



bicycle parking facility manual

ASCOBIKE mauá model

ASCOBIKE + ITDP

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Cyclists in the center of the city of Mauá – São Paulo

introduction

This manual serves as an orientation and an incentive for the creation of bicycle parking facilities in cities; it demonstrates advantages and forms of implementation of bicycle garages near public transportation terminals.

The manual uses the model of the bicycle parking facility created and administered by ASCOBIKE – Association of Bicycle Users of Mauá, in Mauá, Brazil, in the metropolitan region of São Paulo, the largest city in South America. It aims to share this best practice to promote the creation of similar facilities around the world, and increase the use of bicycles as a form of urban transport.

We consider important to encourage the use of bicycles, as it is an ecologically friendly (does not emit pollutants), health-promoting (reduces obesity and traffic deaths and injuries), cost-efficient means of transport that also promotes social equality. Further, the use of bicycles improves the urban environment in general by reducing traffic congestion and sound pollution. For those reasons, in recent years the governments and private sector players from around the world have shown growing interest in creating dependable bicycle parking facilities to encourage bicycle journeys in our cities.

Repressed demand of bicycle users	
2001	200 users / day
2008	1700 users / day



Around the premises of ASCOBIKE





ASCOBIKE Mauá – the biggest bicycle parking garage of the Americas

implementation of bicycle parking facilities

Bicycle garages and bike racks

There are two kinds of bicycle parking facilities. The simplest one consists of a device, also called bike rack [fig. 1]; it can be set into the floor, on the wall or ceiling, in which the bicycles are stored in order and can be locked with a dead bolt or chain, guaranteeing security against thefts. This urban set up, commonly used in Europe, the United States and in Asia, has several formats and can store from one to several bicycles. At ASCOBIKE, metal hooks hold the bicycles in a vertical position. This permits a more efficient use of the space. In addition to utilizing these storage methods, the bicycle parking structure has a supervised entrance offering enhanced security, and offers various services to members.

Why build a bicycle parking facility?

Bicycle parking facilities and bike racks provide great incentives for the use of bicycles as a form of transportation. Furthermore, a prime location where bicycles can be safely, conveniently and comfortably stored gives a sense of dignity to this method of transportation.

Where to implement a bicycle parking facility?

Bicycle parking facilities and bike racks are welcome in public areas and any location that people travel to. [fig. 2]. For example, transportation terminals [fig. 3], commercial buildings, schools, universities, residential areas, hospitals, shopping centers, and grocery stores are some areas that receive many people (clients, staff members, residents, etc.). As such, these individuals would be better able to access their destinations by bicycle if they had high-quality, abundant and affordable parking.





1



2



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How to implement a bicycle parking facility?

The area for a bicycle parking facility is very flexible and can vary according to the number of bicycles and the program of activities proposed by the management of the facility.

The implementation of a bike rack is much simpler, as it only requires the space to shelter a small number of bicycles. For example, a space of 6m² is required to store 5 bicycles.



With the renovations, the bicycle garage acquired infrastructure to lodge up to 2.000 bicycles

the example of ascobike

ASCOBIKE not only take care of bicycles, but also those who ride them.

Adilson Alcantara

A brief history

ASCOBIKE – Association of Bicycle Users – is a non-governmental organization founded in 2001 by the railroad engineer Adilson Alcantara, a staff member of the Metropolitan Trains Company of São Paulo (CPTM). In 2001, Adilson Alcantara occupied the position of station chief and was assigned to find a solution for the many bicycles that were dangerously tied on the fences around the station on a daily basis, making life difficult for the pedestrians and train passengers in the city of Mauá. Adilson's solution involved organizing cyclists into a civil association that would operate bicycle parking facility where bicycles could be stored safely. Adilson requested the CPTM to allow the association to use an empty lot area next to the station and under a pedestrian bridge to establish a bicycle facility. The CPTM granted the space, and ASCOBIKE was born. Since then, the number of bicycle users in the city has increased significantly, and in 2008, the CPTM remodeled the bicycle parking facility in order to adjust its capacity and allow for the growing demand while maintaining the operational standards.

