Campus Parking and Transportation Plan

Austin Peay State University (Clarksville, Tennessee)

November 2022 (Final Report)

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WALKER CONSULTANTS

Contents

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Executive Summary

In Fall 2022, Walker Consultants met with APSU executive leadership to receive draft report feedback. As an outcome of the presentation and executive discussion, Walker Consultants was requested to evaluate an alternative campus rate model that APSU wishes to pursue with the following programmatic features:

- Tier 1 ($122 annually, tied to student rate), Tier 2 ($61 annually), and Tier 3 ($31 annually) pricing for annual Faculty/Staff permits.
- annual event parking revenues approximating $1 million (with 1 percent year-over-year growth assumed); and
- maintenance of existing P&T student fees at a current rate of $122 per year increased annually by 3.5 percent to keep pace with inflation.

The results of the rate adjustments modeled yield a ten-year positive cumulative fund balance of approximately $10.5 million assuming event revenues are maintained within the parking and transportation auxiliary in addition to net proceeds from all other parking and transportation auxiliary revenue sources. This fund balance will allow the auxiliary to reinvest in the system as the campus develops and changes.

Our modeling assumes that faculty/staff demand is inelastic and that Tier 1 rates will be supported across user types. Tier 2 will allow faculty/staff to choose to continue to park at their current rate of $61 dollars per year. Tier 3 will be providing faculty/staff users with a discounted option of $31 dollars per year for less proximate parking spaces that are currently underutilized, e.g., commuter lots requiring additional walking distances and/or Peay Pickup shuttle service.

An oversell factor of 10 percent was applied to all Tier 1 permits based upon our review of the available Tier 1 space inventory with no oversell factor assumed for Tier 2 and 3 permits. User Assignments provides a detailed illustration of our modeling assumptions applied along with ten-year financial results.

Background

Walker Consultants (“Walker”) was engaged by Austin Peay State University (“APSU” and/or “University”) to update (“Plan”) the 2016 comprehensive parking and transportation master plan completed by Walker.

Since the delivery of Walker’s 2016 plan, changes on the APSU campus—including a campus master plan (2017) and a housing and dining master plan (2019) have been completed.

Additional changes to the parking inventory have occurred with the acquisition of several former car dealership parking lots south of College Street.

The purpose of Walker's Study update is to take a fresh look at campus conditions and assess future conditions considering changes to the campus environment. As the University has returned to in-person campus learning, and with the development of the F&M arena downtown, stakeholders are interested in assessing future parking space adequacy and opportunities to better utilize existing infrastructure for wider campus and community benefits.

Current and projected demand do not indicate the need for APSU to build additional parking within the planning horizon.

Walker's Study process was three-fold:

1. Identify Current Campus Conditions
2. Project Future Campus Conditions
3. Formulate Recommendations

Overview of Findings

On February 22nd and 23rd, 2022, Walker undertook parking space inventory and occupancy counts on the APSU campus to measure supply and demand during peak campus usage hours. The results are summarized as follows.

Supply/Demand Findings:

- Overall, campuswide parking occupancies peaked at the 10 a.m. hour when 2,603 spaces, or 57% of the total parking supply, were recorded occupied.
- While ample space vacancy exists campuswide, with over 1,990± vacant spaces recorded at the peak hour, parking "hot-spots" exists across select areas of the campus.
- Parkers are likely circling to find a vacant parking stall in high-demand user areas since these facilities are located closest to core campus buildings, while under-utilized peripheral parking facilities exist within a five-minute walk to the core of campus.
- In observing motorist behavior and spatially analyzing the occupancy data collected, Walker believes that students are likely dedicating at least the same amount of time "cruising" to find an open proximate space, as they would going straight to underutilized facilities and walk. This is creating greater vehicular congestion and potential conflict with cyclists and pedestrians.
- Since there is no tiered pricing system, all spaces—from those nearest to the core to those furthest away—are priced the same but are "operationally" unequal in terms of user preferences.

With approximately 57% of spaces occupied at peak, the current parking "problem" is largely one of perception and behavior, certainly, but it is also a product of the way in which the parking inventory is distributed, allocated, and managed.

- South of College Street, occupancies totaled 33 percent, with approximately 454± vacant spaces recorded at the peak hour indicating a surplus of supply available to absorb future campus demand and/or provide public access for anticipated arena events.
- During non-peak campus hours across evenings and weekends, space vacancy likely exceeds 454 spaces south of College Street.
- ADA space occupancy campus-wide totaled 36 percent at the peak hour; ADA "hot-spot" facilities are Faculty/Staff lots #8 (Eighth Street Lot), #43 (Archwood Lot), and #54 (Miller Hall Lot) with functionally full ADA spaces.
- Opportunities exist to better distribute parking demand across the campus and improve campus motorized and non-motorized circulation.
- Walker projected parking needs across a ten-year planning and development horizon.
- At the end of the ten-year forecast, we project a demand for 2,875 spaces, a ten percent total increase from current design day level demand.
- Space adequacy is projected to be sufficient for every user group expect faculty/staff. With the loss of Lot# 8, demand will be shifted to other faculty/staff and "all permits" parking facilities.
- **At the end of the ten-year planning horizon, ample space adequacy is projected to be available campus-wide with over potentially 1,000 vacant spaces open during periods of peak occupancy.**

Operations and Finance Findings:

- Student (parking general) access fees represent approximately 87 percent of total auxiliary revenues.
- For the previous two years, the auxiliary achieved a positive net operating income of $572,000 (rounded) and $609,000 (rounded) for Year 2020 and Year 2021 respectively before transfers for renewal and replacement and capital reserves.
- Two lot reconfiguration projects, Lot #7 (Burt Lot), and Lot #30 at 4th and Main, represent $1 million in capital outlay needs, but can yield a net increase in parking spaces and improved safety and circulation.
- To provide necessary funds to resource anticipated capital projects and maintain fund reserves, Walker proposes a ten-year rate increase schedule which will introduce a new student permit category creating equity between users and non-users of parking services. Currently all students pay for services through the student access fee even if they do not bring a vehicle onto the campus.
    - After discussions with the senior leadership team, Walker has adjusted this recommendation to replace the proposed student permit fee with demand-based, tiered faculty/staff parking fees.

In considering event parking opportunities anticipated from the F&M arena, the auxiliary enterprise has an opportunity to generate additional revenue to maintain current assets and provide "best in class" services—while using this income to moderate future increases to faculty, staff, and student permit fees required to sustain the auxiliary.

Parking and Transportation Recommendations

Based upon our discovery and analysis, Walker is not recommending the construction of additional parking. Both the existing and future campus parking space adequacy is projected to be sufficient. Policy improvements and recommendations are presented for APSU consideration to maximize the utilization of existing resources, create additional customer service benefits, boost existing operations and finances, and address issues around campus

congestion and safety. Additional communications and campus outreach programs are recommended to educate parking users and to enhance the awareness of the auxiliary.

A significant recommendation is to introduce a student permit rate category independent of the existing student access fee ("Student Access Fee") and reduce the fee accordingly. While this recommendation has not been accepted by the University at this time, it is memorialized herein, to describe the potential benefits.

Currently, all students pay for parking and mobility services through the student access fee even if they do not bring a vehicle and park on the APSU campus. To promote greater equity and correlate parking rates to actual parking utilization, we recommend the auxiliary create a student permit fee category.

The student access fee would remain, but be reduced in rate, to resource non-parking related auxiliary expenditures. This includes the Peak Pickup, sidewalk maintenance and repair, bicycle amenities, and other related expenditures. We recommend this be re-branded as a student access fee.

For illustration purposes, Walker modeled a student access fee of $61 annually (rather than $61 per semester) with current administrative protocols maintained. This fee would not grant student parking privileges. For any student that elected to drive and park on campus, an annual parking permit would need to be purchased, which would be valid through August 31st for each year purchased.

Walker modeled a Year 1 permit annual rate of $81. Faculty/staff permit rates were modeled at $81 annually ($6.75 per month), establishing parity between student parkers and faculty/staff parkers. Currently, faculty/staff rates are lower than students creating inequity.

Under this recommended model, for those students who park, the annual cost will increase to $142 per year ($61 access fee plus $81 parking fee). For those students who do not purchase a parking permit their cost will drop from $122 to $61 per year (access fee only). Faculty and staff parking will increase from $61 to $81 per year for parity with the student parking fee.

Revising the current rate structure promotes the following benefits:

- Equity. Charging parking users (as opposed to all students) for services received introduces equity to the campus parking model. Users are therefore empowered to make their own commute decisions. Furthermore, faculty/staff and student rates become uniform with students not paying a higher annual rate for parking than faculty/staff, which is the current model.
- Auxiliary Sustainability. Currently rates are neither keeping pace with inflation nor being indexed with auxiliary expenditures. For the system to remain solvent and provide best-in-class services, ongoing rate increases need to be administered to meet operational and capital expenses and build up fund reserves.
- Parking Supply/Demand Management. Currently APSU provides open-hunting permits which create parking demand "hot-spots." Some facilities more approximate to the campus core receive high utilization, while other facilities on the perimeter go under-utilized across typical periods. Furthermore, faculty/staff parking facilities are in desirable areas closer to academic buildings providing convenient parking at lower permit rate prices e.g., Lots #40, #43, #45, and #55.

These recommendations have been modified to adjust to institutional priorities and preferences. The revised recommendations include retaining the student access fee and introducing demand-based tiered parking pricing for faculty/staff. The highest pricing tier for faculty/staff (for the most convenient parking) matches the student

access fee at $122/year. A second tier for lower demand parking remains at the current faculty/staff rate ($61/year) and a third "overflow" tier is introduced at $31/year.

Rate	Current	Proposed
P&T Student Fees	$122	$122
Tier 1 Faculty /Staff Permit Rates	$61	$122
Tier 2 Faculty /Staff Permit Rates	$61	$61
Tier 3 Faculty/Staff Permit (Overflow) Rates	$61	$31

**Currently there are no tiered options, and all faculty/staff pay $61 per year.*

The following list summarizes key recommendations; greater details are provided in the "Recommendations" section of this report:

1. Create a set of guiding principles for the parking and transportation system to readily communicate goals and objectives of the auxiliary service to campus stakeholders.
2. Increase financial transparency.
3. Develop a self-sustaining financial and business plan for the auxiliary.
4. Simplify the APSU parking webpage to include easier navigation functions and comprehensive parking and transportation system information.
5. Promote a "park-once" culture on campus.
6. Revise parking pricing strategies.
7. Increase fees annually to at least keep pace with inflation.
8. Build auxiliary reserves to meet anticipated capital improvement programs and unanticipated downturns or parking/transportation system needs.
9. Enhance marketing of associated support services for Peak Pickup.
10. Invest in transit—this could entail optimizing and/or maintaining current routes and services, while expanding to provide access to additional services.
11. Introduce a "free-flowing" event parking operation including the creation of an event parking policy that supports issuance of user warnings and citations with LPR mobile enforcement.
12. Solicit request for proposals for parking permit and citation management services. [1]

[1] As of Fall 2022, APSU implemented a new parking permit and citation management software service.

01 Introduction

Introduction

Austin Peay State University ("APSU" or "University") engaged Walker Consultants ("Walker") to deliver an update to the campus Parking and Transportation Plan("Plan), performed by Walker in 2016.

Since 2016, the University has seen significant changes, including new facilities, new programs, and additional parking assets acquired south of College Street. Additionally, in the last five-period, the University has updated its Campus Master Plan (2017) and adopted a Housing and Dining Master Plan (2019).

In 2022, an events center is being constructed in the downtown area immediately adjacent to the campus. As APSU plans for future development and population growth, the University seeks a comprehensive analysis of the parking and mobility environment to support campus master planning and guide asset management and campus parking and mobility service delivery.

Project Understanding

Walker's overarching focus is to promote a "smart" parking and transportation master plan that is comprehensive, forward-looking, and identifies implementable and cost-effective strategies to improve campus mobility for the entire University population while supporting future campus needs identified within the campus master plan.

Holistic Access Management

Parking is a significant part of an effective transportation system. However, an effective campus transportation system not only considers the relationship between auto commuters and the need for campus parking space, but also alternative modes for accessing the campus including, transit, cycling, walking, carpooling, etc.

If a higher education campus has a goal to reduce parking demand, then it makes sense that parking and transportation policies and programs be coordinated. Tools to manage campus parking demand include parking rate setting strategies, unbundling the cost of parking within the student fee structure, and enhancing non-automobile connections to-and-from the campus.

A "smart" parking and transportation plan addresses a larger scope of work than just automobile parking infrastructure.

Our assessment holistically considers parking and mobility, evaluating both "supply" and "demand" side levers to influence the campus environment and align parking and mobility to greater campus community goals.

Study Process

Walker employed a three-phase process in undertaking this Plan with each phase building on the previous.

- Discovery and Conclusions: In the first phase, we reviewed data, engaged with staff, stakeholders, and senior administrators and developed an understanding of APSU best practices and of challenges and opportunities facing the APSU mobility and parking system.

- Recommendations: Based upon our findings and conclusions, we provided recommendations based on all the data and feedback gathered. The recommendations have informed the development of an Implementation Plan

- Implementation Plan: This plan includes long-term objectives and low-hanging fruit—along with priorities, timing, and opinions of probable costs. The plan seeks to balance both supply management and demand management techniques to address the University's projected population and facilities growth.

Walker Consultants undertook this study with a multifaceted approach that included the collection of significant volumes of quantitative and qualitative data, including stakeholder engagement and a peer benchmarking review.

Discovery and Conclusions: Stakeholder Engagement

The first step in updating the campus parking and transportation plan for APSU was to re-engage senior campus leadership to discover current impressions of the parking and transportation system, document stakeholder goals for the parking and transportation auxiliary, and solicit feedback regarding current parking and transportation practices that serve a wide array of campus users.

Walker engaged approximately a dozen senior campus administrators with oversight of academic and non-academic units to discover and document current conditions. Interviews with campus representatives were held both in-person and virtually with issues and opportunity's "themes" identified.

Discovery and Conclusions: Parking Supply/Demand Study

The purpose of collecting parking supply/demand data is to understand existing campus utilization patterns and make informed projections regarding future supply needs.

To update the campus parking and transportation plan, Walker collected parking space inventory and occupancies to establish baseline conditions for the parking system today.

Since 2016, APSU has acquired additional parking facilities south of College Street to serve both campus and future event needs. Specifically, non-academic buildings south of College Street including the APSU Bookstore require nearby off-street parking options. The study team included new parking facilities in our supply-demand field data collection update.

Field data counts were performed by the study team on Tuesday and Wednesday February 22-23, 2022.

Discovery and Conclusions: Program Evaluation and Alternatives Analysis

Walker reviewed campus development plans and growth projections, analyzed performance and financial data, and evaluated the current parking and transportation program with an eye towards greater, long-term fiscal sustainability.

In 2016, Walker recommended the creation of a parking auxiliary enterprise to operate independently of the University general fund to resource and maintain campus parking infrastructure and provide a quality service for all campus users. This recommendation was implemented.

Today, the parking and transportation program operates as an auxiliary fund with an organizational responsibility to generate revenues sufficient to cover expenditures—and to provide capital outlay for future parking infrastructure projects. In this portion of the analysis, the study team reviewed existing parking permit structures, parking and transportation fees, organizational staffing, and operations and technology practices to inform recommendations regarding the campus parking and mobility system.

Recommendations

Based on observations, reviewing of data, stakeholder engagement, and Walker's experience, a series of recommendations have been drafted to help APSU improve the parking system. Recommendations are organized by category area including planning, finance, operations, and technology.

The Recommendations section of this report offers potential tools to manage the existing parking supply, policies and practices to enhance the operational and financial performance of the auxiliary service, and customer service enhancements to address the needs of multiple users including faculty/staff, off-campus/commuting students, on-campus student residents, and visitors.

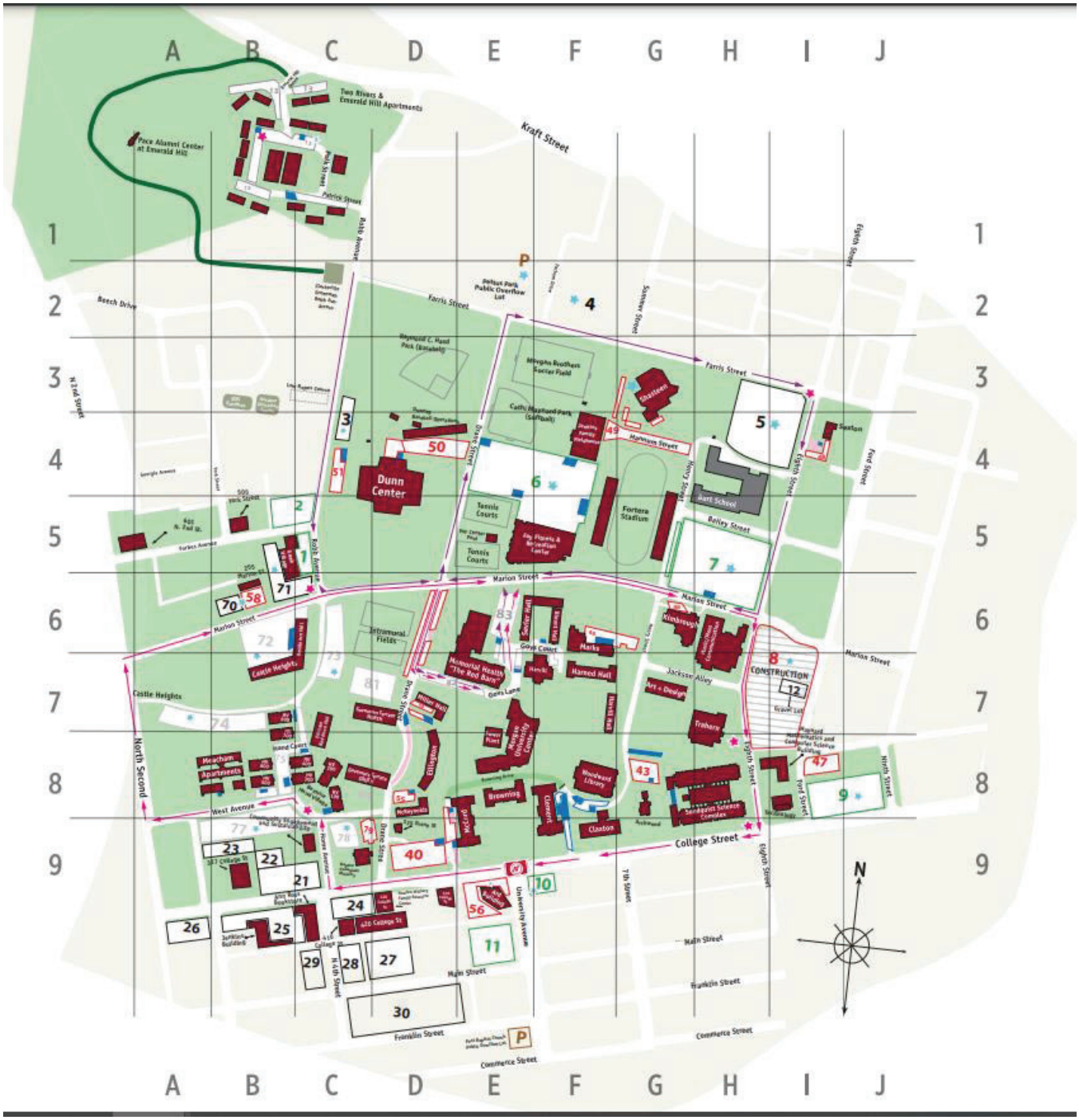
Study Area

Austin Peay State University (APSU) is a four-year public university located in Clarksville, Tennessee. APSU provides students over 56 majors and 63 different concentrations.

