sizes of low pressure (45 psi) steel pipe in Farris, College, Drane, Summer, and Henry. Gas to the central plant comes through a 2" high pressure line that runs from Marion down Drane and then along Governors Lane. Until recently only a small number of buildings other than the central plant utilize natural gas. According to personnel at both Clarksville Gas and APSU, all lines are in good shape and adequately sized with room for expansion.

II. FUTURE NEEDS FOR UTILITIES

1. STEAM

Once the condition issues of the steam and chilled water systems are addressed, this study must still evaluate the ability of the existing systems to meet the future needs of the campus based on the projected growth. New buildings necessary to serve a growing student body, if added to the steam system could push the campus load past a prudent operating point.

Table 2 shows the effects of putting 437,100 square feet of new academic and athletic buildings on the steam system. The connected load increases from 50,890 to 69,310 pph. This undiversified load is approaching the total installed capacity of 83,750 pph. While there is usually some diversity in the heating load, and the two new boilers could carry the expected diversified load, it is recommended that the plant be capable of serving the undiversified load, since peak heating typically occurs when buildings are unoccupied unless the campus has a sophisticated night setback program in most of the buildings. Therefore the diversity is often not as great as for the cooling load. The existing boilers can carry the projected load, but there is no back-up capacity if the larger boiler is out of service. Any new future load beyond what is included in this study should consider in-building boilers.