More than a bicycle garage, ASCOBIKE is an instrument that promotes the use of bicycles as an alternative form of transportation for the residents of the city of Mauá and is becoming a reference, a "best practice" for similar facilities in Brazil, Latin America, and around the world. The association promotes the use of bicycles as a sustainable form of transportation as it is cost-efficient, socially reasonable and eco-friendly.

In addition to safely storing bicycles, the association offers a variety of services to each user: female and male restrooms, loan and maintenance of bicycles, coffee and water, legal support and customer service.

The bicycle facility, that began with approximately 200 bicycles, today attends to 1,700 users daily and is the largest bicycle garage in the Americas.

The objective of the association is to:

- Encourage the bicycle as ecological form of transportation
- Support peace and education regarding transport
- Help governmental organizations to protect riders and their bicycles
- Educate users, drivers, and pedestrians about the rights and obligations of traffic laws
- Organize the cyclists to improve quality of life
- Add value the bicycle riders' experience

locale

Rio Branco Street, nº 36 E
CEP 09310-110
Center Mauá SP Brazil
CPTM Mauá Station

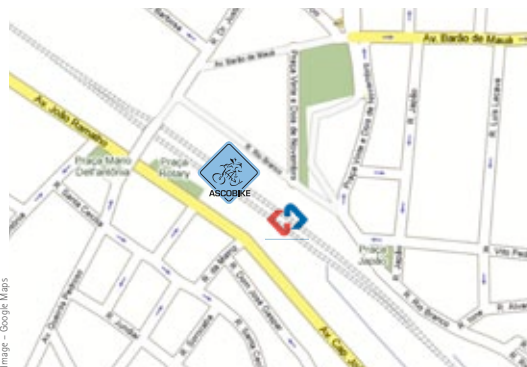
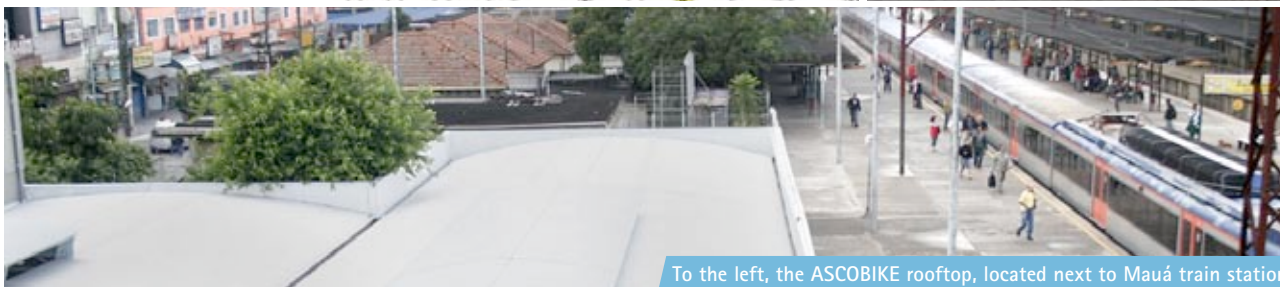
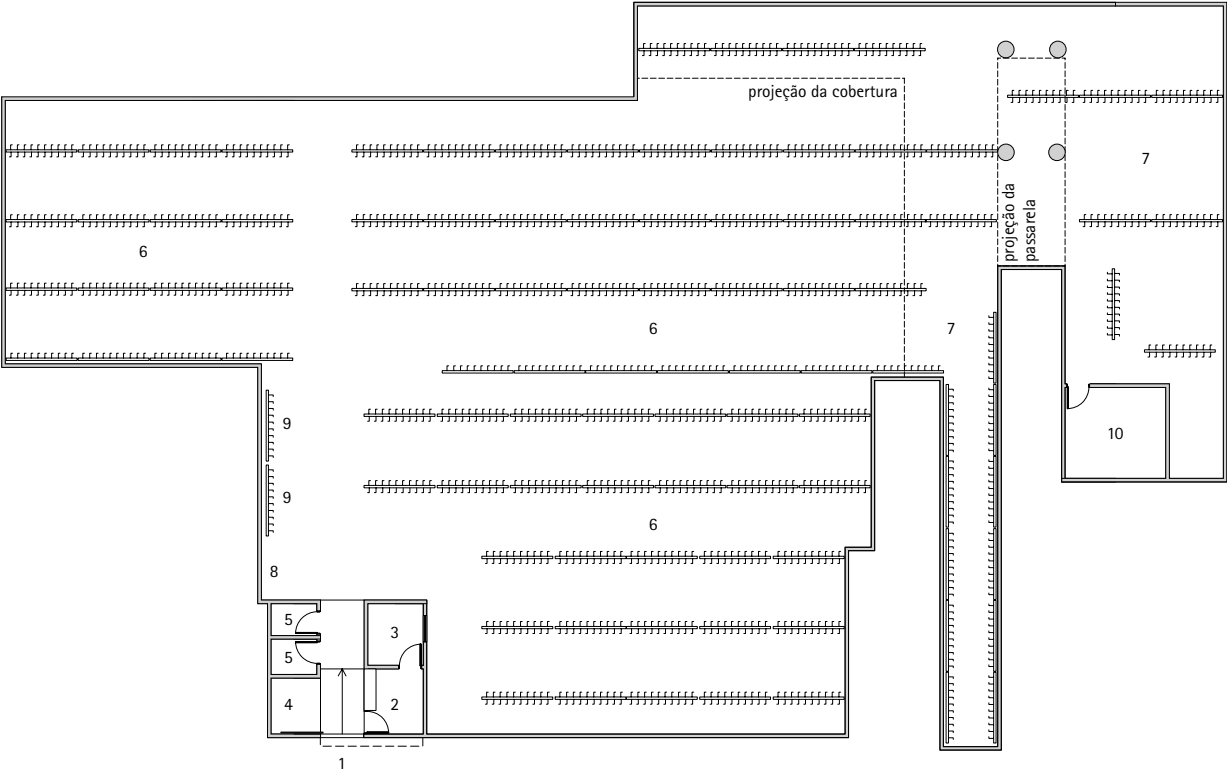


