

Parking and Fleet Management

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INTRODUCTION

The contemporary University campus in the United States has parking, congestion and transportation problems that also face many cities. A large mobile population, including students, visitors, faculty, maintenance and support groups, is exploring campuses daily. The land allocated to a University cannot accommodate all the parking facilities required to service campus users. Universities have to invent strategies to manage traffic and parking, discourage frequent car trips and provide convenient and safe transportation options. The case studies presented below are a review of some examples of University parking and transportation management that creatively meets the transportation needs of commuters and on-campus residents.

CASE STUDIES

Ohio State University, Columbus, OH

Enrollment Statistics

Undergraduate	43,993
Graduate	10,218
Professional students	3,060
Total (Columbus campus)	48,477

Parking permit rates

Main campus	\$172 per year
West campus	\$61.20 per year
Proximity permit	\$387.97 per year

Parking Programs

A Car Free Columbus Day is observed on April 24.

Mass transit is provided by the Central Ohio Transit Authority (COTA) and the Campus Area Bus Service (CABS) (CABS includes also an Overnight courtesy shuttle and Weekend Courtesy Shuttle). OSU enforces the use of more peripheral parking situated outside the traditional campus centers. Peripheral parking passes can be 4 times cheaper than the central campus parking permits. Parking areas outside the campus center have more parking spaces available.

Carpool Special permits are available and can be used by any member of the carpool group.

Motorcycle parking

A motorcycle permit costs \$5 per year. Motorcycles must park in two-wheeled spaces from 5:00 am to 4:00 pm. From 4:00 pm to 2:00 am they can park in any parking space available. Motorcycles can park at metered parking spaces but cannot park in any parking garages.

Visitor parking

Visitors can purchase a visitor permit or park in a pay facility. One-day permit is \$3 and it is valid only for surface parking. Visitors can also purchase prepaid parking coupons. The coupons are \$40 for one book of 10 coupons. They are valid for surface and pay facility parking.

Late night/ Overnight parking

Students, dorm residents or commuters, faculty and staff with a valid parking permit can park their car on Central campus from 4:00 pm to 2:00 am Friday-Monday.

Undergraduate dorm students are required to store their car on the West Campus Parking lot overnight. (2:00 am – 5:00 am) The parking is located approximately 1 mile from North campus. West Campus Parking lot has continuous bus service, patrol and security cameras. Dorm residents cannot park overnight in a campus-parking garage.

Graduate dorm residents can acquire an overnight Proximity permit or park on the West Campus Parking Lot. Proximity permits can be used at parking lots generally located near student residences.

Overnight dorm guests can stay not longer than 24 h. They would pay regular fees. A visitor permit is required for longer visits.

Faculty and staff extended parking is available for seven days. Special arrangements are required for extended parking longer than seven days.

Parking objectives

- Establish suitable pedestrian and bicycle access to campus facilities
- Research possible additional peripheral parking
- Create ride sharing programs
- Increase parking permit fees
- Establish a parking program for the residential and commercial areas within the University district to relieve parking and traffic problems
- Provide on- and off-street parking based on the neighborhood needs
- Encourage students to use long term parking facilities (off-street parking facilities away from the campus core to facilitate warehouse parking)
- Devote on-street parking for commercial short-term use
- Expand the off-street parking through new parking structures and improved use of existing structures

University of Illinois, Urbana-Champaign, IL

Enrollment Statistics	
Undergraduate	27, 889
Graduate and professional	8,849
Total	36, 738

Parking Permit Rates	
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Student permits 2003	Employee permits
Fall/Spring - \$290 per year; \$145 per semester	Faculty/Staff - \$345 per year
Summer - \$70	2 nd /3 rd shift - \$75 per year
Shuttle - \$80 (nonrefundable/nontransferable)	2-6 am - \$ 28 per year
Motorcycle - \$28 (designated parking)	Shuttle - \$ 80 per year

Bicycle - free	Motorcycle - \$28 (designated parking)
Mass Transit District bus - free	Bicycle, Mass Transit District bus- free

Parking Programs

□ **Contractor permits**

Contractors can rent parking permits daily, weekly and monthly (\$6, \$24, and \$70 respectively). Meter-use tags can be obtained for \$6 a day. Contractors can also use the University shuttle (\$80 per Shuttle Pass per year) or make arrangements to “bag” certain meters (\$10 per day) for contractor use.