The APSU Clarksville campus ("Campus") is located within 1 hour of Nashville, Tennessee in downtown Clarksville, Tennessee. Generally speaking, the campus is bounded by Second Street on the west, College Street on the south, 8th Street on the east, and Farris Drive on the north—though the study area extends to several properties that are adjacent to these boundaries.

The following figure depicts the campus study area.

Exhibit 1: Study Area



Definition of Terms

Several terms are used in this report which may have specific meanings when applied to parking planning, demand analysis, and/or parking management. For this report the following definitions are provided:

- ADA Parking: Shorthand notation for "handicapped" or disabled parking stalls which are typically marked with blue striping and signage. Design standards (including quantities) for these spaces are set by the Americans with Disabilities Act Accessibility Guidelines (ADAAG), which were published to clarify the 1990 ADA legislation, and were last updated in 2010.

- Effective Supply Cushion: An industry-recommended cushion of vacant parking stalls that allows for proper circulation of vehicles within the system. Typically, this cushion is between 5 percent and 15 percent of the total capacity; at parking occupancies above roughly 85 percent transient motorists will perceive the parking system to be "full." For employees and students, who are more familiar with the area and parking system, this threshold is closer to 90 percent. When these occupancies are exceeded, drivers spend additional time circulating and looking for the last available spaces and may be inclined to wait for pedestrians returning to their vehicles (a practice referred to as "poaching" or parking space "stalking"). For on-street parking, an effective supply cushion of 15 percent is desirable in order to reduce the amount of vehicular traffic that is generated by motorists driving around looking for a parking space.

- Design Day: The level of usage that the parking system is designed to accommodate while still maintaining an adequate Effective Supply Cushion. For many parking systems, the design day is typically defined as somewhere between the 85th to 95th percentile of absolute peak conditions. Planning for 100% of peak conditions is generally not economically viable as it means that some of the parking system is vacant on most days. On the handful of days per year that demand exceeds the design day threshold, additional parking management measures may be needed including expanded use of parking and/or traffic attendants, use of off-site and remote parking lots, possible use of a shuttle service for remote facilities, and asking employees to park in the more remote areas.

- Survey Day: The day when parking occupancy data was collected. For this study, parking occupancy data was collected on Wednesday, February 23, 2022. Our survey included data collection at 10:00 a.m. and 2:00 p.m., to discover parking demand peak occupancy on a typical weekday.

- Peak Hour Occupancy: The overall peak conditions as observed during our parking demand surveys. In this case, the peak hour occurred at approximately 10:00 a.m., based on the data collected for this study.

- Transportation Demand Management (TDM): Policies and strategies aimed at reducing the number of single-occupancy vehicle (SOV) trips generated by land uses within the study area. Examples may include programs that promote transit use, or encourage nondriving alternatives including biking, walking, car- or vanpooling, and carsharing. Successful TDM strategies will also reduce the amount of parking needed to support the land uses.

Stakeholder Input

As part of Walker's approach to assessing existing conditions, interviews were held with APSU stakeholders including academic and non-academic senior leaders both on campus—during February 2022—and virtually across the months of March and April 2022. More than a dozen administrators were engaged as part of our campus outreach process.

During these meetings and individual interviews, several themes and ideas emerged. These are listed below in no particular order. Comments and suggestions are not attributed to individuals but are disaggregated for anonymity.

The individual comments are paraphrased and do not necessary represent trends. They may inform Walker's recommendations but are not recommendations as presented in this section.

Walker has used the input garnered in the conversations highlighted below, along with our own observations, data collected, and professional judgment and experience as we assessed current conditions, projected future conditions, and developed recommendations.

General Comments:

- *There is a surplus of parking spaces on the APSU campus and parking is not a problem*
- *There is plenty of space capacity, however it is not all located where everyone wants it to be*
- *We have a "walking problem" and not a "parking problem"*
- *Campus parking is very affordable compared to peer institutions*
- *Students are resistant to parking south of College Street*
- *Faculty/staff prefer to park near buildings, but no real complaints have come up during Faculty Senate meetings*
- *The construction of a new Welcome Center at College and Home Avenue might necessitate a greater allocation of visitor spaces*
- *Too much parking around the campus core is creating vehicular congestion and pedestrian safety issues*
- *Would like to see more open and green space at the center of campus*

What's going well?

- *Parking administration is generally going well with current management and LPR enforcement practices*
- *The online portal to purchase faculty/staff decals and to register student vehicles is easy to use*
- *Auto-renewal makes it convenient to obtain decals every academic year for faculty/staff members*
- *ADA spaces are plentiful*
- *Peay Pickup is a great service, however ridership is low*

What could be improved?

- *The lot number assignments confuse some users and not all users understand the number reference system*
- *Opportunities exist to educate permit users about parking privileges*
- *Communication could be enhanced [between departments] with a template for announcements for lot closures, events, etc.*

- *The hang-tag program for guest parking is not working well*
- *T2 virtual parking permit system is not working well as a back-end data process*
- *Bollards on Browning Drive are not functioning correctly*
- *A clearer shuttle schedule with improved frequencies could motivate more faculty/staff and students to utilize the service*
- *Shuttle buses are not ADA accessible*
- *Campus vehicular access from College Street is difficult, some users "cut-thru" campus on streets e.g., Drane and Marion Street*
- *Traffic calming could be implemented throughout the campus*

Vision of Success

- *Promote an equitable and efficient parking and transportation system that is responsive to the needs of the campus community*
- *It may be unnecessary to build more parking at this time and opportunities to better utilize current parking assets should be explored*
- *Maintain current and future parking adequacy for the campus while evaluating opportunities to realize event parking revenue with the development of the F&M Arena*

02 Current Conditions

Parking Supply/Demand

On February 22nd and 23rd, 2022, Walker undertook parking space inventory and occupancy counts on the APSU campus to measure supply and demand during peak campus usage hours. The results are summarized in the following content sections.

Parking Supply

On Tuesday, February 22, 2022, the Walker project team verified the APSU parking space inventory. Each lot was visited with parking spaces numerically identified and inventoried.

Lots were noted by user type (faculty/staff, commuter, all permits, visitor, ADA, etc.). Individual parking spaces were counted; in those locations without curb stops or pavement markings (absent or worn/faded), the number of spaces was estimated. Appendix A: Study Data provides a detailed showing of space inventory by individual facility.

The next two figures depict the total parking space inventory by user-designation group followed by space type.

Exhibit 2: Inventory by User Group

User Type	Inventory
Commuter	1,438
Faculty/Staff	762
All Permits	1,078
Residential	851
Visitor	22
Overflow	165
On street	81
Other	201
Grand Total	**4,598**

Source: Walker Consultants

Exhibit 3: Parking Inventory by Space Type

Space Type	Inventory
Regular	4,338
Reserved	9
ADA	155
Visitor	61
EV	4
Motorcycle	19
Other	12
Grand Total	**4,598**

Source: Walker Consultants

Parking Demand

The Walker team conducted parking occupancy counts on Wednesday, February 23 at both 10:00 a.m. and 2:00 p.m. The weather was overcast and cloudy with high temperatures around 50 degrees. These peak times (including time of semester) were mutually agreed upon by Walker and APSU, based on observations, previous Walker study findings, and professional judgment. These times and days were selected to represent "design day" conditions (i.e., judged to be typically busy days).

On the day before occupancy counts were conducted, Walker validated the University-provided inventory data. Each location was checked for accuracy of data and verified modifications made to the inventory provided by APSU. Most noted discrepancies were minor and were related to parking areas closed for construction, or in parking lots in which interior sub-designations (reserved spaces, ADA, visitor) had been reapportioned.

Walker recorded the parking occupancy of the 4,598± space APSU inventory twice: during mid-morning and mid-afternoon periods. Each of the occupancy counts was completed within an approximately one-hour window.

The 10:00 a.m. counts were completed between 9:30 a.m. and 10:30 a.m., and the 2:00 p.m. counts were taken between 1:30 p.m. and 2:30 p.m. This approach was intended to provide APSU with snapshots in time, during which concurrent campus demand was quickly, efficiently, and accurately measured.

The following "heat maps" provide a visual representation of campus demand. Between the two counts, the 10:00 a.m. window reflected the highest overall demand—57% of all parking spaces occupied, versus 49% at 2:00 p.m. These occupancy heat maps are an overall view of the parking system. Individual experiences will vary on a lot-by-lot basis, as well as throughout the year and within each day. One user may have a personal experience

that is quite pleasant, in which they arrive early to campus and park in the same lot every day finding a space easily. Whereas another user might frequently be unable to find parking and may have a negative perception of the system.

These maps display not only the variances in occupancy among different lots during the observed peak, but also point out entire facilities with extremely low occupancy, primarily facilities south of College Street and north of Farris Street. These lots are in less-desired locations but are still available for users, especially when used in conjunction with the Peay Pickup (the campus circulator).

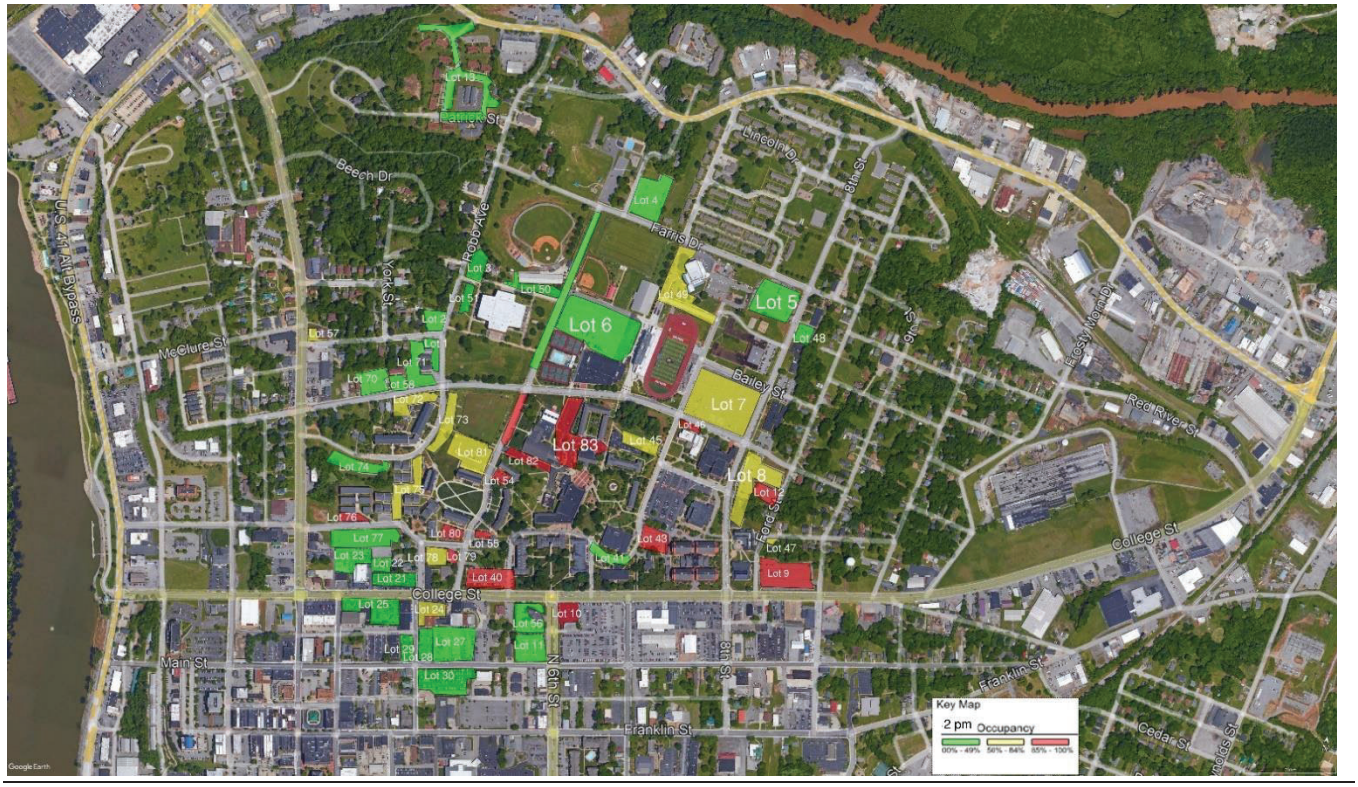
Overall, the entire campus (including all permit lots, faculty/staff, residential, commuter lots, and on street spaces) was 57% occupied.

However, within certain user groups, occupancy percentages varied as shown in the following heat map figure in which green represents 0%-49% occupied, yellow represents 50%-84%, and red represents 85%.

Exhibit 4: Parking Occupancy Heat Map – 10 AM

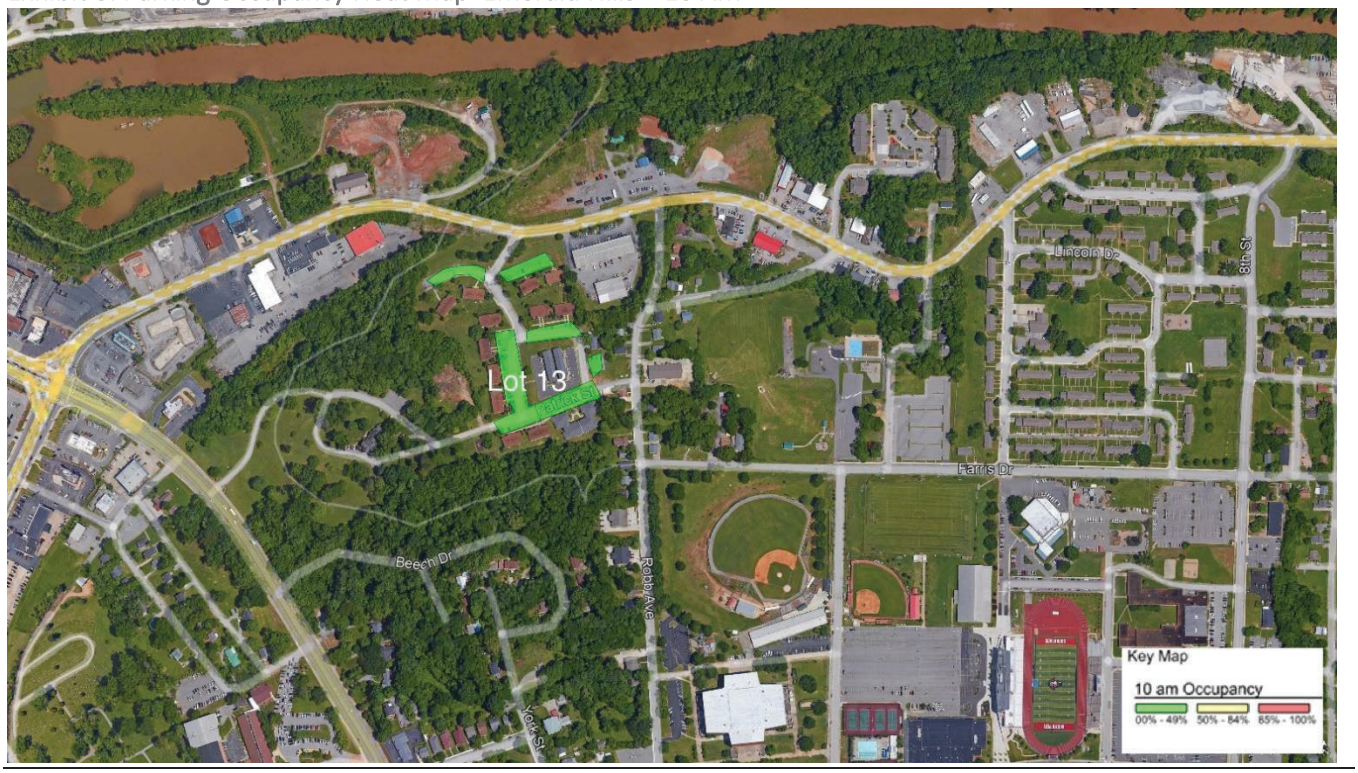
Source: Walker Consultants

Exhibit 5: Parking Occupancy Heat Map – 2 PM



Source: Walker Consultants

Exhibit 6: Parking Occupancy Heat Map Emerald Hills – 10 AM



Source: Walker Consultants

Parking at Emerald Hills during the peak 10 a.m. campus hour totaled 30 percent occupied. To ascertain actual residential usage, Walker requested APSU provide overnight counts Thursday February 24, 2022. Results from the 2 a.m. count indicate that 101 vehicles were parked or 56 percent of Lot #13 inventory indicating ample space availability for Emerald Hill residents.

The following figure depicts overnight spatial results.

Exhibit 7: Emerald Hills Overnight Occupancy – 2 AM

Exhibit 8: Parking Occupancy by User Group – 10 AM Peak

Space Type	Inventory	Peak Occupancy	Occupancy%
Commuter	1438	1,087	76%
Faculty/Staff	762	609	80%
All Permits	1,078	180	17%
Residential	851	559	66%
Visitor	22	12	55%
Overflow	165	57	35%
On street	81	36	44%
Unassigned	201	63	31%
Grand Total	**4,598**	**2,603**	**57%**

Source: Walker Consultants

While no individual user category is experiencing parking demand exceeding 85 percent (around which finding a parking space proves difficult), several parking facilities exceeded 85 percent occupancy levels indicating parking "hot-spot" areas.

