

Parking and Transportation Services Administrative Activities Review

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Mission

The mission of Parking and Transportation Services is to support the mission of the University of Akron by welcoming and assisting students, faculty and staff, and visitors to our campus with facilities and services that meet their transportation needs.

The University's mission statement speaks of developing enlightened members of society through instruction, research, and service. These activities often require people to come together physically to cooperate from a shared space, and Parking and Transportation Services aids them in getting to and from campus, parking personal vehicles, and even in moving around the campus and adjoining areas.

The University of Akron is a vibrant place that hosts numerous activities on a daily basis, in addition to regular class meetings. Whenever the parking and/or transportation needs for an event conflict with those of another event or regular operations, the department assists by allocating these resources to effectively support all of the day's activities.

A visitor's first impression of a university may be formed through interaction with a parking attendant, so Parking and Transportation Services strives to maintain a professional and welcoming full-time and student staff, whose aim is to serve each customer to the best of their ability. Along with its internal partners, the department works to provide facilities that are clean, safe, and easy to use.

Goals

Parking and Transportation Services has developed the following major goals, which are needed to further the department's mission and respond to changing realities regarding customer needs and available resources.

Optimize shuttle system to reduce costs

Shuttle bus services are costly to offer, and unit costs are projected to rise in the near future. Shuttle ridership is now just 22% of its peak in 2010, and has been trending downward since that time, following declining student enrollment and accelerated by the commensurate increase in availability of convenient parking options. Student transportation fee revenues, which support the shuttle, also declined by about \$1.7 million over the same period.

Duplication of service currently exists between the Polsky Express route and the METRO DASH route, both of which offer connections between the center of

campus and the Polsky Building. The Polsky Express route should be eliminated and its ridership moved to the DASH. The remaining weekday Roo Express routes could then be combined into a single circulating route with the same service areas that were previously covered. These changes would provide similar levels of service to residents, students living in adjoining neighborhoods, and commuters, at reduced cost.

> Improve facilities by conducting deferred maintenance

Significant repairs are needed at the Administrative Services Building (ASB) Parking Deck and the West Campus (Polsky) Parking Deck. A feasibility study to determine the recommended scope of repairs is in progress for the ASB Deck, and another will commence for the Polsky Deck upon its completion (reference page 20 for additional details). Deferred maintenance, primarily for concrete conditions, expansion joints and waterproofing membrane, will also need to be performed on the other parking decks in the near future. All parking decks need to be thoroughly power-washed and restriped, while some also need to be repainted.

A long-term goal would be to have a consulting engineer should be brought in on retainer to provide annual recommendations regarding deck maintenance and repair.

Additional resources must also be allocated for the maintenance and repair of UA's 50 surface parking lots, most of which have asphalt pavement. Several lots need to be resurfaced, while many need to be patched and sealed. Ohio winters make asphalt maintenance a continual challenge, so this is not a one-time project, but more needs to be spent on surface lot maintenance on an annual basis.

Improve parking lot safety and security by installing additional cameras

Cameras are not a perfect solution to parking lot safety and security challenges, but they can function as a deterrent to unwanted behaviour and can assist law enforcement in identifying individuals and/or thwarting patterns of criminal activity. At a minimum, cameras increase the perception of safety.

Parking and Transportation Services has installed cameras in the South Campus Parking Deck that cover all ingress/egress points, as well as those of the nearby Exchange Street Parking Deck. A small number of cameras has also been deployed to the North Campus Parking Deck, which focus of secure areas or areas which have been a problem in the past. Building mounted cameras also

provide views of several surface lots, particularly those around InfoCision Stadium and some residence halls.

The current strategy of camera deployment and placement for parking decks and surface lots should be expanded to offer additional coverage areas in the near future.

➤ Improve customer service and grow revenue by investing in parking technology and equipment

Much of the equipment and technology used by Parking and Transportation Services is antiquated and in need of updating. While requiring an initial investment, upgrades to parking technology would not only greatly improve customer experience, but would also lead to increased revenue in many cases. This is detailed for the four most significant potential upgrades listed below.