Image - Google Maps



To the left, the ASCOBIKE rooftop, located next to Mauá train station.

linha do trem



Blue print of Mauá bicycle parking structure

physical space

In a bicycle parking facility, the device for storing the bicycles should be placed to facilitate movement inside of the building, whether that is vertically or horizontally. Most importantly, the layout should allow easy circulation space and the bicycles should be spaced in a way that guarantees user comfort.

In the Mauá bicycle parking facility, access is controlled by only one entrance [1]. The repair shop was strategically placed on the opposite side of the entrance of the facility to ensure surveillance, promoting better safety for the bicycle parking area. In addition, electric and natural lighting covers the entire area.

Total area:
1127,2 m²

Legend:

1. Entrance
2. Receptionist
3. Office
4. Coffee
5. Restrooms
6. Covered parking
7. Uncovered parking
8. Elderly parking
9. Female parking
10. Repair shop

Annual reduction of carbon emissions with parking for 2,000 bikes

Car*	2.376 kg
Bus**	285 kg

* CONAMA 1997 ** FETRANSPOR 2007

Horizontal parking

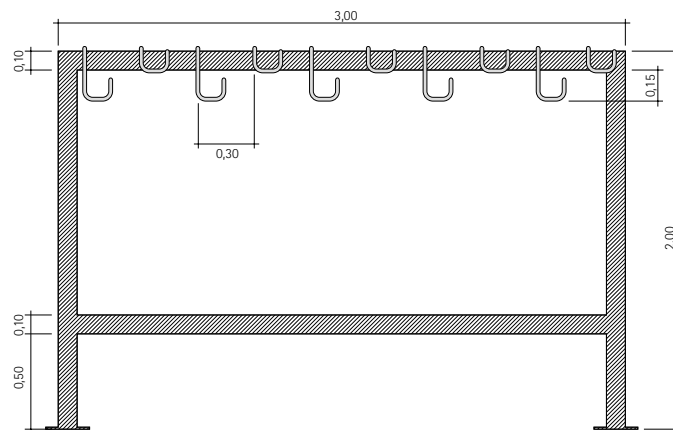
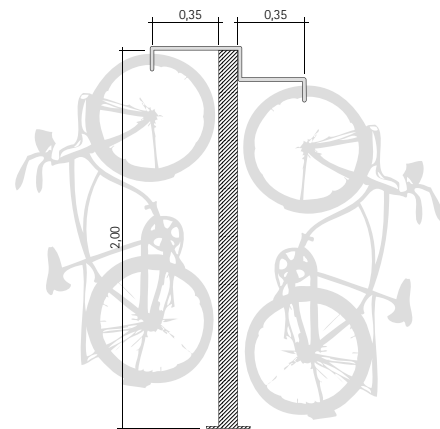
