



MEMORANDUM

TO: Mayor Laurel Prussing
Members, Urbana City Council

FROM: William R. Gray, Public Works Director
N. Patrick Pioletti, Facilities Manager

DATE: February 19, 2009

RE: Parking Study Update

Introduction

In November of 2008, the Urbana City Council accepted the Downtown Parking Study as complete. The Council also asked staff to pursue an implementation plan for the recommendations contained therein. This update will provide a snapshot of the planning efforts to do so to date.

Background

The completed parking study contained recommendations of high, medium, and lower priorities (a copy of the recommendations summary is attached). Staff from Public Works, Community Development, Police, and Finance reviewed these recommendations specifically and re-ordered them using the same priority scale. This re-ordering was necessary based upon real conditions such as budget and ability to implement.

High Priority Recommendations

Parking Duration – Staff supports maintaining our current policy of locating short term metered spaces near the businesses that need them rather than moving them to the ends of the blocks as Rich and Associates suggest. We will continue to add very short term spaces as needs arise in an effort to be responsive to and supportive of downtown businesses. The addition of longer term on-street metered spaces (up to 8 hours) will occur as demand dictates.

Sign Program – Discussion of this recommendation led to indentifying a larger need for wayfinding in the downtown area. This recommendation is tied very closely to the marketing study. Staff will prepare a budget recommendation for FY0910 to develop a new signage program for the downtown area.

Marketing – Staff is working on developing a scope for a marketing effort for downtown Urbana. The costs will be presented with the signage program referenced above.

Handheld Ticket Writers – (upgraded from medium priority to high) Money to replace the existing ticket writing equipment is budgeted for the current fiscal year. Staffs from the Police and Finance Departments are well into the selection process at this point. This new equipment will help us to monitor cars parked inappropriately downtown by recording license plate numbers. Even though a car may be parked legally in the sense of having paid time on a meter, current enforcement policies allow someone to stay in a 2 hour space (for example) for as long as they want if the meter is paid. This is contrary to providing meters of varying durations to force turnover. Identification of cars in this manner will help us to direct people to appropriate parking locations and will help us to evaluate the extent of reported problems related to long term users “feeding the meters” at short term parking locations along West Main Street in order to best identify proper solutions and perhaps avoid more punitive measures such as time zone enforcement.

Courtesy Ticket – (upgraded from medium priority to high) Implementation of this recommendation is tied to acquisition of the new ticket writing equipment. Once the new equipment is in place, courtesy tickets can be issued for first offenses for meter overtime in the downtown area. Implementation of this recommendation also ties in with enforcement personnel acting as ambassadors to visitors to and patrons of the downtown area. Issuing courtesy tickets may reduce overall ticket revenue, but such a reduction would be offset with implementation of the fine structure outlined below under Graded Fines.

Rich and Associates also critiqued our ticket collection rate, recommending an increase in collections to at least 85%. Since there may be several ways to accomplish this goal, a specific recommendation from staff will be forthcoming at a future date.

Graded Fines – (upgraded from medium priority to high) Implementation of this recommendation, as in the case of the courtesy ticket, is tied to the acquisition of new ticket writing equipment. Over the course of several discussions, staff concluded that the graded fines as proposed by Rich and Associates would not fit the business friendly image that Urbana tries to maintain downtown. However, with the advent of the courtesy ticket, staff also felt that current fines do not provide a sufficient deterrent. To address this situation, a new fine structure will be proposed for the downtown area timed with the implementation of courtesy tickets. Initial violations will be free. Repeat violations will be \$5.00 and will double to \$10.00 if not paid within 72 hours. No specific graded fine program as Rich and Associates recommended is being proposed at this time.

Safety and Security – (upgraded from medium priority to high) The safety of our customers and citizens walking to and from parking areas at night is a concern we have heard and take seriously. Further, given Urbana’s commitment to sustainability, staff has been considering lighting upgrades in parking facilities for some time. Accomplishing this recommendation will require a study of all lighting fixtures and controls by type and location. Funding to do so will be proposed during the upcoming budget process.