Electronic permitting

Physical parking permits are no longer needed for modern parking enforcement. Parking access can be sold online and controlled granularly by parking lot, day of the week, time of day, etc. This information can be updated and accessible to parking attendants in real-time, so that it is always clear if a vehicle is parked properly.

Electronic permitting is more convenient for the customer since the access is immediate and there is no hang-tag to obtain or lose. It is cost effective because it eliminates both the production and distribution costs of the hang-tags.

• Electronic event parking sales, with an online prepayment option

Electronic permitting systems can also be used for special event parking operations, allowing customers the option to prepay online with a credit card instead of being required to pay cash at entry. This technology can also speed up the process of filling a parking lot prior to an event vis-a-vis a typical cash-at-entry process.

License plate recognition (LPR) enforcement technology

Integral to electronic permitting systems is LPR-based enforcement technology. The reason that modern parking systems do not require parking permits is that LPR technology makes checking the parking

privileges of each vehicle incredibly efficient. Lot attendants simply have to drive an LPR-equipped vehicle through the lot and any vehicles lacking the proper permissions automatically trigger the generation of a parking citation.

LPR technology would enable much more thorough coverage of campus parking lots, and would significantly increase the number of violations caught and citations written, without additional enforcement staff.

 Electronic parking meters/pay stations with pay-by-cell or credit card options

Hourly visitor parking is currently offered through the attended Visitor Lot underneath Robertson Dining Hall, and through numerous mechanical parking meters spread throughout campus parking lots. These meters are very old, and only accept quarters. Newer visitor parking technology would allow customers additional payment options such as pay-by-cell or credit card swipe at the meter head. Some of these options would also reset the meter as vehicles leave, eliminating the piggybacking that often occurs when there is extra time left on a meter.

➤ Improve visitor parking by creating visitor/premium gated lots at InfoCision Stadium and in the South Campus Parking Deck

The Robertson Visitor Lot is located at the center of campus and serves its function well for general visits. However, many visitors attend events at InfoCision Stadium or the Jean Hower Taber Student Union, for which this visitor lot is not convenient. This can be remedied by gating off Lot 6 at infoCision Stadium and the lowest level of the South Campus Parking Deck to create two additional visitor/premium lots using the Robertson Visitor Lot model.

This change would bring additional benefits beyond the improvement of visitor parking. Selling a limited amount of access to these gated lots to employees and students would generate additional revenue. Management of Lot 6 for the numerous events at InfoCision Stadium would become much easier and less labor intensive, reducing costs.

Additionally, this change would prevent Lot 6 from being used as a cut-through between Brown Street and Spicer Street. This cut-through traffic often moves at unsafe speeds, primarily because the lot has the look and feel of a roadway (it used to be Union Street and Vine Street before parking was added).

> Expand the bike share program to additional locations

The bike share program has only existed for one year, but is growing in popularity. It is currently run out of two locations: the Parking and Transportation Services Office, and the Student Recreation and Wellness Center. As the program matures, additional locations for bike rental/return will be identified. The program's management software and processes are not easily scalable, and will need to be upgraded/updated before this expansion can occur. A plan is currently in place to work with students of Dr. Shiva Sastry to develop a better management system during the 2018-2019 academic year.

Offer hourly/daily car rentals to students/employees through an automated service that would locate the vehicles on the Akron campus

Many colleges and universities are working with one of several private companies to locate vehicles for hourly/daily rental on their campuses. These services are highly automated, and allow students and employees to easily rent a car online, for as little as an hour at a time, and have it automatically unlocked for them via satelite link at the appointed time. This would provide an additional transportation option for students who do not have a vehicle of their own.

Services

General Parking Services

Many activities of the Parking and Transportation Services department can be considered general parking services, which are offered to students, faculty and staff, and campus visitors. These services include the issuance of parking permits, educating people about parking rules and regulations, patrolling the parking lots for violations and issuing citations, reserving parking spaces for VIP guests, towing/booting cars, providing driving directions, directing traffic within the lots, helping students make a parking/transportation plan that works with their class schedules, helping people find their cars, etc.

The department issues approximately 30,000 permits annually, over half of which are to customers who physically come to the Parking Office. Each year about 17,000 parking citations are written, but many of these are warning tickets under our generous policy toward permit-holders. The vast majority of customers coming to the Parking Office for assistance are looking for help with either a permit or a ticket. These general parking services account for 60% of the work of the front-line customer support staff.

