



***Bicycle Parking in Downtown Lawrence Inventory
Summer 2010***

Introduction

The last downtown bicycle parking inventory was conducted in 2001 by the KU Transportation Center in coordination with the Bicycle Advisory Committee (BAC). The report provided a better understanding of the state of bicycle facilities in Downtown Lawrence. The BAC made recommendations to improve the quantity and quality of bicycle parking in downtown and their labors have been fruitful, yet further parking facilities may be necessary in certain locations. This inventory examines the amount, types and locations of existing bicycle parking in downtown. It also provides some observed recommendations for future improvements based on nationally accepted guidelines for bicycle parking facilities.

Bicycle Parking Guidelines

The American Association of State Highway and Transportation Officials (AASHTO) produced a report in 1999 titled *Guide for the Development of Bicycle Facilities*. The guide provides general guidelines and recommendations for bicycle facilities on and off road. AASHTO defines two fundamental types of bicycle parking: long term and short term. Short term bicycle parking “provides a means of locking the bicycle frame and both wheels, but does not provide accessory and component security or weather protection (unless covered).” This type of facility is intended for parking where the bicycle is visible and convenient to the building entrance. This is the type of bicycle parking provided in Downtown Lawrence. Long term bicycle parking provides a higher degree of protection and security. These facilities are often “lockers, cages or rooms in buildings.” They are generally located where a bicycle would be unattended for long periods of time, such as a residence, employment location or transit station.

AASHTO recommends that bicycle racks be designed so that they meet the following requirements:

- Do not bend wheels or damage other bicycle parts
- Accommodate high security U-shaped bike locks
- Accommodate locks securing the frame and both wheels (preferably without removing the front wheel from the bicycle)
- Do not impede or interfere with pedestrian traffic
- Are easily accessed from the street and protected from motor vehicles
- Are visible to passers-by to promote usage and enhance security
- Are covered where users will leave their bikes for a long time
- Have as few moving parts as possible

The Association of Pedestrian and Bicycle Professionals (APBP) produced a report in 2002 titled *Bicycle Parking Guidelines*. The guide specifically addresses the selection and placement of appropriate bicycle racks for short term parking. The guide suggests the rack elements should:

- Support the bicycle upright by its frame in two places.
- Prevent the wheel of the bicycle from tipping over.
- Enable the frame and one or both wheels to be secured.
- Support bicycles without a diamond-shaped frame with a horizontal top tube.
- Allow front in parking: a U-lock should be able to lock the front wheel and the down tube of an upright bicycle.
- Allow back in parking: a U-lock should be able to lock the rear wheel and seat tube of the bicycle.

The guidelines also recommend that consideration be given to the amount of spacing surrounding bicycle parking. To maximize the efficiency and use of all the available spaces in the lot, each element of the parking facility must be able to accommodate bicyclists coming and going. If the bicyclist finds it too inconvenient to use the rack, they will look for an alternative place to park and reduce the stated capacity of the rack element by half. Proper use of each rack element is fundamental to ensuring the manufactured capacity for parking. The guide also notes that the rack area should be located within 50 feet or 30- second walk of the entrance it serves.

Existing Conditions

Types of Bicycle Parking in Downtown Lawrence

The City of Lawrence does not have bicycle parking design standards; as a result, there is a large variety of bicycle parking facilities found throughout the city and downtown. All of the bicycle facilities found in Downtown Lawrence are classified as short term parking. Each type is defined below and pictured on page 4.

- Inverted U – Shaped like a U but oriented upside down. These racks are generally 36” high and 18’ wide. Each individual U shaped rack element can supports two bicycles.
- Wave – Similar to the Inverted U; however, this rack is continuous and bicycles are parked perpendicular to the rack rather than parallel. Rack capacity is dependent upon rack size.
- Bollard – A single post with an attached oval or circular shape on each side. Each rack element can supports two bicycles.
- Half-H – This rack looks like the lower half of the letter H. Each rack element can support two bicycles.
- Fence– This facility is the typical school yard bicycle rack. It has a comb pattern and provides front wheel support to bicycles. A fence rack requires users to alter sides of the facility every

other slot to reach maximum capacity on each individual rack. Rack capacity is dependent upon rack size.