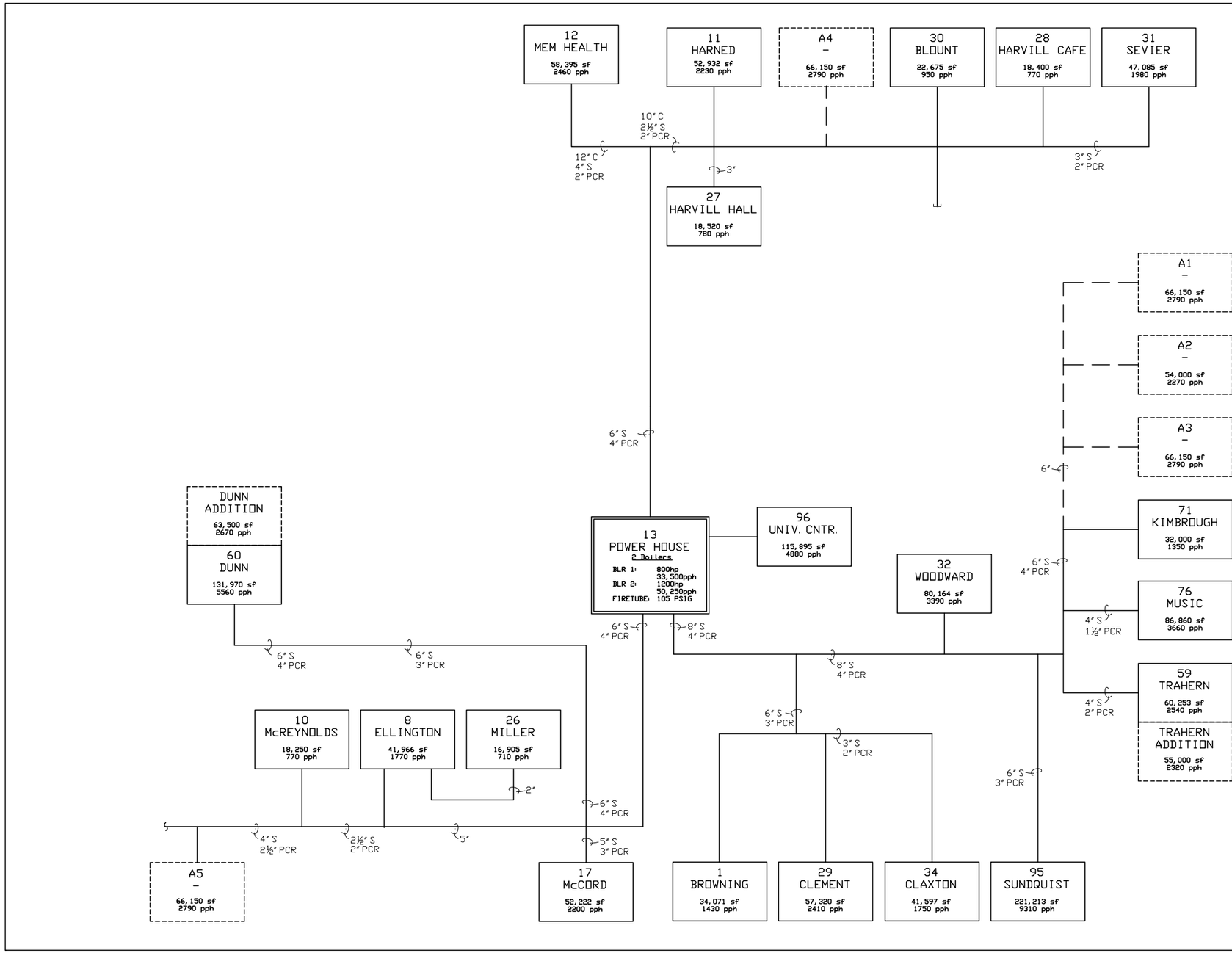
TABLE 2

Table #-2 APSU Masterplan Future Building Data									
Bldg No.	Name	Use	Year	Gross SF	Class	Lab	CHW	CHW	STM
	EXISTING SUBTOTAL			1,208,880	56,638	114,486	3,440	8,256	50,890
	DIVERSIFIED AT			75%			2,580	6,192	38,168
FUTURE BUILDINGS									
A1	Academic	10		66,150			190	380	2,790
A2	Academic	10		54,000			150	300	2,270
A3	Academic	10		66,150			190	380	2,790
A4	Academic	10		66,150			190	380	2,790
	Trahern Add'n	13		55,000			160	320	2,320
A5	Academic	10		66,150			190	380	2,790
	Dunn	15		63,500			180	360	2,670
	SUBTOTAL FUTURE			437,100			1,250	2,500	18,420
	DIVERSIFIED AT			75%			938	1,875	13,815
TOTAL FUTURE				1,645,980			4,690	10,756	69,310
	DIVERSIFIED AT			75%			3,518	8,067	51,983

Capacity of the distribution system must also be considered. If the central plant is kept at its present location, the sizes and flows of each branch with new buildings will need to be evaluated more carefully to determine more precisely the flow and pressure drop in each section of the pipe. Because the lines in each branch have been increased in size as they have been replaced, there appears to be capacity for new steam loads in the major trunk lines.

Many of the proposed new buildings are located in the east area of campus, as shown in **Drawing M-1** on page 53 and **Diagram M-3** and on the following page. This is the largest steam line on campus, and is currently sized with enough capacity to pick up the additional load.

DIAGRAM M-3



STEAM BLOCK DIAGRAM

Legend:

S STEAM
C CONDENSATE
P PUMPED CONDENSATE RETURN
——— EXISTING PIPING
— — — FUTURE PIPING

BLDG. No.
BLDG. NAME
GROSS SQ. FOOT
STEAM LOAD
EXISTING BUILDING

BUILDING TO BE DEMOLISHED

FUTURE BUILDING

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CAMPUS MASTER PLAN

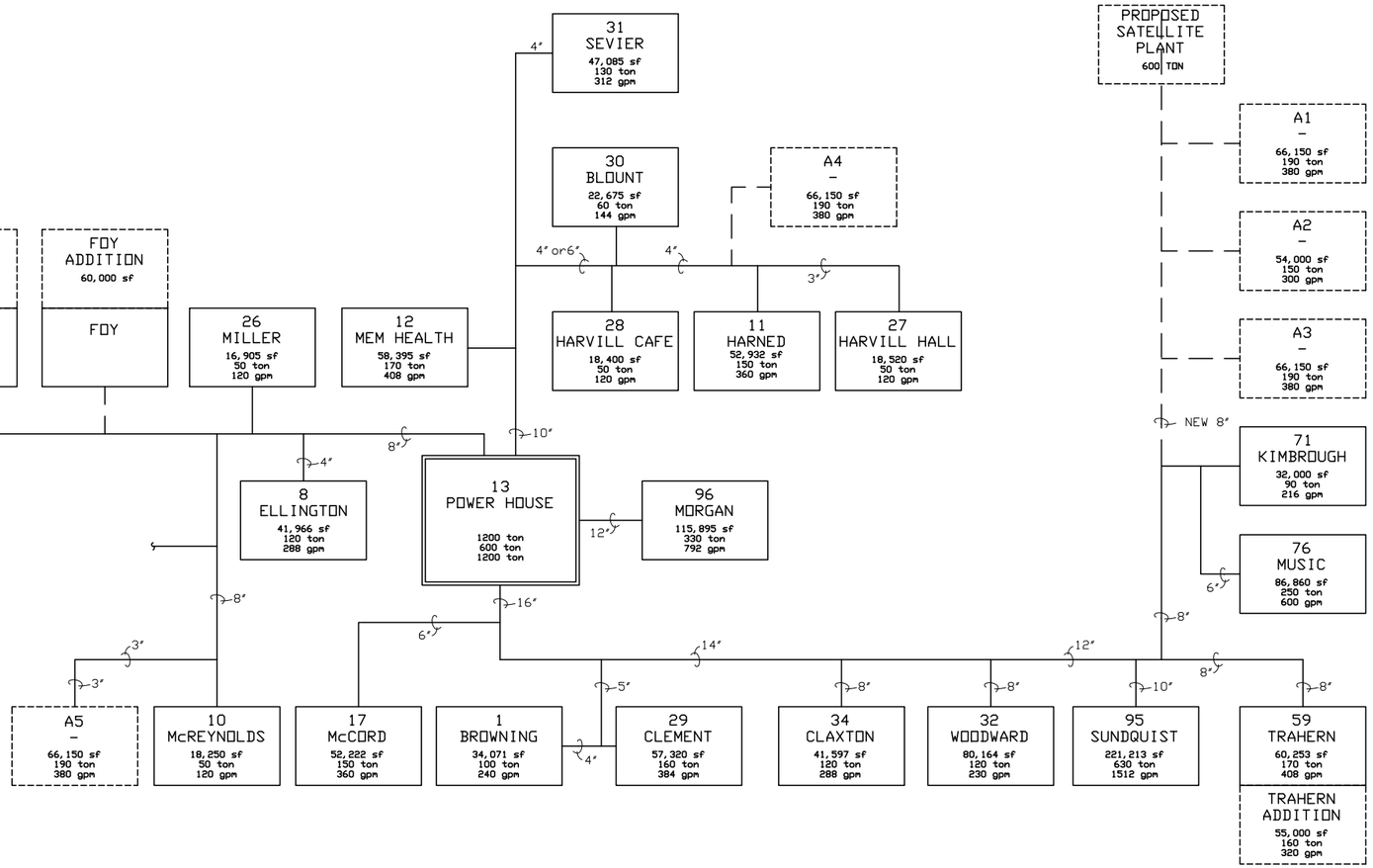
March 2013

DWG M-3

2. CHILLED WATER

The new buildings will push the chilled water load past the peak capabilities of the existing plant. **Table 2** on page 60 shows the additional chilled water load associated with new academic and residential buildings. The future diversified load of 3,518 tons is beyond the plant's installed capacity of 3,000 tons. Expansion space at the existing central plant is very limited. Installing another chiller of this size in the existing plant would be very difficult, but it could be possible to install one or two 600 ton chillers in a satellite plant to meet the future need and provide some back-up. Because the greatest concentration of new academic buildings is proposed for the area north of Kimbrough, a satellite plant there could serve the three new buildings proposed and tie into the central plant lines to provide back-up capacity to the central plant. This is shown on **Drawing M-2** on page 55 and **Diagram M-4** on the following page. Tying into the 8 line serving Kimbrough and Music/Mass Communication with an new 8" or 10" from the satellite plant would give the University the option to backfeed chilled water from the satellite plant. This would be especially helpful during the much needed replacement of the cooling towers in the existing central plant.

DIAGRAM M-4



CHILLED WATER BLOCK DIAGRAM

Legend:

EXISTING PIPING

FUTURE PIPING

BLDG. No.
BLDG. NAME
GROSS SQ. FOOT
TONS
GPM

EXISTING BUILDING

BUILDING TO BE DEMOLISHED

FUTURE BUILDING

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ICT PROJECT No. JOB# 120270

APSU

AUSTIN PEAY STATE UNIVERSITY
CAMPUS MASTER PLAN

March 2013

DWG M-4

3. ELECTRICAL

3.1 Main Distribution Switchgears

Based on the proposed campus master plan, the two (2) main 13.2kV VFI switchgears on Marion Street can support the new buildings in the 5-year plan.