The UAPD is a critical partner when it comes to parking enforcement. They patrol parking areas and occasionally write parking tickets when an obvious or serious infraction has occurred. They direct traffic on roadways while we control traffic within the lots. They assist our customers when the Parking Office is closed, primarily by taking payment for fines and releasing booted/towed vehicles.

Parking and Transportation Services prides itself in how quickly it is able to issue student parking permits during the first week of each semester. Although the line sometimes extends outside of the lobby, it moves very quickly. However, the process could be improved if more students could be nudged into requesting their parking permits online and having them mailed before the beginning of the semester.

> Special Event Parking

The University of Akron has a vibrant campus with some type of event taking place almost every day. Parking and Transportation Services works with event organizers and venues to develop parking and/or transportation plans that are specific for each event. We often control parking lots around the venue to ensure that the event's needs are met, and when appropriate we staff lots to charge attendees from the general public.

Critical campus partners include: Athletics, E.J. Thomas Hall, Student Life, UAPD, PFOC, and Aramark. The first three are critical because of the events that take place in their facilities, while the latter three are fellow service providers for events at any venue. The department works most closely and consistently with the UAPD in the delivery of event services.

The department also controls UA's downtown lots (the Polsky Deck and nearby surface lots) for some events in downtown Akron. Parking fees for Rubber Ducks games generate approximately \$35,000 in revenue annually, and holiday events and summer festivals bring additional income.

Parking and Transportation Services provides event services for large, centrally-planned events like student move-in, Week of Welcome, visitation days, and NSO programs. We also provide services for colleges and departments when it comes to: guest speakers, special lectures, donor events, career fairs, etc.

> Sign Making Services

Signage is a frequent need when it comes to managing parking facilities, and so Parking and Transportation Services has maintained its own sign-making equipment for many years. We make the vast majority of permanent and temporary signage that is found in UA parking lots. Occasionally, the department assists the UAPD, Capital Planning, PFOC, EOHS, or other departments with their signage needs.

Since our signage is produced using cut adhesive vinyl, Parking and Transportation Services also creates the inserts for the blue name plate placards which hang outside of many campus offices.

> Parking Facilities Management

Parking and Transportation Services works closely with Capital Planning and Facilities Management and the Physical Facilities Operations Center (PFOC) for the maintenance and repair of parking lots and decks. The Purchasing Department is also heavily involved in larger projects that are contracted out.

As parking staff work the lots and decks for regular enforcement or event operations they visually inspect the conditions and report any issues to the appropriate people. Many from the campus community also report issues that they see to this department, and these reports are similarly triaged. Regular maintenance issues, such as potholes, plugged drains, burned out lights, and trash are turned over to PFOC Parking Maintenance for resolution. Since maintenance staff were consolidated under PFOC in 2015, communication lines with the trade shops that perform specific repairs have been improved.

Sometimes the facility conditions require significant repairs to be conducted by an outside contractor, and these are reported to Capital Planning so that a project can be created. While Capital Planning manages these projects and does much of the heavy lifting, Parking and Transportation Services provides budget information, design input, controls access during construction, and helps to track progress. We also work to make temporary accommodations for those displaced by any closures, and educate the campus community about these alternatives.

Capital Planning and Parking and Transportation Services agree that facilities management could be improved by hiring an engineering consultant on retainer to provide an annual assessment of parking facilities that would help us to prioritize repairs given budgetary constraints.

> Roo Express Shuttle

The University's critical partner for Roo Express shuttle services is the external shuttle operator, ABM Parking Services (ABM). ABM has been the contracted operator of the shuttle since its inception in 2007, and throughout this time has provided expertise, management support, dispatching, drivers, coordination of maintenance and other services.

The Roo Express shuttle was started during the peak of the New Landscape for Learning initiative, when parking was in short supply due to lots having been taken offline for new buildings while enrollment was growing. One purpose of the shuttle was to help people get to or from campus without a personal vehicle, particularly for the thousands of students living in the neighborhoods adjoining the campus, which also helped to address UA's parking shortage at the time. Another purpose was to facilitate the movement of people around campus, which also addressed the parking shortage by making the more remote parking areas more convenient, as well as making it less likely for students to have to drive from class to class.