- Parking Meter Ovals are designed to support one bicycle or two bicycles if cooperatively locked together. They are added to parking meter poles throughout downtown to provide better support for bicycle parking. There are approximately 1,500 parking meters and 15 parking meter ovals in Downtown Lawrence.
- Special-Artistically design racks with contextual significance. The most recent example of this type of rack is the specially designed Ride Lawrence bicycle racks. Rack capacity is dependent upon design.
- Trees, parking meters and other poles are sometimes also used by cyclists to secure their bikes. Use of makeshift facilities can indicate the need for added bicycle parking capacity and/or the need to relocate some bicycle racks in an area. These facilities are not picture below.



Parking
Meter Ovals



Fence



Inverted U



Wave



Half H

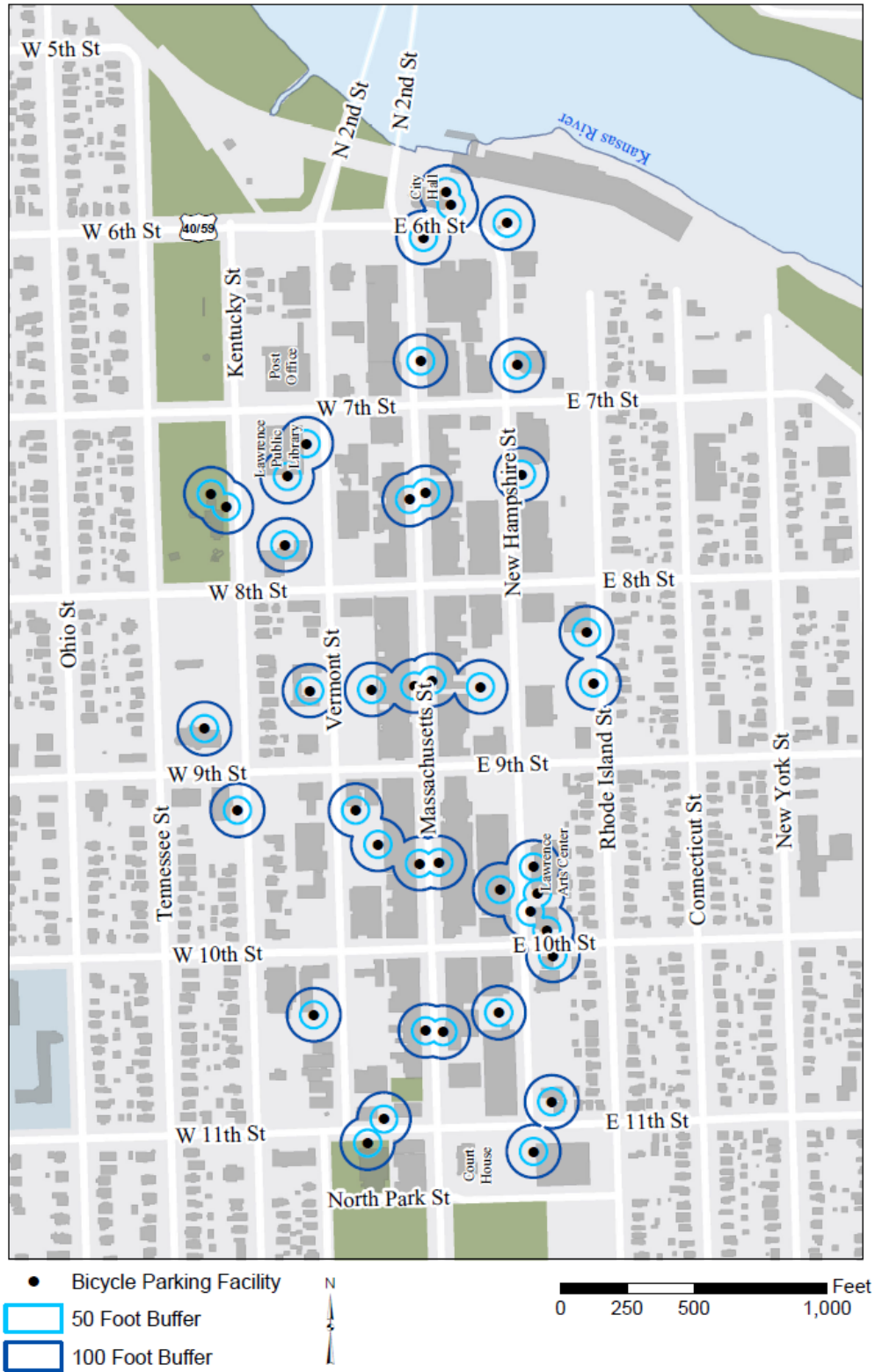


Bollard



Special

Locations of Bicycle Parking in Downtown Lawrence: Downtown Bicycle Parking Map-2010



Capacity of Bicycle Parking in Downtown Lawrence

Location	Address	Type of Rack	Number of Parking Spaces	Rack Condition	Short or Long Term
City Hall Street Level	6 E 6th Street	Inverted U	4	Good	Short
Lower Level Behind City Hall	6 E 6th Street	Half H	10	Good	Short
Parking Lot - south side of City Hall	SE corner, 6th & Mass	Half H	6	Good	Short
Riverfront Parking Garage	1 Riverfront Plaza	Wave	22	Good	Short
Free State Studios	644 New Hampshire Street	Half H	4	Good	Short
Free State Brewery	636 Massachusetts Street	Special	4	Good	Short
Borders Bookstore	700 New Hampshire Street	Bollards	6	Good	Short
Willis	211 East 8th Street	Wave	7	Good	Short
Lawrence Aquatic Center Side Lot	727 Kentucky Street	Fence	18	Average	Short
Lawrence Aquatic Center Crosswalk	727 Kentucky Street	Inverted U	10	Good	Short
Lawrence Public Library South Entrance	707 Vermont Street	Fence	18	Good	Short
Lawrence Public Library East Entrance	707 Vermont Street	Wave	5	Good	Short
Lawrence Public Library East Entrance	707 Vermont Street	Fence	18	Good	Short
Inbetween Storefronts	800 block of Massachusetts	Inverted U	4	Good	Short
Lot 8	800 block of Rhode Island Street	Ride Lawrence	16	Good	Short