The horizontal parking is inconvenient in that it occupies more space than a vertically mounted parking would. Nevertheless, it is very convenient for women, children, and the elderly [fig. 10, p. 24]. It is important then to be aware of the minimum distance between the bicycles so they can be accommodated easily.

ASCOBIKE has 40 horizontal parking spaces with a front wheel rack and a distance of 40 cm between the bicycles.

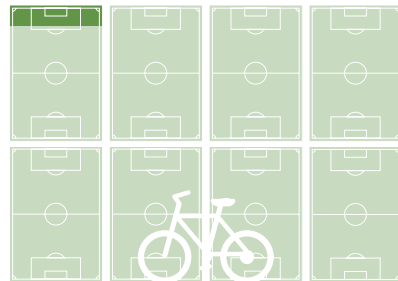
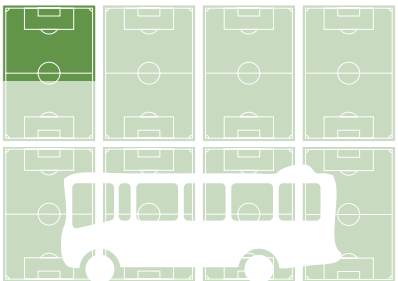
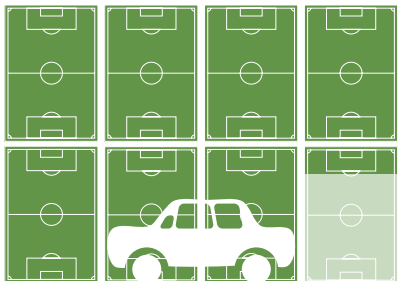
Vertical parking

The majority of the available parking at ASCOBIKE allow for vertical mounting (1,960 parking), optimizing the use of physical space. The racks are installed with intervals of 30 cm and are mounted alternatively at a height of 1.80 m and 1.95 m. This way, the handlebars do not collide and interfere with each other.

Dimensions of vertical racks utilized by ASCOBIKE



Parking and maneuverable space occupied for 2,000
people in different types of vehicles



Automobiles

1,667 cars (average occupation 1.2 passengers per vehicle)	52,899 m ² or 7.2 soccer fields
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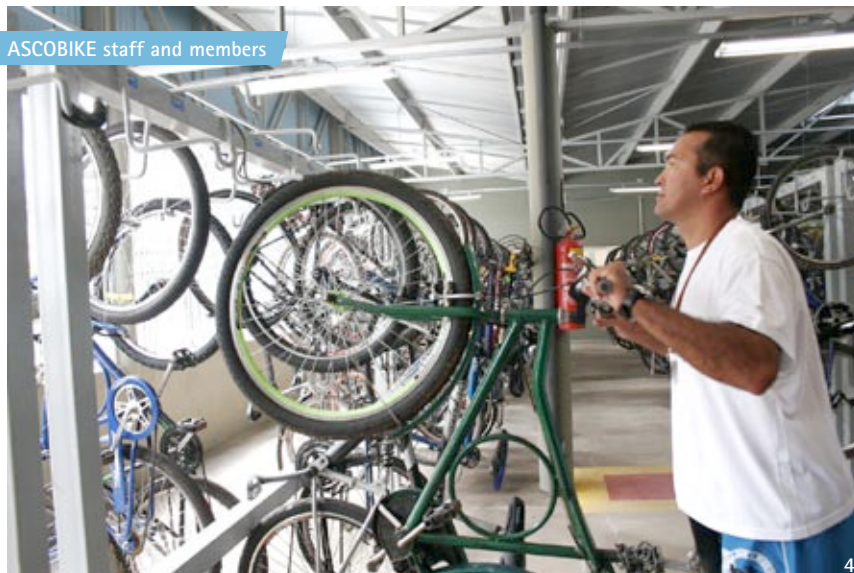
Bus

