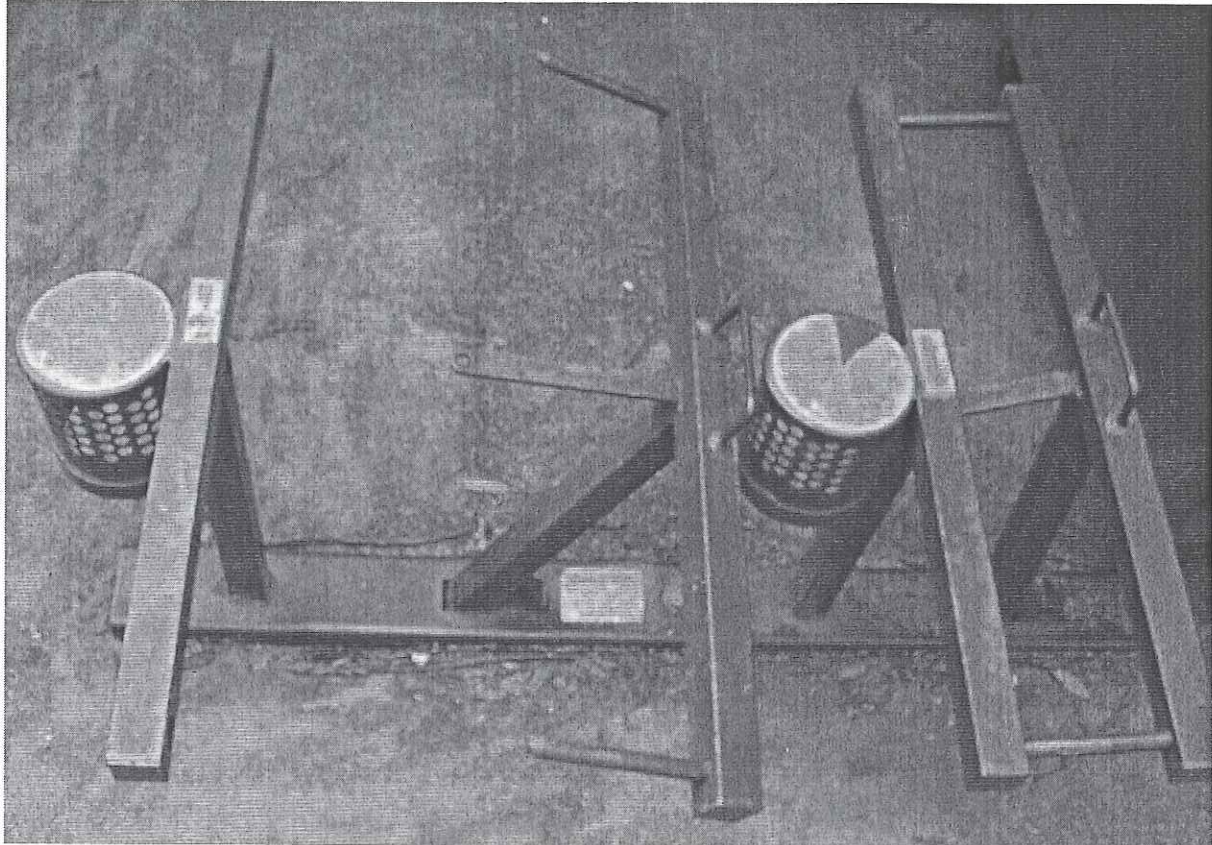


The Bike Rack Team



Environmental Science 410
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1.0 In the Beginning

Problem Statement

The distribution and type of bicycle racks located throughout campus are inefficient and out of date.

Problem Background

Humboldt State University and the surrounding community are dedicated to making as small of an eco-footprint as possible. Humboldt County is viewed around the world as a county on the forefront of environmental awareness and sustainability. From the waste water treatment facility at the Arcata marsh, to the vast array of Natural Resource and Science degrees offered on campus, Humboldt State University is recognized as a leader in Natural Resource Sciences, Engineering, and much more. The Schatz Energy and Research Lab ^{is} are leading the way in hydrogen fuel cell technology and renewable energy sources from solar technology to thermal heating. Even the pledge that we are asked to sign at graduation request us to be active in environmental issues. The pledge states,

"I pledge to use my life to actively work towards a more socially and environmentally responsible world. I vow to help create a more equitable world, free of prejudice, discrimination, and oppression. I also promise to **take action to protect the environment and the earth's resources for future generations**. I will continue to live by these words long after graduation and will also encourage others to embrace this way of life." This project has presented our group with the opportunity to positively affect alternative transportation issues on campus, resulting in less pollution caused by driving and less congestion on the roads. Our group is taking action to protect the environment and the earth's resources for future generations.

A study done in spring 2002 by HSU student Sean Kinghorn, reveals that the most utilized form of transportation to and from campus by students, faculty, and staff is driving.

- 43% Drive SOVs, Single Occupancy Vehicles

- 12% Carpool
- 12% Bus
- 20% Walk
- **13% Bike** or Skateboard

We are blessed to live in such a beautiful town with such amazing weather. A vast majority of students on campus live in Arcata or the surrounding areas, making biking to campus a real alternative to driving. With roads that are fairly safe, and path ways to and throughout school, increasing bicycle commuting is a possibility.

The parking director on campus Stephen Sullivan stated that the percentage of students who drive to campus is 30-35%. Across the country at other Universities, the percentage of students who drive to school averages around 50%. One reason why HSU is significantly below the national average in student driving to school is because the majority of student that attend HSU live within a 6 mile radius. Another reason is that people want to bike instead of driving, in order to get exercise and to avoid polluting the environment by driving a SOV (single occupancy vehicle).

Currently on campus, problems that face students faculty and staff who intend to bike to campus are:

- Bike racks are inefficiently placed throughout campus.
- The bicycle racks on campus do not properly house modern bikes, resulting in improper locking.
- The injustice of the removal of racks behind the Natural Resources building.
- School enrollment is expected to increase, resulting in more stress on the transportation resources.
- Lack of bike lockers dissuades people with expensive bikes from biking to school.

Racks are inefficiently placed throughout campus.

Only three years ago, when people would lock their bike to the railing on the west end of the forestry building, the University Police Department would issues citations, and eventually a fine which must be paid in order to graduate. Now, no enforcement of this illegal parking exists. One reason why students are illegally locking their bikes to this

railing is due to the lack of parking behind the Forestry building. At the same time that this area and others are overflowing with bikes, at the south end of the Van Duzer Theater there are over 100 empty spaces. Inefficient placement of racks through out campus results in underutilized structures, at the same time there are over utilized racks, causing congestion.

The bicycle racks on campus do not properly house modern bikes, resulting in improper locking.

Currently the majority of racks available to users are the very old and out of date T-style rack. Many problems exist with this rack; the most significant is that its design is incapable of housing the majority of modern bikes. Bike tubing has increased in width, rendering this old T-style rack design useless. Another problem is that the cord that is part of the rack misleads user into thinking that it is used to wrap around the frame of the bike, while its true intent is for wrapping around tires of bicycles that are expensive. This has resulted in bikes being stolen very easily. Stephan Sullivan stated that 15-20 bicycles are stolen a semester, most from the library, and most were tied up with that misleading cord.

The injustice of the removal of racks behind the Natural Resources building, which has resulted in inadequate parking, forcing students to illegally park their bikes.

Sometime over winter break 2003-2004, some plumbing work was done behind the Natural Resources Building. In the process of fixing the plumbing, maintenance removed the racks located in an excellent spot behind the building. The racks have not been replaced, which has resulted in further stress to the forestry racks. This area is the most significantly overused area on campus. Removing racks does not improve the current situation at all, especially in a prime location that has an overhang to protect it from weather. Few areas with overhangs exist throughout campus, and those that do are highly used areas (Except the Van Duzer Theater).

The overhang protects the racks only

School enrollment is expected to increase, resulting in more stress on the transportation resources.

Student enrollment is bound to increase over the years. With no plans in place to update current bike racks or to expand parking capacity, this lack of action could result in more driving than is necessary.

Lack of bike lockers dissuades people with expensive bikes or bikes with high emotional attachment from biking to school.

Bikes over time have become more and more expensive. With a new mountain bike averaging in the upper hundreds to thousands of dollars, people are investing a lot of money into their bikes. Most people with expensive bikes, who want to take it to school, are discouraged by leaving it in the open tied to a very old rack.

The bicycle-parking problem is so severe that some people are locking their bikes to trees and signs, or any other "pole" that is available. Bikes are being locked to random objects, and sometimes they are in the way, and now students have to consciously look for bikes and/or be sure to step around bikes and not trip on them. Bikes are also locked incorrectly to the racks which cause them to fall over, making the fallen bike a walkway hazard. Other people are opting to drive or walk or take the bus instead of riding their bikes because it is so inconvenient to find a place to park. With these problems in mind our group decided to focus specifically on bike related issues.

Source of this information

2.0 Goals and Objectives

Goal

The goal of our project is as follows:

To promote bicycles as viable transportation to HSU by increasing the ease of bicycle use on campus focusing on updating bike racks and distributing new racks to locations lacking adequate capacity on a priority basis.

Objectives

Following are our main objectives to complement our goals:

1. Replace the bike rack that was removed from behind the Natural Resources building with the new wave style racks that will hold 9-18 bikes by 8.26.04.
2. If successful at the Behavioral and Social Science Building, have bike lockers (6-8 spaces) installed by the University Police Department no later than a 1 year after the BSS building is complete.

3. Implement new wave style racks on a priority basis, based on survey results, in the following order:

Natural Resources Building 8.26.04

Forestry Building 8.26.04

Wildlife Building 8.26.04

Gist Hall 1.20.05

Science D 1.20.05

Harry Griffith Hall 1.20.05

The remaining racks have yet to be assigned a date for removal, although the entire campus is expected to be finished no later than 5.15.06.

Solutions

1. NR Building

By providing new wave style racks behind the Natural Resource Building, will decongest the forestry area. This will give students, staff, and faculty a place to park there bikes under an overhang, which will prevent the bike from getting wet and rusting during wet weather. Providing up to 18 new spots will also allow students who are illegally locking there bikes to the Forestry railing to park in a dry, unobstructed area.

2. Bike Lockers

Along with the construction of the Behavioral and Social Science building, will be the construction of about 8-12 bike lockers attached to the building. These bike lockers will cost from 1000-1500 dollars for materials and to install. Once functional these can be rented out to students, on a first come first serve basis, for a fee of 40 to 45 dollars per semester. Eventually the bike lockers will become a source of income if utilized for a sustained period of time.

3. Implementation order

By replacing the racks on a priority basis, areas that are in need of immediate attention will be addressed first, while those that are not highly used will be dealt with at later dates. All racks on campus are expected to be replaced within two years. Before our group gathered data showing areas of high usage, there was no removal plan~~x~~ or order in place. By providing usage data, we are able to replace the racks in a much more effective manner, addressing problem areas first.