Although the Roo Express still serves these valid purposes today, the situation on and around campus has changed greatly since 2007. There is no longer a general shortage of parking spaces, but rather an abundance. Over 500 spaces are available in the East Campus Parking Deck on any given day. More students are living in large private housing facilities located very close to campus, and many choose to walk to and from classes. Annual ridership on the Roo Express is now 192,000 passengers, and this is down from 860,000 passengers in 2010.

At current service levels, the Roo Express is likely to cost \$1 million in FY20. This is not sustainable given declining transportation fee revenue (directly linked to declining enrollment) and the need to conduct costly deferred maintenance on parking facilities. Parking and Transportation Services is developing a plan to align shuttle services with current needs and thereby create efficiencies that reduce costs. This optimization will entail shifting some ridership away from the Roo Express and onto the DASH shuttle.

> DASH Shuttle

The Downtown Akron Shuttle (DASH) is a free shuttle operated by METRO RTA and financially supported by the University of Akron. It began operation in the fall of 2016, and has been renewed since that time as ridership has grown. METRO operates a relatively new fleet of eight (8) large-capacity CNG buses for the DASH service. These bright purple buses are easy to spot, easy to use, and even offer free wifi onboard.

DASH connects UA with many downtown locations, as well as to the Robert K. Pfaff Transit Center, the hub for the rest of METRO's line services. Since UA students and employees receive free transportation on any of METRO's routes within Summit County, DASH represents the critical first or last connection that makes the METROZip program effective and convenient.



A DASH bus waiting at the Robert K. Pfaff Transit Center

Most significantly, the DASH connects the main part of campus with the Polsky Building downtown, which is always a significant transportation need for students, faculty, and staff due to the large number of classes held within that building. Since the DASH meets this critical need and has a lot of extra capacity, it has enabled the shifting of ridership from the Roo Express onto it, and a commensurate reduction in the number of Roo Express buses in operation. Opportunities are being explored for further optimization along these lines.

> METROZip Program

As mentioned above, the METROZip program enables anyone with a valid Zipcard to receive free rides on any of METRO's regular routes throughout Summit County, as well as a \$1 discount on the fare for their North Coast Express line to Cleveland. This cost effective program greatly enhances the transit options available to the campus community.

METROZip represents one step that the University of Akron has taken in order to make the total cost of college attendance more affordable. Some students (and a few employees) regularly rely on this program in order to get to and from UA. This enables them to attend classes without having to maintain a vehicle or pay for insurance or fuel. Furthermore, some resident students who live on campus without a personal vehicle utilize this service to get off campus for various activities like getting to work, shopping and entertainment.

> Bicycling Support Services

Bicycling is a form of transportation that is growing in popularity, due to its cost-effectiveness, positive impact on health, and sustainability. Parking and Transportation Services helps to facilitate biking on campus in two primary ways: providing and maintaining bike racks and storage lockers where students, employees, and visitors can lock up their bikes, and through the free campus bike share program managed in conjunction with the Student Recreation and Wellness Center (SRWC).

The campus bike share is a program that allows students and employees to enjoy free daily bike rentals. Customers can check out and return bikes at the Parking Office in the North Campus Parking Deck, or at the SRWC. Bikes do not have to be returned to the same location at which they were checked out. Customers simply sign a waiver upon rental, and are given a bike, tamper-resistant bike lock, and helmet to use for the remainder of the day.

With the proximity to campus of the Towpath Trail, as well as cycle-friendly improvements that have been made or are being planned for nearby City roadways, biking is becoming an ever more important mode of transportation for the campus community. Parking and Transportation Services and the SRWC are working with Dr. Shiva Sastry to improve the software used to manage this program, so that it will be scalable and permit expansion to additional locations.

Resources

Parking and Transportation Services is an auxiliary that is funded primarily by transportation and permit fees, and does not receive support from the General Fund. Years of declining enrollment, often coupled with fixed and/or rising costs, have presented ongoing resource challenges. Staffing reductions and the realignment of maintenance personnel with the Physical Facilities group have created efficiencies and reduced labor costs. The transit system has also been optimized numerous times in

order to maintain most service levels while reducing operating costs. Some facilities maintenance has been deferred, but repair projects will be necessary for several parking decks in the near future.