As examples, Lot #7 (Burt Street Commuter Lot) and Lot #8 (Eight Street Faculty/Staff Lot) had recorded peak occupancy rates of 96% and 98% respectively while Lots #40 (McCord Building F/S Lot), #43 (Archwood F/S Lot), and #81 (Govs Lot) reached full capacity, with 100% occupancy.

In aggregate, parking space adequacy by user category is sufficient, however users have preferred parking facilities which can be ascertained in greater detail by the heat map illustrations above.

ADA Parking

The following tables summarize parking space inventory and occupancy for handicap ADA spaces on campus.

Exhibit 9: ADA Parking Supply-Demand by Facility 10 AM Peak

Lot ID	ADA Provided Space Facilities	User Category	ADA Inventory	ADA 10 a.m. Occupancy	Occupancy%
6	Foy Fitness & Rec Lot	Commuter	15	2	13%
7	Burt Street Lot (Marion)	Commuter	12	10	83%
8	Eighth Street Lot	Faculty/Staff	4	4	100%
13	Emerald Hill Parking Area	Residential	6	0	0%
24	Lincoln Lot	All APSU Permits	2	0	0%
40	McCord Building Lot	Faculty/Staff	14	4	29%
41	Henry Street	Onstreet	37	15	41%
42	Westley Lot	Faculty/Staff	1	0	0%
43	Archwood Lot	Faculty/Staff	9	9	100%
45	Mark's Lot	Faculty/Staff	4	3	75%
48	Sexton	Faculty/Staff	2	1	50%
49	Shasteeen Lot	Faculty/Staff	1	0	0%
50	Dunn Center F/S Lot	Faculty/Staff	1	0	0%

51	Dunn Center F/S Lot	Faculty/Staff	4	3	75%
53	Ellington Visitor	Visitor	2	1	50%
54	Miller Hall Lot	Faculty/Staff	1	1	100%
55	McReynolds Lot	Faculty/Staff	2	1	50%
56	Ard Lot	Faculty/Staff	3	1	33%
58	Marion Street Apartments	Faculty/Staff	1	0	0%
59	Trayhurn	Faculty/Staff	1	0	0%
72	Castle Heights North	Residential	4	0	0%
75	Hand Village Court Lot	Residential	12	0	0%
76	Meacham North Lot	Residential	2	0	0%
80	Governors Terrace South	Residential	3	0	0%
81	Governors Terrace North	Residential	3	0	0%
84	Govs Court	Residential	5	1	20%
85	Hand Village	ADA	4	0	0%
Total			155	56	36%

Source: Walker Consultants

Walker inventoried approximately 155 ADA spaces across 27 surface parking lots and on street areas. Total occupancy approached 36 percent at the peak 10 a.m. hour indicating an ample surplus of ADA spaces campuswide. Faculty/Staff lots #8 (Eighth Street Lot), #43 (Archwood Lot), and #54 (Miller Hall Lot) occupancy attained 100 percent for each facility respectively. The recommendations section addresses how APSU should approach the quantity and allocation of ADA spaces on campus.

Exhibit 10: ADA Space Occupancy by User Group

ADA Spaces Allocated by User Group	ADA Inventory	ADA Occupancy	Occupancy%
Commuter	27	12	44%
Resident	35	1	3%
Faculty/Staff	48	27	56%
Visitor	2	1	50%
On street	37	15	41%
All APSU Permits	2	0	0%
ADA	4	0	0%
Total	**155**	**56**	**36%**

Source: Walker Consultants

Supply-Demand Key Findings

- Overall, campuswide parking occupancies peaked at the 10 a.m. hour when 2,603 spaces were recorded occupied, or 57% of the total parking supply.
- While ample space vacancy exists campuswide with over 1,990 ± vacant spaces recorded at the peak hour, parking "hot-spots" exist across select areas of the campus.
- Parkers are likely circling to find a vacant parking stall in high-demand user areas since these facilities are located closest to core campus buildings while under-utilized parking facilities exist within a five-minute walk to the core of campus.
- In observing motorist behavior and analyzing the occupancy data spatially, Walker believes that students are likely dedicating the same amount of time "cruising" to find an open approximate space—creating greater vehicular congestion and friction with cyclists and pedestrians—as they would parking in under-utilized facilities on the campus periphery and walking to the core of campus.
- Since there is no tiered pricing system, all spaces—from those closest to the core of campus to those furthest away—are priced the same but are "operationally" unequal in terms of user preference and behavior.

- South of College Street, occupancies totaled 33 percent with approximately 454± vacant spaces recorded at the peak hour, indicating a surplus of supply available to absorb future campus demand and/or provide public access for anticipated arena events.
- During non-peak campus periods across evenings and weekends, space vacancy likely exceeds 450 spaces south of College Street.
- ADA space occupancy campus-wide totaled 36 percent at the peak hour; ADA "hot-spot" facilities are Faculty/Staff lots #8 (Eighth Street Lot), #43 (Archwood Lot), and #54 (Miller Hall Lot) with functionally full ADA spaces.
- Opportunities exist to better distribute parking demand across the campus and improve campus motorized and non-motorized circulation.

With approximately 57% of spaces occupied at peak, the current parking "problem" is largely one of perception and behavior, certainly, but it is also a product of the way in which the parking inventory is managed, distributed, and allocated.

As the overall occupancy percentage indicates, there is likely no need for additional parking to be built in the immediate future (projected demand, including population growth and/or loss of parking will be discussed in the "Future Conditions" section of this report). However, based on the heat maps and the previous figures displaying occupancy by facility, there may be ways to reallocate and spread demand more evenly. Detailed recommendations related to potential reallocation of parking spaces are discussed in later sections of the report. Recommended reallocations consider future parking demand, using University projections, as well as campus construction plans.

Evolution of Parking Management for College Campuses

On most college campuses, the development and management of parking resources is an evolutionary process. APSU's model of having faculty/staff, student commuter, and resident student parking designations, with general privileges is fairly typical among similar campuses. It is also typical that, eventually, as demand patterns and expectations grow and shift, this general management system begins to falter. In a system of broad permit types (e.g., "commuter" permits park in any "commuter" space), credentials can be used to park in a variety of lots and are sometimes referred to as "hunting permits." As a campus continues to grow—and especially expand—the flaws of this system become more pronounced as people start to vie for "prime" spaces and try to move their cars from space to space throughout the day.

This system of "hunting permits" creates several issues. These permits with broad privileges "instruct" commuters (whether faculty/staff or students) to check their favorite lot first and circle it, searching for a space. Experience has probably told them the facility will be full, but they try it anyway, because—who knows—they may get lucky. But they probably do not, so they move on their second favorite lot, and so on. This search process impacts convenience, customer service, traffic congestion, and safety. Eventually, they end up in a lot they knew all along

was available, but they are frustrated and possibly running late. Had they gone to that lot first, they may have been less happy with their parking location, but they would have found a spot immediately, and they would be at their destination that much sooner. Or, they waste so much time searching, and are now so late, they (knowingly) park illegally; in doing so, they risk getting a ticket, but more importantly, they now displace and inconvenience someone else (e.g., a permit holder for that area). In the worst-case scenario, they park in a space that severely restricts access to campus or endangers campus community members (e.g., ADA, loading, service, fire lane, etc.).

While "hunting permits" are egalitarian, giving everyone the ability to compete for prime spaces, more often they lead to unpredictable results and frustration. APSU has grown and developed to the point at which campus feedback, customer behavior, and observed supply/demand conditions would indicate that the current parking management techniques are no longer the most effective alternative. The campus has outgrown them.

Walker Commentary: Parking supply versus parking user perceptions

As we connect outreach findings with our supply and demand analysis and parking operations findings, we can more carefully probe the user experience and perceptions that shape commuting behaviors.

High driving rates in the region, coupled with an abundant amount of free or inexpensive parking throughout the Clarksville community, influences user expectations and perceptions around campus access and parking.

As revealed in our stakeholder outreach, many APSU students come from high school districts (many within Montgomery County, Tennessee) where parking is abundant, free, and close-by and where the front door can be "visible" even if walking distances are significant. This experience forms perceptions about a level of service (that might not completely be attainable) and the ability of permit holders to find a parking spot easily and quickly all the time.

If a permit holder cannot find their desired space when they need to, they might believe that there is a parking problem on campus (and that perception may be reality for them).

By addressing a system's imbalances and permit access privileges thru parking management protocols and practices, campus parking demand can be distributed more efficiently, "hot-spot" areas where congestion and safety concerns exist can be ameliorated, and better campus circulation and land use practices can be implemented.

In the recommendations section of this report, Walker offers suggestions to:

- improve parking signage and regulations;
- manage parking lots more granularly;
- create a predictable parking experience;
- support a "park-once" philosophy;
- incorporate closer regulation of violations;
- reduce traffic and improve safety; and,
- allow patrons to choose their levels of convenience, availability, and expense.

03 Future Conditions

Overview

Walker has used observational and APSU-provided data to project the future conditions of parking inventory, occupancy, and financial sustainability.

Using the occupancy data collected by Walker, in conjunction with APSU's own anticipated campus development and population projections, Walker developed a forecast for parking supply and demand over the next decade.

The key finding is that the parking system, when viewed as a whole, is adequate to today's needs and will continue to be throughout the duration of the ten-year projection period. This should not be construed to imply that there aren't localized parking shortages (either by facility or user group) on campus. The *Future Parking Needs Analysis*, which follows, describes this in narrative and graphical detail.

The overall occupancy of the campus parking system at the observed peak (Wednesday, February 23, 2022, at 10 a.m.), was 57%, with 2,603 of 4,598 total spaces occupied.

Current and projected demand do not indicate the need for APSU to build additional parking within the presented planning horizon.

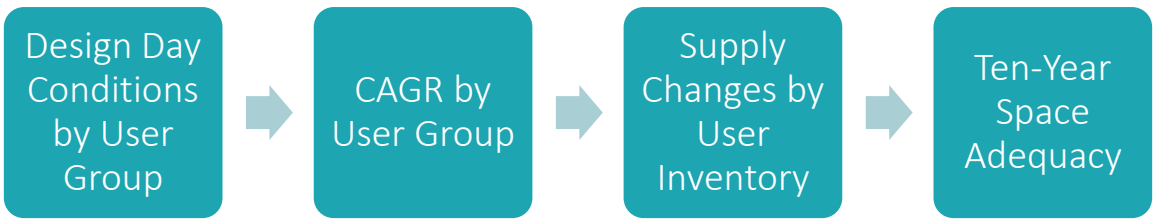
Future Parking Needs Analysis

To evaluate future parking conditions for the APSU campus, Walker prepared ten-year supply/demand projections. The following section details our methodology applied.

Projected Demand Methodology

The following figure depicts Walker's process for determining future parking adequacy across a ten-year horizon.

Exhibit 11: Future Needs Analysis Methodology Process



1. **Design Day Conditions by User Group.** Walker collected field occupancies in Spring 2022 to establish a baseline for ten-year projections by user group category. We have assumed that peak conditions observed represent current design day conditions and an in-person baseline

2. **Comprehensive Annual Growth Rate (CAGR) by User Group.** Walker applied a compound annual growth rate (CAGR) to current design day demand. In interrogatories with campus officials, Walker identified growth rates by user groups which are applied to baseline design day conditions.

3. **Supply Changes.** To assess parking adequacy by user type, adjustments were applied to the parking space inventory anticipating the gain and/or loss of parking spaces on the APSU campus. Faculty/staff Lot #8 (Eighth Street Lot) was assumed to be removed from the parking inventory by FY 2023 due to campus construction.

4. **Ten-Year Parking Space Adequacy.** At the end of the ten-year period, we compare projected parking demand to the future supply to determine adequacy on a surplus/deficit space basis (accounting for an effective supply cushion).

Covid-19 Pandemic Influence

While the University has returned to in-person learning over academic year 2022, after a shift to remote learning in 2020 and 2021 due to the Covid-19 pandemic and state-at-home orders by the governor, the outlook for growth on the APSU campus remains modest. For planning purposes, we have assumed a 1% annual growth rate to the following user categories, as depicted in the following table.

Exhibit 12: Baseline Growth Rates by User Type

User Type	Annual Growth Rate
Commuter	1%
Faculty/Staff	1%
All Permits	1%
Residential	1%
Visitor	1%
Other	1%

Source: Walker Consultants

The following exhibit depicts ten-year demand projections based upon user groups.

Exhibit 13: Ten-Year Baseline Parking Demand Projections

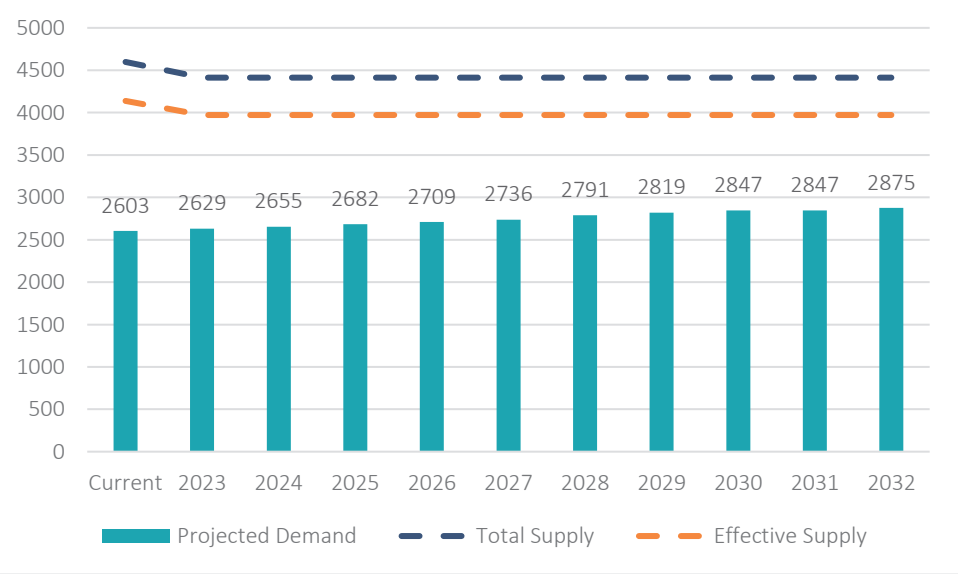
Year / User Group	Current (FY 2022)	1 FY23	2 FY24	3 FY25	4 FY26	5 FY27	6 FY28	7 FY29	8 FY30	9 FY31	10 FY32
Commuter	1,087	1,098	1,109	1,120	1,131	1,142	1,154	1,165	1,177	1,189	1,201
Faculty/Staff	609	615	621	627	634	640	646	653	659	666	673
All Permits	180	182	184	185	187	189	191	193	195	197	199
Residential	559	565	570	576	582	588	593	599	605	611	617
Visitor	12	12	12	12	12	13	13	13	13	13	13
Other	156	158	159	161	162	164	166	167	169	171	172
Total	2,603	2,629	2,655	2,682	2,709	2,736	2,763	2,791	2,819	2,847	2,875

Source: Walker Consultants

At the end of the ten-year forecast, we project a demand for 2,875 spaces, a ten percent total increase from current design day level demand.

The following exhibit presents supply-demand projections in graph format.

Exhibit 14: Ten-Year Supply/Demand Summary



Source: Walker Consultants

The following exhibit depicts supply-demand projections in numerical table format with space adequacy presented on a surplus/deficit basis for each of the ten years modeled.

Exhibit 15: Ten Year Supply/Demand Projections

Year	Current	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Projected Demand	2,603	2,629	2,655	2,682	2,709	2,736	2,791	2,819	2,847	2,847	2,875
Total Supply	4,598	4,413	4,413	4,413	4,413	4,413	4,413	4,413	4,413	4,413	4,413
Effective Supply	4,138	3,972	3,972	3,972	3,972	3,972	3,972	3,972	3,972	3,972	3,972
Surplus/Deficit	**1,535**	**1,343**	**1,316**	**1,290**	**1,263**	**1,236**	**1,181**	**1,153**	**1,125**	**1,125**	**1,096**

Notes:

1) Assumes 1% CAGR for all user categories.
2) Assumes the loss of faculty/staff parking at Lot #8 (Eighth Street Lot) by Year 2023.
3) An effective supply factor of 90% was applied to the total space inventory as a supply cushion.

Source: Walker Consultants

Total campus parking space adequacy at the end of the ten-year period is projected to be sufficient with approximately 1,096 spaces available for additional campus growth with an effective supply cushion of 10 percent.

While total adequacy is projected campuswide, space adequacy by user group was parsed further to guide parking planning and operations.

Exhibit 16: Projected Baseline Ten Year Demand by User Group

Space Type	Inventory	Peak Occupancy	Occupancy%	Year '32 Demand	Occupancy%
Commuter	1,438	1,087	76%	1,201	83%
Faculty/Staff [1]	762	609	80%	673	117%
All Permits	1,078	180	17%	199	18%
Residential	851	559	66%	617	73%
Visitor	22	12	55%	13	60%
Other	447	156	35%	172	39%
Grand Total	**4,598**	**2,603**	**57%**	**2,875**	**65%**

Notes:

1) Assumes the loss of faculty/staff parking at Lot #8 (Eighth Street Lot) by FY 2023.
2) Positive space adequacy is projected by Year 10 for "all permits" sufficient to absorb the loss of Lot #8.