3.0 Alternative Solutions

We came up with a list of alternative ways to accomplish our goals. After our initial brainstorm, we crossed off some of the ideas right away. Those ideas and our reasons for eliminating those choices are as follows: **rioting or protesting** because it takes a lot of work to organize and most likely it would not be effective, **starting a promotional campaign** because we feel the alternative transportation club already does, **starting a club** because the alternative transportation club already exists, **having the school dump lots of money into the project** because the school has no money right now, and to **do nothing and hope for the best** because as the past has shown nothing is likely to happen.

Then we decided to brainstorm all the possible advantages and disadvantages of our remaining alternatives. We then ranked them in the order we would like to see them done. We ranked the alternatives based on our personal values and if we thought the idea is actually feasible, so it was a completely subjective process. Our remaining alternatives are described in the following paragraphs, going in order from our number one choice to our number 11 choice.

#1: A Community Program

The program would allow a place for the bike shops and the bike library to get involved in educating the public/HSU students faculty and staff about bikes, and possibly giving student discounts. The advantages are that the program would link existing community resources, it would give the community input at HSU, and it would expand opportunities by providing alternative sources of information. The disadvantages are as follows: it would take a lot of work/people power/volunteers to organize the program and make it effective, stores may not want to give student discounts if they don't already, and it could be exclusionary if a store wasn't able to participate.

#2: Change University Policies

The advantages: The change would redirect the flow of money to focus less on cars, there would be guaranteed funding for bicycling issues, more bike parking would be a priority, and the school would have money to do things. Disadvantages: There isn't enough money for parking as it is, since the majority of the money comes from vehicle fees most of it should go back to the drivers, and it could jeopardize jobs (metermaids)/supplies/expansion of car parking.

#3: Radio/TV Commercial

Make a radio or TV commercial to raise awareness of biking issues. Advantages: Commercials could make biking issues known to the community, increase involvement in any projects, dissuade people from using cars, and supply ideas for future projects (and a chance for collaboration) in media/communication areas such as the local news and/or radio shows. Disadvantages: Companies may not want to do this for free, it requires a lot of time to be put in, it requires capital (time, labor or money), it could take away from other community issues, and it may not work.

#4: Grant Writing

Advantages: There would be no tax on the school, it's not relative to CSU/HSU budget cuts, it can be seen as free money. Disadvantage: It's a lot of work to write a grant, a lot of people power is needed, and it requires extended time.

#5: Student Survey

We would like to take a student survey or student vote to gauge the value HSU students place on biking and biking issues. Advantages: We would know the feelings of the students, it would be a source for future information on student preferences about biking issues, and it would help to make decisions about biking issues if HSU wanted student input. Disadvantages: People lie on surveys, preferences change over time, there isn't always a representative population that takes a survey, and doing a survey requires a time and labor commitment from (a) volunteer(s).

#6: Offer an Incentive to Bikers

Advantages: It would (hopefully) increase the number of bikers and decrease the number of drivers commuting to school, and giving the students positive rewards for

making an environmentally conscious decision. Disadvantages: It requires a steady flow of capital to provide the incentive, which could take money away from other important issues, and it does not address the bike parking issue.

#7: Fundraising

This could be done in a variety of ways, such as selling food, getting donations, and/or hosting events like concerts. The advantages and disadvantages are very similar to those of grant writing, alternative number 4. Advantages: We would receive donations so it would be completely voluntary, the income is self-sufficient, there is no tax on the school for the income, it's not relative to CSU/HSU budget cuts, it can be seen as free money, and it relies on volunteers so all money received is kept for the cause. Disadvantages: It takes a lot of work to raise a lot of money, a lot of people power is needed, it takes a lot of time, as far as food goes it takes money to make money (buying cooking supplies), we are assuming that people would want to buy what we are selling or donate to the cause, and it makes the university less responsible for its problems and puts more responsibility on the student body.

#8: Improve Biking Facilities

This would increase the amount of bike lanes on campus, increase route availability, and provide maps with the best biking routes. Advantages: This would create safer routes and more space for bicyclists. Disadvantages: This would take road space away from cars and pedestrians, and it doesn't address the parking issue.

#9: A Student Tax

Advantages: There would be money available to do projects, it would make students think about biking, and it's guaranteed money to work with. Disadvantages: The students do not want to pay more money, fees are only going to get worse in the coming years, biking issues are not at the top of the list, and so it could only be implemented if the students showed that biking is important to them.

#10: Promote Other Methods of Transportation

This would be promoting every kind of transportation except for Single Occupancy Vehicles (SOVs). Advantages: It advocates for a more sustainable effort in the reduction of green house gases, it detracts from SOVs, and it acknowledges an

awareness of the existing environmental problems. The only disadvantage is that it does not address the current bike issues/problems.

#11: Do Nothing & Hope for the Best

Advantage: It's easy. Disadvantages: there is no change in the current situation, and so the problems continue on, unabated.

As with everything else in life, there are political barriers to replacing the racks. The first barrier is a lack of communication and coordination between departments. An example of this is that the bike racks behind the Natural Resources building needed to be removed by Maintenance in order to fix a plumbing problem that occurred during Christmas break, 2003 – 2004. Stephen Sullivan, the head of the Parking and Commuter Services department was not told about the removal of the racks until after the fact. It was not until Maintenance called Sullivan and asked if he wanted to keep the racks that he knew they had even been removed. Also, Sullivan is in charge of purchasing the new bike racks, and Maintenance is in charge of installing them. So, when the new bike racks arrive at HSU, they will be replaced according to Maintenance's schedule.

There is also a lack of funding throughout the California State University system. Budgets are being cut in every department, so there is no way Parking and Commuter Services can ask HSU for money to assist in the bike rack replacement process. The funding source for alternative transportation comes from fees collected from parking tickets, but only 50% of the fees. Of this 50%, the majority of the money goes to subsidizing the bus lines, leaving only a minor portion left for other types of alternative transportation, such as biking.

There are quite a few sites on campus already that have bike racks placed on them. What we found while conducting the survey is that if an area is suitable for a bike rack, then it already has one (with the exception of the removed Natural Resources rack). This makes it hard to add new racks, as all the obvious places have already been utilized.

Decision Matrix

Alternative Solution	Advantages	Disadvantages
1. A Community Program	<p>Link existing community resources.</p> <p>Give the community input at HSU.</p> <p>Expand opportunities by providing alternative sources of information.</p>	<p>It would take many work/people power/volunteers to organize the program and make it effective.</p> <p>Stores may not want to give student discounts if they do not already.</p> <p>Could be exclusionary if a store was not able to participate.</p>
2. Change University Policies	<p>Redirect the flow of money to focus less on cars.</p> <p>Guaranteed funding for bicycling issues.</p> <p>More bike parking would be a priority.</p> <p>The school would have money to do things.</p>	<p>There is not enough money for parking as it is.</p> <p>Redistribution of funds.</p> <p>Could jeopardize jobs (meter-maids)/supplies/expansion of car parking.</p>
3. Radio/TV Commercial	<p>Could make biking issues known to the community.</p> <p>Increase involvement in any projects.</p> <p>Dissuades people from using cars.</p> <p>Supply ideas for future projects (and a chance for collaboration) in media/communication areas such as the local news and/or radio shows.</p>	<p>Companies may not want to do this for free.</p> <p>Requires a lot of time.</p> <p>Requires capital (time, labor or money).</p> <p>Could take away from other community issues.</p> <p>It may not work.</p>
4. Grant Writing	<p>No tax on the school.</p> <p>Not linked to CSU/HSU budget cuts</p> <p>Can be seen as free money.</p>	<p>Requires a lot of work to write a grant</p> <p>People power is needed</p> <p>Requires extended time.</p>
5. Student Survey	<p>We would know the feelings of the students.</p> <p>Would be a source for future information on student preferences about biking issues.</p> <p>Would help to make decisions about biking issues.</p> <p>HSU student input.</p>	<p>People lie on surveys.</p> <p>Preferences change over time.</p> <p>Not always a representative population that takes a survey.</p> <p>Requires time and labor commitment from volunteer.</p>
6. Offer an Incentive to Bikers	<p>Increase the number of bikers.</p> <p>Decrease the number of drivers commuting to school.</p> <p>Give the students positive rewards for making an environmentally conscious decision.</p>	<p>Requires a steady flow of capital to provide the incentive.</p> <p>Could take money away from other important issues.</p> <p>Does not address the bike parking issue.</p>

7. Fundraising	<p>Completely voluntary. Income is self-sufficient. No tax on the school for the income. Not relative to CSU/HSU budget cuts. Can be seen as free money. All money received is kept for the cause.</p>	<p>It takes a lot of work to raise a lot of money. Substantial people power is needed. Time consuming. Takes money to make money (buying cooking supplies). Assumes people would want to buy what we are selling or donate to the cause. It makes the university less responsible for its problems and puts more responsibility on the student body.</p>
8. Improve Biking Facilities	<p>Would create safer routes and more space for bicyclists.</p>	<p>Would take road space away from cars and pedestrians. Does not address the parking issue.</p>
9. A Student Tax	<p>Money would be available for projects. Create students awareness of biking issues.</p>	<p>Students do not want to pay more money. Fees are only going to get worse in the coming years. Biking issues are not at the top of the list. Could only be implemented if the students showed that biking is important to them.</p>
10. Promote Other Methods of Transportation	<p>Advocates for a more sustainable effort in the reduction of green house gases. Detracts from SOVs. Acknowledges an awareness of the existing environmental problems.</p>	<p>Does not address the current bike issues/problems.</p>
11. Do Nothing & Hope for the Best	<p>It is easy.</p>	<p>There is no change in the current situation, and so the problems continue on, unabated.</p>

4.0 Implementation

In order to complete this project, there were four main things that we did:

- research on various topics
- identified and met with parties and stakeholders
- made and used a survey
- made a Geographic Information System (GIS) database.

Research on various topics

Our group gathered data from the internet in evaluating types of bicycle racks that are available (Appendix B). Also utilizing information gathered from the bike library, ATC, and community bike shops. We used this information to help estimate the type of bikes being used on campus. Another valuable source of information came from Stephen Sullivan.

One of the topics we researched was style of bike racks. We were unaware that a unifying style of rack for campus had already been chosen, and that we could not influence this decision. The style chosen was the wave rack, which can be seen on campus in front of the Depot and in front of the Student Business Services building

Identified and met with parties and stakeholders

Stephen Sullivan, the parking director at HSU and the Alternative Transportation Club were identified as our parties and stakeholders. Sullivan is the person in charge of making alternative transportation purchases, such as bike racks, and deciding when they can fit into the budget, thus when they will be available to install on campus. The Alternative Transportation Club is a major stakeholder also, but in a different way. The club is full of people who bike to school everyday, and they put on events such as car free day and carpool Tuesdays. Members of the club can also be seen riding their bikes around town all the time.