Existing Parking Facility and Equipment – (upgraded from low priority to high) Staff had already identified the existing equipment for replacement including the ticket spitters, gates, and fee computer. Funding is available now however, no replacement was pursued until the parking study and the analysis of the deck were completed. The RFP process for replacement of the equipment is set to commence soon. Further, other areas/items identified besides equipment in the study as needing attention are being addressed.

Medium Priority Recommendations

Angled Parking – The Engineering staff developed a list of criteria to use in analyzing the advisability of converting existing parallel parking on-street in the downtown area to angled parking. (A copy of that analysis is attached) These criteria include average daily traffic of less than 3000 cars, 25 mph posted speed limit, not a bus route, and minimum street widths from curb face to curb face. Based upon these minimum standards, the only streets that meet the criteria are Walnut Street between Main Street and Water Street and Water Street between Vine Street and Broadway Avenue. Under such a change, walnut Street would also convert to one way. Rich and Associates recommended converting Broadway Avenue but it does not meet the safety criteria.

Lower Priority Recommendations

Privately Developed Parking/Fee in Lieu – (downgraded from medium priority to low) Staff felt that the amount of new development occurring in the downtown area would not warrant a change like this. Currently the CBD is zero lot line zoning which does not require any off-street parking. This zoning allows a developer to build out to the property lines (i.e. not provide for on-site parking) and look to the city to provide appropriate parking.

Provision of parking is currently negotiated as a part of development agreements on a case by case basis. If, in the future, a number of new development projects are proposed concurrently, a pooled or in-lieu fee can be explored at that time.

Bicycle Parking/Enhancements - Staff drafted a brochure to help developers and businesses make good decisions regarding installation of bicycle parking (copy attached). This brochure shows images of acceptable and unacceptable bike rack types and also lists good practices for placement of racks. In addition, the zoning ordinance was recently amended to improve bicycle parking requirements as suggested by BPAC.

There are currently 181 bicycle parking spaces in Downtown Urbana, with plans to add more in the parking deck, at The Market, and in Lot 1. However, many of the current bicycle racks have an inadequate "front-wheel-in-slot" design in which the bicycle cannot be properly locked unless the bicycle is parked broadside. The City will use the newly developed bicycle parking brochure guidelines to ensure proper rack type and placement. All future bicycle rack installations on City right-of-way will include racks that meet the City's new requirements.

Pedestrian Activity – While no specific improvement projects are identified presently (other than the previously described signage/wayfinding effort), this is a popular topic of conversation at various meetings from both a safety and aesthetic point of view.

Enforcement Vehicles – Hybrid vehicles were purchased for the parking enforcement staff before the parking study became final. No further purchases are anticipated at this time.

New Parking – No modifications from Rich and Associates recommendation.

Fiscal Impact

Figures for the costs of undertaking the signage, marketing, and lighting efforts will be available soon and will be subsequently presented to the City Council for discussion and prioritization of funding alternatives. Since there is no identified funding source for the costs of implementing these programs a revenue source recommendation may be forth coming as well.



CITY OF URBANA, ILLINOIS
DEPARTMENT OF PUBLIC WORKS

ENGINEERING

MEMORANDUM

TO: Pat Pioletti

FROM: Engineering Staff (WRJ, GLJ, JLS, JJS)

DATE: January 22, 2009

RE: Angled parking

Introduction

Per the City's recent Downtown Parking Study, engineering staff researched and discussed angled parking on City streets. Specifically, staff reviewed two articles from the Institute of Transportation Engineers Journal – *Angle Parking Issues Revisited, 2001* and *Changing On-Street Parallel Parking to Angle Parking*. Staff also reviewed historical documents. Information from the researched documents is quoted and summarized below.

Angle parking issues revisited, 2001

Institute of Transportation Engineers. ITE Journal, March 2002 by Box, Paul C

Bulleted items are direct quotes from the journal article.