27 buses (occupation of 74 pas- sengers per vehicle)	4,050 m ² or 0.55 soccer fields
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Bicycles

2,000 bicycles (vertical parking; 1 user per vehicle)	1,063 m ² or 0.15 soccer fields
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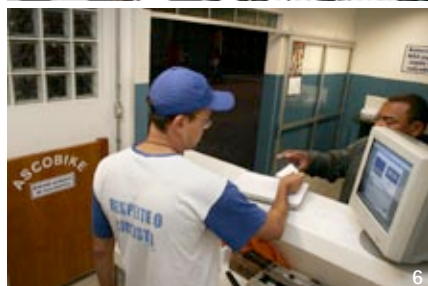
ASCOBIKE staff and members



4



5



6



7



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services offered

Secure 24h Parking [fig. 9]

ASCOBIKE operates 24 hours a day and 365 days of the year allowing constant access for cyclists.

Hot coffee and cold water [fig. 5]

The association serves around 2,000 coffees to members daily.

Shoe polishing [fig. 5]

The equipment is available to the members who want to utilize it.

Sanitary facilities

Female and male restrooms exclusively for members.

Qualified professionals [fig. 6]

ASCOBIKE staff members are trained to provide efficient and excellent service to members. An essential part of the mission of the ASCOBIKE is to make each member feel valued and respected.

Special parking for women and the elderly [fig. 10]

Horizontal racks are provided and allow for easier accessibility for women and the elderly.

Air compressor [fig. 14]

To inflate tires (free of charge).



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11

Repair Shop [fig. 11]

The ASCOBIKE repair shop offers inexpensive repair services which are typically a bit lower than market retail cost.

Members' responsibilities

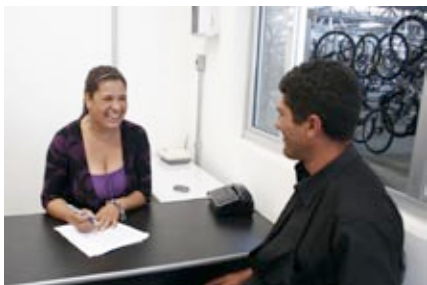
- ✓ Store the bicycle properly
- ✓ Use a lock to secure the bicycle

Bicycle loan

For users whose bicycles are in the repair shop, ASCOBIKE offers a loaner bike until the repair is finished (for a preset period of time).

Health Plan

The association has contracts with health insurance companies to offer health plans with discounted rates for members and staff.



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Customer service [fig. 12]

Quality customer service is a part of the goals of the association. There are two customer service representatives attending to members various needs.

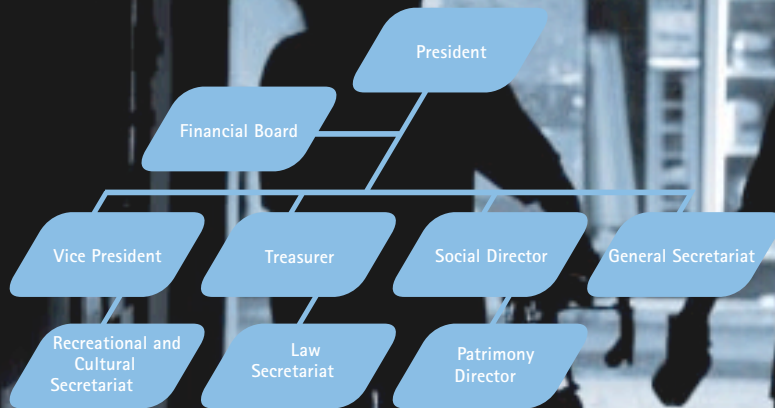
Legal support [fig. 13]

Legal Information is provided free of charge to members. Members are escorted by the customer service representatives to a participating law office that is hired by the association.