> Personnel

The responsibilities of Parking and Transportation Services are carried out by eight employees, seven full-time and one part-time. This is approximately 40% of the size the department was in 2011, under its previous Director. Staff reductions since that time have meant a repeated shuffling of duties and increased workload for everyone. The department has managed these transitions well, and its employees continue to work diligently to ensure its success. This is also true of the numerous student assistants employed by Parking and Transportation Services, on whom the department heavily relies.

The following table shows the title, key functions, and number of employees in each position.

Title	Key Functions	#
Director	Develops budget and tracks spending Determines departmental policy/processes Transit system design and development Supervision of personnel Deck/lot repair planning and coordination Planning and operations for large events and special services IT support and development for parking systems Special projects/new initiatives	1
Assistant Director	Assists budget development and tracking Pays invoices Supervision of personnel Transit system design and development Management of transportation services Planning and operations for large events and special services Special projects/new initiatives Departmental Hiring Processing Manager for full and part time staff	1

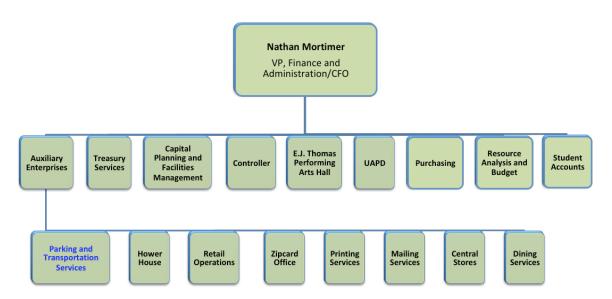
	Occasional coverage of office functions	
Administrative Secretary	Opens the office Processes daily cash deposits and journals Oversees office functions and student assistants Hiring student assistants for the office Answers phones and responds to customer needs Issues permits Creates requisitions, orders supplies	1
Office Support Specialist	Providing guidance to student assistants Backup for daily cash deposits Answers phones and responds to customer needs Issues permits Scheduling special Roo Express services Updating DoubleMap shuttle routing Customer invoicing and payment tracking Records management Closes the office	1
Coordinator of Parking Facilities	Parking enforcement (ticketing, booting, towing, etc.) Supervision and scheduling of student lot attendants Hiring student assistants for field operations and event services Event planning and operations Lot setup & recovery (cones/rope, barricades, bag parking meters, etc.) Coordination on maintenance issues Purchases equipment	3*
Parking Maintenance Worker (PT - 25 hours/week)	Maintains mechanical parking meters Collects/deposits coins from parking meters Assists with sign-making	1
TOTAL		8

^{*} Only 2 of these 3 Coordinator of Parking Facilities positions is currently filled. A search is underway to fill the 3rd position.

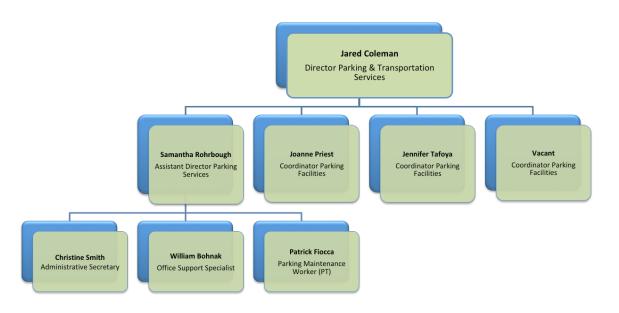
Organizational Charts

Parking and Transportation Services is an auxiliary department within the Division of Finance and Administration. The following organizational charts show where the department fits into the division's structure, as well as the internal organization of the department.

Division of Finance and Administration Org Chart



Parking and Transportation Services Org Chart



> Financials

The following table presents the past five (5) years of Parking and Transportation Services' actual revenues and expenses, along with the budget for FY '19. Note that figures for FY '18 are projections since final closing numbers have not yet been provided. All figures are in U.S. dollars (\$).