Created and implemented survey

After meeting with Stephen Sullivan, he asked for raw data that could be used to determine frequency of usage of racks throughout campus. Our group then created a map outlining all the racks on campus, we created a survey that clearly showed usage patterns. We did this enlisting the help of the ATC, and fellow students on campus. (Appendix C)

Made GIS map and database

Using the information from the survey we compiled the data into a GIS database using Arc View. This information is now easily accessible, and clearly demonstrates what areas have high usage, and what areas have low usage. (Appendix D)

5.0 Results and Recommendations

Results

After doing an analysis of the information given to us by Sullivan, compiling information from our survey, with the actual data and taking into consideration the comments from the survey, we came up with three results. Empty and full racks at the same time lead to the conclusion that as far as the numbers are concerned there is enough bike parking on campus, there is a general poor quality of racks around campus, and there are political barriers to replacing the existing racks.

There are empty and full racks on campus at the same time, which leads us to the fact that there are enough bike parking spots on campus, if you just look at the numbers. The problem is the distribution and concentration of where the bike parking is located in relation to where classes are concentrated. It is inconvenient for people who want to park at a full rack to find a different one, so they lock up their bike on any "pole" that happens to be around, be it a tree or a parking meter or a handrail.

Following is an example of our findings: imagine a bright sunny Northern Humboldt County day. Many students are enjoying the sunshine by riding their bikes to school. The bike racks in front of the entrance to Science D only have fourteen spaces,

and they are all full. There are also bikes locked up all along the corridor leading to the door of the building. More students would love to park there, but there is just no more room. Well, up the hill a few hundred feet is the little known-about racks on the side of the Van Duzer Theater. There are one hundred twenty two bike parking spaces at this location. The average usage of these racks on any given day is about twenty bikes. This leaves us with one hundred or so available parking spaces in a very close proximity. The Science D racks are out in the open, and offer no cover to bikes or their riders if the weather turns to rainy conditions. The Van Duzer racks are completely covered, out of the way of all forms of traffic, and are ok quality racks. In fact, the racks in both locations are the same style and quality. The Van Duzer racks are a great location to house library and Science D bike overflow.

There is not a high quality of bike racks that currently exists on campus. The racks are old, some 30 years old, others older. They are extremely out of date with current bike frame trends, and this makes locking up bikes difficult. This dissuades people from using certain racks, leading to under utilized bike racks in highly coveted bike parking areas.

An example of this is the racks on the south side of Harry Griffith Hall. The racks are so old and out of date that many people do not know how to use them correctly; people opt to double up bikes at the racks located on the east side of the building instead, where there are only six spots. Those twenty-four racks are also very big. They are a great example of poor space management on campus. Replacing these racks with wave racks will allow there to be many more bike parking spots at that location, and it is speculated that usage of those racks will increase, because of the location and because it would be great overflow parking from the Forestry building. The same style of racks are located by the West Gym, and some of those racks are rusted shut or rusted open, which makes them extremely difficult to use.

As with everything else in life, there are political barriers to replacing the racks. The first barrier is a lack of communication and coordination between departments. An

example of this is that the bike racks behind the Natural Resources building needed to be removed by Maintenance in order to fix a plumbing problem that occurred during Christmas break, 2003 – 2004. Stephen Sullivan, the head of the Parking and Commuter Services department was not told about the removal of the racks until after the fact. It was not until Maintenance called Sullivan and asked if he wanted to keep the racks that he knew they had even been removed. Also, Sullivan is in charge of purchasing the new bike racks, and Maintenance is in charge of installing them. So, when the new bike racks arrive at HSU, they will be replaced according to Maintenance's schedule.

repetition

There is also a lack of funding throughout the California State University system. Budgets are being cut in every department, so there is no way Parking and Commuter Services can ask HSU for money to assist in the bike rack replacement process. The funding source for alternative transportation comes from fees collected from parking tickets, but only 50% of the fees. Of this 50%, the majority of the money goes to subsidizing the bus lines, leaving only a minor portion left for other types of alternative transportation, such as biking.

There are quite a few sites on campus already that have bike racks placed on them. What we found while conducting the survey is that if an area is suitable for a bike rack, then it already has one (with the exception of the removed Natural Resources rack). This makes it hard to add new racks, as all the obvious places have already been utilized.

Recommendations

After evaluating our results, we came up with the five following recommendations for the campus: install more bicycle parking, replace current racks, place maps on the racks, install bike lockers, and add bicycle parking to the campus maps.

Even though there are physically enough bike parking spaces on campus, we feel there needs to be more parking available in our hot spots. It is really inconvenient for people to have to bike all around campus to find a place to lock up their bicycle.

The bike racks are going to be replaced on campus, but it is going to take a few years to complete the process. We have made a list of the order we think the racks should be replaced in, our criteria being based on a combination of our hot spots, location of the racks, and how old the current racks are.

An idea we came across while reading other projects on this same issue is putting a map of bicycle parking on racks at highly used locations to direct overflow parking to under utilized locations. We would rather see more spots, but at least this way people will be able to see where to go instead of having to think about an alternate location to go to for locking up.

Bike lockers would be of great assistance to the bike parking problem. How it works is that one person rents the locker for a whole semester. The school then gets paid back over the course of a few semesters for the purchase price of the lockers. After the cost is covered, the rest of the money collected can go into the fund to help purchase more bike racks, and also to purchase more bike lockers. The benefits of the lockers is that the renter can keep a very nice bike locked away without fear of it getting stolen; the renter would not have to carry around a helmet, bike seat, front tire, or any other item that is easily stolen off of a bike; the renter can store rain gear or work out clothes or books in the bike locker while not using these items, leaving the renter less encumbered with things to haul around campus. Bike lockers are already in the plans for the Behavior and Social Science building that is slated to start construction this summer. If the lockers are a success at the BSS building, they will be placed at other locations around campus. We hope this will happen before waiting on results to see if the BSS lockers are successful.

There are several campus maps located around the school. They show where the buildings, roads, and car parking lots are, but there is no mention of bike parking on these maps at all. We would like to see stickers applied to the maps to show the location of bike parking, or maybe to get new maps printed out to put in the cases that show where bikers can park their bikes. People use these maps to familiarize themselves with campus, and to learn where they need to go. Putting bike parking on these maps will promote bike

usage, as it will show that bike parking is a priority in this community and it would show that HSU is a bike friendly campus.

6.0 Evaluation and Monitoring

Summary

Many good ideas and projects have been started but never followed through or monitored for effectiveness. Our group hopes to not follow this established pattern. The way we intend to do this is by enlisting the help of the Alternative Transportation Club. The ATC will periodically monitor the installation of parking structures and evaluate their effectiveness. The ATC was chosen both because it is a student group with dedicated members and because the club will likely still be around in ten years. The parking replacement list that our group has created will be the document that the ATC uses to monitor the installation of bike racks. The ATC will coordinate between Parking and Commuter Services and Campus maintenance.

Parking and Commuter Services

Taking the recommendations from this project into consideration Stephen Sullivan will produce a list of bicycle racks to be replaced. He will then initiate a purchase order for the racks. Sullivan will also ask maintenance to install the racks in the order of importance as indicated on the list of bicycle rack to be replaced.

Campus Maintenance

Maintenance is responsible for the installation of all bicycle racks on campus. Installation of the racks must be included into the work schedule of the maintenance staff. Maintenance has very little incentive to replace the bicycle racks in a timely fashion. We have determined that the way to insure that the bicycle racks are replaced promptly is to enlist the help of the ATC.

Alternative Transportation Club

Bicycle rack installation will be monitored by the ATC. As they see necessary, the ATC will visually survey the proposed locations for rack replacement to see if they have been installed. If campus maintenance has fallen behind on their installation schedule the ATC will contact Stephen Sullivan and Maintenance to correct the problem.

In addition to reviewing installation, the ATC will conduct surveys of the bicycle parking on campus using the survey created by our group or an updated version of our forms and data bases. The periodic surveys will monitor the effectiveness of the new racks by comparing the pre-project data with the post project data.

Appendix A

Tabi Bolton

Date	Task	Hours
1/28	make group, brainstorm	0.5
2/2	brainstorm	0.5
2/10	background research	1.5
2/12	ATC meeting	0.5
2/29	type up prob. Background	1
3/1	meeting in Depot. Work on Prob. Statement	1.5
3/3	internet research	3
3/7	Sacred Grounds Goals Meeting	1
3/11	Depot meeting	1
3/22	brainstorm with Joe, Alternatives	0.5
3/23	meeting with arcata bike library	0.5
3/24	muddy waters meeting	1.5
3/28	sacred grounds meeting, weighing alternatives	1
4/1	Sullivan meeting	3
4/5	library meeting	2
4/7	library meeting implementation	1
4/8	ATC meeting	2
4/9	survey map creations	4
4/11	surveys	0.5
4/12	surveys	1
4/14	surveys	0.5
4/25	surveys	1
4/26	Monitoring eval. Meeting	0.75
4/26	surveys	0.5
4/27	surveys	1
4/28	photos	1
4/28	finalize GIS data	2.5
4/29	ATC meeting	1
5/1	power point presentation creation	3
5/3	Class Presentation, prep.	2
5/4	meeting in library	1
5/6	Final document prep.	2
5/6	Final Document group	4

45.75

Heather Collins

Date	Task	Hours
1/28	make group, brainstorm	0.5
2/2	brainstorm	0.5
2/3	research	2.5
2/12	ATC meeting	2
2/29	type up prob. Background	1
3/1	meeting in Depot. Work on Prob. Statement	1.5
3/2	research	2
3/3	email Joe	0.2
3/7	Sacred Grounds Goals Meeting	1
3/7	Type up Goals and Objectives	0.5
3/11	Depot meeting	1
3/22	brainstorm with Joe, Alternatives	0.5
3/24	muddy waters meeting	1.5
3/28	sacred grounds meeting, weighing alternatives	1
3/28	type weighing alternatives	2
4/1	Sullivan meeting	3
4/5	library meeting	2
4/7	library meeting implementation	1
4/8	ATC meeting	2
4/26	Monitoring eval. Meeting	0.75
4/27	surveys	1
4/28	finalize GIS data	2.5
4/28	Power Point	2
4/29	ATC meeting (tabi)	1
4/30	Power Point	2
5/2	Power Point	3
5/3	Talk with Renee Stork	0.25
5/3	Presentation	0.75
5/4	meeting in library	1
5/6	Final document prep.	3
5/6	Final Document group	4

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Joe Rousse

Date	Task	Hours
1/28	make group, brainstorm	0.5
2/2	brainstorm	0.5
2/12	ATC meeting	
2/29	Create Problem Statement	1
3/1	meeting in Depot. Work on Prob. Statement	1.5
3/3	Established relations with Sullivan	2
3/7	Sacred Grounds Goals Meeting	1
3/11	Depot meeting	1
3/22	brainstorm with Joe, Alternatives	0.5
3/24	muddy waters meeting	1.5
3/28	sacred grounds meeting, weighing alternatives	1
4/1	Sullivan meeting	3
4/5	library meeting	2
4/7	library meeting implementation	1
4/8	ATC meeting	2
4/26	Monitoring eval. Meeting	0.75
4/27	surveys	1
4/28	finalize GIS data	2.5
4/29	Analyze data from surveys	2
5/3	Talk with Renee Stork, Presentation	0.25
5/4	meeting in library	1
5/6	Final document prep.	7
5/6	Final Document group	4
	Areas of final document that I wrote:	
	Problem Background	
	Goals	
	Objectives	
	Solutions	
	Implementation (Heather)	
	Dead End Work (Work that did not get implemented)	
	Community Bike Shops, Tried to set up incentive program:	2
	Master Plan research	2
	Other Universities research	2
5/1	Set up Power point presentation	4
5/2		4

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Appendix B

Alternative & Recreational Transportation Association

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Count taken to increase bicycle "friendliness" (October 7th)

THE LUMBERJACK (Melanie Mintz) - How many bicyclists does it take to convince transportation engineers that bicycles are a legitimate mode of transportation? The Natural Resources Services division of the Redwood Community Action Agency hopes information collected during two agency coordinated bike counts in September will help answer that question. RCAA Planner/Interpreter Jennifer Rice, coordinator of the bike counts, said she hopes the information will encourage officials to design transportation systems that are safe and convenient for nonmotorized traffic, such as bicyclists and pedestrians. The data collected will be provided to county and city decisionmakers and planners.