- Current findings substantiate earlier work. When curb parking is allowed, parallel is much safer than angle on a mileage basis for local collector and major routes and creates far less interference with traffic flow.
- The largest detail study of curb-parking accidents to date was Safety Aspects of Curb Parking, which gathered accident and other data on over 170 miles of local, collector and major urban streets in nine cities in five states. A summary of this project appeared in a Transportation Research Board (TRB) paper. Part of the FHWA project was a survey sent to 205 city and urban county traffic engineers, plus all 50 state traffic engineers. There were 119 city and 42 state replies relative to angle-parking practices. Numerous city traffic engineers indicated strong opposition to angle parking-many indicated that such existing parking predated their employment. Only 5 percent identified a trend to add angle parking in retail areas, while 1 percent saw such a trend for industrial areas and 2 percent in residential areas. None of the state traffic engineers planned any new angle parking.

City responses included:

* "...we have a very strong policy against any on-street angle parking..."

* "...the existing head-in parking, which has been reduced to date to not more than five city blocks total, has been in existence prior to an ordinance passed by the City Council in 1952 prohibiting other than parallel parking. We feel that any manner of head-in parking which requires backing into the through traffic lanes of a public street for maneuvering is a hazard to traffic flow and safety.

States also reported strong feelings such as:

* New Jersey officials stated, "Accident analysis along roadways where angle parking is being practiced has shown the rate of accidents to be higher in all cases and, in some instances, three times as great as a similar location with parallel parking....Of particular interest to cities was their statement, "Another fact that should be considered by municipal officials is that in the event of an accident involving vehicles at a location where angle parking is not approved (by the State), municipal officials could in some way be considered as contributing to the accident."

* Wyoming officials identified a policy that the state requires parallel parking on all streets they maintain that have parking.

* Michigan policy prohibited angle parking on all major streets eligible for reimbursement of funds from state gas or weight taxes.

* Idaho required a complete supportive study, with no angle parking for average daily traffic (ADT) over 8,000, even if street width was over 80 feet (ft.). For widths of 60 to 80 ft. and ADT over 2,000, angle parking was not allowed, nor width under 60 ft. for any ADT.

- In Clarendon Hills, Illinois, a small suburb of Chicago, 60 percent of all parked-car accidents were found to be related to angle parking on a few streets. Low-activity angle parking for commuters near a rail station had an annual rate of only three accidents per 100 spaces. Higher-turnover angle locations next to retail had a rate of 22. By comparison, high-turnover retail streets with parallel parking had a rate of only eight, or about one-third as much.
- In the Naperville, Illinois central business district (CBD), approximately 1.1 curb miles of retail frontage curb parking were studied. On a curb mile basis, the angle-parking rate is about three times that of parallel parking.
- In Laramie, Wyoming a study was made of parking operations on 21 blocks of the CBD, before and after changes were made. These included replacement of parallel parking with angle layout. On one street, parking accidents increased 225 percent.

- In Mesa, Arizona for any land use, collector streets with angle parking had rates two to three times the rates of those with parallel parking.
- In Scottsdale, Arizona streets with angle parking had accident rates from 1.5 to 3 times those for streets having parallel parking. The predominate type of angle-parking accident was the unparking maneuver (64 percent).
- Conclusion: When curb parking must be allowed, as it typically is on most local and many collector streets, then the parallel type is substantially safer than angle.

Changing On-Street Parallel Parking to Angle Parking

Institute of Transportation Engineers. ITE Journal, February 2002 by Edwards, John D

Bulleted items are direct quotes from the journal article.

- Arterial streets with through traffic as the predominant movement are not good candidates, because a substantial number of operators may be strangers to the area.¹
- For angle parking in a business area, a typical minimum width to consider is 60 ft. curb-to-curb with two parking lanes and two driving lanes. In reality, a more comfortable minimum dimension is 68 to 70 ft. (two 18-foot parking lanes, two 16-foot driving lanes).²
- Streets with traffic volumes over 10,000 to 12,000 vehicles per day will rarely allow angle parking, due to the disruption of the traffic flow caused by parking maneuvers. Angle-parking maneuvers on streets less than 40 ft. wide will disrupt flow, creating congestion. If angle parking is interjected into streets with volumes in excess of 10,000 vehicles per day, parallel alternate routes should be designed.³
- Angle-parking maneuvers dictate lower operating speeds due to the limited sight distance involved in unparking from an angle-parking space. Therefore, posted and operating speeds must be lower. Posted speeds of 25 mph or less should be considered for streets with angle parking.⁴
- The primary reason to convert from parallel to angle parking is to increase on-street parking availability; however, in downtowns where a surplus of parking exists, there is little reason to implement angle parking. Frequently, an area that appears to lack short-term parking is simply an area where enforcement activity is low and long-term parkers are using on-street parking spaces.
- The introduction of angle parking will substantially reduce capacity on a street.