□ **Daily Parking**

Visitors primarily use metered parking. Housing visitors can obtain housing visitor permits that are valid only on specific lots. Shuttle transportation from the housing parking lots to campus is available.

□ **Cash Key-** programmable key that allows metered parking.

The key costs \$ 15, it can be programmed for \$10-\$100 value. (besides the initial \$15)The cash key can be used in combination with coins.



Daily Meters use **hangtag/permit** for individuals or departments (The hangtag is valid at any university meter except the red short-term meters. When using the hang tag the month date and year needs to be scratched off. The cost is \$6 each.)



State Vehicles/ Motor Pool

The Motor Pool Office provides vehicles to University employees and authorized students/student organizations Monday through Friday 8:00 am - 5:00 pm. The charges for the vehicles are 26 cents per mile for fleet cars and 28 cents per mile for vans. In August 2001 the fleet acquired a 1992 electrical Ford Escort. The recycled research Ford hybrid used by the University was converted to an electrical vehicle in 1993 by a team of students.

University of Minnesota, Twin cities

Enrollment Statistics	
Undergraduate	27, 699
Graduate and professional	10, 298
Total	46, 734

Parking Permit Rates	
Hourly meters	\$1.25 /hour
Daily lots	\$3.25 /day
Carpool lots	\$1.75

Bike Lockers	\$6.25 /month; \$75 /year		
	24-hour Contract	Nights Only	Other
Lots	\$55 /month	\$27.50 /month	
Ramps	\$82.50 /month	\$55 /month	
Garages	\$110 /month	\$73 /month	
Student Remote Contract Area			\$27.50 /month
Official Vehicles			\$51.50 /month- Surface \$76.75 /month- Ramp

Parking Programs

Campus public parking options

- Hourly rate facilities and meters
- Daily rate facilities (charge a flat fee for the entire day)
- Off-peak parking (charge a flat fee for parking in the early morning and late afternoon)
- Special event parking (some facilities charge a higher rate starting 2 hours prior to a scheduled event)
- Free night and weekend parking (weekdays: 8am-8pm)
- Each student is charged a mandatory \$10 transportation tuition fee.

Student Parking contracts

- 24 hour parking contracts (Reserved parking spot 24 h a day, seven days a week.)
- Late evening and weekend contracts (First come, first serve basis.)
- Residence Hall parking contract (Distributed through a residence hall lottery, limited parking spaces per residence. Once reserved, each space is available 24 h a day, seven days per week). Students who do not get a residence parking space can participate in the commuter parking space lottery. Commuter permits range \$200-\$400 per semester.

State Vehicles/ Motor Pool

Two new gas-electric Toyota Prius hybrid vehicles are available at the rental pool of the University of Minnesota. The University fleet also operates 70 vehicles that run on E-85 (85% ethanol and 15% gas), partially sponsored by the Council of Great Lakes Governors Biomass Program. The University has its own E-85 pump.

Arizona State University, Tempe, AZ
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Enrollment Statistics	
Undergraduate	36, 802
Graduate and professional	10, 557
Total	47, 359

Parking Permit Rates	
Parking structure/Lot	\$210- \$125-\$60

Student Disabled	\$ 125
Faculty/Staff Disabled	\$ 210
Motorcycle	\$ 60

Parking Programs

Weekday 7 am –4 pm	Parking decals reflecting the lot number are required to park on campus.
Weekday 4 pm- 7pm	People holding decals for the Main ASU campus can park on any parking lot. (except for motorcycles)
Weekday after 7 pm and any time on non-event weekend	Parking is allowed anywhere but at Residence and Restricted lots.

Residential permits

Students residing in ASU’s housing must display a residential decal. These decals do not grant permission to park in other campus areas before 7pm. Housing visitors can park in housing visitor areas while displaying a temporarily housing permit.

Parking garages

Garages require parking permits or pay parking 7 am – 12 am Monday through Friday. Some garage permits are Radio Frequency Identification Tags. The tags allow the user to park only in the designated garage during the hours of enforcement. The tags are multi-year permits and they must be returned to the University upon termination.

Retiree permits

These permits are issued at no charge to retired employee. Parking is restricted only to a specific zone.

Temporary disabled permits

These permits are issued free of charge to people holding a regular parking permit and are valid for three weeks. All others have to pay a daily fee for the temporary permit.

Faculty/Staff

Faculty or staff that do not have an Arizona license plate are not allowed to purchase a regular decal. They can obtain a temporary weekly \$10 decal.