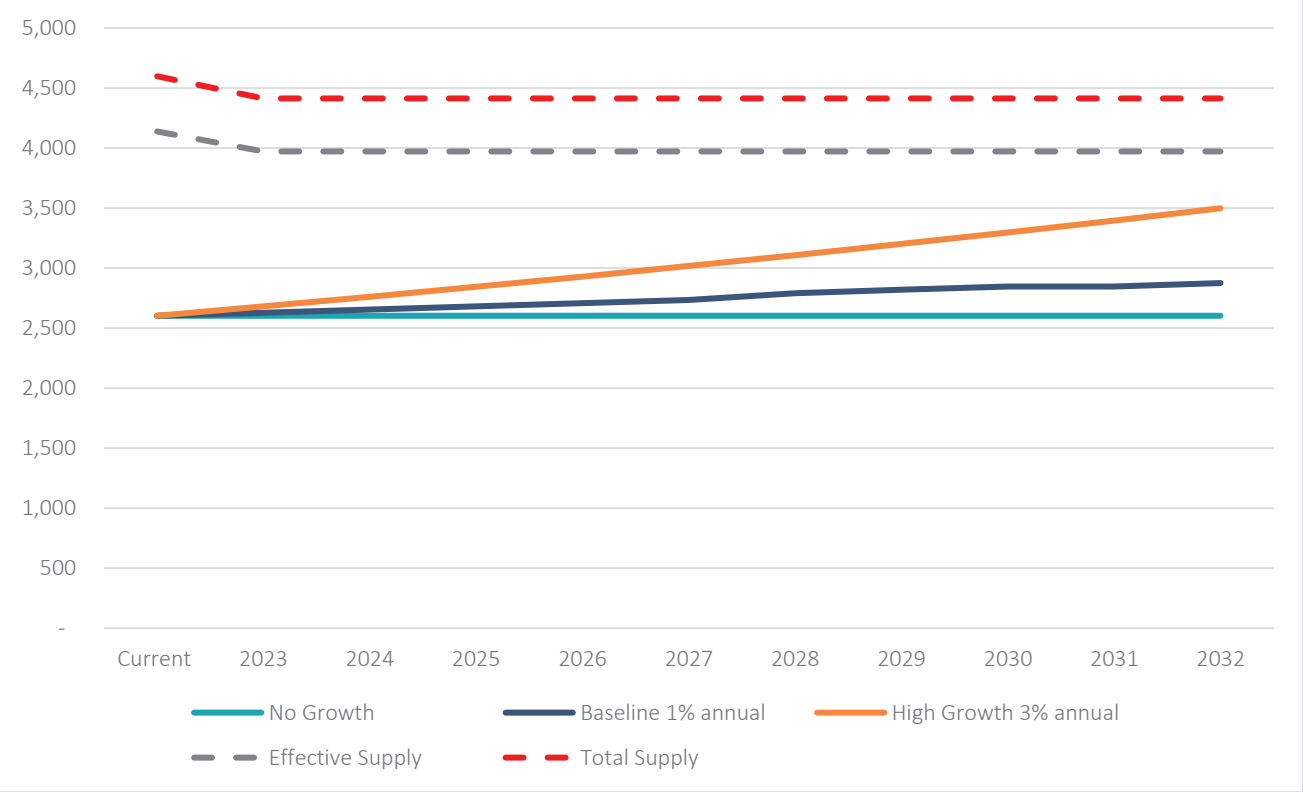
Source: Walker Consultants

Space adequacy is projected to be sufficient for every user group except faculty/staff. With the loss of Lot #8 demand will be shifted to other faculty/staff and "all permits" parking facilities. While disruptive, there is ample space adequacy in "all permit" facilities to absorb the deficit of faculty/staff spaces anticipated.

As a point of comparison, Walker compared our 1% CAGR baseline scenario to a no growth (0% CAGR) and high growth scenario (3% CAGR).

The following exhibit summarizes the comparative analysis.

Exhibit 17: Growth Scenario Comparison – No Growth, 1% Annual, and 3% Annual



Source: Walker Consultants

Even with a high-growth scenario modeled (orange), the campus will maintain parking adequacy to the Year 2032, with more than 470 vacant spaces assumed with an effective supply cushion of 10 percent; over 900 total spaces without an effective supply cushion.

Based upon our discovery and analysis, APSU will not need to construct additional campus parking infrastructure for the next ten-year planning period if the above assumptions are met.

Any additional parking infrastructure would be elective assuming the current and future conditions modeled.

Walker has modeled parking sufficiency at the end of the ten-year horizon. However, even with only modest growth and with a current surplus space, the removal of existing surface parking lots for building construction projects, may require APSU to make decisions about how to redistribute and manage parking demand to ensure that parking remains sufficient for current and future users.

04 Operations and Finances

Operations and Finances

The following section reports on existing parking and transportation operations and finances. Included in this section is a review the auxiliary organizational structure, current policies and practices, fees and fines, and shuttle operations.

APSU Best Practices

Walker evaluated the existing operation and identified the following best practices existing today on the APSU campus:

Operations & Technology

- ✓ **APSU Online Parking Portal** is a customer service convenience offered to users to obtain permits, pay citations, and appeal violations, and register vehicle license plates on campus. Integrating this portal into the License Plate Recognition (LPR) parking enforcement platform creates greater system efficiencies and enhances customer service conveniences for users. This increases customer convenience with no waits and lines required at permit renewal periods, while providing payroll-deductions for faculty/staff users each academic year.
- ✓ **Shift to virtual permitting environment** in which the license plate is the credential. APSU has migrated to a virtual campus permit environment for faculty/staff, student, and visitor parking. This enables greater efficiency in the administration of parking and places the responsibility of updating plates, makes, and vehicle information on the parking user and not the administrative staff while reducing costs for supplies and mailing.
- ✓ **License Plate Recognition (LPR) enforcement** is a camera-based system mounted to a parking enforcement vehicle which allows parking enforcement staff to scan hundreds of vehicles in a short amount of time using a license plate recognition software. LPR digital enforcement is an industry best practice and can result in significant savings in both time and costs performing parking enforcement. In addition to streamlining operations, LPR enforcement provides a higher degree of reliability and transparency in the delivery of campus parking management.

Staffing & Information

- ✓ **Parking and Transportation staff**'s approach with customers; demeanor; and work ethic; is an integral part of the system. Walker's assessment is that the staff are professional, courteous, and sensible in their approach to customer service and enforcement. They have professionalized parking management on campus and provide a quality service to diverse campus users.
- ✓ **Parking FAQ's section:** A frequently-asked-questions (FAQ) section is provided on the APSU parking webpage which provides answers to common questions regarding parking program steps and processes. The placement and visibility of this navigation tab helps users navigate complex processes for a more seamless user experience. We recommend APSU continually update this section based upon popular user inquires and repeat questions, so this continues to be a responsive and relevant tool for users.

Exhibit 18: APSU Frequently Asked Questions

Parking Maps +

Police +

Frequently Asked Questions

Leading through EXCELLENCE

Parking and Transportation
Shasteen Building
P.O.Box 4425
Clarksville, TN 37044

931-221-7275
931-221-7405
parking@apsu.edu

Frequently Asked Questions

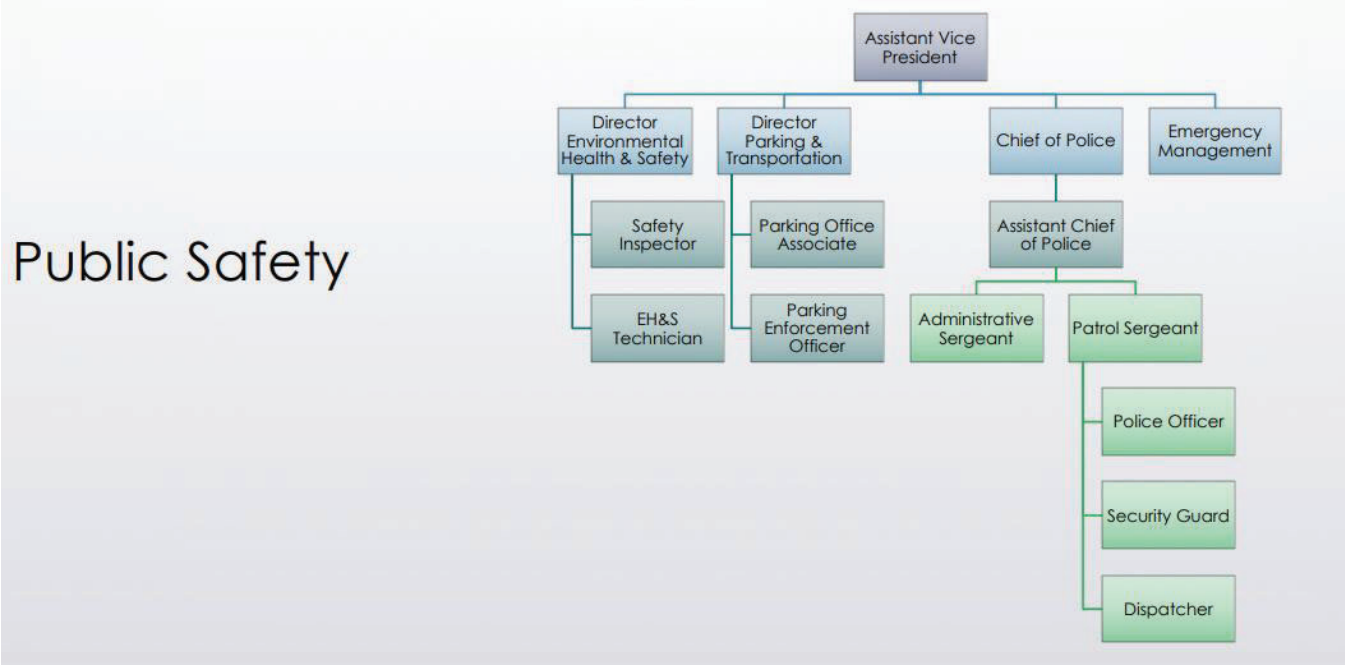
1. **Do I need renew/register my vehicle(s) each year?**
    1. Vehicles must be renewed/registered annually. This allows one to apply for a permit for the current academic year.
2. **What password do I use?**
    1. Sign in using your APSU credentials. The Parking Portal uses single sign on.
    2. If you are a guest/visitor and have never logged into the system you will need to create and account before proceeding.
3. **How do I delete a vehicle from my account?**
    1. A vehicle can not be deleted after it has been entered into the Parking Portal. This is a measure put in by the vendor. However, you may contact the Parking Office and notify them that you want to terminate the relationship of a vehicle on your account.
4. **How do I obtain an ADA parking pass?**
    1. One must have a valid state issued ADA placard registered in their name to utilize ADA parking. Please bring or scan your placard, placard registration, and identification to the Parking Office for verification.
5. **My department is bringing in guests, how do I apply for a visitor pass?**
    1. Please follow the directions on the Parking page for requesting a visitor pass. There are two sets of directions: one for the visitor who is requesting a pass themselves and

Source: APSU

Organizational Structure

Oversight and management of the parking and transportation department is performed by a Director of Parking & Transportation which reports directly to the Assistant Vice President for Public Safety. The Assistant Vice President for Public Safety oversees Environmental Health and Safety, Parking and Transportation, Campus Police, and Emergency Management and reports directly to the Vice President of Finance and Administration. The following organization chart depicts the relationship between parking and transportation within the public safety division of responsibility.

Exhibit 19: Public Safety Organizational Chart



Source: APSU, Finance and Administration

Parking Policies and Practices

APSU policy requires that all vehicles parked on campus be registered in the APSU parking portal. This includes frequent campus users including students, faculty/staff, and residents, as well as infrequent users who are not affiliated with the campus including visitors.

Users are required to enter their vehicle information and license plates in the online APSU parking portal.

APSU uses License Plate Recognition (LPR) camera-based technology to identify vehicles parked on campus. Students may access the parking portal at www.apsu.t2hosted.com using their APSU credentials without the @apsu.edu or @my.apsu.edu as their username. Those who are not affiliated with the university can create a login by following the Guest Login link.

Vehicle registration instructions include:

1. All motor vehicles parked on APSU property between 7:30 a.m. and 4:00 p.m. or on lots leased by APSU must be registered with APSU. Housing lots are enforced twenty-four hours a day, seven days a week.

2. All vehicles must be registered in the parking portal which can be found at www.apsu.t2hosted.com.

3. Parking registration must be renewed at the beginning of each fall semester as long as the registrant remains a student or APSU employee.

4. Persons are entitled to one category of parking registration at a time. Persons will be identified by their primary affiliation with APSU. Graduate assistants and part-time student workers are eligible for student registration only.

5. Only persons who are neither students nor faculty/staff are entitled to register for visitor parking.

Student Parking Fees

A $61 student "student access fee" is assessed to all registered students each semester.

Faculty/staff decal fees

Faculty/staff are required to purchase parking decals per academic year. The cost of the decal is $61 per academic year. Permits must be renewed at the beginning of each fall semester and are valid until the beginning of the following fall semester.

Exhibit 20: APSU Rate Comparison Table

Category	Student Rate	Faculty/Staff Rate
Annual Rate	$ 122.00	$ 61.00

Source: APSU, Walker Consultants

Currently students are paying more to park on an annual basis than any other rate group.

Designated Parking Areas

Users are required to park in designated "color coded" parking areas. Violations will result in parking tickets. The following represents the color-coding system for parking on campus:

- **Red:** Faculty and Staff
- **Blue:** ADA Accessible
- **Green:** Commuters, and Emerald Hills and Two Rivers residents
- **Silver:** Residents (university residence halls)
- **Black:** Overflow, and any valid APSU permit holder

*Visitor and 30-minute parking spaces are labeled as such. The APSU parking regulations and map can be found at https://www.apsu.edu/map/pdf/parking-map.pdf

Parking Fines

APSU has codified the following fine amounts for parking violations on campus:

- **Parked in visitor, maintenance, or emergency vehicle space:** $35
- **Parked in ADA accessible space:** $200
- **All other parking violations**: $25
- **Boot removal fee**: $75 for 1st boot in academic year; $125 for subsequent boots in an academic year
- **All moving violations when written as an APSU citation**: $35.00

Failure to Pay Fines

Students who fail to pay violation fines or penalties will not be permitted to register for course work, to continue as a student, to receive credit, to receive a degree, or to obtain a transcript until the fines or penalties are paid.

- Repeated violations of parking regulations will be grounds for towing away, impoundment or immobilization in accordance with regulations under enforcement.
- Students who persist in violating these regulations or commit a single violation under extreme circumstances will be referred to the Dean of Students' office for disciplinary action which may lead to suspension or dismissal from APSU.
- Once a motor vehicle or owner has accumulated one hundred dollars ($100) of unpaid fines, his or her motor vehicle, if found parked upon APSU property or lots leased by APSU, will be immobilized or towed in accordance with regulations under 0240-05-01-.06 Enforcement.
- Any individual (student, faculty, or staff) with outstanding citations will not be allowed to register a motor vehicle or purchase a parking permit until indebtedness is cleared.
- Repeated violations may result in the loss of parking privileges.

Parking Appeals Process

Parking appeals are to be requested using the APSU online portal with the following steps to be taken per APSU policies:

1. Upon receipt of a citation, persons have three (3) class days to submit an appeal.
2. Appeal forms are completed and submitted electronically through the parking management software.
3. Issuing officers will be afforded the opportunity to comment on appeals before they are presented to the appeal authority.
4. The Student Tribunal shall hear and decide all student appeals.
5. Students may further appeal the Tribunal's decision to the Vice President of Student Affairs, or designee, within three (3) class days of the finding by Student Tribunal.
6. When APSU is not in session, the Dean of Students will hear and decide appeals.
7. Staff and visitors' appeals shall be heard by a committee consisting of the Faculty Senate Chair or designee, Staff Council Chair or designee, and the Dean of Students.
8. Anyone failing to appeal within three (3) class days of issuance of citation loses the right to appeal.

Campus Transportation

The Peay Pickup Shuttle and Clarksville Transit Buses through a partnership with Clarksville Transit System (CTS), provides students free transportation around campus via the Peay Pickup shuttle and allows free transportation around the City on CTS buses with a valid Peay Pickup card and a valid Govs ID card. The Peay Pickup is operated by CTS. The University pays CTS a total of $X per year to pay for these transit programs; the source of funding is _____.

Peay Pickup Hours of Operation

CTS operates two Peay Pickup shuttle routes from 7:30 a.m.-7 p.m., Monday-Friday, through final exams each semester.

Routes

The Peay Pickup routes run on the north and south side of the campus, with Marion Street being the dividing line. Each shuttle takes approximately 5-6 minutes to complete a route circuit. Students must have their Peay Pickup card and Govs ID ready when boarding. Cards are distributed by Campus Police with parking decals. Students can flag the shuttle down or wait at a shuttle sign. Additionally, APSU students ride free on any CTS city bus with a valid Peay Pickup card and a valid Govs ID card. For route information, visit www.ridects.com/routes. CTS buses run from 4:30 a.m.-9 p.m. six days a week.

Current Parking Permit Allocation

The current parking "problem" is one of perception and behavior, but it is also a product of the way in which the parking inventory is managed, distributed, and allocated. On most college campuses, the development and management of parking resources is an evolutionary process. APSU's model of having faculty/staff, student commuter, and resident student parking designations, with general privileges is fairly typical among similar campuses.

It is also typical that, eventually, as demand patterns and expectations grow and shift, this general management system begins to falter. A system in which there are broad permit types (e.g., "commuter" permits park in any "commuter" space) can be used to park in a variety of lots and are sometimes referred to as "hunting permits." As a campus continues to grow—and especially expand—the weaknesses of this system become more pronounced as people start to vie for "prime" spaces and try to move their cars from space to space throughout the day.

Among commuters (whether faculty/staff or students), "hunting permits" encourage behaviors that impact convenience, customer service, traffic congestion, and safety. These permits with broad privileges "instruct" permit holders to check their favorite lot first and circle it, searching for a space. Experience has probably told them the lot will be full, but they try it anyway, because—who knows—they may get lucky. But they probably do not, so they move on their second favorite lot, and so on. Eventually, they end up in a lot they knew all along was available, but they are frustrated and possibly running late. Had they gone to that lot first, they would have been less happy with their parking location, but they would have found a spot immediately, and they would be at their destination much sooner. Or, they waste so much time searching, and are now so late, they (knowingly) park illegally; in doing so, they risk getting a ticket, but more importantly, they now displace and inconvenience someone else (e.g., a permit holder for that area). In the worst-case scenario, they park in a space that severely restricts access to campus or endangers campus community members (e.g., ADA, loading, service, fire lane, etc.).

While "hunting permits" are egalitarian, giving everyone the ability to compete for prime spaces, more often they lead to unpredictable results and frustration. APSU has grown and developed to the point at which customer behavior and observed supply/demand conditions would indicate that the current parking management techniques are no longer the most effective alternative. The campus has outgrown them.

Anticipated Campus Improvements

The Campus Master Plan (2017) and Housing and Dining Master Plan (2018) provide strategic guidance on desired campus facility growth and priorities. Walker has reviewed these plans to assess their impact on parking and transportation services. **Note, both documents were produced before the onset of the Covid-19 pandemic which has materially impacted market conditions and projected growth patterns.**

Campus Master Plan

The APSU Master Plan proposes several campus improvements in the coming years including a projected need for five new campus buildings (projected pre-pandemic) and the delivery of a mixed-use development south of College Street. **Note, with market and enrollment uncertainty in academic year 2022, Walker is aware of only one**

new building project moving forward. A key theme of the master plan is the promotion of campus pedestrian activity and pedestrian safety through the reduction of vehicular congestion caused by campus parking to close-by to the core. The master plan promotes the relocation of vehicular parking away from the campus core to the periphery.