"More people on bicycles would mean more people on the streets and a livelier, friendlier environment than the one created by automobiles," said Rice. "in addition with a better bicycle network, there would be fewer cars, less congestion and the notorious campus parking jam could be greatly diminished." During a 12-hour period on Wednesday, Sept. 16, RCAA volunteers counted nearly 1,000 bicyclists passing through the LK Wood-Sunset intersection a block north of campus. During the same period nearly 2,000 bicyclists passed through six Arcata intersections. Volunteers were also busy at six intersections each in Eureka and McKinleyville. A count of equal scope also took place on Sept. 26. Final numbers from all of the sites were not available at press time.

The agency's efforts apparently have wide community support. HSU natural resource student Brian Ludy was one of 130 volunteers who donated three to six hours of their time. He said that a few hours of his time seemed a small contribution to make to help create safer bike routes in the community.

The bike count was funded in part by a grant from the North Coast Unified Air Quality Management District that RCAA received to help local decision-makers design bikeable and walkable communities. In addition to the count, the grant was used to design an area bike map (which will be available later this fall), buy bike racks for McKinleyville, hold conferences on creating livable communities, and for a feasibility analysis on potential improvements to county on-and-off street bikeways.

The scenic Hammond Trail, co-developed by RCAA and the Humboldt County Public Works Department, is an example of an on-and-off street bikeway. Rice said she would like to see transportation planners expand the development of such trails. A coordinated network of on-and-off street trails could encourage people to choose to walk, roller-blade and cycle as a means of transportation and non-car dependent recreation, said Rice. On the other hand, she said she has observed that some places actually discourage cycling.

"Whether people ride and how they ride has a lot to do with the bicycle 'friendliness' of the place," said Rice. For example, she said that in areas where bike lanes are inadequate or poorly designed, cyclists tend to ride on sidewalks and put themselves and pedestrians in potential conflict.

According to Rice, one of the main roadblocks encountered by RCAA in promoting the development of a trail system has been the perception by officials and the general public that bicycling is mainly for children and adult "hooligans." Although bicycle commuters are nearly invisible, motorists often observe bicyclists breaking traffic laws. she said.

During the bike counts, volunteers recorded information that will be used by planners to move beyond popular perception to facts. They tallied numbers of cyclists, their age (above or below 16 years old), whether they were riding with or against traffic. their direction through an intersection. and whether or not they were wearing helmets.

Rice hopes that a report of the study will be available to officials and the public this winter. She is looking for a student with a mind for math and statistics and a passion for the issue to help analyze die data. For information, call the Humboldt Bay Bicycle Commuters Association at 839-3614 or the RCAA at 269-2060.

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International Bicycle Fund

Bicycle Parking Criteria, Bike Rack, Bicycle Locker, Cycle Stands & Bike Storage Systems

A growing number of cities, including the cities of Santa Cruz and Palo Alto, have bike parking ordinances that are tied to their car parking ordinances.

The City of Portland (OR) Bicycle Program's web site has a page on bicycle parking: [Bicycle Parking Facilities Guidelines](#) and information on their [bike parking program](#).

The city of Santa Cruz and the Santa Cruz County Regional Transportation Commission (SCCRTC) has been fairly successful in getting bike racks and lockers installed in various places around the community. Something like 1000-3000 bike positions have been funded and installed (mainly from ISTEPA and air pollution control funds). Seattle WA has installed 1600 bicycle racks intended for short-term parking in commercial areas. (SCCRTC has a list of acceptable low-cost racks and installation guidelines.)

Various mechanisms can be used for determining where to put the racks. Almost all the ones that are sited with bicyclist input are in heavy use. It is more likely that those sited for political consideration will be under used. Sighting bicycle parking doesn't have to be scientific. Some of the best determinants for sighting bike parking are:

1. **Visual observation.** Look for where bikes are parked illegally due to lack of legal parking. The (car) parking patrol people can probably do this for you in a week.
2. **User input.** Ask bicyclists (through clubs or advocacy groups) to create a list of most-needed spots for bike parking.
3. **Land use criteria.** Target every coffee shop, bookstore, video arcade, teen/young adult clothing store.
4. **Public-private partnership.** Have a grant program whereby businesses can request bike parking for customers and employees, paying for the installation themselves, but getting the racks paid for by the grant.
5. **Building code.** Require all new development or change of business to install bike parking proportionate to car parking requirements.

After the general location has been selected there are additional decisions as to the exact location, style of rack and number of parking places to provide.

More "scientific" criteria may be useful for determining exactly what kind of bicycle parking device to install and exactly where.

- **Visibility:** Cyclists should easily spot short-term parking when they arrive from the street. A

highly visible location discourages theft and vandalism. Avoid locations "off on the side", "around the corner" or in un-supervised parking structures or garages.

- **Access:** The parking area should be convenient to building entrances and street access, but away from normal pedestrian and auto traffic (see below). Avoid locations that require bicycles to travel over stairs.
- **Security:** Surveillance is essential to reduce theft and vandalism. For security, locate parking within view of passers-by, retail activity, or office windows. Better yet: officially assign building security, parking lot attendant or other personnel to watch for suspicious behavior.
- **Lighting:** Bicycle parking areas should be well lit for theft protection, personal security and accident prevention.
- **Weather Protection:** Whenever possible protect bicycle parking area from weather. We recommend that you use an existing overhang or covered walkway. Alternatively, construct a canopy or roof -- either freestanding or attached to an existing building.
- **Avoid Conflict with Pedestrians:** Locate racks so that parked bicycles don't block the pedestrian path. Select a bike rack with no protruding bars that could trip or injure cyclists or pedestrians. Very low bar-type racks can be a hazards to pedestrians -- not recommended.
- **Avoid Conflict with Automobile:** Separate bicycle parking and auto parking and roads areas with space and a physical barrier. This prevents motor vehicles from damaging parked bicycles and keeps some thieves at a distance. Most professional bike thieves use vans or similar vehicles to hide there activities and make a get-away with their booty concealed. The closer bicycle parking is to automobile parking, alleys, roads, etc., the better the opportunity for a bike thief.

The more short term the parking and the more secure the location the simpler the bike parking device. Security can be a matter of a guarded location, a high volume of pass-by traffic or control of access.

Short Term Parking. Short-term bicycle parking, can be as simple as a stationary object to which the cyclist can lock the frame and wheels. To lock both wheels usually requires a user-provided 6 foot cable (or chain) and lock or removing a wheel. One of the simplest bicycle parking devices for public places is a hitching post type rack (a couple of verticle post with a horizontal piece between them). A bike can be leaned against it and locked up. The bicyclist must supply the lock.

Medium Term Parking. Medium term bike parking requires a stationary object in which the bicyclist can lock the frame and both wheels with a user-provided lock. These bike racks usually involve something that clamps around the bicycle and a cage that help protect the lock from being tampered with or physical assault. This class of bike rack may have difficulties fitting all variety of bicycles. Some of the common bike styles that loose out are recumbants, tandems and kids bikes. People also complain that it is hard to use some of these racks without dinging or scratching your bicycle.

Long Term Parking. Bicycle parking facility intended for long term parking and protected against theft of the entire bicycle and its components and accessories. Three common ways of providing secure long term bicycle parking are: a) fully enclosed lockers accessible only by the user; b) a continuously monitored facility that provides at least medium term type bicycle parking facilities; and c) restricted access facilities in which short term type bicycle racks are provided and access is restricted only to the owners of the bicycles stored therein.

Perhaps the easiest retrofit is bicycle locker. Generally they are as strong as the locks on the door. They are designed to be secure individual bikes with panniers, computers, lights, etc, 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. On the downside, if lockers have coin-operated locks, they can be a target of theft, and my attract various non-intended uses.

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Planning to Install Bicycle Parking



Installing bicycle lockers

This guide is intended to help you save money installing bicycle parking facilities that work.

Whether you are required or volunteering to in bicycle parking, you should plan thoughtfully for convenient, secure and plentiful bicycle parking. If you see bicycles locked to trees, posts or other stationary objects nearby, you probably need bicycle parking. If you have bicycle parking the rarely used it may be poorly located or of a type that offers

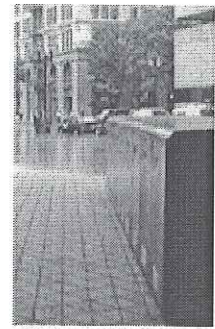
little security. You will find tips in this guide to help you plan for new parking or improve current parking. The basics of effective bicycle parking are a **good rack** and a **good location**. The information on the following pages should provide you with enough knowledge to install bicycle parking facilities that work. For additional information or guidance you may contact:

City of Portland Bicycles
1120 SW Fifth Avenue, Room 730
Portland, Oregon 97204-1972
(503) 823-CYCL
(503) 823-2925
roger.geller@pdxtrans.org

Finding a Good Location

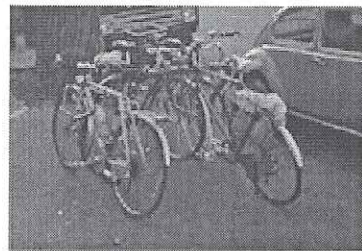
The first step in planning your bicycle parking is finding a good location. The location you choose should meet the needs of your potential users and consider where cyclists want to park, not where you might like them to park. While the new bicycle parking code requires both short- and long-term parking for most land uses and has different standards for each category, well planned bicycle parking can serve both uses. Lack of adequate bicycle parking facilities and fear of theft are major deterrents for all bicyclists. To ensure your bicycle parking will be used, be sure to choose locations that are: **convenient enough to encourage cycling**; and **secure enough to**

reasonably safeguard against bicycle theft.