Visiting faculty members without Arizona license plate who do not get paid by ASU can obtain a regular parking permit after proof of compliance with Arizona’s emission standards.

Benefits eligible Faculty can select a Payroll deduction option for the decal purchase.

Faculty leaving on Sabbatical must contact the Decal Sales in order to make arrangements about the decal return.

Shuttle Bus/ Visitor Parking

The shuttle provides service between ASU Main, Mesa Community College and ASU East. The cost of a ride is \$2. A book of 10 tickets can be purchased for \$ 15.

Visitors of ASU can park on designated visitor parking areas. There are also visitor spaces with 20 min time limit. Those spaces are on first-come, first-serve basis.

State Vehicles/ Motor pool

Every department wishing to acquire a state vehicle must contact the Arizona State University Fleet Service Manager to initiate the procedure.

State and Federal laws require a large portion of the state vehicles to operate on cleaner alternative fuels. Periodic emission inspections are instituted through the University fleet.

The ASU motor pool provides vehicles to faculty, staff and students for strictly university business. Departmentally owned vehicles have a door logo that indicates the department they belong to. The vehicles are available for paid daily rental, long-term rental and lease. The fleet service dispatcher advises the people who will travel in the same direction to carpool.

Michigan State University, MI

Enrollment Statistics

Undergraduate	18, 002
Graduate and professional	3, 040
Professional	586
Total	21, 992

Parking Permit Rates

Student Parking Permit	\$55-\$110 /year
After hours parking permit-Graduate students (3pm-5am)	\$42 /year
One-day Parking Permits	\$4 /day
Metered parking	\$1 /hour
Event Public parking	\$15 and \$10 per spot
Event Disabled parking (includes a shuttle ride from the parking lot to the stadium)	\$10

Parking Programs

Student parking on campus

Parking permits are required on all vehicles parked on campus 7am-6pm Monday through Friday. After 6pm all parking is free. All students must register their vehicle with the Department of Police and Public safety regardless of whether they live on or off campus if they want to drive on campus. Bicycle registration for two years is free. Students need to have at least 20 credit hours to apply for a parking permit. The availability of parking permits are guaranteed for seniors and juniors. Validator permit is a reduced permit for a second vehicle allowing the owner to park on campus only one of the vehicles at a time.

Faculty/Staff

Departments can lease reserved parking spaces with department funds for the purpose of visits, people movement or vendors.

Shuttle Bus/ Visitor Parking

- Campus visitors must park at meters or gated hourly pay lots. Students with registered vehicles may use the gated hourly pay lots at a discounted rate. Residence hall visitors can purchase a permit for \$5.
- Permits for the visitors of MSU's Museum can be purchased at the Museum store for \$1. The permits are valid at the visitor spaces of the museum for 2 hours.
- Students and faculty are encouraged to use the CATA bus service (Capital Area Transportation).

State Vehicles/Motor Pool

The State of Michigan passed a resolution supporting the use of plant based motor oil. Michigan State University is testing the new oil products in some of their state vehicles.

University of California, Davis

Enrollment Statistics

Undergraduate	22,079
Graduate	3,406
Total	28,236

Parking Permit Rates

General permits	\$37-\$46
Carpool permits	\$8-\$16 /month
Vanpool Permits	\$25 /month
Night Permit	\$19 /month
Summer Session Permits	\$66-\$79
Visitor permit	\$6 /day (can be purchased from a permit dispensing machine)

Parking Programs

Parking permits are required on all vehicles parked on campus 7am-10pm (Sept. 15th –June 15th) and 7am-5pm (June 16th-Sept. 14th) Monday through Friday.

- Freshman** students are not allowed to buy a parking permit. This rule was initiated the fall semester of 2002. Students with special circumstances can appeal the rule. If the appeal is approved the student can receive a parking permit for a specific lot only.
- "Stack" program** provides parking attendants that park cars in aisles of already-full lots to expand lot capacity during peak winter demand.

State Vehicles/ Motor Pool

More clean-fuel vehicles will be added to the university's automotive fleet (new compressed natural gas fueling facility will be available to supply the vehicles).



Recently, Nissan provided 15 Hypermini electric cars to UC Davis as a part of a consumer response study. Employees will use the cars for a variety of purposes on campus and in the city of Davis. After that they will record their impression of the interior conditions, speed, comfort, safety, charging convenience, and usefulness compared to walking or cycling. The bus fleet of the school already has clean fuel vehicles.