The University should relocate most of the vehicular parking from the campus core to 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 shuttle service as demand for the shuttle is likely to increase.
APSU Master Plan (2017) – Parking & Vehicular Circulation

Housing and Dining Plan

Consultant Bradford & Dunlavey Inc. provided a Housing and Dining Plan (2018) B&D assessed the internal APSU market through a web-based survey, focus group meetings, and analysis of the external off-campus market conditions through CoStar Submarket reports. The market context was filtered through the strategic objectives and decision-making criteria to establish recommendations.

Note, in academic year 2021, student housing average occupancy totaled 60 percent, a 36 percent reduction from the period of B&D's Housing Master Plan (2018). Performance data shared by the Housing/Residence Life and Dining Services Division indicates that average occupancies are currently 62.5% in academic year 2022.

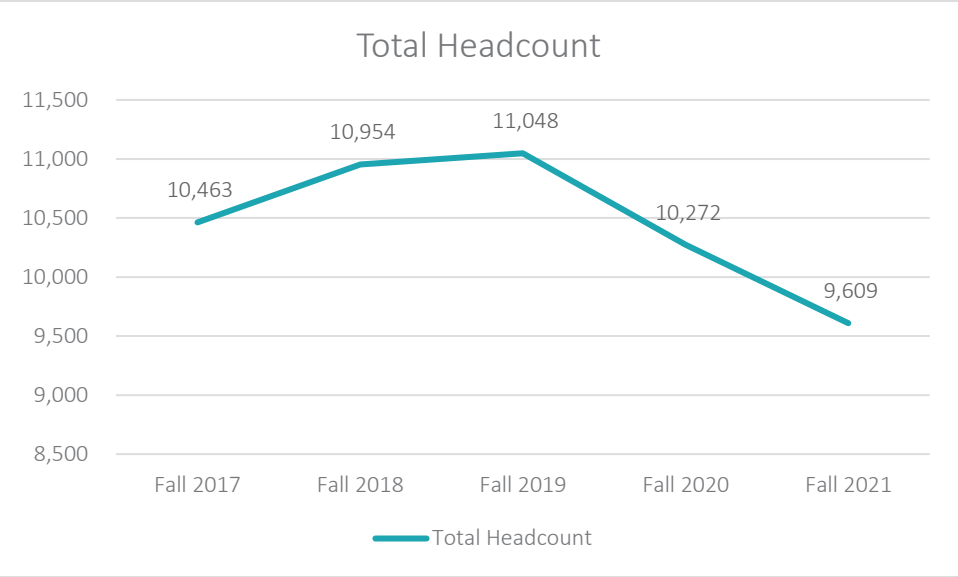
Campus housing officials believe that demand recovery for student housing may take a full ten-year horizon impacting Housing Master Plan recommendations. No new student housing projects are anticipated.

B&D findings and recommendations are summarized here:

- In 2018, demand exceeded housing inventory by 11 beds; however, the excess demand is not at the scale that B&D would recommend that Austin Peay build new housing.
- Housing must support Austin Peay's strategic plan by growing responsibly. Therefore, Austin Peay must build inventory capacity in response to growth with the following considerations.
    - Excess demand should reach 300-400 beds to support new development.
    - Demand will grow in alignment with enrollment growth. The following demographic characteristics will have the greatest impact on demand:
        - Increased enrollment from students outside of a 50-mile radius from the University,
        - Increased enrollment from international students, and,
        - Increased traditional student enrollment (e.g., first-time freshmen, 21 years or younger).

Since Fall 2018, enrollment has steadily declined a total of 16 percent total over the last five-year period, softening the demand for additional student housing units. The following figure summarizes actual student enrollment over the last five-year period.

Exhibit 21: Student Enrollment Five-Year Trend



Source: Walker Consultants

Based upon the data reviewed and interviews conducted, Walker does not foresee significant capital investments for new student housing units over the next ten-year period or the delivery of "net" new units. Campus officials will work to maximize existing resident hall occupancy and recover demand lost due to the pandemic effect.

Auxiliary Financial Analysis

Anticipated Event Parking Demand

F&M Bank Arena, located in downtown Clarksville, TN, will be a 6,000-seat multi-tenant venue owned by Montgomery County and operated by Sabertooth Sports & Entertainment (a division of the NHL Nashville Predators).

APSU will be the primary tenant and will occupy the facility for men's and women's basketball games. In addition to sporting events, the venue is expected to host concerts, conventions, and trade shows. The project is due to be completed in summer 2023.

Preliminary capacity estimates suggest that the venue will hold approximately 6,000 fans for concerts; 5,500 for basketball games; and 5,000 for hockey games.

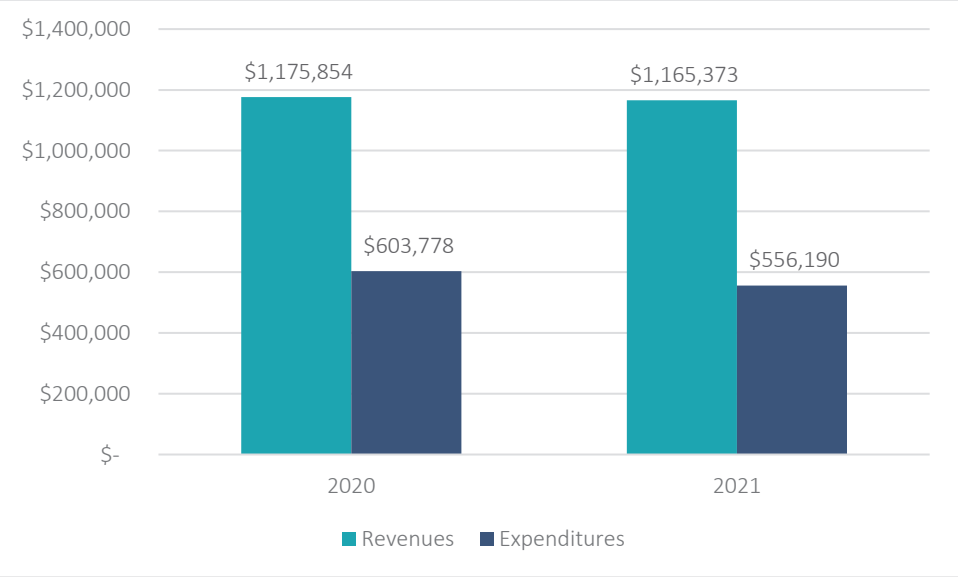
The City of Clarksville is considering the construction of a new downtown parking parage to accommodate anticipated event activity and growth downtown.

"There is a lot of interest in our downtown. We understand that the arena project [F&M Bank Arena] and private development in our downtown makes it crucial for us to do this and address our parking needs," said Clarksville Mayor Joe Pitts. Event recommendations are discussed in recommendation number 11, in the next chapter.

Auxiliary Financial Summary

Walker analyzed the last two years of complete operating statements for the auxiliary enterprise. These were the first years that Parking and Transportation operated as an auxiliary, after having been parsed out from Public Safety. The following exhibit summarizes revenues and expenditures for FY 2020 and FY 2021. Due to the pandemic, enrollment declines, and the short history of the auxiliary, these baseline figures may not prove to be indicative.

Exhibit 22: Parking Revenues and Expenditures – Year 2020 and Year 2021



Source: APSU

Exhibit 23: Auxiliary Budget – Year 2020 and Year 2021

Fiscal Year	2020	2021
Parking Revenues	$ 1,080,887	$ 1,021,535
Fines	$ 94,967	$ 143,838
Total Revenues	$ 1,175,854	$ 1,165,373
Total Expenditures	$ 603,778	$ 556,190
NOI	**$ 572,076**	**$ 609,183**
Transfers to Renew and Replace	$ (272,076)	$ (145,200)
Capital Sinking	$ (300,000)	$ (300,000)
Surplus/Deficit	$ 0	$ 163,983

Source: APSU

For the previous two years, the auxiliary achieved a positive net operating income of $572,000 (rounded) and $609,000 (rounded) for Year 2020 and Year 2021, respectively, before transfers to renew and replace and capital sinking funds.

Capital Repairs & Replacement

In 2021, scoping and estimating services were provided for Lot #30 (at 4th and Main), a former car dealership lot, to address internal circulation and implement angled parking reducing stall width to 8.5 ft to maximize parking efficiency. According to the analysis, "The proposed configuration of the parking lot exhibits 2, one-way driveways, internal circulation, one way drive aisles and angled, 8.5 ft wide parking stalls. The total parking count increases to 131, from the existing 80 spaces while also reducing asphalt and increasing green space." An entrance only driveway will be installed at the west end of the parking lot while an exit only driveway will be installed at the east end with an accordion type of traffic pattern through the lot.

To accomplish this lot reconfiguration the following estimate was prepared for APSU.

Exhibit 24: Lot #30 Reconfiguration – TTL Scope and Estimate (2021)

Treatment	Estimated Costs
Lot reconfiguration w/ seal coat	$193,778.98
Lot reconfiguration w/ mill and overlay	$277,722.82

Source: TTL

In April 2022, the parking and transportation auxiliary solicited an opinion of probable costs from Hurst-Rosche, Inc. for the reconfiguration of Lot #7 (Burt Street Lot). Total costs to reconfigure ingress/egress and internal circulation with full mill and overlay and sidewalk replacement is $771,545.

To accomplish both projects, which would enhance the functionality and safety of existing facilities, the auxiliary fund would need to have a balance of over $1 million in 2022 dollars.

Fund Summary

The APSU parking and transportation auxiliary is maintaining a positive fund balance year-over-year.

Peer Rate Benchmarking

Walker performed a benchmarking rate survey to understand how APSU compares to identified peers. These peer institutions are based on a study completed by the APSU Decision Support and Institutional Research (DSIR) office in Fall 2018. Access to the article, “Selecting Peer Institutions Using Cluster Analysis-Fall, 2018” may be viewed at https://www.apsu.edu/dsir/reports/apsu_white_paper_peer_final.pdf.

The following exhibit summarizes our findings.

Exhibit 25: APSU Peer Institutions Parking Rate Benchmarking

Peer Institution	Student Annual	Student remote	Student Reserved	F/S Annual	F/S remote	F/S Reserved
Columbus State University (Georgia)	$ 45		$ 180	$ 90		$ 180
Jacksonville State University (Alabama)	$ 50			$ 50		
McNeese State University (Louisiana)	$ 40			$ 40		
Morehead State University (Kentucky)	$ 180	$ 100	$ 480	$ 180	$ 100	$ 480
Murray State University (Kentucky)	$ 200	$ 100		$ 200	$ 100	
Radford University (Virginia)	$ 148			$ 148		
The University of Tennessee – Chattanooga	$ 238		$ 380	$ 238		$ 380
The University of Tennessee – Martin	$ 85			$ 85		
Texas A&M International	$ 100			$ 100		
The University of Texas at Tyler	$ 80			$ 100		
University of Houston – Clear Lake	$ 87			$ 87		
University of North Alabama	n/a			n/a		
weighted average	***$ 114***			***$ 120***		
Austin Peay State University* (Estimated parking rate)	$ 62			$ 61		
above/below weighted average	***-45%***			***-49%***		

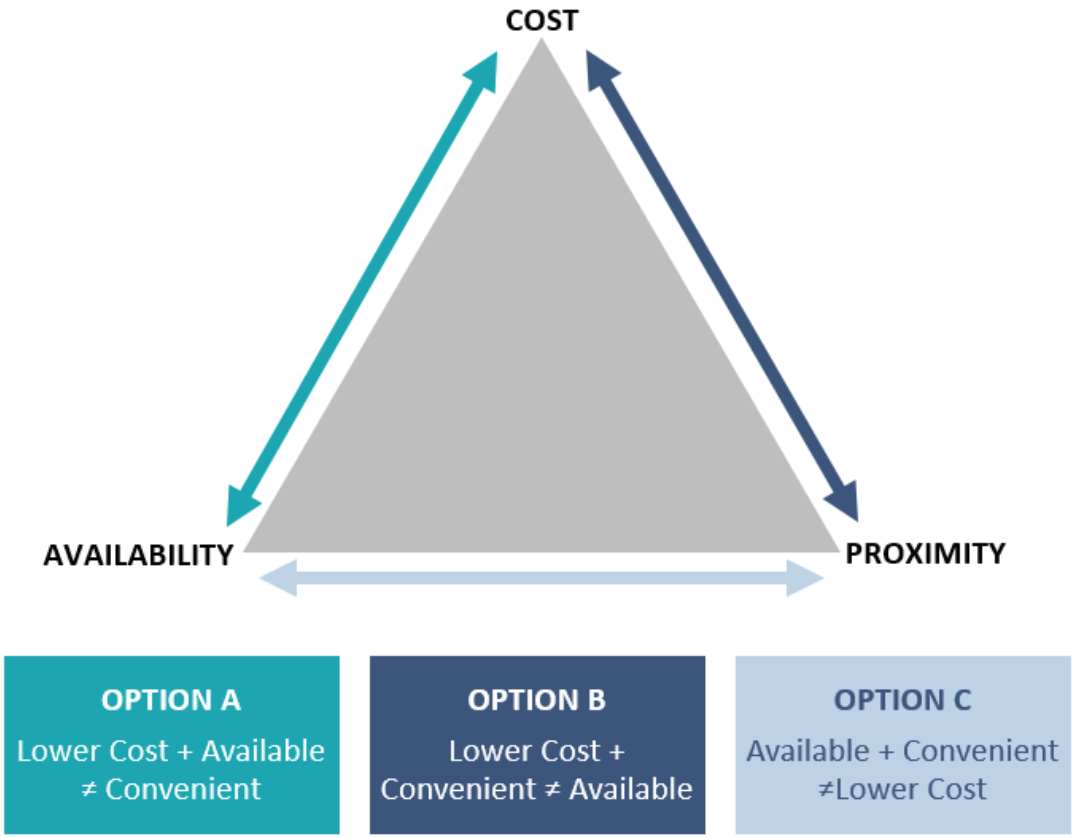
Source: Walker Consultants

* Since APSU does not have parking permit fees separated from the student access fee, Walker calculated what the actual rate for parking is now on campus given parking related expenses. Existing "calculated parking fees" are 45% below the weighted average benchmark of peers for student parking permit fees. Existing APSU faculty/staff rates are 49% below the weighted average benchmark indicating opportunities to increase both student and faculty/staff parking rates.

Costs, Proximity, and Availability Trade-offs

Correlating permit cost to demand is a common pricing strategy used by parking providers. This practice entails recognizing the three desired characteristics related to a user's parking experience: cost, proximity, and availability. Using the following figure, Walker illustrates that not every user is able to have all three desired parking characteristics concurrently. A user may weigh their options and choose which two characteristics they value most. It is important to note these are not Walker's rules; they are a reflection of how the market works.

Exhibit 26: Parking Trade-offs Pyramid



Source: Walker Consultants

These principles suggest:

A. If parking is inexpensive and available, it is not likely to be convenient
B. Inexpensive, convenient parking is unlikely to remain available
C. In order to offer parking that is available and convenient, it cannot be cheap

05 Recommendations

Best Practices and Recommendations

Additional best practices for APSU to consider based upon leading industry organizations providing successful parking and commuter service programs in a university setting include:

- **Pricing** used as a mechanism to regulate demand in and around campus.
- **Improved lighting and safety measures** to promote parking in more remote lots e.g., South of College Street Lot #27, #28, and Lot #30.
- **Clear signage and dynamic parking information** to improve the experience and regulate the flow of traffic and parking density.
- **Promotion of alternative transportation and transportation demand management** efforts.
- **Carsharing, ride sharing, bikesharing, carpooling and other commuter benefits** could be offered/broadened to reduce parking demand and campus congestion.
- **Extend free or discounted transit services** to faculty and staff.
- **Support the location** of public bus stops on the campus.

Campus Parking Management Models

The following report section reviews parking management and permit systems models available to campuses to manage parking supply and demand and create greater customer service enhancements.

"Hunting" Permit Campus Model

APSU currently utilizes a simple "hunting license" system to allocate permit holders to designated parking facilities based upon permit affiliations e.g., student, faculty/staff, resident, or "all permit" holders. This access management arrangement is common where demand is relatively low and supply abundant. Administering parking using this model has clear advantages and disadvantages as reviewed here:

Advantages

Advantages of a "hunting" permit system include:

- Simple to understand once users learn the location of available facilities
- Easy to understand when a color-coding designation system is applied to facilities
- Allows parkers to move their vehicle throughout the day and access multiple parking facilities
- Easy to administer when demand is low and does not require facility-specific occupancy monitoring since users can access multiple permit designated lots

Disadvantages

Disadvantages of a "hunting" permit system include:

- With increased demand, the competition to secure more desirable "close-by" parking increases

- Increased vehicular traffic and motorist "cruising" on campus to search for desired spaces
- As vehicle congestion increases greater pedestrian and bicycle safety issues become apparent
- Customer satisfaction can be affected as parkers grow more frustrated when demand for parking increases

Tiered Parking Model

As a university campus parking system matures, and as supply and demand imbalances become more apparent, a more granular system of allocating scarce parking resources might be required.

Current, high-volume parking programs on university campuses often take advantage of supply/demand economics applying pricing strategies to help consumers weigh tradeoffs between convenience and cost.

To use a college football metaphor, "*not every seat is on the 50-yard line*"; similarly, some parking spaces have inherently greater value in the eyes of users than others. In recognizing these dynamics, administrators can utilize pricing as a dynamic tool to allocate supply and demand. This often raises issues of equity and elitism. However, instead of asking if it is fair to charge more for seats on the 50-yard line, perhaps a better question is: "Is it fair that people sitting in nosebleed pay the same as people sitting on the 50-yard line?".

A tiered pricing model acknowledges that parking is not a static activity and that users place different values on time, money, and proximity to access parking resources. More desirable spaces should be assessed as convenience spaces, while facilities on the periphery of campus, that require greater walking or shuttle access, should be priced according to their value spatially in relation to the core of campus. These distinctions are not arbitrary, customers have "voted with their feet"; it is the market that determines which spaces have more value. Essentially, as long as a lot has the targeted amount of occupancy, it is not overpriced, and a waiting list indicates that it may be underpriced.

In a tiered pricing system, parking lots (or zones) are typically treated as discrete facilities with a finite number of parking permits sold based upon measured facility occupancy data.

In a typical tiered model, faculty and staff are given priority for access to core parking areas of high demand and have lower cost options at the perimeter. Based on available inventory commuter/off-campus students are sometimes offered the opportunity to purchase more expensive parking in the core, but more frequently are given permit privileges for perimeter parking facilities.