Dry and convenient bicycle lockers

Rack Selection and Installation



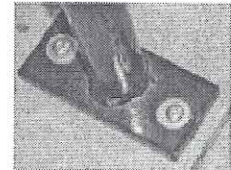
An example of code-approved rack in use

All bicycle racks are not created equal. There are many styles to choose from. Make sure you choose yours according to the following guidelines:

What's required

Racks that allow the frame and one wheel to be locked to the rack with a high security, U-shaped shackle lock if both wheels are left on the bicycle. These racks are preferred by cyclists and can help you attract their business.

All racks (and lockers) must be securely anchored - seasoned cyclists will opt for the nearest permanent object in lieu of a poorly anchored rack.

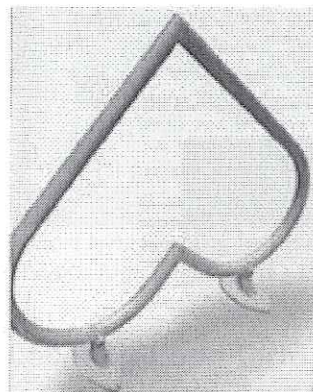


Example of tamper-proof bolts

What works

Bicycle parking may be provided in floor, wall or ceiling mounted racks - the City of Portland Bicycle specialist staff can help you determine whether yours meet the standards.

Design your own rack - you can be creative in your design as long as it meets the standards.



A creative rack design that meets City standards

What doesn't work

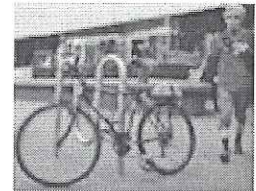
Old fashioned racks that hold only the wheel of the bicycle can cause damage and are a waste of your money - seasoned cyclists will find other alternatives and take their business elsewhere.



Wall-mounted racks

Locating Short-term Parking

Short-term bicycle parking provides shoppers, customers, messengers and other visitors who generally park for two hours or less a convenient and readily accessible place to park bicycles.



Convenient short-term parking

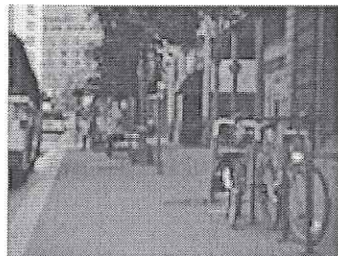
What's required

Locate within 50 feet of a main entrance - short-term parking should be near the entrance cyclists use.

Distribute short-term parking - where there is more than one building on a site, or a building has more than one main entrance, the parking must be distributed to serve buildings or main entrances.

Cover - if more than 10 short-term spaces are required, at least 50% must be covered.

A permit - if your building is built to the lot line and you plan to install parking on the sidewalk, you will need a permit.



Short term parking located near a high traffic area

What works

Locate parking in visible and prominent location - cyclists are unaware of the parking if it won't be used.

Locate parking in areas where there is high pedestrian activity - having lots of eyes and ears nearby adds to cyclists' perception of security.

What doesn't work

Isolation - a bicycle rack that is visually or physical isolated will not be used and is a target for thieves.

Locating Long-term Parking

Long-term bicycle parking provides employees, students, residents, commuters and others who generally stay at a site for several hours a secure and weather-protected place to park bicycles. The measure of security for long-term bicycle parking must be greater than that provided by short-term parking.



Covered, secure long-term parking

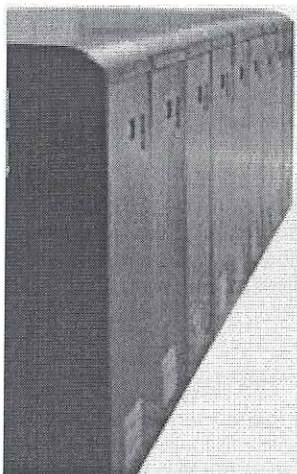
What's required

Locate on site or within 750 feet of the site - daily bicycle commuters are generally willing to walk a short distance, about three blocks, if they are confident the parking is secure.

Cover - at least 50% of long-term bicycle parking must be covered.

Security can be achieved in at least one of the following ways:

- 1) in a locked room or area enclosed by a fence with a locked gate;
- 2) within view or within 100 feet of an attendant or security guard;
- 3) in an area that is monitored by a security camera; or
- 4) in a location that is visible from employee work areas.



Lockers offer high security and weather protection

What works

Secure locations - cyclists will be more likely to park where they are confident their bicycle will be there upon return.

Locate in well lit areas - lighting increases security of property and personal safety.

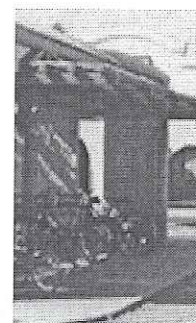
Install lockers - in areas where security is in question where there is limited opportunity to provide weather protection, enclosed bike lockers are the best solution.

What doesn't work

Isolation - a bicycle rack that is visibly or physically isolated will not be used and is a target for thieves.

Spacing and Siting Standards

Each bicycle parking space should be easily accessible. Cyclists should be able to securely lock their bicycles without undue inconvenience and their bicycles should be reasonably safeguarded from intentional or accidental damage. Consider the space that a rack full of bicycles will take up, not just the rack itself. Also consider that cyclists require a sufficient pathway in and out of the parking area.



High density covered parking

What's required

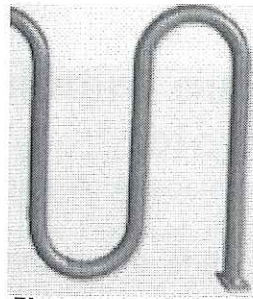
Each parking space must be accessible without moving another bicycle - generally, allow for 2 feet by 6 feet for each bicycle parking space.

Provide an aisle at least 5 feet wide behind all bicycle parking to allow room for maneuvering - just as automobile drivers need additional space to maneuver in and parking spaces, so do cyclists.

What works

Staggered racks - some bicycle racks can be staggered on 17 inch centers allowing for more bicycles to be parked.

Consider the space a filled rack requires - the City Portland Bicycle specialist staff can provide you with spacing requirements for specific rack types.



Plan your parking for bicycles, not an empty rack

What doesn't work

Installing bicycle racks too close to a wall or too close to each other - installing racks improperly can cut capacity as much as 90%.

Installing bicycle racks too close to car parking - motorists will seldom leave sufficient room for bicycles to park and maneuver if bicycle parking is not sufficiently separated from car parking.

Covered Bicycle Parking

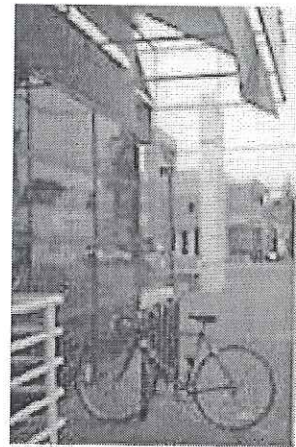
Prolonged exposure to rain can rust a bike's metal frame and components and the sun's ultraviolet rays can deteriorate a bike's soft seat and tires. Cyclists who value their bicycles will thank you for providing weather protection by giving you their business.

What's required

Cover must be permanent - the cover should be designed to protect the bicycle from rainfall and be at least 7 feet above the floor or ground.

What works

Take advantage of existing overhangs or awnings - this is a creative, low-cost way of providing some weather

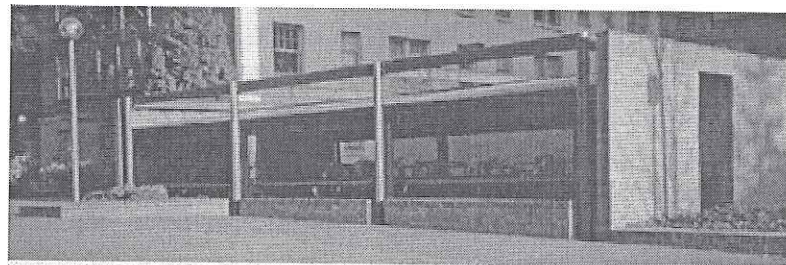


Making use of an existing awning

protection. Install bicycle lockers - in areas where potential for sufficient cover is limited, enclosed bicycle lockers are the best solution.

What doesn't work

Partial cover or cover that is too high - cover is intended to protect bicycles from rain and sun as well as protect cyclists from rain when they are locking or unlocking their bicycle.



Covered parking at Portland State University

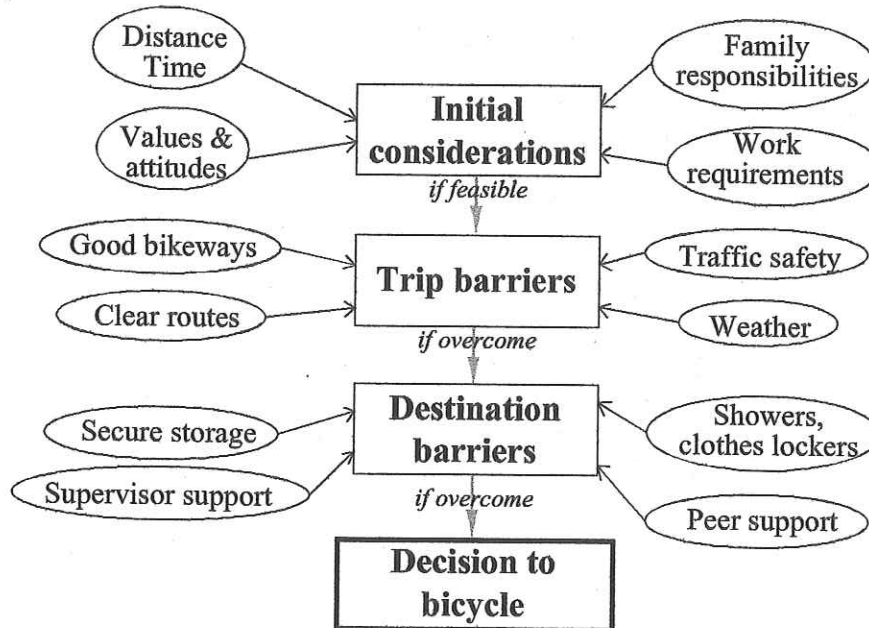
Sign Parking Signs

Signs serve several purposes. They let cyclists know you have bicycle parking and that their business is valued. Signs also help cyclists find your parking if it is not immediately visible or direct long-term users to the parking area.

Getting commuters out of a car and on to a bicycle

Patrick Siegman, Siegman & Associates - Town & Transportation Planning

To achieve any significant mode shift, it is important to tip the balance toward cycling at every decision point on the way. The diagram below summarizes all the basic decisions that go into choosing the bicycle as the best commute mode:



Each key variable may be weighed differently by each individual, but the decision-maker must pass through three steps before deciding to bicycle commute. First, the "initial considerations," which the employer has limited control over, of whether cycling generally fits with the commuter's lifestyle. The second tier, "trip barriers," involve bikeway conditions between home and the workplace. While we and our neighbors have among the best bikeway facilities in the country, significant barriers do remain, and we must work with all the appropriate jurisdictions to overcome those. Finally, "destination barriers" are the ones an employer can do the most about. Barriers at work, particularly the lack of secure bicycle storage, are often the primary limits to increased bicycle commuting.