Carlink

The program is a proposed smart car sharing service. A fleet of vehicles would be available for a short term use. “Smart” technologies will monitor, reserve and collect payments.

Emory University, Atlanta, GA

Enrollment Statistics	
Undergraduate	6, 316
Graduate and professional	5, 037
Total	11, 353

Parking Permit Rates	
Student Permits	\$336 /year
Temporary students, who are not registered	\$28 /month
Faculty/Staff Permits	\$244-\$1000 /year; \$20.33-\$83.33 / month

Parking Programs

Specialty Hangtags

The hangtags are issued to University employees using their personal vehicles for official business or to authorized university vendors.

Student Hangtags

Issued to students living off-campus, fraternity houses, sorority lodges and some Residential Centers. The hangtags allow students to park on campus in designated areas only.

Housing parking

Freshman students at Emory University are not permitted to park on campus. Others can obtain a housing parking permit after registering their vehicle with the Emory Parking Office. Some residence halls have specific parking lots designated for housing parking, others allow parking in campus parking garages. Every vehicle driven on campus must be registered with the Parking Office.

State Vehicles/ Motor Pool

Currently, daily maintenance and parking enforcement in Emory is conducted using 40 low speed electric vehicles and two electric pickup trucks. Emory University has also purchased ten compressed natural gas (CNG) shuttles. The shuttles refuel with a FuelNet card from a station owned by the city of Atlanta. In addition, the school is expecting 15 electric buses to arrive to campus.



An electrical Toyota was donated to the President of Emory University.

Emory University received a grant from the US Department of Energy along with Georgia Power and Clean Cities Atlanta through the Georgia Environmental Facilities Authority in 2000. Emory University used their grant portion of \$ 225, 000 to construct a charging parking deck for electrical vehicles. Georgia Power and Clean Cities Atlanta installed charging stations on the parking deck. In addition, 50 more stations will be installed for electrical car users that might be on campus or just passing though. The 50 additional stations can support over 100 electrical vehicles.

Th!nk city cars

Th!nk city car is a Ford Motor Company electric car. The cost to run the car is about \$1 a day. Th!nk city meets all US crash standards. It is freeway legal and has a range of 53 miles under ideal conditions. The car can reach over 60 mph and recharges in 4-6 hours. Th!nk city retails for \$20,000 but the price can drop below \$15,000 after state and federal rebates.

Emory University employees will be able to reserve the Th!nk cars via internet and access them with a smart card or PIN number. Emory will lease the vehicles from Georgia Power for \$500 a month. The rental price may be reduced by state and government tax credits. Global Positioning System and mileage limit will prevent possible theft.

Future Campus Improvements

Many campus roads are repaved with bricks to create the atmosphere of an urban pedestrian park. In the future, roads used by the new vehicles will be designated for electrical vehicles use only.

Stanford University, Palo Alto, CA

Enrollment Statistics

Undergraduate students	6,606
Graduate students	8,243
Total	14,849

Parking Programs

- Beginning in the Fall of 2000, freshman will not be allowed to have cars on campus
- Parking fees are raised 15% annually
- Stanford University contracts with Enterprise Rent-A-Car. The University provides inexpensive campus space for the Rental service; in return the students 18 or older can rent a car and get an affordable promotional rate. Vehicles are covered by student's personal insurance. Stanford risk management assists students who have no auto insurance. It is cheaper for the students to rent a car for three quarters of the weekend of the academic year than to pay the full price to store a car on campus.

University of Iowa, Iowa city

Enrollment Statistics

Undergraduate	18,713
Graduate	9,309
Total	28,022

Parking Permit Rates

	Commuter	Storage	Night	Other
Student permits (9 months)	\$135 \$1.50 /per day	\$207 \$2 /per day	\$152	Motorcycle-\$34 Park card-\$10, \$25, \$50
Law student permit				\$51 / month
Faculty/Staff permits (month)	\$15		Garage-\$34 Surface-\$17	Garage reserved-\$51 Surface reserved-\$34 Motorcycle-\$51 /per year
Meters/ per hour	Public-\$.75, Student-\$.50, Hooded meters-\$13.50 /per day			
Buss Passes / per semester	Subsidised-\$50, Discounted-\$80, Faculty Buss Pass-\$10-\$23			

Parking Programs

Student permits

Students who do not own a car can purchase the Iowa City Student Semester Bus Pass. Students that use a car on campus can obtain a Bus Pass based on the kind of decal they have. Decals available to students are: Day permit, Night permit, Commuter permit, Hawkeye storage permit, Law permit, and Motorcycle Permit. Students can use a prepaid Park Card at all university cashiered parking facilities. The Park Card can be credited with \$10, \$25 or \$50 value payable in person or through U-Bill student accounts (for amounts >\$10). Students with Park Cards pay a reduced rate at cashiered facilities.