Lot 3	800 block of Vermont	Half H	6	Good	Short
Lot 4	800 block of New Hampshire Street (West side of street)	Half H	6	Average	Short
Vermont Street Station	831 Vermont Street	Fence	6	Good	Short
Lawrence Bank	110 East 9th Street	Fence	5	Good	Short
Lawrence Arts Center Front Entrance	940 New Hampshire Street	Special	5	Good	Short
Lawrence Arts Center Side Entrance	940 New Hampshire Street	Fence	12	Good	Short
New Hampshire Street Parking Garage	900 block of New Hampshire	Inverted U	2	Good	Short
Salvation Army 10th St Entrance	946 New Hampshire Street	Half H	6	Good	Short
Salvation Army New Hampshire Street Entrance	946 New Hampshire Street	Half H	6	Good	Short
Lot 5	900 block of Vermont	Half H	3	Damaged*	Short
Wheatfields	904 Vermont Street	Wave	5	Good	Short
901 Building	901 Kentucky	Special	6	Good	Short
Sun Fire Ceramics 10th Street side	1002 New Hampshire Street	Half H	6	Good	Short
1046 New Hampshire Street Offices	1046 New Hampshire Street	Half H	6	Good	Short
Douglas County Law Enforcement	111 East 11th Street	Wave	5	Good	Short
Community Building	115 West 11th Street	Bollards	8	Good	Short
Capitol Federal Savings		Wave	7	Good	Short
Trinity Episcopal Church	1011 Vermont Street	Wave	7	Good	Short
Midblock Improvments	East 700 block of Massachusetts	M	5	Good	Short
Midblock Improvments	West 700 block of Massachusetts	M	3	Good**	Short
Midblock Improvments	East 800 block of Massachusetts	M	5	Good	Short
Midblock Improvments	West 800 block of Massachusetts	M	5	Good	Short
Midblock Improvments	East 900 block of Massachusetts	M	3	Good**	Short
Midblock Improvments	West 900 block of Massachusetts	M	5	Good	Short
Midblock Improvments	East 1000 block of Massachusetts	Inverted U	2	Good	Short
Midblock Improvments	West 1000 block of Massachusetts	Inverted U	2	Good	Short

* should be 6

** should be 5 (newspaper boxes and/or light poles encroach parking space)

Inventory Conducted June 2010

The number of parking spaces calculated for capacity is based upon the manufactured capacity of the rack element. Actual capacity is dependent upon the proper use of the facility by each bicyclist. The count does not include the number of parking meter ovals.