Item	Actual FY '14	Actual FY '15	Actual FY '16	Actual FY '17	Projected FY '18	Budget FY '19
Revenue						
Student Permits/Fees	7,311,583	7,372,171	7,182,337	6,827,674	6,221,081	6,080,705
Employee Permits	504,664	506,169	486,721	456,070	336,809	325,000
Employee Co-payments	317,797	297,470	271,360	250,328	241,137	228,000
Fines	196,785	116,278	94,254	98,422	73,455	70,000
Rent	193,993	141,754	165,116	142,746	142,354	141,996
Visitor Parking	267,033	281,093	222,910	192,442	141,041	138,000
Special Events	228,795	207,163	154,874	206,165	195,363	195,000
Misc.	0	44,431	29,683	50,385	51,111	36,000
Transfer-In	80,982	1,453,454	12,300	6,995	0	1,600,000
Total Revenue	9,106,087	10,426,248	8,626,763	8,238,888	7,409,551	8,821,901
Expenses						
Staff	494,438	569,910	326,738	244,546	219,253	262,185

Overtime	19,456	20,107	11,280	4,562	4,017	4,000
Student Asst.	155,516	155,209	158,773	186,981	186,536	189,200
Grad. Asst.	16,470	17,834	20,758	20,679	2,535	0
Fringes	228,676	219,051	162,290	126,400	119,313	107,416
Supplies/Ser vices	2,392,123	2,459,774	2,199,722	1,909,771	2,033,870	2,376,800
Insurance	4,771	0	4,384	5,318	0	0
Utilities	350,711	425,870	456,271	308,363	329,784	340,572
Overhead	541,857	538,368	0	0	0	0
Debt Service	4,460,917	4,499,533	4,435,800	4,448,450	4,462,235	4,479,528
Communicati ons	16,518	16,454	9,867	11,037	9,933	10,200
Travel	216,850	156,462	104,780	53,515	51,429	52,000
Plant Funds	60,861	596,155	0	0	0	0
Transfer-Out	1,453,454	12,300	6,995	20,000	0	1,000,000
Total Expenses	10,413,850	9,687,029	7,897,656	7,339,621	7,616,661	8,821,901
Net Surplus (Deficit)	(1,307,763)	739,219	729,107	899,267	(207,110)	0
Beginning Balance	1,111,636	(196,127)	543,092	1,272,199	2,171,466	1,964,356
Ending Balance	(196,127)	543,092	1,272,199	2,171,466	1,964,356	1,964,356

Noteworthy Facts and Trends

1. Debt Service

Parking and Transportation Services makes almost \$4.5 million in debt service payments annually, for debt related to past parking deck construction or renovation. This fixed cost represents over 60% of its annual revenues.

2. Student Transportation Fees

Student transportation fees make up over 80% of Parking and Transportation Services' annual revenue. Revenue from student fees has been in steady decline since 2010, and is now \$1.7 million less than it was at that time, mostly due to declining enrollment. This trend has put significant pressure on the department's budget.

Parking and Transportation Services has managed this change primarily through reductions in expenses, and was able to run surpluses and add to its fund balance through 2017. Expenses finally outstripped these falling revenues in 2018, resulting in a loss of about \$200,000. Unless the negative enrollment trend can be reversed, further expense reductions will be needed in the near future for the department's financials to be sustainable.

3. Payroll

The "Staff" and "Fringes" budget lines have been reduced by over \$400,000 since they peaked in 2015. A portion of these expenses shifted over to the "Supplies/Services" line when PFOC took over management of the Parking Maintenance group, and now the department funds maintenance activities through PFOC chargebacks rather than directly through payroll. Beyond the realignment of the Parking Maintenance group, however, an additional two (2) full-time and seven (7) part-time positions have been eliminated within the department since 2015. Current staffing levels are appropriate given the department's budget and responsibilities. Further staff reductions are not possible without a significant impact on services.

4. Transit Expenses

The largest cost-savings in recent years has come from changes to the University's transit system: the Roo Express shuttle and METRO RTA's contracted services. Ridership and cost data from the Roo Express shuttle operation has been reviewed annually in order to optimize shuttle routes

for the preservation of service levels at reduced cost. The following table shows the cost breakdown for the Roo Express shuttle and METRO's transit services for the past five (5) years, and demonstrates that these efforts at cost control have been very successful.