- In most traditional downtowns, transit operations are present on many of the downtown streets. In the conversion of parallel to angle parking, the presence of transit operations should be considered. This may affect transit operations in several ways: (1) It may increase route time due to additional congestion; (2) it may make the conversion of parallel to angle parking on narrow street widths unfeasible; and (3) the presence of transit stops may reduce the number of potential additional spaces that might be gained with angle parking.⁵

1 – Main Street is an arterial street.

2 – Main Street between Race Street and Broadway Avenue is 62 feet wide.

3 – The ADT on Main Street is 10,000.

4 – The posted speed limit on Main Street is 30 mph

5 – Main Street is a bus route between Race Street and Broadway Avenue.

However, from the same journal article.....

- With the struggle to revitalize traditional downtowns, there is a need to provide more convenient on-street parking in retail districts to support economic restructuring. In this feature, the first in a series on parking, the author summarizes the reasons why one should consider changing parallel on-street parking to angle on-street parking and the traffic and parking conditions under which such a change can be made.
- Shoppers using traditional downtowns expect to be able to park in front of their destination or be able to at least see the destination, while shoppers at suburban shopping centers are willing to park at substantial distances from their primary destination and walk. Studies of average walking distances for shopping trips show longer walking distances for shopping centers than the central business district, especially for cities under a population of 500,000, yet the perception by shoppers is that parking is more convenient in shopping centers as compared to traditional downtowns.
- Another consideration related to parking angle is the time needed to park and unpark. It is reported that the average time for a "back-in" maneuver for a parallel space is 21 seconds, while the time for a "drive-in" or "back-in" maneuver for an angled space is only 11 to 12 seconds; thus parallel parking has the greatest potential for delaying traffic.
- One of the reasons for introducing angle parking is to provide a wider "buffer" between sidewalks and driving lanes. A parallel-parking lane provides 8 to 9 ft. of buffer, while an angle-parking lane provides 18 to 20 ft. This increased buffer results in reduced vehicle splash, reduced noise, reduced fumes and improved perception of safety for the pedestrian.
- As stated earlier, angle parking is usually associated with somewhat higher accident rates. While this may be statistically true, one must be careful not to overemphasize the accident potential because those accidents that do occur are likely to be minor in nature.

- Hickory, North Carolina, a city of 36,000 in the foothills of the Blue Ridge Mountains, had an ambitious program of parallel to angle parking conversions in 1999. Three street segments in the downtown area were converted, resulting in a 15 percent increase in parking. The local streets involved had daily traffic volumes of 2,000 to 5,000 vehicles per day. The wide streets and abutting retail uses made this an ideal situation for conversion. Accident rates have not changed and operating speeds were reduced to 22 mph.
- Main Street in Greenville, South Carolina carried over 12,000 vehicles per day and was a four-lane street with two lanes of parallel parking. The conversion was made to a two-lane street with angle parking with a curb width of 68 to 70 ft. as a part of a streetscape and a major redevelopment project in downtown that included a major hotel, office building, parking garage and conference center. Traffic volumes on Main Street decreased after implementation to 5,000 to 8,000 vehicles per day. Accident frequency is very low (less than 20 per year) in the eight mid-block sections of the project. More importantly, retail sales, building assessments and tax collections have soared. Greenville has a healthy downtown again.

A Major Street and Highway Plan for the Champaign-Urbana Urbana Area

In addition to reviewing the ITE Journals cited above, we researched historical documents. In August of 1960, Harland Bartholomew & Associates prepared *A Major Street and Highway Plan for the Champaign-Urbana Urbana Area*. The following paragraph comes from page 95 of this document.