If there is resident student parking adjacent to core campus residence halls, the best practice would be to offer that at a premium rate with the less-expensive option of storing their vehicle in remote or peripheral areas. In this way, high-demand areas may be freed up for short-term campus users. Whether core or perimeter, resident student permits do not typically convey privileges to park anywhere else on campus.

Peripheral parking often requires the use of shuttle services with integration between parking and shuttle operations to maximize the use of every space and provide access management.

A helpful (and simple) method to identify which parking facilities should be priced highest is the application of peak occupancy data to determine pricing increases or decreases—with the highest peak occupancy facilities assigned a highest value and the highest permit prices, and the least desirable parking areas assigned lower values and lower prices.

Exhibit 27: Pricing by Occupancy Suggested Index

Utilization Index	Occupancy %	Suggested Pricing
High	85-100%	High
Medium	50- 84%	Medium
Low	<50%	Low

Source: Walker Consultants

To simplify the administration of tiered pricing, peak occupancy data can be reviewed on an annual basis with permit rates adjusted as necessary to achieve desired occupancy targets.

This method is responsive to existing utilization patterns on campus and is a best practice to assign a value and price to all parking spaces.

Blended Model

Not all campuses are ready to transition to a comprehensive tiered model. One approach to introduce tiered parking pricing to a campus, when demand might not be high enough, is to adopt a blended or hybrid model.

A blended model recognizes the benefits of both "open-hunting" and tiered pricing to balance supply and demand and provide more user choices. Medium and high demand lots can transition to tiered rates with a greater share of convenient spaces, while low demand lots can maintain open-hunting access privileges. As demand increases, a facility can transition to tiered reserved parking.

In a dynamic pricing system, the fee charged for a permit is set to a target peak occupancy rate. If occupancy and demand is too low, the fee should be reduced, and conversely if demand is too high, the fee should be increased until desired occupancy targets are met. Typically, rate evaluations are performed on an annual basis with peak occupancy performance data evaluated.

Transportation Demand Management

Parking operations and capital expenditures at APSU are largely supported by revenues received from the sale of faculty/staff permits and student access fees assessed. As an auxiliary service, costs for new facilities and rising operating expenses are borne directly by users. Continuing to build additional parking facilities, including structured parking to meet campus needs while passing the cost onto students and employees is politically difficult in any environment, let alone during challenging economic cycles.

Campus parking decisions are ultimately land-use decisions with surface parking (and impervious surface) occupying significant acres of campus land area that could instead support core mission functions. By addressing the "demand side" of parking behaviors, administrators can make better "supply-side" decisions around land-use space planning and support the strategic campus growth they wish to see.

Transportation Demand Management (TDM) programs offer a cost-effective alternative to reduce drive-alone commuting (and campus parking) while promoting fiscal and environmental sustainability.

TDM is a program of information, encouragement, and incentives provided to commuters to help individuals understand all their transportation options and to optimize all modes in the system, counterbalancing critical dependencies on drive-alone commuting and a host of incentives that enable drive-alone commuting, such as below market-rate or subsidized parking.

TDM is not only a vital element of a balanced and sustainable campus plan but has the potential to yield positive return for APSU with relatively modest investments. The goal of a TDM Plan is to reduce drive alone commuting thereby reducing campus parking demand, vehicular congestion in-and-around campus, and adverse pedestrian safety and environmental impacts. A TDM plan is typically integrated with other key campus plan elements including land use and infrastructure planning. By integrating TDM with land use planning processes, the highest and best use of scarce campus land can be promoted to meet an institution's stated academic, research, and outreach missions. Walker provides high-level recommendations to introduce TDM to the APSU campus.

Recommendations

1. Create a set of guiding principles for the parking and transportation system to readily communicate goals and objectives of the auxiliary service to campus stakeholders.

The purpose of setting guiding principles is to create an open and transparent information environment in which users can see where funds come from and where they go to provide parking and transportation services to the campus community.

Additionally, these communications provide a forum to help educate users about the nature of auxiliary departments. As an auxiliary, parking and transportation is required to balance its own budget while continuing to provide and reinvest in effective and efficient parking management services to the community. Guiding principles provide users a "big picture" explanation as to the purpose and requirements faced by an auxiliary operation.

As such, guiding principles do not replace existing policies or practices but rather but rather establish a context for communicating the key the goals and objectives of the enterprise.

Guiding Principles typically address:

- Mission and vision
- What is a parking auxiliary?
- Operational responsibilities and duties
- Campus parking rules and regulations
- Parking enforcement goals
- Parking revenue goals (including fee setting)
- Inclusion of parking in master planning processes
- Procedures for managing losses of parking supply (both temporary and permanent closures)

- A communications plan for internal and external stakeholders
- Event parking protocols
- Defining operational and capital expenditures for equipment, supplies, deferred facility maintenance, preventative maintenance, and new construction
- Budgetary planning processes to continue to meet campus needs for access and financial sustainability

Providing the above content online and/or in an annual report increases the transparency and accountability of the enterprise to the campus community while educating users on the benefits and financial requirements to providing parking and transportation services to the campus.

While users might not always want to see rate increases or operational changes, they should, at a minimum, be made aware that the services they are consuming are not without fixed and variable costs.

Auxiliaries are operated on a self-supporting basis, in which the combination of fees and other revenues must be sufficient to meet ongoing capital and operating expenditures and any debt service associated with auxiliary assets.

Additionally, each auxiliary unit also has an obligation to maintain fund reserves to acquire, replace, and maintain depreciable assets.

We recommend APSU consider undertaking an internal exercise to develop guiding principles along with the following:

Our Vision

Our Mission

We provide efficient parking and related services by:

We ensure equitable parking and related services by:

2. Increase financial transparency

In addition to updating guiding principles and communications materials, we recommend that the APSU parking and transportation auxiliary increase financial transparency to educate users.

Benefits to doing this include:

- Sharing sources and uses to increase campus understanding of why there are parking fees
- Illustrating how the money is reinvested in the system
- Showing sources and uses diminishes the notion that parking is a “cash cow”; and
- Reduces friction when fees must be increased

3. Develop a financial and business plan for the auxiliary enterprise.

To meet the goals and objectives of the auxiliary, “best in class” programs typically have a financial plan.

A business plan accompanied by a five-year financial plan clearly defines the roadmap for organizational success. In tandem with recommendation #2 to create greater financial transparency, financial plans provide guidance and accountability for the enterprise.

The purpose of this level of planning is to provide a clear vision of the organization including its current financial position, services and programs provided, an evaluation of its service lines, as well as an assessment of its market and customer base to assess the ability of the service to meet the demands of the campus both organizationally and financially.

The outcome of the process is to produce a recommended plan whose goals and objectives are aligned with the University's strategic plan together with a five-year financial and capital outlay program to support asset maintenance.

A business or financial plan can include key areas including:

- Technology. Modernize the delivery of programs and services to gain efficiency and improve customer satisfaction.
- Development of TDM programs. Decrease the demand for single-occupant vehicle parking within the campus boundary.
- Existing Facility Improvements. Aggressively pursue improvements to existing facilities while maximizing the amount of parking available within the campus boundary.
- Clear regulations, policies, standards, and key performance indicators. To ensure consistent and successful administration of existing programs and to accommodate growth of additional programs and services designed to better meet the needs of the campus now and in the future.
- Program Evaluation. Evaluate and analyze the success of current programs and services including review of fee structures, operational costs, and capital funding requirements to achieve such program success.

The five key areas noted above (and others) can be addressed within a financial plan which clearly assigns financial resources to strategic initiatives.

A well-developed financial plan includes specific information concerning the organization, a financial overview of programs and services, service sector analysis, market and customer analysis, and analysis of its strengths, weaknesses, opportunities, and threats (SWOT) analysis. This information can be compared to goals and objectives and organized by a five-year operational and capital outlay program.

4. Simplify the APSU parking webpage to include easier navigation functions and comprehensive parking and transportation system information.

Currently, there is a patchwork of parking and transportation related information available on the APSU parking webpage and the navigation flow from the main APSU website is unclear. The user must click "campus safety" first to link to the "campus parking and transportation" tab.

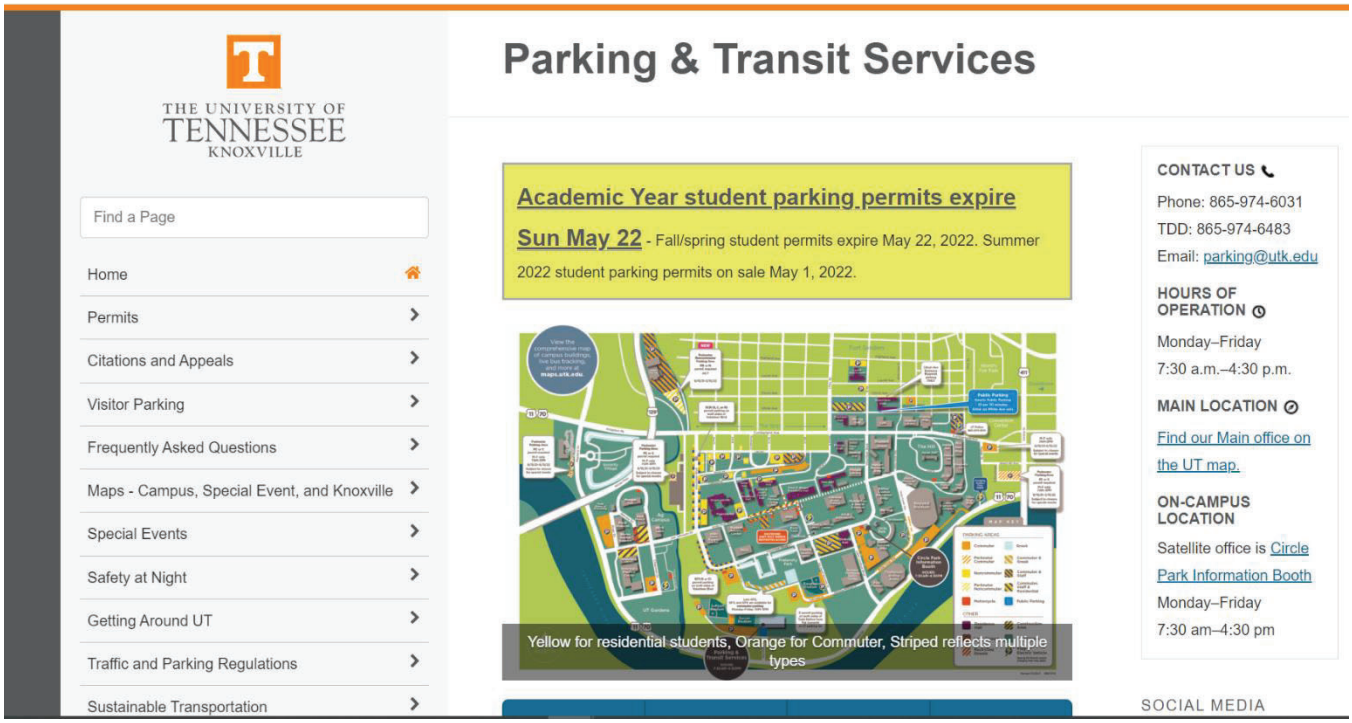
We recommend that APSU enhance the visibility and prominence of the parking webpage and organize the information simply and clearly. We suggest the page be moved out of the campus safety webpage and be elevated as a parallel page.

Organizing information with readily visible navigation tabs off a dedicated parking webpage home page will help users' direct inquiries and more readily find helpful information.

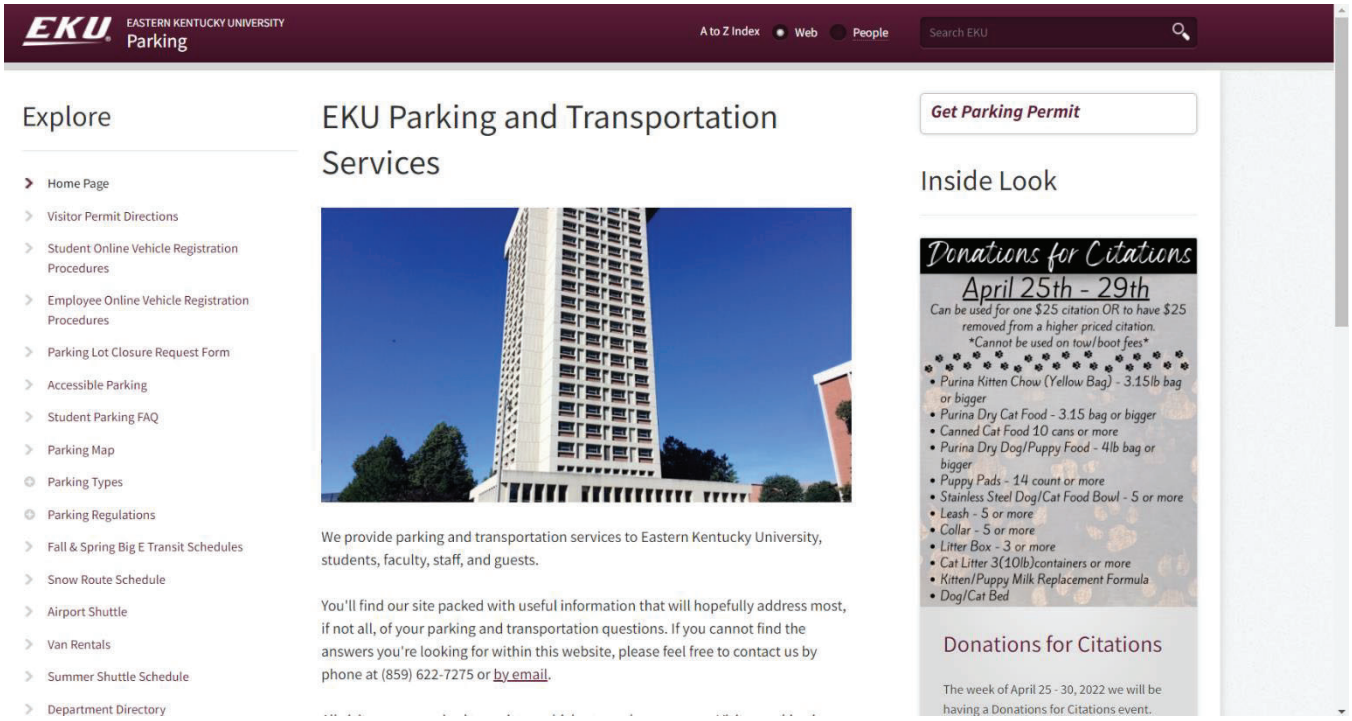
A comprehensive navigation should include, but not be limited to:

- "Where can I park?" –which should link to parking resource maps by user-type e.g., commuter, resident, faculty/staff, visitors etc., with corresponding instructions
- Permit costs
- Purchase a permit
- Pay or appeal a parking ticket
- Visitor parking
- Event parking
- ADA parking
- Transit (including campus shuttling and public transit resources)
- Campus parking regulations
- About us
- Announcements
- Contact us

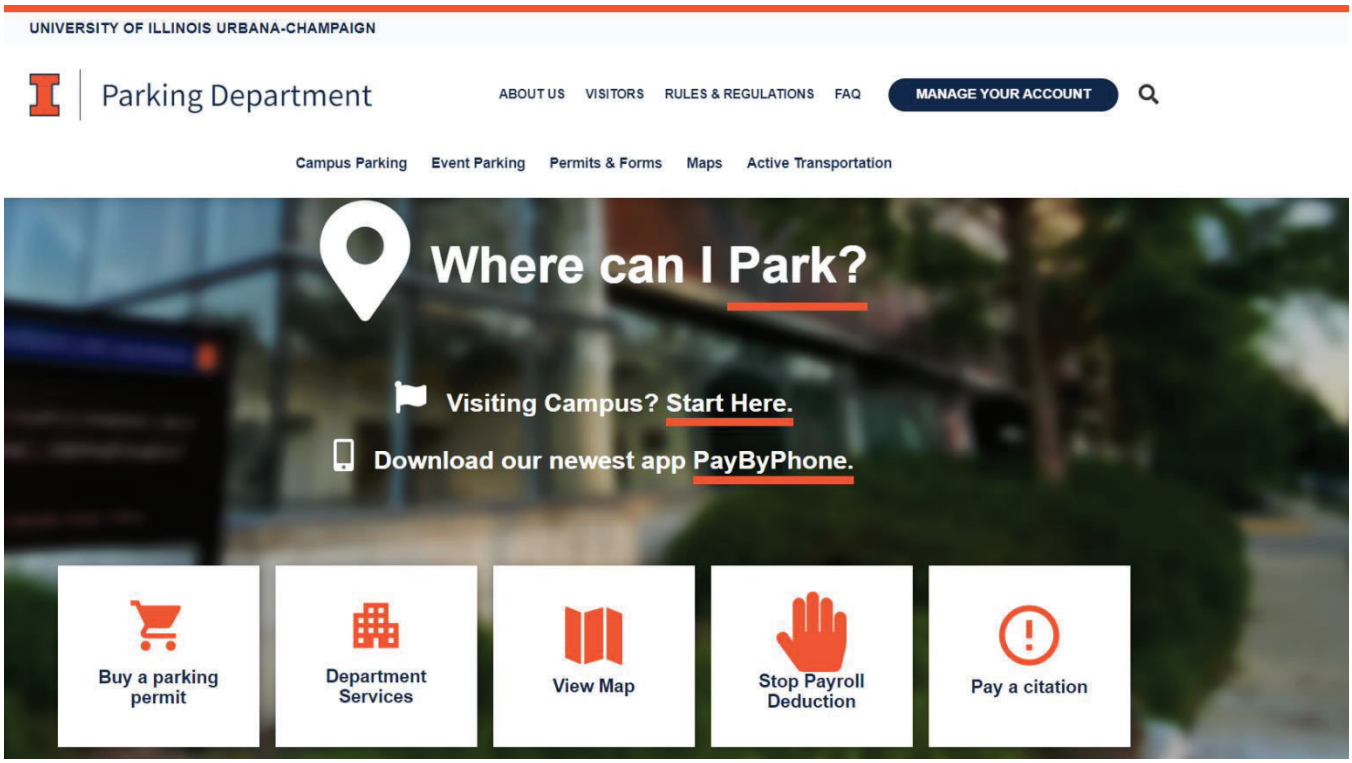
Exhibit 28: Parking Website Examples



Source: University of Tennessee



Source: Eastern Kentucky University



Source: University of Illinois Urbana-Champaign

5. Promote a "park-once" culture

APSU should promote a "park once" campus—a system in which users park their vehicles only one-time at the beginning of their campus visit and do not move their vehicles between campus destinations throughout the day. This reduces vehicular circulation and congestion; improves safety for motorists, transit, pedestrians, and cyclists; and, creates a greater park-and-walk culture. To support a "park-once" culture, APSU can revise parking pricing strategies and permit offerings to minimize user access to multiple lots. Broad access privileges encourage parkers to move their vehicles to find the "closest" space.