Year	ABM Cost	Fuel Cost	Maintenance Cost	METRO Cost	Total Cost
2013-14	1,226,339	210,377	323,728	n/a	1,669,444
2014-15	1,129,052	152,885	284,288	100,000	1,723,718
2015-16	1,123,171	101,063	254,214	100,000	1,582,482
2016-17	664,952	48,184	132,417	350,000	1,195,553
2017-18	659,472	52,798	118,946	350,000	1,181,216

The \$337,000 decline in transit expenses which occurred in 2016-17 was due to a new contract having been reached with METRO RTA for the DASH shuttle. The DASH serves some of the same campus locations as the Roo Express, so its inception enabled the elimination of one main Roo Express route and shifting of some of this ridership to the DASH. This contract with METRO RTA has been a critical part of the department's response to significantly declining revenue, and should be continued.

5. Deferred Maintenance

The University of Akron's parking decks are generally in good condition, but some deferred maintenance will need to be conducted in the very near future. Having just completed (July '18) a waterproofing project in which the expansion joints and upper-level drains were replaced in the Schrank Parking Deck, two additional deck repair projects loom on the immediate horizon - for the Administrative Services Building (ASB) Parking Deck and the West Campus (Polsky) Parking Deck.

ASB Deck Repairs

The ASB Parking Deck has been closed indefinitely due to the significant deterioration of the concrete surface and structure. Design flaws, stemming from before the University acquired this

facility, have hampered past attempts to correct problems with this deck.

The University has engaged DESMAN, engineering consultants with extensive experience working with UA's parking decks, to conduct a feasibility study in order to determine the best course of action. Since repairs are going to be very costly, and the small number of parking spaces contained within this deck are not critical, DESMAN has been asked to provide multiple options, ranging from full renovation to demolition. Their report is expected in August '18.

Polsky Deck Repairs

If the University is pleased with DESMAN's feasibility study for the ASB Deck, then they will also be enlisted to conduct a feasibility study for the Polsky Deck. This deck is also experiencing concrete deterioration, primarily on the rooftop slab, but also on the lower levels. It is likely that some amount of expansion joint and/or waterproofing membrane replacement will be part of this repair project. Although the scope and timing of the project have yet to be determined, this will be an expensive project that has to be completed in the near future.

> Equipment, and Technology

Parking Meters

UA is currently using old mechanical parking meters, which were purchased in bulk very cheaply. They are a cost-effective means of making spaces available to visitors while generating revenue, and they work well with relatively low maintenance. However, these meters lack some of the functionality and convenience features of modern equipment. For example, they only take quarters rather than also accepting credit card payments. Several better solutions are available, from new digital meter heads and/or multi-space pay stations to pay-by-cell services that would incorporate the existing meters. Parking and Transportation Services has set a goal to upgrade to new visitor parking technology when space in the budget permits such an investment, and will continue to monitor the state of this technology until that time.

Gate Equipment

The only gate equipment currently in use is in the Robertson Parking Deck, for both the Visitor Lot and the Administrative Lot. The gates themselves are relatively newer 3M gates which still look good and function well. However, the "ticket-spitter" box for the Visitor Lot needs to be replaced. The card reader system for the Administrative Lot is an older technology that utilizes a magnetic card. This functions well but would be more convenient if converted into a Zipcard reader. Such an investment only makes sense, however, if additional lots were being gated off and a single access system were needed. See the 'Goals' section of this document regarding future possibilities for new visitor parking areas.

Enforcement System

Parking and Transportation Services currently uses the enforcement portion of a parking management system called iParq. iParq leases to UA the handheld devices (Android phones) and belt printers used to write parking tickets, and provides a hosted software solution for the database and interfaces. Although iParq has the ability to issue and manage parking permits within the same system, UA does not currently utilize this feature due to the added costs that would either be incurred or passed along to our customers.

As mentioned in the Goals section above, UA should move to a license plate recognition (LPR) based system in the future, when the budget allows for this investment. This would reduce expenses by allowing a transition to a permitless system, and increase revenue through additional fine payments, while also increasing convenience for customers.