To increase bicycle commuting, an employer must do all it can to remove barriers at each step along the way.



1. TAP YOUR INSIDE EXPERTS

Why do it all yourself (especially if you don't bike to work)? Invite experienced commuters to form a *Bicycle User Group (BUG)*. They'll think of things you might miss, and help with programs you can't do by yourself.

2. KNOW YOUR OUTSIDE EXPERTS

Cities and counties often have *Bicycle Advisory Committees (BACs)*. Advocacy groups, often called *Bicycle Coalitions*, work for safe bike transportation networks. National groups like the *League of American Bicyclists (LAB)* publish educational literature, and much more is available on the Web. Most *bike clubs* are recreational, but some have transportation expertise. Contact *Bicycle Solutions* for a resource list.

3. PROVIDE SECURE (INSIDE) PARKING

Locking a bike outside isn't like locking a car. Inside parking is best, and it's free (bike lockers aren't). Street bike tires are cleaner than shoes - allow bikes in offices, cubicles, and unused stairwell and storage space. Call *Bicycle Solutions* for a sample inside-workplace bike parking policy which satisfies the Fire Marshal. Installing outside racks anyway? Let cyclists choose them, and place them where walkers and lobby staff can see them clearly or cyclists will avoid them. Call *Bicycle Solutions* for information and pricing on the best racks.

4. PROVIDE A PLACE TO SHOWER, DRESS, AND KEEP OFFICE CLOTHES

Depending on distance and climate, a shower may be optional or a "must". Cyclists can change in a restroom if they must, but a separate changing room is better. And unlike noontime joggers, bike commuters need to store clothes overnight, preferably a week's worth -- even if you can't provide showers. Provide long-term-use clothes lockers or an inexpensive locked wardrobe cabinet shared by several commuters.

5. SUGGEST GOOD ROUTES TO WORK

Does your city or county publish a free bike route map, in print or online? If not, your BUG or *Bicycle Solutions* can suggest routes. Copy and highlight a local street map. Ask your city or county staff to fix gaps and obstacles.

6. GIVE FIRST-TIMERS A FREE LUNCH

Have a cafeteria? Create a coupon and give employees a friendly incentive to try their first bike commute.

7. SPREAD THE WORD

Distribute a "one-pager" that describes parking, showers, changing rooms, clothes storage, incentives, BUG, BACs, bike shops, electronic mail, etc., along with your name, title, phone number, and email address. Post it wherever bikes are parked, outside the lunchroom, and on your website. Set up a bike commuter email list so you can post news and your cyclists can help each other solve problems.

8. CAPTURE NEW COMMUTERS

Tell newcomers about your program when they're changing their commute. It only takes a minute - just give them your one-pager summary! Ask current commuters to "buddy up" with the new person on their first ride in.

9. SET AN EXAMPLE

Live within 5 to 7 miles (1/2 hour by bike)? Bike to work, and invite others to join you! Your contacts (see #1 and #2) can help you with the skills and knowledge that make a bike commute smooth. Round-trip too far? With a "Bike-Carpool", you bike one way and carpool the other way with your bike on a folding bike rack that stows in a car's trunk when not in use.

10. HOLD A STREET SKILLS SEMINAR

Street Skills For Cyclists, a seminar available in 3-to-4 hour formats, teaches bicycle owners what they need to safely and confidently handle commuting and utility trips. It's affordable for employees, so you need only provide a classroom. Call *Bicycle Solutions* for a flyer and for information about customizing the class for your location. We also offer 1-hour lunchtime bike "brown-bags" in the San Francisco Peninsula and South Bay areas.



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: bicycle parking costs

: manufacturers

: parking guide

intersections

:: Bicycle Parking : Costs

Cost to install bike racks: \$150 each (parks two bikes)
 Cost to install bike lockers: \$1000 each (parks two bikes)
 Cost to provide car parking space: \$2200 surface lot, \$12,500 garage
 Number of bike spaces in one car space: 10-12

How much do agencies charge to rent bicycle lockers?

A survey of local bicycle program managers in 2000 revealed the following rang costs that agencies charge people to rent bicycle lockers.

University of California, Davis: \$20 per quarter (10-12 weeks), \$20 key depo \$10 per quarter for those commuting 10 miles or more (one way).

Portland, Oregon: \$10/month, \$25/3 months, \$45/6 months, \$25 key deposit. structure assumed to cover locker costs over 10-year period.

San Francisco: \$25/3 months, \$45/6 months, \$75/1 year, \$25 refundable key deposit.

Albuquerque, NM: Free lockers for downtown employees.

Madison: \$75/1 year.

Cincinnati: Has 10 lockers in downtown. \$40/6 months. Recent increase in ke deposit to cover lock replacents.

Caltrain: \$5/month six months in advance, \$25 refundable key deposit.

Maryland Mass Transit Admin: \$25/3 months, \$70/ year, \$25 refundable key deposit.

Washington DC Metro: \$45/6 months, \$70/year, \$10 key deposit

Tucson: 54 lockers(108 spaces) in downtown, 54 lockers (108 spaces) at sele transit stops, \$2/month, \$7.50 refundable key deposit.

Santa Cruz, CA: \$5 per month, \$10 refundable key deposit (plus \$3 bicycle lice

The City of Los Angeles has contracted out the management of bike lockers ir several locations in the city. The local bicycle user group administers the progra



Bike Lockers

MODEL	MOUNTING	HOW TO ORDER USE THE SOURCE FOR DESIGNATING YOUR CHOICES WHEN ORDERING
SIZE	FINISH	

Cycle Shed™ Model# CS2-P



CS 2-P

CAPACITY

2 bicycles per modular unit (each unit is diagonally divided with a door on either end). Units can be used individually or in a linear fashion.

DESIGN

Unique one piece body design eliminates separate side, roof, and common wall panels offering advantages over competitors' multi-panel bicycle locker designs. Unlike our competitors' lockers, Creative Pipe lockers:

- Can stand alone or in a linear fashion without the use of common walls creating a more stable unit and giving the end user complete flexibility on future placement of the locker units.
- Do not require nuts and bolts to attach roof panels to side panels thereby increasing security while decreasing installation time.
- Do not have seams/gaps between side panels and top panels eliminating the chance of water and other debris from entering the unit while making it impossible for vandals to use pry bars to separate panels.
- Ship from our quality controlled factory square and need only to be leveled on the pad where they are placed.
- Ship 100% assembled and therefore installation costs, time, and mistakes are minimized saving the customer a great deal of money

CONSTRUCTION

- Extra thick 5/8" double wall construction for unsurpassed strength, rigidity and insulation.
- Integral internal framework and ribbings in walls, roof and floor to provide strength and rigidity allowing the units to withstand over 225 pounds per square foot on the

top surface and over 60 pounds per square foot on the door and side surfaces without buckling or cracking.

- High tensile strength zinc coated or stainless steel fasteners to join all components to the framework.
- Steel "U" channel wall reinforcements for unrivaled strength.

NOTE: Perforated sheet steel (mild or stainless) security viewing windows are now available (see top of pg 45)

MATERIAL

SHELL: UV Stabilized, graffiti, vandal, abrasion and fire resistant polyethylene. Polyethylene has an extremely high impact resistance making it nearly impossible to dent. Polyethylene is highly chemical and corrosion resistant. Paints, markers and glues will not adhere to its surface. Polyethylene will not heat up and provides excellent insulation and ventilation. **Polyethylene is made from 100% recyclable materials.**

DIAGONAL PARTITION: External grade sealed OSB.

INSTALLATION

Flanged Surface Mount: Proprietary surface mounted leveling and anchoring system secured by steel anchor bolts and possessing a maximum vertical adjustment of 5 inches.

Dimensions: Length: 75" Width: 40" Height: 50"

LOCKS

Door locks are pop-out T-handles with removable lock cylinders manufactured by either the Ace Lock Company, the Tubar Lock Company (new and recommended) or the Medeco High Security Lock Company.

Locks are individually keyed and equipped with a vertical locking bar which runs the full length of the door from top to bottom.

Locks can also be master keyed.

Lockers can also be used with padlocks or "U" shaped bike locks.

HINGES

Molded in hinges with stainless steel pins.

FINISH

UV Stabilized, graffiti, vandal, abrasion and fire resistant polyethylene in a large variety of colors (note: color is integral to the material and not merely surface applied).

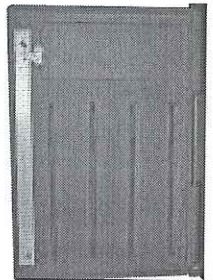
FEATURES AND ACCESSORIES

Recessed number plates (sequentially numbered). Vented doors. Crowned roof to shed water. Accessory hooks. Proprietary steel surface mounted leveling and anchoring system which utilizes steel anchor bolts and can be vertically adjusted to a maximum of 5 inches.

NOTE: The CS2-P is the only polyethylene locker on the market to utilize steel "U" channel wall reinforcements for unsurpassed strength and integrity.

Standard Polyethylene Color Selections

BLUE	BEIGE	GREEN	GREY	BLACK



Locking Bar Detail



Leveling Foot Detail

Guardian Bicycle Locker Systems - Patents Pending

DIMENSIONS:

Depth: 60"; Width: 47"; Height: 70",

Capacity

1 bicycle per unit. Units can be used individually or in numerous linear, circular or s-shaped configurations.

MATERIAL

SHELL: UV Stabilized, graffiti, vandal, abrasion and fire resistant 100% recyclable Medium Density Polyethylene (MDPE) with patent pending Stainless Steel hardware.

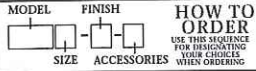
DESIGN

- Space efficient vertical design with an internal ramp for walking the bike up into place. Requires no lifting.
- Dual locking system featuring either pop-out T-handles with keyed lock cylinders or padlock handles.
- Extra wide door opening for easy access to the bicycle.
- Can stand-alone or in linear fashion without the use of common walls giving the end user complete freedom of placement and future relocation.
- Fully contains each bike on all four sides for extra security.
- Can be anchored to concrete pads or walls.



GUARDIAN™





Cycle Shed™ Bicycle Lockers-CS™ Series & Electronic eCS Series



CS™ Series and eCS Series Bicycle Lockers by Creative Pipe, Inc. are made to the most stringent specifications and quality standards to provide ultimate security and resistance to vandalism, corrosion, and theft. At Creative Pipe, Inc. we offer lockers made from solid or perforated sheet steel (electro-galvanized mild or stainless) or polyethylene (CS™ Series only).