6. Revise parking pricing strategies

Walker recommends APSU consider updating current parking pricing models to achieve the following:

- An increase in the price differential between more and less desired parking
- Creation of distinct choices among cost, location, and availability
- Establishment of cost commensurate with perceived value
- Unbundled, such that those who park cover the costs of providing parking, rather than being subsidized by other populations

Additional details are provided in the User Assignments subsection. In addition to distributing parking demand more equally across campus to relieve parking "hot-spots", increased parking rates are needed to meet auxiliary capital requirements and debt service. As reviewed in the operations and finances section, fund reserves need to be maintained to allow Parking and Transportation to reinvest in the system and provide a cushion against adverse market cycles.

7. Increase fees annually with inflation.

In addition to setting rates commensurate with perceived value, we recommend a practice of increasing parking fees annually to keep pace with inflation. Currently, APSU parking fees are not indexed to inflation while the expenses that the auxiliary incurs are inflation influenced.

Allowing parking prices to stagnate creates much greater friction when rates must be raised in larger increments less frequently.

8. Build auxiliary reserves to meet anticipated capital improvement programs.

An estimated $1.0 million in capital projects (in 2022 dollars) are anticipated with lot reconfigurations at Lot #7 (Burt Street) and Lot #30 (at 4th and Main). To meet capital project needs, increased fund reserves will be required.

Additionally, beyond capital requirements, enhanced fund reserves act as "rainy-day" funds for market downturns.

9. Enhance marketing of associate support services (Peay Pickup).

Walker heard in our stakeholder outreach that faculty/staff knowledge of the Peay Pickup is limited and if more information resources and public communications touchpoints occurred, ridership could be enhanced. This would establish a critical connection to support the "park once" recommendation.

An opportunity to enhance communications to promote the shuttle program and service to commuter lots exists with campus stakeholders. Information packets at hiring and periodic presentations to faculty senate and employer groups is needed to advance information and promote ridership in addition to online resources.

10. Invest in transit—this could entail optimizing and/or maintaining current routes and services while expanding to provide additional services

Campus shuttle operations promote more effective distribution of parking demand across campus and improve the circulation of the campus. Removing barriers to ridership include:

- Helping users feel confident with Austin Peay Shuttle headways—which will help to utilize the parking spaces on the outskirts of campus
- Continuing to market, promote, and provide easy access to parking and shuttle information
- Enhance subsidies for campus community members who use public transportation to commute
- Work with CTS to see if improved connections between the campus and the community can increase the number of people who commute to the campus by bus

11. Introduce a "free-flowing" event parking operation including the creation of an event parking policy that supports issuance of user warnings and citations with LPR mobile enforcement.

"Free-Flow" Event Parking Management

The University requested that Walker assess event management strategies and the financial potential of providing paid parking in APSU lots during F&M Bank Arena events. Currently Lot #29 and #30 is available for public off-street parking for members of the community and is offered as a mobile "pay-by-phone" public parking facility.

Exhibit 29: F&M Arena to APSU Lots

Source: Walker Consultants

During stakeholder engagement, APSU event parking needs were communicated to Walker and are summarized by the following:

- APSU seeks to generate additional parking revenue from facilities south of College Street and be a good downtown partner.
- Event parking can be a catalyst for parking auxiliary revenue enhancements (while helping to keep down the price of faculty, staff, and student permits).
- An event parking solution must have a low-cost infrastructure investment.
- Ideally, the solution adopted must be integrated into existing APSU management and enforcement technology infrastructure.
- The event management system should provide great customer service and ease of use for diverse users.

APSU Athletics at F&M Bank Arena

APSU has signed a thirty-year tenant lease to house men's and women's basketball events at the F&M Bank Arena.

With event parking demand anticipated beyond 2023, APSU is motivated to pursue greater event public parking opportunities south of College Street, provided APSU-campus user parking privileges are secured with events occurring primarily across evening and weekend periods not encroaching upon daytime campus parking space needs. Walker observed facilities south of College Street as being underutilized across peak daytime hours during our campus field data collection.

Walker has developed a **conceptual** event parking pro forma for a ten-year planning horizon. Note, this model is being provided for **information purposes only** with a range of market, financial, and operational assumptions that will need to be determined and tested beyond the scope of this study.

The following exhibit summarizes Walker's conceptual pro forma for event parking revenue generation with assumptions listed below. Deviation from these assumptions will impact results.

Exhibit 30: F&M Event Revenue Model

Event Revenue	Est. Peak Demand	Absorption Factor	Event Rate	Events/Year	Approx. Potential Revenue
APSU Games	1,600	20%	$10.00	30	$96,000
Non-APSU Events	1,600	20%	$10.00	33	$106,000
Total Event Revenues					$202,000

Source: Walker Consultants

Conceptual Event Revenue Assumptions

The following is a list of market, financial, and operational assumptions applied for event parking revenue projections:

- Events/Year: The F&M Event Center will operate year-round with approximately 30 home men's and women's basketball games and 100 non-APSU events by Year 3 (33 in Year 1, 66 in Year 2, 100 in Year 3).
- Event Rate: All users will pay a $10 flat rate for parking with a $2 rate increase at Year 4 and a $3 rate increase at Year 9. Donor (free) parking privileges are not assumed nor modeled in our analysis, nor is free event parking offered to APSU permit holders. In this model, all parking within the event perimeter is presumed to be at the event rate.
- Estimated Peak Demand: Estimated peak demand generated from the *NPA/ICSC* shared parking model *arena* land use category with known seating quantities input for parking space generation.
- Absorption Factor: An absorption factor assumes that APSU owned facilities (Lots #24, #25, #27, #28, #29, and #30), totaling approximately 472-spaces, can absorb event parking demand at approximately 320 occupied spaces averaged per event. APSU facilities will capture 20 percent of total event parking generation estimated since APSU parking is adjacent to the F&M arena Year 1 to Year 10.
- Walk-shed: Event goers will walk a 2-3 block radius to park at available APSU surface lots and each facility will be signed and actively marketed for public event parking during assumed event periods.
- Rates: The downtown market will support an initial $10 APSU flat rate (currently all parking meters are free weekdays after 5 p.m. and all-day on weekends).
- Downtown parking management influence: Free or severely discounted on street parking stands to adversely impact APSU revenue capture as users will first seek out free parking resources. We recommend that APSU encourages the City of Clarksville to review and revise downtown parking meter rates to extend paid parking hours of operation across weekday evenings beyond 5 p.m., and during Saturday daytime and evening hours, to promote greater on street turnover and parking management before the opening of the F&M Event Center.

Event Operational Expenditure Assumptions

- Operational: APSU Lots #24, #25, #27, #28 #29, #30 remain gateless and become pay-by-phone paid parking lots during event periods. During non-event periods, APSU maintains regular APSU user group access privileges and enforcement protocols.
- Event Personnel: APSU Event Parking will require additional labor for internal event parking management. We have assumed that the event manager will conduct mobile LPR parking enforcement for event lots only and be available to troubleshoot any customer issues occurring during event times for an estimated 20 hours per week.
- Wages and Benefits: Event salaries and benefits increase at a rate of 3.5% annually.
- Other: All other operating expenses are assumed to be resourced by the existing parking auxiliary enterprise budget.

Walker proposes APSU consider adopting a "free flowing" event parking operation with several features that APSU has already implemented on campus.

These include:

- mobile "pay-by-plate" technology
- gateless parking facilities
- License Plate Recognition (LPR) verification and enforcement

The following figure depicts the key elements of a proposed "free-flowing" event parking operation.

Exhibit 31: "Free-Flow" Event Parking Concept

		
Lot signage	Warning notices and citations	LPR Enforcement

Source: Walker Consultants

Through meeting with Austin Peay State University's senior management team, it is clear that the University understands the value and potential of the parking facilities surrounding the F&M Bank Arena and is willing to explore charging market rate pricing and/or to outsource parking operations to maximize the revenue potential, while providing a key and pivotal service to the community. Accordingly, in Walker's revised pro forma for the Parking and Transportation auxiliary, Walker has modeled, at University request, annual event revenue income at $1M per year.

Mobile "Pay-by-Plate"

With mobile pay-by-plate systems, the user is not required to remember a parking space number or pay a cash attendant or multi-space meter kiosk. Instead, they enter their vehicle's license plate information and select the amount of parking time needed either on a website or via the downloaded mobile parking app. These systems accept credit or debit cards and frequently include ApplePay and GooglePay payment integration. The cost for using mobile payment applications is usually a fee of $0.35 - $0.45 per transaction, which is charged directly to the users in addition to the parking fee. Some municipalities and parking providers agree to pay this fee for all users or for registered residents of the city, although this is not common, and users typically don't mind the small surcharge. Patrons that do not have the app installed may use the online website portal or call or text the posted number to initiate a parking session. Pay-by-plate does not require the parking owner to install parking signage over each stall or paint surface space numbers at each lot, saving facility infrastructure expenses.

APSU provides Park Mobile pay-by-plate service at Lot #29. While Walker is vendor neutral, we observe that Park Mobile is the designated vendor for downtown Clarksville parking meters. To maximize patron use, it is recommended to consider using vendors already in use in surrounding communities to allow existing customers to use an app they already have on their phone and with which they are familiar. It is not uncommon, however, to accept multiple payment apps for the same facility, to make it easy for customers without regard to which app or apps they have downloaded.

Benefits of mobile payment include:

For Parking Operator

- Reduces onsite labor and event staffing needs
- Eliminates costly parking access and revenue control (PARCS) equipment which represent ongoing maintenance and lifecycle replacement costs
- Eliminates onsite physical cash handling creating a smoother and safer operation
- Has the ability to be integrated with existing parking enforcement technology platforms
- Supports a "carrots" and "sticks" approach to parking enforcement for event users

For the Parking User

- Allows users to reserve parking in advance with online reservations and pre-pay options saving the user time and hassle finding a parking space day-of event
- Is "contactless" and does not require users to touch hardware e.g., multi-space pay stations
- Users can receive text message updates regarding the parking session
- Users can extend parking session via mobile phone (for hourly parking rates)
- Is integrated with GooglePay and ApplePay enabling more payment-acceptance options

Mobile parking payment is making it easier for consumers to locate, reserve, and pay for parking—reducing frustration, traffic congestion caused by motorists "cruising" for available public parking, while increasing user parking compliance and revenue collection creating a "win-win" for consumers and parking facility owners.

Parking Enforcement: Warning Notices and Citations

Carrots

To achieve maximum user compliance and increase revenue collection rates, APSU can implement a warning notice and citations policy for event parking across sanctioned event parking lots and hours of operation. To educate users, a "first-time" offense warning can be issued to first time offenders who do not pay at mobile lots with instructions on how to pay and alternative payment methods available including text message and telephone options.

Sticks

The next offense will incur a more severe fine that APSU can issue as a parking violation citation. We recommend these violations be set higher than the current $25 infraction amount for campus users—it needs to be commensurate with the event rate and not encourage "gambling" that they will not get caught.

License Plate Recognition (LPR) Enforcement

"Pay-by-plate" payments allow for the integration of a License Plate Recognition (LPR) system which is a camera-based "scanning" system that is mounted to a parking enforcement vehicle.

When a vehicle is parked in a lot, the rear license plate is captured by cameras mounted on an enforcement patrol vehicle. The camera scans the plate referencing the payment database to verify proper parking privileges.

Enforcement patrols with vehicle-mounted cameras reduce staffing hours that traditional foot patrols incur, saving staffing hours and payroll costs and increasing the efficiency and frequency with which enforcement can be completed.

Efficiency

An LPR camera can patrol more than 1,500 parking spaces per hour in most cases which eliminates the need to staff each parking area. Additionally, the license plate data that is scanned and geo-located gives enforcement personnel real-time information to make better decisions about vehicles parked at APSU facilities.

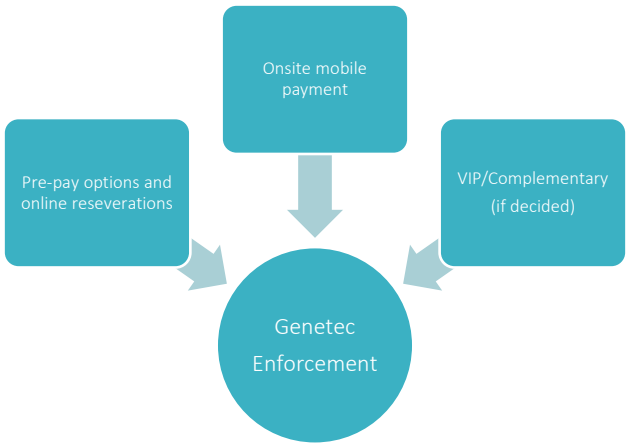
Improved User Experience

In addition to streamlining enforcement operations, LPR creates a better customer experience. The use of mobile payment and LPR enforcement allows for an operation to become "frictionless" and gateless which improves traffic flow in-and-out of parking facilities, eliminates entry/exit lane back-ups, and reduces vehicular congestion on roadways adjacent to parking facilities.

For an event operation, it is important to reduce "friction" and the time hassle to access parking so event goers can focus more on enjoying the event experience.

APSU currently owns a Genetec LPR enforcement system which is operated on campus today. The following figure depicts the integration between each of the solutions reviewed above.

Exhibit 32: Event Platform Integrations



Source: Walker Consultants

12. Solicit Request for Proposals for a parking permit and citation management services

The current vendor term is up in Summer 2022, we recommend a new competitive bid solicitation process.

Solicit bids for a qualified vendor to provide a parking permit and citation management system that includes the following services:

- **Parking Permit Management** – Including, but not limited to, payment processing, permit issuance and tracking, and reporting with electronic, permit-by-plate Genetec system integration utilized for several permit types: students (commuters and residents), faculty/staff, visitors, and other new user categories including event parking.

  Parking Citation Management – Including, but not limited to, citation tracking, payment processing, collection of delinquent parking citation accounts, and scheduling of administrative hearings, as well as the provision of electronic handheld citation issuance devices and required software for the parking enforcement program.

Vendor Requirements

The selected vendor must have the ability to appropriately perform the required work with demonstrated success with at least three (3) previous college and university campuses, preferably issuing more than 5,000 "virtual" permits per academic year and processing at least 25,000 parking citations per year.

Unified Parking Management System

The parking management system shall be considered unified in the sense that all components or subsystems shall be contained in a single ecosystem where both front and backend user experiences are seamless. At a concept-level, the system is to be viewed as having an e-commerce "front-end" public facing orientation and a "back-end" (administrative access) interface where staff can interface with the management solution to manage customer accounts and administer citation services. In advance of the Fall 2022 semester, APSU procured a new vendor

User Assignments

Create a Faculty/Staff Tier pricing structure

APSU has opportunities to create greater equity among system users and better distribute faculty/staff parking demand using strategic permit pricing. Currently, all faculty/staff members pay an annual rate of $61 for a general faculty/staff parking permit which is used as a "hunting permit" to access all faculty/staff demarcated facilities and to "park down" into "All APSU" lots. There is no price differential between the most convenient and more remote parking areas.

APSU seeks to implement a three-tier faculty/staff permit system, as illustrated in the following table and map.

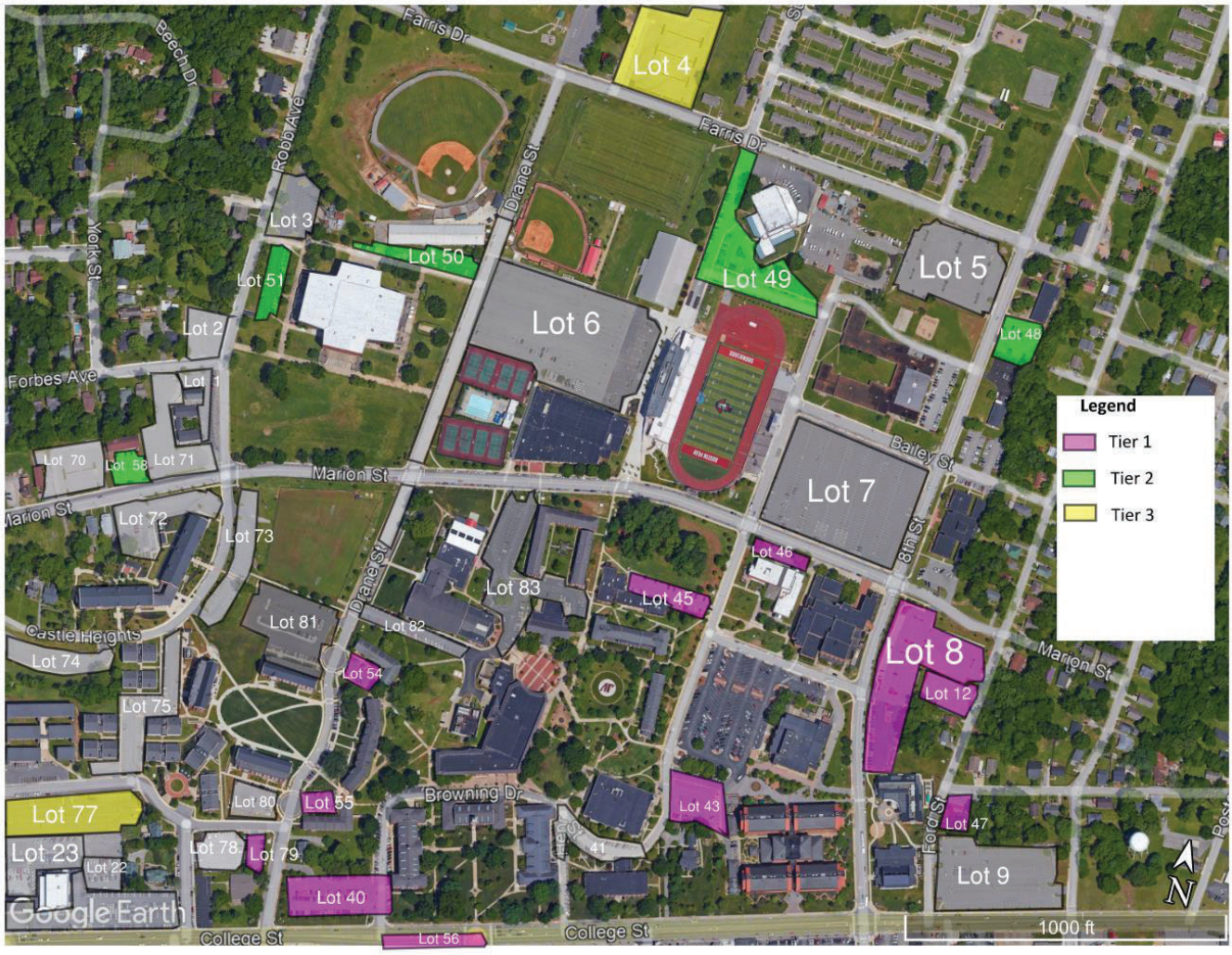
Exhibit 33: APSU Proposed Faculty/Staff Tier Permit Program

Faculty/Staff Tier	Proposed Rate	Spaces
Tier 1 Faculty /Staff Permit	$122	611
Tier 2 Faculty /Staff Permit	$61	278
Tier 3 Faculty/Staff Permit (Overflow)	$31	165

Source: APSU, Walker Consultants

The following map depicts the location of proposed tier facilities.