3.2 Distribution

Based on the proposed campus master plan, the existing underground distribution system can support the new buildings in the proposed campus master plan without upgrades. The new buildings in the proposed campus master plan can be fed from existing 13.2kV underground Circuits #1 and #4. New 15 KV VFI switches, cables, and transformers can be added to these circuits to support the new buildings. However, Section III of this study recommends replacing the oldest 15kV cable due to age and condition. Much of this cable is in Circuits #3 and #4, and should be replaced prior to adding significant new loads.

4. COMMUNICATIONS

4.1 Copper

The existing copper network appears to be adequate for the future scenario. Plans to move much of the functions now served by this network to a Voice Over Internet Protocol (VoIP) system could render much of this network obsolete. However, many other systems utilize this infrastructure for distribution and therefore cannot completely be removed or demolished once a full VoIP conversion occurs.

4.1 Fiber

Shifting functions to VOIP could add to the load currently carried by the fiber optic network. Multiple networks are likely to be created to carry different traffic. The University will need to define how it intends to proceed before conjectures can be made regarding any shortfalls in the existing fiber optic infrastructure.

5. NATURAL GAS

5.1 City

The campus's gas consumption will increase as new buildings are added, but the Clarksville Gas has ample capacity to handle the increased load.

5.2 Campus

If the central heating and cooling plant is relocated so that it can more easily expand, it will be necessary to run a new gas line back to the 4" high pressure gas line in Marion Street. This line would also be the tie-in point for a satellite plant. Any boilers that were installed in individuals could be served from the low pressure gas distribution system that runs in every campus street except for Drane.

III. POTENTIAL COST RANGES

1. Steam

Extending steam lines to new buildings will save the University the cost of installing new boilers, but it does come with a cost for the distribution piping. Assuming steam and chilled water are installed in a common trench where practicable, the estimated cost for steam lines is approximately $1320/ ft for 6" steam line. For the proposed new academic buildings there would be roughly 1000 feet of new piping or $1,320,000.

2. Chilled Water

The proposed chilled water satellite plant could be incorporated as part of one of the new buildings proposed in the northeast part of the campus or it could be housed in a stand-alone building. For planning purposes, the most conservative option is to look at the estimated probable cost of a satellite plant in its own building. Based on similar installations at other campuses, a satellite plant with two 600 ton chillers could have an approximate installed cost of $2.7 million. Chilled water piping installed in a common trench with steam would have an installed cost of approximately $1200/ft or $1,200,000 to connect the proposed new academic buildings.

3. Electrical

3.1 15KV Cable

Replace the oldest underground direct-buried distribution cable with new concrete-encased ductbanks and 15kV cable. The cable size should be increased to accommodate future loads.

15KV Conductors: 8,000 LF, Unit Cost - $9.00 per linear foot, Total Cost - $72,000

Ductbank: 2,700 LF, Unit Cost - $125.00 per linear foot, Total Cost - $337,500

3.2 Cable Junction Enclosures

Test all thirty (30) Cable Junction Enclosures (CJE) and replace as necessary. Estimate replacing twenty (20) CJEs.

Test CJE: 30 EA, Unit Cost - $1,000 EA, Total Cost - $30,000

Replace twenty (20) CJEs: Unit Cost - $3,000, Total Cost - $60,000

4. Communications

4.1 Copper

When required to upgrade the infrastructure to a specified building utilizing an existing ductbank, the estimated costs for installing a copper multi-pair cable shall be $21 per linear foot per 200 pair cable. When required to add copper cabling to a new building, creating a new ductbank, the estimated costs for installing a copper multi-pair cable shall be $72 per linear foot per 200 pair cable.