Discussion

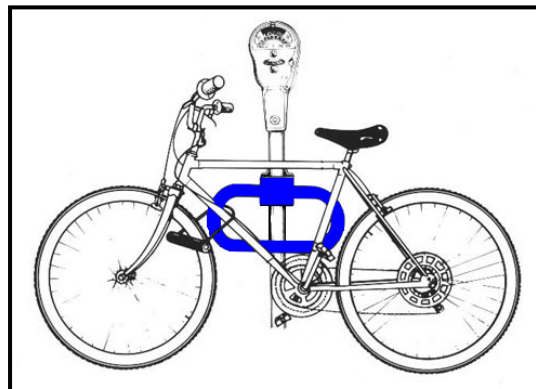
This inventory provides a good basis to assess what bicycle parking facilities currently exist in Downtown

Lawrence. However, due to the number of bicycles regularly found locked to trees and non-designated bicycle facilities, it is apparent that the quantity of bicycle parking to meet the demand may not be located in the areas of highest demand. It is also apparent that Downtown Lawrence is missing long term secure bicycle parking; this will become increasingly demanded as the quantity of housing grows in the downtown area. Based on the observations from this inventory and comments from the Bicycle Advisory Committee, the recommendations to improve bicycle parking in Downtown Lawrence are noted below.

Recommendations for Bicycle Parking in Downtown Lawrence:

- Reconfigure the bicycle parking facilities that are lacking the proper maneuvering space to encourage more use of these facilities and avoid conflicts with other uses nearby (newspaper boxes, trees, light poles, etc.)
- Improve the visibility of short term bicycle parking facilities. Paint the bicycle parking facilities located in Downtown Lawrence a bright blue color to draw attention to them. This would allow the oval parking meter rings to stand out on the parking meter poles. Additional oval rings are the most ideal additional bicycle facility downtown for meter poles not attached to light poles.
- Educate the public about available and legal bicycle parking options. The bicycle rideability map provides a good start to the educational process. Additional features could include placards on meter

Downtown Parking Spaces by Rack Type	
Bollards	14
Fence	84
Half H	67
Inverted U	24
M	26
Ride Lawrence	16
Special	15
Wave	58
Total	304



poles or other objects or additional literature to inform new and experienced bicyclists where they can lock their bicycle.

- Update and enhance the existing bicycle parking standards to reflect more thoughtful planning and adherence to the national standards. The BAC should work with the Planning & Development Services staff to identify parts of the development codes that need revisions to improve bicycle parking. Develop bicycle rack and storage requirements to address design and location. This will promote bicycling by providing spaces that are most ideal for bicyclists to park. This will also aid in a more uniform set of parking facilities throughout the City.
- Develop partnerships with the Lawrence Central Rotary Club in their effort to encourage and grow the volume and placement of bicycle parking in Downtown Lawrence.
- The BAC and City should determine the needs for long-term bicycle parking locations and consider ways to fund and install this parking. Long term parking is needed to encourage bicycling to work, to events and to Downtown in general. It will be increasingly important as more residential units are built Downtown. This could be done through joint public private partnerships in the areas needing this parking. Samples of long term bicycle lockers are pictured at the right. Long term bicycle lockers like those pictured here can be rented and locked to prevent vandalism and theft of the lockers and their contents. This also prevents them from being used in a manner not consistent



Bike to
Work
Bicycle
Locker



Bike
Gard
Bicycle
Locker



Cycle
Works
Bicycle
Locker

with their designed purpose (e.g., trash cans, sleeping spaces, flammables storage bins, etc.). A survey should be conducted to determine ideal and available locations for bicycle locker placement. Long term bicycle parking should be considered in new parking facilities.