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Organizational Structure



Operational Structure



management model

The bicycle parking facility in Mauá is maintained by the association's own resources, which comes from monthly membership payments. The space utilized by the association was granted by the CPTM, which subsequently also sponsored the renovations. The new warehouse, with a capacity for 2,000 bicycles, was granted to ASCOBIKE in August 15th of 2008.

Today, the association is comprised of approximately 1,700 affiliated cyclists and receives new members daily.

User costs

R\$ 10.00	monthly fee for members only
R\$ 1.00	day pass (24h) for non-members



15



16



17

Operation

To become a member, one must fill out a registration form including the cyclist's personal data and information regarding the bicycle (color, brand and estimated bike value for reimbursement in case of theft or damage) [fig. 15]. Each member receives a registration number that is attached to the frame of the bike in a small id plate [fig. 16]. The same number is also put on the rack where the bike will be hung [fig. 17] and registered in the software developed especially for the asso-

ciation. When storing the bike, members identify themselves through their id number and receive a parking receipt [fig. 18]. The parking receipt has the members' name and the date and time of arrival, which serves as vehicle information as well as educational messages [fig. 19]. Upon leaving, the cyclist must show the same receipt in order to take the bicycle from the parking facility. Should the receipt be lost, the member will then have to sign a document to remove the bicycle.



18



19

The monthly membership fee is R\$ 10.00 (equivalent to approximately \$5.00 USD). There is also an option of a day pass, for non-members that costs R\$ 1.00 (\$0.50 USD) for a period of 24 hours.

To become a member, one must also sign a contract that includes the rules of the association. The user is required to bring and use a chain or any locking device to lock the bicycle. As such, the association only holds itself accountable for damages on bicycles that were stored appropriately [fig. 20].



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Bicycles infrastructure around the world



beyond bicycle parking facilities

Modern cities with a high quality of life rating develop road infrastructure to support different forms of human mobility (on foot, by bicycle, public transportation such as buses or trains, and cars) that are safe, comfortable, and high-quality. Those cities have extensive networks of bike paths that allow bicycles to be a viable transportation option for everyone, independent of gender or age. Before implementation, the cities plan where, when, and how a bicycle path will be created, with the objective of creating connections that enable the circulation of cyclists throughout the entire city. In addition, the bike paths are constantly being expanded and improved, and future neighborhoods are already planned for the use of bicycles. Furthermore, adequate road signs and infrastructure to assist users such as bicycle parking facilities and bike racks will ensure the constant and proper use of the bike networks.

- 21. Simone de Beauvoir Bridge for cyclists and pedestrians above Senne River. Paris, France.
- 22. Bike path in Holland.
- 23. Cyclists in Copenhagen, Denmark.
- 24. Bike path on the seashore of Copacabana, Rio de Janeiro.
- 25. Bike path in Bogotá, Colombia.

Many Brazilian cities are starting to plan, develop, and implement bike path networks. Currently, there are already some excellent examples in existence. Since the climate of most Brazilian cities is favorable and the average distances of travel are relatively short, the potential of bicycles as a form of transportation in Brazil is vast.

Upon choosing a form of transportation that is environmental friendly, the 1,700 daily users of the ASCOBIKE directly contribute to a better and a more stable city, country, and world. Although the management model of the ASCOBIKE is 100% Brazilian it is completely replicable. It is our hope that this manual will assist with the implementation of many bicycle parking facilities around the world and that those facilities collaborate to establish complete bike networks, which in turn will improve the quality of life of all citizens.





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Creation