Since 9-11, we have also offered highly transparent perforated sheet steel lockers. Being transparent, this perforated material greatly increases public security by diminishing the chances that bicycle lockers will be used by homeless people, as drug enclosures, or as a place to store and detonate explosive devices. On our sheet steel lockers, perforation is offered on the door, side, or roof panels, or any combination thereof. On our polyethylene lockers, perforated sheet steel viewing windows are available.

eCS Smart Bicycle Locker

The revolutionary eCS™ Bicycle Locker is the only bicycle locker specifically designed to embrace modern technology and to offer the full range of secure bicycle parking options that modern micro-electronics can offer. Functional characteristics long desired by both cyclists and facilities managers such as keyless on-demand parking, pay-parking, usage monitoring, unattended bicycle rental, and a wide range of other options can now be provided at a reasonable cost by the multi-faceted eCS Bicycle Locker. In addition, eCS Bicycle Locker can also offer traditional assigned-key parking. eCS Bicycle Locker's exceptionally low re-keying costs means that each eCS Bicycle Locker customer is guaranteed to receive a unique, one-of-a-kind key. Finally, eCS Bicycle Locker also offers flexibility of choice in panel materials to custom suit particular security, durability, fire-resistance, weather-resistance, visibility, aesthetic, and budgetary requirements. Equally important, eCS Bicycle Locker's frame-and-panel system is the only system specifically engineered to offer high transparency with maximum bicycle security.

CAPACITY:

Single capacity triangular unit (pictured); single capacity rectangular unit; traditional double capacity rectangular unit diagonally divided with a lockable door on either end (pictured). Designate "eCS1-T", "eCS1-R", or "eCS2" for a single capacity triangular or rectangular eCS or a double capacity eCS respectively.

MATERIAL:

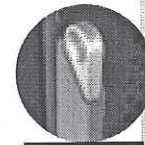
Framework & Doorframes: 12 gauge tubular sheet steel.
 Infill Options: 12 or 14 gauge perforated sheet steel with 3/8" holes; Solid 14 or 16 gauge sheet steel.
 Locks: Electronic locks. Optional keypad.
 Locking Bar: Full length stainless steel with three point locking.

AVAILABLE FINISHES:

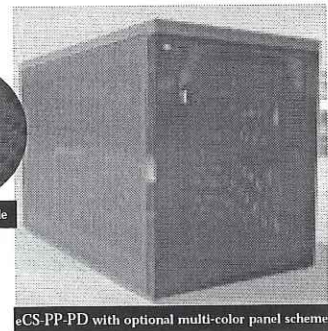
Graffiti resistant T.G.I.C. polyester powder; optional stainless steel with a satin finish.
 **PLEASE PHONE US OR VISIT OUR WEBSITE FOR MORE COMPLETE INFORMATION ON THIS UNIT.



eCS-T-PP



Pry-proof handle



eCS-PP-PD with optional multi-color panel scheme

Cycle Shed™ Model #: CS 2-C™, CS1-C or CS1-C-T

SPECIFICATIONS

Dimensions: Length: 76"; Width: 39"; Height: 47"
 Note: Single capacity units, CS 1-C, are 30" wide.

CAPACITY

1 or 2 bicycles per modular unit (double capacity units are diagonally divided with a door on either end). Units can be used individually or in a linear fashion with other units sharing a common wall. Single capacity units are also available. Please designate "CS1-C" for a single capacity rectangular unit or "CS1-C-T" for a single capacity triangular unit.

MATERIAL

WALL AND TOP PANELS: 16 gauge sheet steel.
 Optional 14 gauge sheet steel; optional 12 gauge perforated sheet steel.

DOOR PANELS AND DOOR FRAMES: 12 gauge sheet steel; optional perforated 12 gauge sheet steel door panel.

DIAGONAL PARTITION: External grade OSB.
 Optional sheet steel or perforated sheet steel.

CONSTRUCTION

Heavy duty 12 gauge tubular steel door frames at both ends.

All fasteners are internal.

Hinges

Heavy duty full length 14 gauge stainless steel piano door hinges.

Locks

Door locks are pop-out T-handles with removable lock cylinder manufactured by either the Tubar Lock Company, Ace Lock Company or the Medeco High Security Lock Company. Locks are individually keyed and equipped with a vertical locking bar which runs the full length of the door from top to bottom. Locks can also be master keyed. Also available with padlock/"U" Lock handles to accommodate either a padlock or "U" lock. (See photo below)

FEATURES AND ACCESSORIES

Number plates (sequentially numbered).
 Proprietary stainless steel surface mounted leveling and anchoring system.

FINISH

Graffiti resistant polyester powder coat. Over 180 colors available. Two-tone or multi-color schemes available. Optional stainless steel lockers with satin finish available upon request.

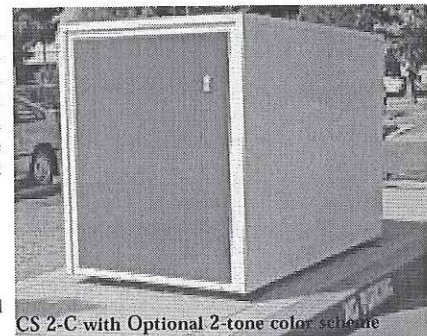
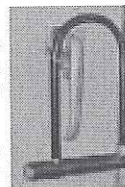
INSTALLATION

Flanged Surface Mount: Proprietary surface mounted leveling and anchoring system secured by stainless steel anchor bolts and possessing a maximum vertical adjustment of 5 inches.

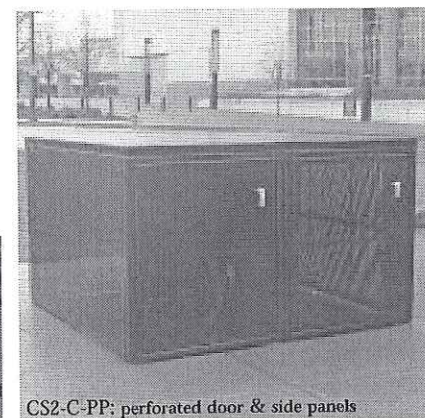
Assembly

Lockers ship broken down for on-site assembly. Doors are factory assembled and hung in their frames prior to shipment.

Accommodates either a Padlock or "U" Lock

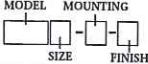


CS 2-C with Optional 2-tone color scheme

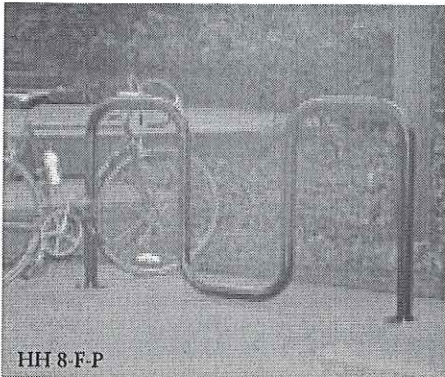


CS2-C-PP; perforated door & side panels

Hammerhead • Enforcer • Thunderbolt Wide Loop

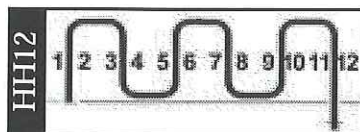
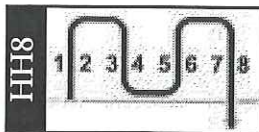
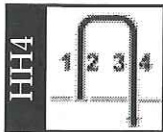
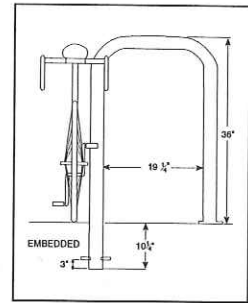
MODEL MOUNTING

HOW TO ORDER
 USE THIS SEQUENCE FOR DESIGNATING YOUR CHOICES WHEN ORDERING

Hammerhead™-HH™ Series *Also available in square tubing



HH 8-F-P

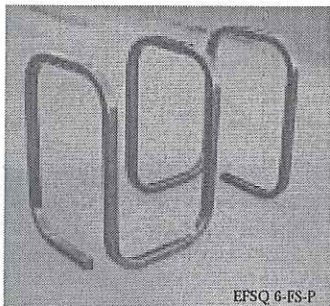
- Modified serpentine style rack allows parking of two bikes or one motorcycle per loop.
- Available in three standard sizes to accommodate 4, 8, or 12 bicycles.
- Available in a standard embedded mount or optional flanged surface mount.
- Standard hot-dipped galvanized finish and optional powder coated, thermoplastic or Satin #4 stainless steel finish.
- Heavy duty 2 3/8" O.D. ASTM (.154" wall) Schedule 40 steel pipe construction.
- **MOUNTING OPTIONS** (Please see "INSTALLATION SECTION" on Page 44 for detailed mounting options): embedded mount (standard) or flanged surface mount (optional). Designate "-E" for embedded racks or "-F" for flanged racks after the model number.
- **FINISH OPTIONS:** Hot-dipped galvanized (standard & recommended); polyester powder coated (optional); thermoplastic powder coat (optional); stainless steel with a #4 satin finish (optional). Designate "-G", "-P", "-T", or "-SS" for galvanized, powder coated, thermoplastic coated, or stainless steel finish respectively after the mounting designation.



MODEL #	CAPACITY	LENGTH
HH 4	4	30"
HH 8	8	68"
HH 12	12	112"

NOTE: Also available in 2" x 2" ASTM (.188 wall) square structural and mechanical tubing.

Enforcer™ Rack-EF™ Series *Also available in square tubing



EFSQ 6-FS-P



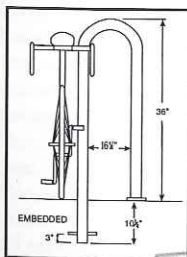
EF 6-FS-P

- Innovative design allows the bike to make contact with the rack at two points for increased stability.
- Available in 4 standard sizes to accommodate 4, 6, 8 or 10 bikes.
- Available in standard embedded mount or optional surface mount.
- Constructed from 2 x 2" (.188 wall) square structural and mechanical steel tubing (recommended), 2 3/8" O.D. (.154 wall) Schedule 40 steel pipe, or 1.9" O.D. (.145 wall) Schedule 40 steel pipe.
- **MOUNTING OPTIONS:** Freestanding; permanent surface mount; permanent flanged mount; or embedded mount. Designate "-FS", "-SM", "-F", "-E" for freestanding, surface mounted, flanged or embedded mount respectively after the model designation.
- **FINISH OPTIONS:** Hot-dipped galvanized (standard & recommended); polyester powder coated (optional); thermoplastic powder coat (optional); stainless steel with a #4 satin finish (optional). Designate "-G"; "-P", "-T", or "-SS" for galvanized, powder coated, thermoplastic coated, or stainless steel finish respectively after the mounting designation.
- Patent applied for.

(Please see "INSTALLATION SECTION" on page 44 for detailed mounting options)

MODEL #	CAPACITY	DIMENSIONS
EF 4	4	28"L x 36"H x 20"W
EF 6	6	54"L x 36"H x 20"W
EF 8	8	79"L x 36"H x 20"W
EF 10	10	105"L x 36"H x 30"W

Thunderbolt™ Wide Loop-WTB™ Series *Also available in square tubing

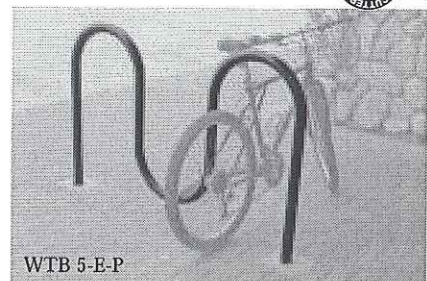


- Wider loop version of the popular Thunderbolt™ Series (see page 37) offering more space under each loop.
- Also available in square tubing designate WTBSQ.