The diagonal parking now permitted on Springfield-Main Street from Cedar to Bennett Avenue presents a severe potential accident hazard to vehicular traffic. In addition, it causes excessive delay to traffic movements through that area. The provision of an adequate circulation system around the central business area could relieve Springfield-Main Street of much of its existing volumes. If such relief is not provided soon, it will be necessary to remove diagonal parking in order to adequately accommodate the increasing traffic volumes. Adequate off-street parking facilities are available within two blocks distance from the central section of the business district; thus the removal of diagonal parking would not present a severe reduction in parking space availability. Parallel parking could, of course, be retained.

Conclusion

So, as asked in the *Changing On-Street Parallel Parking to Angle Parking* journal article, what is the answer for the traffic engineer/transportation planner? On one hand, there is the opportunity to increase convenient parking at little cost for the downtown retail district. On the other hand, there is a likely increase in congestion and a possible increase in accidents for that street segment that is the candidate for change. Or, it is likely that drivers will seek alternate routes, reducing exposure of the businesses?

Based on the research performed, engineering staff believes that angled parking is a possibility on City Streets. However, we do not feel it is appropriate on all streets. Therefore, staff developed the following minimum standards for streets if angled parking will be allowed on that street:

- ✓ ADT < 3,000
- ✓ 25 mph posted speed limit
- ✓ Not a bus route
- ✓ Minimum street widths:
 - 60' for 2 angled parking lanes (18' each) & 2 driving lanes (12' each)
 - 50' for 1 angled parking lane (18'), 2 driving lanes (12' each) & 1 parallel parking lane (12')
 - 42' for 1 angled parking lane (18') & 2 driving lanes (12' each)
 - 36' for angled parking on one side of a one-way street (18' + 14')

In Downtown Urbana, the only streets that meet these criteria are:

- Walnut Street between Vine Street and Water Street
- Water Street between Vine Street and Broadway Avenue

Main Street between Race Street and Vine Street is not recommended for angled parking because it does not meet the criteria listed above.

Table 1A: Recommendations Summary

| High Priority: (Recommendations that should be undertaken as soon as possible) | | |
|---|--|------------------------------------|
| Recommendation | Budget Amount | Agency Responsible |
| Parking Duration | None | Public Works |
| Sign Program | Budget \$200,000 (one time) | Public Works |
| Marketing | Budget \$7,500 per year | Community Development/Public Works |
| Enforcement Personnel | Budget \$55,000 per additional officer | Police Department |

| Medium Priority: (Items that are needed, but can wait until high priority recommendations are enacted) | | |
|---|---|--------------------------------|
| Recommendation | Budget Amount | Agency Responsible |
| Angled Parking | \$25,000 per block face + \$200 per stall | Public Works |
| Handheld ticket writers | Budget \$35,000 | Police Department |
| Courtesy Ticket | None | Police Department |
| Ticket Collections | None | Police Department/Finance |
| Graded Fines | None | Police Department/Finance |
| Privately Developed Parking/Fee in Lieu | None | Planning/Community Development |
| Safety & Security (Lighting) | Budget \$25,000 | Public Works |

| Lower Priority: (Items that are less urgent and can wait pending budget availability) | | |
|--|------------------------|------------------------------------|
| Recommendation | Budget Amount | Agency Responsible |
| Existing Parking Facility & Equipment | \$55,000 to \$75,000 | Public Works |
| Bicycle Parking/Enhancements | None | Community Development/Public Works |
| Pedestrian Activity | \$172,000 per crossing | Public Works |
| Enforcement Vehicles (already acquired/on-going) | Budget \$40,000 | Police Department |
| New Parking | \$9,000,000 | Public Works/Community Development |
| Existing Parking Structure | None at present | Public Works |



Bicycle Parking Manufacturers

American Bicycle Security

www.ameribike.com
800-245-3723

Bike Up

www.bikeup.com
800-661-3506

Creative Metalworks

www.creativemetalworksllc.com
888-BIKE RAX

Creative Pipe

www.creativepipe.com
800-644-8467

cycle-safe

www.cyclesafe.com
888-950-6531

Dero

www.dero.com
800-891-9298

Dobra Design

www.dobradesign.com
888-642-3722

Function First Bike Security

www.bikerack.com
800-BIKE RIB

Huntco Supply

www.huntco.com
800-547-5909

Madrax

www.madrax.com
800-448-7931

Palmer Group

www.bikeparking.com
888-764-2453

Saris Cycling Group

www.saris.com
800-783-7257

The Park Catalog

www.theparkcatalog.com
888-447-2401

Thank you for your commitment to providing secure and adequate bicycle parking at your business. Your investment in bicycle parking lets people know that you welcome them and their bikes.