4.2 Fiber

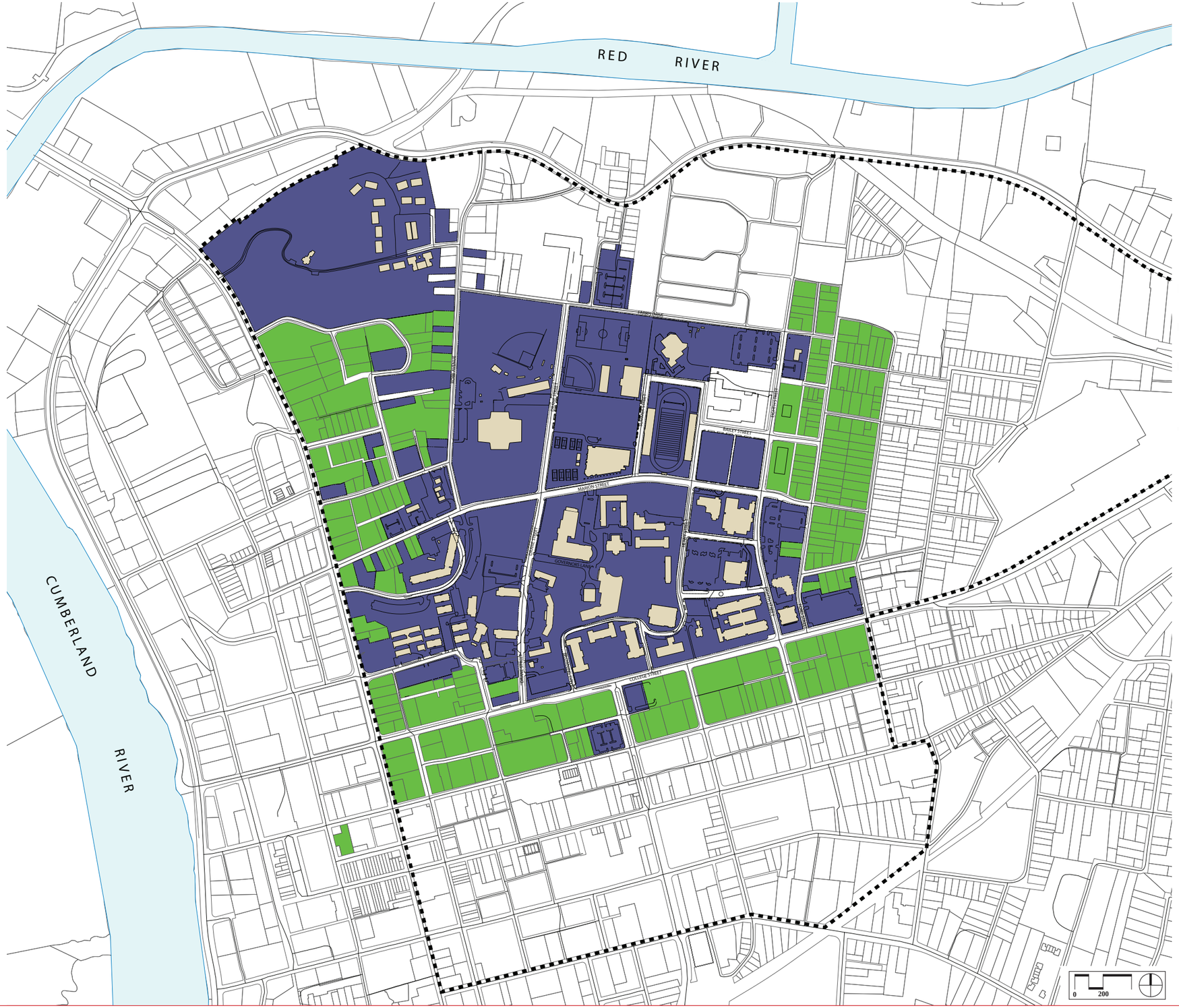
When required to upgrade the infrastructure to a specified building utilizing an existing ductbank, the estimated costs for installing a fiber optic cable shall be $13 per linear foot per 24 strand Single Mode Fiber Optic Cable. When required to add copper cabling to a new building and creating a new ductbank, the estimated costs for installing a copper multi-pair cable shall be $65 per linear foot per 24 strand Single Mode Fiber Optic Cable.

Appendix Four

LAND ACQUISITION AND DISPOSAL PLAN

Drawing A.1:

LAND ACQUISITION AND DISPOSAL PLAN



LAND ACQUISITION AND DISPOSAL PLAN

Austin Peay State University

Campus Plan 2013

- UNIVERSITY BUILDINGS
- UNIVERSITY PROPERTY
- HIGH PRIORITY POTENTIAL AND OPPORTUNISTIC LAND ACQUISITION
- OUTLINES LONG RANGE POTENTIAL LAND ACQUISITION

UNIVERSITY PROPERTY SHOWN ON THIS MAP TOTALS 182 ACRES

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