Exhibit 34: APSU Proposed Faculty/Staff Tier Parking Facilities



Source: APSU, Walker Consultants

The initial allocation of the parking space inventory for faculty/staff tiers was developed in concert with APSU. As tier pricing is introduced, parking administrators should evaluate usage by tier parking facilities and adjust the space allocation and pricing accordingly to balance supply/demand. If demand for Tier 1 spaces exceeds the supply, pricing could be increased. Conversely, if demand for a specific Tier 1 lot(or lots) is is too low, it may be more appropriate to shift that facility to Tier 2. The tiering of lots should be driven by market conditions.

Student Parking

While APSU seeks to pursue tiered pricing only for faculty/staff, we recommend a similar strategy be pursued in the future for commuter and resident students. To achieve this, parking would need to be decoupled from student access fees. Potential future tiers could include Commuter Core and Commuter Remote categories and Residential Core and Residential Remote permit categories should the university elect to manage student parking

behavior on a more granular basis. As there are more student parkers than faculty/staff parkers in the system, this may have a more noticeable impact on campus parking demand distribution.

Residential students tend to use their cars less frequently, reducing the turnover of spaces throughout a day. In the most central parts of campus, it would be more efficient and would yield improved customer service, to allow multiple users (commuting students, faculty, staff, and visitors) to have access to these spaces throughout the day.

In order to reduce demand near the center of campus and to incentivize some residential students to park further, Walker proposes a scenario in which a limited number of permits are sold for spaces adjacent to residence halls, with an equivalent number of spaces designated for that purpose. Resident students may either choose to purchase a permit that only allows them to park in a specific lot near their residential complex, or a significantly less expensive “remote” permit, which allows them to “store” their car for less frequent use. This is a is a concept that has not been built out into a pro forma in the context of this report, but could be a topic for additional study, if the University is interested.

Lot #7 and Lot #9 , which are designated exclusively for students, have utilization exceeding 85 percent and are functionally full at the peak hour. Walker recommends that in the future these facilities and perhaps others be priced as “Commuter Central” lots with users paying more for close-by building privileges. “Commuter Remote” lots including Lot #1, Lot #2, Lot #3, Lot #4, and lots south of College Street have the potential for reduced student parking rates given the further walking distance.

Oversell Factors

Walker's potential pricing parking tiers for the Core entails selling permits on a lot-by-lot basis. There are some lots for which only faculty/staff, or residents, or commuters would be eligible. Other lots could be shared, by allocating the number of permits to be sold (e.g., 90-space lot, with 100 permits available, potentially all available only to faculty/staff, or perhaps 60 to faculty/staff and 40 to commuter students). In lots that experience turnover (i.e., comings and goings) throughout the day, it is common industry practice to have an "oversell factor" by which more permits are sold than there are spaces in a given facility. This recognized that it is highly unlikely that all permit holders are concurrently present on campus.

The practice of developing oversell factors is both art and science, and often requires adjustments and trial-and-error. It is important to note that if permits are sold-lot-by-lot the oversell factors need to be determined in the same way. To this end, when tiered parking is introduced, Walker recommends conservative oversell factors, particularly in Tier 1 areas. Smaller lots (e.g., fewer than 20 spaces) are more sensitive to fluctuations in demand, therefore should have a lower initial oversell factor (e.g. 5%); larger lots are able to absorb greater variations and could start out with a 10% oversell. As demand starts to settle into a pattern, the oversell should be adjusted with the goal of having 85%-90% occupancy during periods of typical peak demand.

Parking Auxiliary Financial Pro Forma

In Fall 2022, Walker Consultants met with APSU executive leadership to receive draft report feedback. As an outcome of the presentation and executive discussion, Walker Consultants was requested to evaluate an alternative campus rate model that APSU wishes to pursue with the following programmatic features:

- Tiered pricing for annual Faculty/Staff permits.
- annual event parking revenues approximating $1 million (with 1 percent year-over-year growth assumed); and
- maintenance of existing P&T student fees at a current rate of $122 per year increased annually by 3.5 percent to keep pace with inflation.

The results of the rate adjustments modeled yield a ten-year positive cumulative fund balance of approximately $10.5 million assuming event revenues are maintained within the parking and transportation auxiliary in addition to net proceeds from all other parking and transportation auxiliary revenue sources. This fund balance will allow the auxiliary to reinvest in the system as the campus develops and changes.

Our modeling assumes that faculty/staff demand is inelastic and that Tier 1 rates will be supported across user types. Tier 2 will allow faculty/staff to choose to continue to park at their current rate of $61 dollars per year. Tier 3 will be providing faculty/staff users with a discounted option of $31 dollars per year for less proximate parking spaces that are currently underutilized, e.g., commuter lots requiring additional walking distances and/or Peay Pickup shuttle service.

An oversell factor of 10 percent was applied to the gross number of Tier 1 permits based upon our review of the available Tier 1 space inventory and apparent demand, with no oversell factor assumed for Tier 2 and 3 permits, based on the large inventories in these tiers.

Revenue Assumptions

With refined vendor permit sales data, Walker applied additional assumptions regarding current and future permit usage and projected rate increases for the APSU campus. The following assumptions were applied to our baseline conditions:

- Year 2022 budget actuals inform the current baseline of 8,341 students paying the student access fee and 870 faculty/staff members purchasing annual permits.
- The student access fee ($122 annually) remains in place and approximately 8,424 students are assessed a fee in Year 1.
- Student access fees increase annually 3.5% indexed to inflation.
- Assumes faculty/staff rate tiers are introduced by Year 1: Tier 1 ($122 annually, tied to student rate), Tier 2 ($61 annually), and Tier 3 ($31 annually) for annual Faculty/Staff permits
- Tier 1,2, and 3 permit fees increase annually 3.5% indexed to inflation.
- An oversell factor of 10 percent is applied only to Tier 1 permits with no oversell in Tier 2 and Tier 3 categories.
- Assumes 1% faculty/staff permit user growth annually Year 2 through Year 10.
- Assumes 1% student growth annually Year 2 through Year 10.

Event parking revenues are introduced at Year 1 with Year 1 event parking revenues approximating $1 million (with 1 percent year-over-year growth assumed) Exhibits 35 and 36 depict assumptions applied in our modeling. Deviation from these assumptions stands to impact modeling results.

Expense Assumptions

The following assumptions were applied to our baseline conditions:

- Baseline expenditures are derived from Year 2022 budget actuals.
- Expense increases occur 3.5% annually across all existing categories assumed.
- A new “event manager” position is created in Year 1 with auxiliary budget impacts.
- “Renew and replacement” category is assumed to be deducted after net operating income and increase 3.5% annually.

Capital reserves are assumed to be deducted after net operating income and increase 3.5% annually.

Exhibit 35: Ten Year Estimated Annual Volumes

Projected Volumes	Base Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
P&T Fee (applied to all students)	8,341	8,424	8,509	8,594	8,680	8,766	8,854	8,943	9,032	9,122	9,214
Faculty /Staff (Tier 1) Permits	671	671	671	671	671	671	671	671	671	671	671
Faculty /Staff (Tier 2) Permits	112	121	121	130	139	148	157	166	175	184	193
Faculty/Staff (Tier 3) Permits	87	88	88	89	90	91	92	93	94	95	96

Source: Walker Consultants

Exhibit 36: Ten Year Rate Increase Assumptions

Rate	Base Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
P&T Fee (status quo)	$ 122	$ 122	$ 126	$ 131	$ 135	$ 140	$ 145	$ 150	$ 155	$ 161	$ 166
Faculty /Staff (Tier 1)	$ 61	$ 122	$ 126	$ 131	$ 135	$ 140	$ 145	$ 150	$ 155	$ 161	$ 166
Faculty /Staff (Tier 2)		$ 61	$ 63	$ 65	$ 68	$ 70	$ 72	$ 75	$ 78	$ 80	$ 83
Faculty/Staff (Tier 3) Overflow		$ 31	$ 32	$ 33	$ 34	$ 35	$ 36	$ 37	$ 39	$ 40	$ 42

Source: Walker Consultants

Exhibit 37: Ten Year Financial Pro Forma

	Base Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
P&T Student Fees [1]	$1,017,600	$1,028,000	$1,074,000	$1,123,000	$1,174,000	$1,227,000	$1,283,000	$1,341,000	$1,402,000	$1,466,000	$1,532,000
Faculty/Staff Permits (Tier 1)	$53,070	$82,000	$85,000	$88,000	$91,000	$94,000	$97,000	$101,000	$104,000	$108,000	$112,000
Faculty/Staff Permits (Tier 2)		$7,000	$8,000	$8,000	$9,000	$10,000	$11,000	$12,000	$14,000	$15,000	$16,000
Faculty/Staff Permits (Tier 3)		$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$4,000	$4,000	$4,000
Event Revenue - General [2]		$1,000,000	$1,010,000	$1,020,000	$1,030,000	$1,041,000	$1,051,000	$1,062,000	$1,072,000	$1,083,000	$1,094,000
Projected Revenues	**$1,070,670**	**$2,120,000**	**$2,180,000**	**$2,242,000**	**$2,307,000**	**$2,375,000**	**$2,445,000**	**$2,519,000**	**$2,596,000**	**$2,676,000**	**$2,758,000**
New Event Manager		($60,000)	($62,000)	($64,000)	($66,000)	($68,000)	($70,000)	($72,000)	($75,000)	($78,000)	($81,000)
Estimated Expenditures [3]	($622,400)	($644,000)	($667,000)	($690,000)	($714,000)	($739,000)	($765,000)	($792,000)	($820,000)	($849,000)	($879,000)
Projected Expenses	**($622,400)**	**($704,000)**	**($729,000)**	**($754,000)**	**($780,000)**	**($807,000)**	**($835,000)**	**($864,000)**	**($895,000)**	**($927,000)**	**($960,000)**
Net Operating Income	**$448,270**	**$1,416,000**	**$1,451,000**	**$1,488,000**	**$1,527,000**	**$1,568,000**	**$1,610,000**	**$1,655,000**	**$1,701,000**	**$1,749,000**	**$1,798,000**
Renew & Replace	($145,200)	($150,000)	($155,000)	($160,000)	($166,000)	($172,000)	($178,000)	($184,000)	($190,000)	($197,000)	($204,000)
Capital Reserves	($300,000)	($311,000)	($322,000)	($333,000)	($345,000)	($357,000)	($369,000)	($382,000)	($395,000)	($409,000)	($423,000)
Annual Surplus/Deficit	$3,070	$955,000	$974,000	$995,000	$1,016,000	$1,039,000	$1,063,000	$1,089,000	$1,116,000	$1,143,000	$1,171,000
Cummulative Fund Balance	**$3,070**	**$958,000**	**$1,932,000**	**$2,927,000**	**$3,943,000**	**$4,982,000**	**$6,045,000**	**$7,134,000**	**$8,250,000**	**$9,393,000**	**$10,564,000**

Notes:
1) Assumes status quo P&T fee (increasing 3.5% annuall.
2) Event revenue assumptions were provided by APSU with 1% YoY revenue growth applied.
3) Expenditures do not include renew and replace or capital reserves.
4) Faculty/Staff Tier 1, Tier 2, and Tier 3 permits are introduced at Year 1.

Source: Walker Consultants

Appendix A
Study Data

Map ID	Facility Name	User Group	Designation	Total Inventory
1	Greek Village (Robb Ave.)	Commuter	regular	34
			Reserved	0
			ADA	0
			15-minute	0
			Other (note)	0
2	Forbes and Robb Ave. Lot	Commuter	Regular	44
			Reserved	0
			ADA	0
			15-minute	0
			Other (note)	0
3	Dunn Center (Robb Ave.) Lot	ALL APSU Permits	Regular	52
			Reserved	0
			ADA	0
			15-minute	0
			Other (note)	0
50	Dunn Center F/S Lot	Faculty/Staff	Regular	57
			Reserved	1
			ADA	1
			15-minute	0
			Other (note)	0
51	Dunn Center F/S Lot	Faculty/Staff	Regular	31
			Reserved	4
			ADA	4
			15-minute	0
			Visitor	4
6	Foy Fitness & Rec. Lot	Commuter	Regular	512
			Reserved	0
			ADA	15
			Other (EV)	2
49	Shasteen Lot	Faculty/Staff	Regular	64
			Reserved	0
			ADA	1
			15-minute	0
			Visitor	12
			Other (note)	4
5	Burt Street Lot (Farris)	All APSU Permits	Regular	187
			Reserved	0
			ADA	0
			15-minute	0
			Other (note)	0
				0
48	Sexton	Faculty/Staff	Regular	27
			ADA	2
			Visitor	8

7	Burt Street Lot (Marion)	Commuter	Regular	494
			Reserved	1
			ADA	12
			15-minute	0
			Other (note)	0
8	Eight Street Lot	Faculty/Staff	Regular	185
			ADA	4
			15-minute	0
			Other (note)	0
			MC	6
47	St John's Street Lot	Faculty/Staff	Regular	11
			Reserved	0
			ADA	0
			15-minute	0
			Other (note)	0
9	9th Street Lot	Commuter	Regular	202
			Reserved	0
			ADA	0
			15-minute	0
			Other (EV)	2
			MC	11
43	Archwood Lot	Faculty/Staff	Regular	48
			Reserved	1
			ADA	9
			15-minute	0
			Other (note)	0
45	Mark's Lot	Faculty/Staff	Regular	35
			Reserved	0
			ADA	4
			15-minute	0
			Other (note)	1
83	Blount/Sevier West Lot	Residential	Regular	73
			Reserved	0
			ADA	0
			15-minute	0
			Other (note)	0
40	McCord Building Lot	Faculty/Staff	Regular	103
			Reserved	0
			ADA	14
			15-minute	0
			Visitor	6
55	McReynolds Lot	Faculty/Staff	Regular	14
			Reserved	0
			ADA	2
			15-minute	0

			Other (note)	0
54	Miller Hall Lot	Faculty/Staff	Regular	9
			Reserved	2
			ADA	1
73	Castle Heights East	Residential	Regular	75
			Reserved	0
			ADA	0
			15-minute	0
			Other (note)	0
72	Castle Heights North	Residential	Regular	74
			Reserved	0
			ADA	4
70	Marion Street West Lot	All APSU Permits	Regular	42
			Reserved	0
			ADA	0
			15-minute	0
71	Marion Street East	All APSU Permits	Regular	68
			Reserved	0
			ADA	0
			15-minute	0
			Other (note)	0
58	Marion Street Apartments	Faculty/Staff	Regular	21
			Reserved	0
			ADA	1
			15-minute	0
			Other (note)	2
74	Castle Heights South Lot	Residential	Regular	84
75	Hand Village Court Lot	Residential	Regular	85
			Reserved	0
			ADA	12
			15-minute	0
			Other (note)	1
21	Honda Upper Lot	All APSU Permits	Regular	127
22	Honda Lower Lot	All APSU Permits	Regular	36
23	Honda Back Lot	All APSU Permits	Regular	58
25	Jenkins Lot	All APSU Permits	Regular	73
			Visitor	2
26	3rd & College Lot	All APSU Permits	Regular	0
	measure s.f. from aerial		Reserved	0
29	4th & Main West Lot	All APSU Permits	Regular	35
			Reserved	0
24	Lincoln Lot	All APSU Permits	Regular	42
			Reserved	0
			ADA	2
			15-minute	0

			Other (note)	0
28	4th & Main East Lot	All APSU Permits	Regular	37
			Reserved	0
			ADA	0
			15-minute	0
			Other (note)	0
27	Truck Lot	All APSU Permits	Regular	177
			Reserved	0
			ADA	0
			15-minute	0
			Other (note)	0
56	Ard Lot	Faculty/Staff	Regular	42
			Reserved	0
			ADA	3
			15-minute	0
			Visitor	5
11	Main Street Lot	Commuter	Regular	91
			Reserved	0
			ADA	0
			15-minute	0
			Other (note)	0
30	4th & Main South Lot	All APSU Permits	Regular	108
10	University Lot	Commuter	Regular	47
12	Ford Street Lot	All APSU Permits	Regular	36
14	Henry Street North Lot	Commuter	Regular	14
13	Emerald Hill Parking Area		Regular	178
			Reserved	0
			ADA	6
			15-minute	0
31	Drane St. North	All APSU Permits	Regular	44
	(between Marion and Farris)		Reserved	0
	On street		15-minute	0
			ADA	0
			Other (note)	0
44	Drane St. South	Faculty/Staff	Regular	44
			Visitor	2
41	Henry Street	Onstreet ADA	ADA	37
42	Westley Lot	Faculty/Staff	Regular	21
			ADA	1
46	Kimbrough	Faculty/Staff	Regular	8
				0
53	Ellington Visitor	Visitor	Visitor	22
			ADA	2
			Other	2
57	601 N. 2nd Street	Faculty/Staff	Regular	21

			Other	1
59	Trayhurn		ADA	1
	IT Building		Regular	0
	529 N. 2nd Street		Reserved	0
76	Meacham North Lot	Resident	Regular	21
			ADA	2
77	Meacham South Lot	Overflow	Regular	165
			MC	2
78	Holm Avenue	Resident	Regular	47
79	West Avenue Lot	Faculty/Staff	Regular	21
				0
80	Governors Terrace South	Resident	Regular	25
			ADA	3
81	Governors Terrace North	Resident	Regular	116
			ADA	3
82	Guvs Lane Lot	Resident	Regular	39
			Other	1
84	Guvs Court	Resident	Regular	34
			ADA	5
85	Hand Village	ADA	ADA	4
TOTAL				4,598