See Section VIII-7. Bicycle Parking of the Urbana Zoning Ordinance for additional information regarding bicycle parking.



City of Urbana
Department of Public Works

706 South Glover Avenue
Urbana, IL 61802

Phone: 217-384-2387

Fax: 217-384-2400

City of Urbana Bicycle Parking Guidelines



August 2008

The Rack

The rack should:

- 🚲 Accept U-shaped locks and cables.
- 🚲 Allow the cyclist to easily lock the bike frame and one wheel to the rack.
- 🚲 Prevent the wheel of the bicycle from tipping over.
- 🚲 Be usable by a bike with no kickstand.
- 🚲 Be anchored to the surface so that it cannot be stolen with bikes attached.

Acceptable Designs



Unacceptable Designs

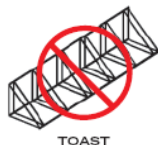
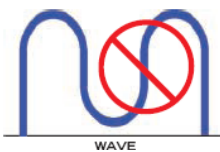


Image Source: FHWA

The Location

The location should:

- 🚲 Be convenient to the building entrance it serves, preferably within 50 ft.
- 🚲 Be easily spotted upon arrival to the building it serves. A high visibility location discourages theft and vandalism.
- 🚲 Be spaced far enough away from walls and other obstacles. Can a bicycle maneuver in and out even when other bikes are parked?
- 🚲 Provide a minimum 4 ft of sidewalk clearance when a bicycle is parked at the rack.
- 🚲 Where possible, be installed under an existing awning or overhang to protect bikes from inclement weather.
- 🚲 Be well lit to discourage theft and vandalism and to help prevent accidents.
- 🚲 Be separated from the vehicle parking by a physical barrier to prevent parked bicycles from being damaged by motor vehicles.
- 🚲 Be distributed to serve all buildings or main entrances.



The Placement

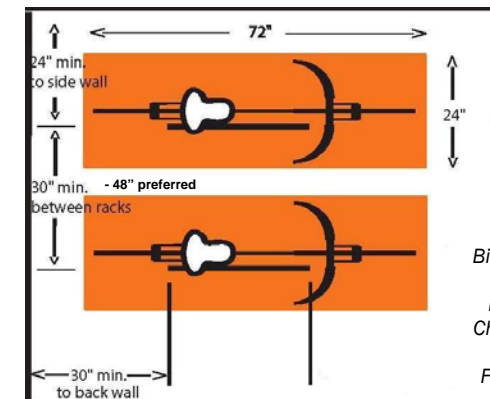
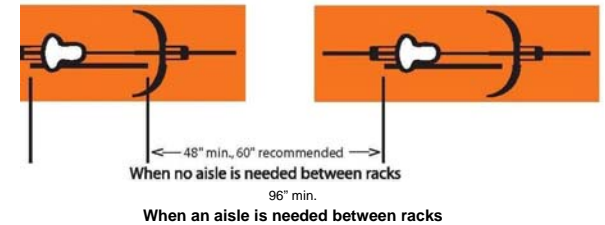


Image Source: Bike Parking for Your Business Chicagoland Bicycle Federation

The City encourages the use of bicycles as a logical alternative to the automobile for access to local amenities. In fact, one of the City Council's common goals is to "Get Urbana Bicycling."

Bicycling provides for the public health and well being of Urbana's citizens, contributes to good air quality and reduces congestion.

The provision of secure bicycle parking is a necessary part of the City's bicycle network, allowing people to use their bikes for transportation and reducing parking in undesirable places.