- The Day permit is free. It is available to registered students who do not live on campus.
- The Night permit (4:30 pm-8:30 am) is available to registered students and students residing on campus if they do not hold any other than a motorcycle permit.
- Commuter permits are first available to students living outside the Iowa city/Coralville metro limits.
- The Hawkeye permit is available to students residing in UI Residence Halls or UI Family Housing. It provides access to a remote parking facility 24-hours/day, 7 days/week along with free campus shuttle access. This permit cannot be used at student-designated meters.
- Law permits are available to law students who do not live on campus.
- Motorcycle permits are purchased by students who operate a motorcycle or a moped on campus. In addition, students can obtain a Park card and use it at campus meters and ramps.

Faculty permits

Faculty/staff holding day permits and/or vanpool assignment can obtain a Buss Pass for \$23 /per month. Other faculty and staff can obtain the same permit for \$10 /per month. Faculty and staff can also take

advantage of a multitude of night and free hangtag parking on campus after 4:30 pm. Departments also offer a Business Placard that works as a phone card at metered parking and other areas on campus.

CONCLUSION

Many universities have discovered that the way to manage traffic, congestion and parking, while creating a pleasant environment, is to provide adequate transportation and parking restriction systems. Freshman are sometimes not allowed to bring a vehicle to campus. They are encouraged to live on campus and use the University's facilities while adjusting to the first year of college. Everyone is required to display a decal to park on campus during working hours. Extensive transportation systems, shuttles, bicycle facilities, carpools and motor pools are available to students and faculty as an alternative to driving.

The Universities are committed not only to efficient transportation but also to a healthy environment. Many Universities use the state vehicles and motor pools to test hybrid cars and systems. Electric vehicles also receive exposure in campus environments. Recognizing the effects of pollution, schools are encouraging alternative cars and fuels.

Summary Table

School	Enrollment	Restricted Freshman Parking	Limited Student Resident Parking	Alternative Fuel Vehicles in the Fleet	Visitor Parking	Departmental Parking	Unique Progr.
University of Florida	46,885	N	N	Y 1electric car	Meter	State Vehicle Designated Spaces	NA
Ohio State University	48,477	N	Y ¹	N Research state	Visitor Permit; Meter; Prepaid Parking Coupons	Faculty and Staff extended parking (7days and more)	NA
University of Illinois	36,738	Y Designated Freshman Parking lots	Y-need Housing decal ⁴	Y 2 electric cars	Meter; Hangtag Permit ³	Hangtag Permit at meters in visitor designated lots	Cash Key
University of Minnesota	46,734	Y-Lottery Parking permit distribution	Y-Limited parking contracts and lottery	Y 2 gas-electric hybrid vehicles	Meter; Parking reservation by a Department	Parking reservation service is available	NA
Arizona State University	47,359	NA	Y Residential permits ⁴	Y use of cleaner alternative fuels	Meters; All day temporary permits	Motor pool; State Vehicles	Retiree Parking Permits
Michigan State University	41,545	Y- students with 20 credit hours are eligible	Y- students need to apply for a space in a storage lot	N-The campus fleet is testing plant based motor oil.	Meters; Gated hourly pay lots	Departments can lease reserved spaces	NA
University of California, Davis	28,236	Y ²	NA	Y- 15 Hypermini electric cars-consumer response study	Meter; All-day permits (permit dispensing machine ³)	Meter; Parking Permits	Carlink-proposed smart car sharing service
Emory University	11,353	Y ²	Y ⁴	Y-electrical vehicles (42)	Valet parking Visitor parking	NA	Th!nk cars
Stanford University	14,849	Y ²	NA	NA	NA	NA	Rental Program
University of Iowa	28,022	N	Y ⁴	N Research state	Meter; Park cards	Business Placard; Van pool	Park Cards

Notes:

¹-Undergraduate

²-Freshman can not park on campus

³-Visitors invited by UIS are not required to pay for parking

⁴ Parking is allowed only in designated parking lots

N- No

Y-Yes

NA – Not available

References

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