Micros POS

Micros HMS 9700 is the point-of-sale-system that has been adopted by all of Auxiliary Enterprises, and is used throughout the University. This system works very well on the front end at time of sale. It is limited in terms of searching and reporting, such that some customer information has to be cross-referenced with the permitting or enforcement systems in order to resolve disputes or process refunds. However, the Micros POS system is sufficient for the department's current needs.

Permit/Fee System

Parking permits are managed by a system that was developed by Director Jared Coleman in conjunction with the Webteam. It contains multiple online parking permit applications, a MySQL database (on the platform), management web pages, and a plethora of backend scripts that handle everything from permit assignments to student fee adjustments and employee payroll deductions. This system generally works well, but should be replaced in the future by a solution that integrates LPR-based enforcement and permitless parking, as discussed above.

DoubleMap GPS

All Roo Express and DASH buses are equipped with GPS transponders which allow their locations to be displayed in real time. The DoubleMap app also allows customers to see next arrival-time estimates by stop, as well as a host of other routing information. This system provides extremely useful information to customers, especially students. It allows them to time their arrival to a bus stop so they do not miss a bus or have a long wait. This is particularly useful during inclement weather, when no one wants to wait outside very long. The DoubleMap system works well and is easy to both manage and use.

> Space

Parking and Transportation Services currently has sufficient space with which to conduct its operations. The department's two main spaces are both located within the North Campus Parking Deck: the main office suite on Level 2, and the maintenance and sign shop on Level 1. Several equipment storage rooms are also maintained in other parking decks.

Our external partner for Roo Express shuttle operations, ABM Parking Services, has been assigned space in Quaker Square for a dispatch office. This has been important to the operation because of the ability to park several buses in the nearby parking lot, as well as proximity to both north campus and downtown.

Future Plans

Parking and Transportation Services is continually looking for new and better ways to deliver quality services and reduce costs. Many of these potential improvements have already been described in this report.

The department's most pressing need is to stabilize the budget. Turning around the University's downward enrollment trend and stabilizing student transportation fee revenue would be the ideal solution, but this is beyond the department's control. Eventually, employee parking permit fees should be brought to parity with student parking rates, but this would have to be negotiated with employee unions and timed appropriately. Little room exists for ancillary revenue growth in the short term, given the capabilities of our current equipment and technology. This is especially true for visitor parking and fine collection revenue. Special event parking rates can be increased, and have been in some cases like for UA football games, but demand elasticity must be considered so that actual revenue is not unintentionally reduced. In the short-term, the budget will have to be addressed primarily through further expense reductions.

As shown in this document, Parking and Transportation Services has already significantly reduced expenses to keep them in line with falling revenues. The two largest cuts have been to the transit system and the department's payroll. No further room for reduction exists in the case of the latter, but the former can be further optimized. The department is currently developing plans to do just this. A first step may be eliminating the Polsky Express shuttle route, and shifting that ridership onto the DASH instead. Conversations are in progress with METRO RTA regarding adjustments to the DASH Route that would mitigate the downside to such a change.

Improving the budgetary outlook is crucial because of the investments that are needed in facility maintenance, as well as the equipment and technology used to control and manage these facilities. Large projects will be necessary to fix the ASB and Polsky parking decks. Additional, unforeseen repairs will be needed in coming years to the concrete, expansion joints, and membrane of other parking decks. Parking areas located near InfoCision Stadium and the Student Union should be gated off to create additional visitor and premium parking and increase revenue. A permitless enforcement system based on LPR technology will improve customer service and increase revenue, but also requires significant investment. Parking deck maintenance must take priority over these other investments, however, and in particular the situation with the ASB and Polsky Decks must first be addressed.

In the 2018-2019 year, Parking and Transportation Services plans to move forward with: the installation of additional security cameras, the development of a better software solution for managing the bike share program, and establishing a contract for hourly/daily car rentals on the Akron campus. Discussions will continue with METRO RTA regarding updates to the DASH shuttle that will make reductions to Roo Express services easier for the campus to absorb. The impact on parking and shuttle services of the new Five-Star Fridays scheduling model will be tracked throughout the fall and spring semesters, so that any necessary adjustments can be made.