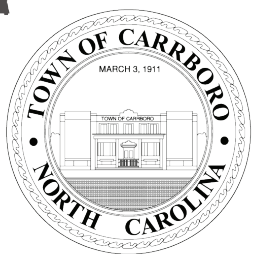




TOWN OF CARRBORO

COMPREHENSIVE BICYCLE TRANSPORTATION PLAN

ADOPTED BY THE BOARD OF ALDERMEN
MARCH 24, 2009



PREPARED FOR:
THE TOWN OF CARRBORO,
NORTH CAROLINA
PREPARED BY:





Fig. 7-57. Bicycle parking wayfinding signage will inform the bicyclist about where facilities exist.



Fig. 7-58. An example of a covered bicycle parking facility.

7.6 Ancillary Features

Bicycle Parking

As more bikeways are constructed and bicycle usage grows, the need for bike parking will climb. Long-term bicycle parking at bus stops and work sites, as well as short-term parking at shopping centers and similar sites, can support bicycling. In addition to providing the venue for parking, bicycle parking wayfinding signage will help provide direction to the facilities. Bicyclists have a significant need for secure long-term parking because bicycles parked for longer periods are more exposed to weather and theft, although adequate long-term parking rarely meets demand.

When choosing bike racks, there are a number of things to keep in mind:

- The rack element (part of the rack that supports the bike) should keep the bike upright by supporting the frame in two places allowing one or both wheels to be secured.
- Install racks so there is enough room between adjacent parked bicycles. If it becomes too difficult for a bicyclist to easily lock their bicycle, they may park it elsewhere and the bicycle capacity is lowered. A row of inverted “U” racks should be installed with 15 inches minimum between racks.
- The inverted “U” shaped bicycle racks are preferential for short term parking due to their efficient use of space, ease of use and security, while bicycle lockers provide

a safe and secure option for long term bicycle parking (Figure 7-61).

- Empty racks should not pose a tripping hazard for visually impaired pedestrians. Position racks out of the walkway’s clear zone.
- When possible, racks should be in a covered area protected from the elements. Long-term parking should always be protected (Figure 7-58).
- For safety and visibility, provide lighting in bicycle parking areas through overhead or bollard lighting fixtures.

For more information on bicycle parking facilities please visit:

<http://www.apbp.org/pdfsanddocs/Resources/Bicycle%20Parking%20Guidelines.pdf>

<http://www.ibike.org/engineering/parking.htm>




Fig. 7-59. Bicycle parking in downtown Carrboro.

THE RACK ELEMENT

Definition: the rack element is the part of the bike rack that supports one bicycle.


The rack element 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 (e.g. a mixte frame)
- 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




Comb, toast, school-yard, and other wheel-bending racks that provide no support for the bicycle frame are NOT recommended.


The rack element should resist being cut or detached using common hand tools, especially those that can be concealed in a backpack. Such tools include bolt cutters, pipe cutters, wrenches, and pry bars.




INVERTED "U"
One rack element supports two bikes.




"A"
One rack element supports two bikes.




POST AND LOOP
One rack element supports two bikes.



COMB
One rack element is a vertical segment of the rack.



WAVE
One rack element is a vertical segment of the rack. (see additional discussion on page 3)



TOAST
One rack element holds one wheel of a bike.

Not recommended

Fig. 7-60. Recommended bicycle parking facilities, Source: APBP. (www.apbp.org)

Bicycle Storage

Bicycle lockers are a crucial component of the bicycle system. They offer safe and secure storage at transit centers and destinations. Parking rates are reasonable at about 3-5 cents per hour. Bicycle lockers are designed to be secure and flexible so that the individual bikes with panniers, computers, lights, etc. can be left on the bike. Some designs of bike lockers can be stacked so there is twice the parking density. Good protection from the weather is another benefit. Bike lockers tend to be used most for long term bicycle commuter parking in area without a lot of continuous oversight. Carrboro's future mixed-use developments (which may include residential use) would benefit from these types of storage facilities.



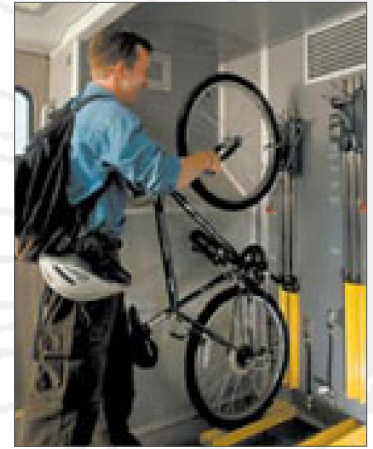
Fig. 7-61. Bicycle locker facility and pay stations offer long-term parking.





Fig. 7-62. Chapel Hill Transit, serving parts of Carrboro, provides racks on the front of their buses.

Fig. 7-63. Examples of integrating bicycle facilities with transit modes.



Bicycle Facilities on Buses

Integrating bicycle facilities with transit modes allows bicyclists to greatly expand their range of travel or “trip chain”. Integration of facilities with transit modes allows cyclists to use their bicycles on one or both ends of their daily commute, allowing greater flexibility. Figure 7-63 shows examples of commuter bus services with customized facilities allowing for simple and secure storage of bicycles without hindering or impeding other passengers. Chapel Hill Transit buses, serving parts of Carrboro, provide racks on the front and should maintain or expand this service to bicyclists.

Affordable and Accessible Bicycle Maintenance

This bicycle repair stand shown in Figure 7-64 is a fixture within the Cambridge, UK, town marketplace. The Carrboro equivalent would be at the farmers’ market which is a center for activity, easily accessible by foot or bicycle. Local bike shops in Carrboro could provide similar services. The presence of smaller-scale operations that primarily provide maintenance and repair functions within semi-permanent structures like the tent and tarp shown below allowing for a lower cost operation, thereby passing on savings to the customer in terms of lower repair and maintenance costs.



Fig 7-64. A bicycle maintenance stands in the UK.

LOADING YOUR BIKE



❶ Let the driver know you will be loading your bike. DO NOT STEP IN FRONT OF THE BUS UNTIL THE DRIVER LETS YOU KNOW IT IS SAFE TO DO SO.



❷ Bikes can only be loaded at the front end of the bus from the curbside and under no circumstances can you bring your bike inside the bus. Also, the driver can't get off the bus to help be he or she can tell you how to use the rack.



❸ Remember, instructions are also posted on the rack itself. It is a three-step process and generally takes no more than 30 seconds.

1. If the rack is folded up, simply pull it down.
2. Lift the bike up and fit it into the rack's wheel wells, which are labeled for the front and rear wheels. If no other bike is on the rack, use the space closest to the bus.
3. After the bike is in the rack, simply lift the support arm up and over the front tire.

This arm should be in contact with the tire, not the fender or any other part of the bike. It is a good idea to make sure the support arm is in place before boarding the bus and don't forget to pay your fare.

Unloading Your Bike



1. When you want to get off the bus, exit by the front door and tell the driver that you must get your bike. Unloading should always be done from the curbside.
2. Raise the support arm off the front tire and lower it to its resting position.
3. Lift your bike out of the rack and place it on the ground. If there is not another bike in the rack, please fold the rack back up. Step away from the bus and back towards the curb, allowing the bus a clear path to merge into moving traffic.

Fig. 7-65. Instructions on how to load a bicycle onto a bus equipped with a bicycle rack, developed for a bicycle user map by Fremont, CA.