MODEL #	CAPACITY	LENGTH
WTB 3	3	21"
WTB 5	5	59"
WTB 7	7	97"
WTB 9	9	135"
WTB 11	11	173"
WTB 13	13	211"

NOTE: Also available in square tubing.

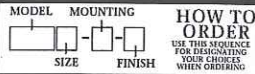
NOTE: Freestanding mounting option now available



WTB 5-E-P

Handwritten notes: TB9 (7601) 310-30 SHIPP rack





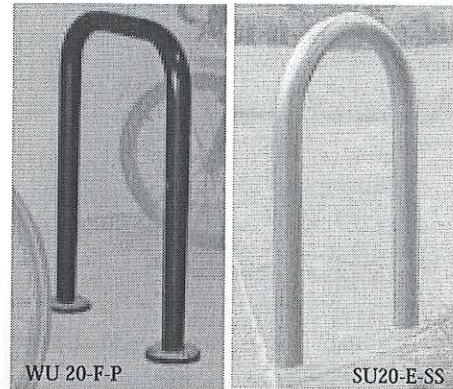
U-Rack • Bike Fence • Sidewinder



Inverted "U" racks—Models SU™ and WU™



- Fabricated from 1.5" I.D. (1.9" O.D.) or 2.0" I.D. (2 3/8" O.D.) ASTM A53 Schedule 40 Steel Pipe.
- 1.5" I.D. racks are designated SU 15 and WU 15 and 2.0" I.D. racks are designated SU 20 and WU 20.
- Bicycle makes contact with the rack in two places for additional stability and security.
- Simple, attractive, economical and space saving design is ideal for city sidewalks.
- Optional center cross bars available to make the racks more ADA friendly and to provide greater stability.
- **MOUNTING OPTIONS:** (Please see "INSTALLATION SECTION" on page 44 for detailed mounting options): embedded mount (standard) or flanged surface mount (optional). Designate "-E" for embedded racks or "-F" for flanged racks after the model number.
- **FINISH OPTIONS:** Hot-dipped galvanized (standard & recommended); polyester powder coated (optional); thermoplastic powder coat (optional); stainless steel with a #4 satin finish (optional). Designate "-G", "-P", "-T", or "-SS" for galvanized, powder coated, thermoplastic coated, or stainless steel finish respectively after the mounting designation.
- **OPTIONAL CROSS BAR:**
Please designate "-CB" after finish option for optional cross bar.
NOTE: Square tubing models shown below.



1.5" I.D. Schedule 40 Steel Pipe			
Model #	Description	Capacity	Length
SU 15	1.5" I.D. Schedule 40 pipe SU rack	2	21"
WU 15	1.5" I.D. Schedule 40 pipe WU rack	2	30"

NOTE: OTHER LENGTHS ALSO AVAILABLE.

2.0" Schedule 40 Steel Pipe			
Model #	Description	Capacity	Length
SU 20	2.0" I.D. Schedule 40 pipe SU rack	2	22"
WU 20	2.0" I.D. Schedule 40 pipe WU rack	2	30"

NOTE: OTHER LENGTHS ALSO AVAILABLE.

Square Tubing Inverted "U" racks— Models SUSQ 2 and WUSQ 2



- Made from 2" x 2" x .188 wall square tubing (thicker wall than 2" Schedule 40 steel pipe).
- Available in all the same sizes, finishes and mounting options as the SU and WU racks.
- Offers all the advantages of the SU and WU racks with the added advantage of far superior security (please see top of page 37).

Model #	Description/Capacity	Length
SUSQ 2	2" Square Steel Tubing SU rack	2
WUSQ 2	2" Square Steel Tubing WU rack	2

NOTE: OTHER LENGTHS ALSO AVAILABLE.



Bike Fence™-BF Series™ *Also available in square tubing



- One of our most rugged bicycle rack designs.
- Enables bicycles to stand upright.
- Continuous mig welds at all joints for unsurpassed strength and durability.
- Available in 7 standard sizes to accommodate 4 through 24 bicycles.
- Double or single side loading.
- 2" I.D. Schedule 40 steel pipe end frames and headers and 1" I.D. Schedule 40 vertical slats.
- Standard hot-dipped galvanized finish.

MODEL #	DESCRIPTION/MAXIMUM CAPACITY	DIMENSIONS
BF-4	4 space Bike Fence/6 bicycles	35"L x 34"H x 31"W
BF-6	6 space Bike Fence/8 bicycles	51"L x 34"H x 31"W
BF-8	8 space Bike Fence/10 bicycles	67"L x 34"H x 31"W
BF-12	12 space Bike Fence/14 bicycles	99"L x 34"H x 31"W
BF-16	16 space Bike Fence/18 bicycles	131"L x 34"H x 31"W
BF-20	20 space Bike Fence/22 bicycles	163"L x 34"H x 31"W
BF-24	24 space Bike Fence/26 bicycles	195"L x 34"H x 31"W

NOTE: OTHER SIZES ARE AVAILABLE.

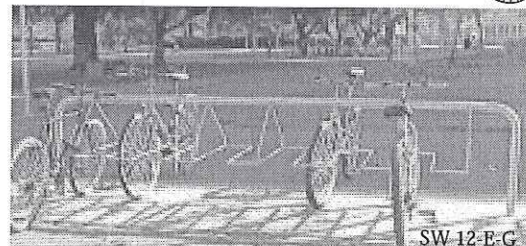


Sidewinder™-SW™ Series *Also available in square tubing

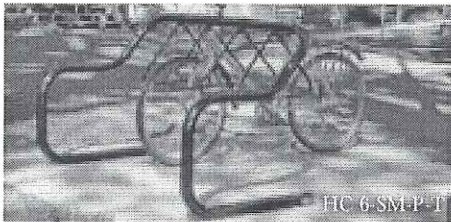


- Frame is constructed from 2 3/8" O.D. Schedule 40 steel pipe.
- Hangers are constructed from heavy duty 3/4" solid round bar.
- Triangular stand for freestanding rack is constructed from 2 1/2" x 3/8" flat bar.
- Available in standard embedded mount, optional flange mount and optional freestanding triangle mount.
- Standard hot-dipped galvanized finish.
- Hanger design promotes obvious, intuitive and secure bicycle parking.
- All joints are continuous mig welds for unsurpassed strength and durability.
- Available in 4 standard sizes to accommodate 8 through 14 bicycles (Optional sizes available).

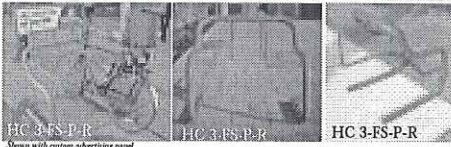
MODEL #	DESCRIPTION	DIMENSIONS
SW 8	8 space Sidewinder	102"L x 33"H x 30"W
SW 10	10 space Sidewinder	121"L x 33"H x 30"W
SW 12	12 space Sidewinder	140"L x 33"H x 30"W
SW 14	14 space Sidewinder	159"L x 33"H x 30"W



Hurricane Rack™-HC™ Series *Also available in square tubing



HC 6-SM-P-T



HC 3-FS-P-R

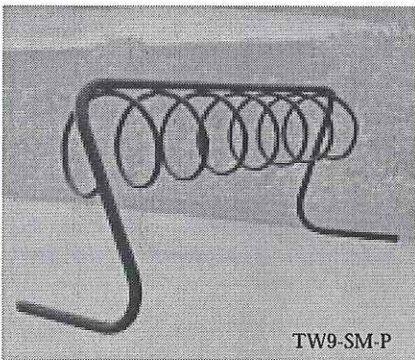
- Frame is constructed from 2 3/8" O.D. Schedule 40 steel pipe.
- Hangers are constructed from heavy duty 3/4" solid round bar.
- Unique design can be used as a freestanding rack or permanently bolted down.
- Optional sizes available.
- Standard hot-dipped galvanized finish and optional powder coated, thermoplastic or Satin #4 stainless steel finish.
- All joints are continuous mig welds for unsurpassed strength and durability.
- Available with either rectangular or triangular hangers. Designate either "-R" or "-T" respectively as the last designation.

- FINISH OPTIONS: Hot-dipped galvanized (standard & recommended); polyester powder coated (optional); thermoplastic powder coat (optional); stainless steel with #4 satin finish (optional). Designate "-G", "-P", "-T", or "-SS" for galvanized, powder coated, thermoplastic coated, or stainless steel finish respectively after the mounting designation.

MODEL #	DESCRIPTION	DIMENSIONS
HC 3	3 space Hurricane	25"L x 34"H x 38"W
HC 4	4 space Hurricane	36"L x 34"H x 38"W
HC 6	6 space Hurricane	58"L x 34"H x 38"W
HC 8	8 space Hurricane	79"L x 34"H x 38"W
HC 10	10 space Hurricane	101"L x 34"H x 38"W
HC 12	12 space Hurricane	122"L x 34"H x 38"W

- MOUNTING OPTIONS: Freestanding or permanent surface mount.

Twister™-TW™ Series *Also available in square tubing



TW9-SM-P

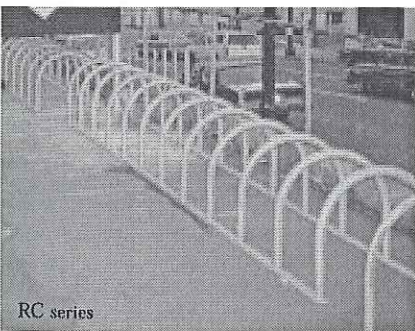
- Frame is constructed from 2 3/8" O.D. Schedule 40 steel pipe.
- Spiral locking loops are made from one continuous piece of 1 1/2" O.D. Schedule 40 steel pipe.
- Legs can be fabricated going the same or opposite directions.
- Available in 4 standard sizes to accommodate 4, 6, 9, or 11 bikes.
- Optional sizes available.
- Standard hot-dipped galvanized finish and optional powder coated, thermoplastic or Satin #4 stainless steel finish.
- All joints are continuous mig welds for unsurpassed strength and durability.

- MOUNTING OPTIONS: Freestanding or permanent surface mount.
- FINISH OPTIONS: Hot-dipped galvanized (standard & recommended); polyester powder coated (optional); thermoplastic powder coat (optional); stainless steel with a #4 satin finish (optional); Designate "-G", "-P", "-T" or "-SS" for galvanized, powder coated, thermoplastic coated, or stainless steel finish respectively after the mounting designation.

MODEL #	DESCRIPTION	DIMENSIONS
TW 4	4 space Twister™	26"L x 38"H x 26"W
TW 6	6 space Twister™	46"L x 38"H x 26"W
TW 9	9 space Twister™	66"L x 38"H x 26"W
TW 11	11 space Twister™	86"L x 38"H x 26"W

NOTE: OTHER SIZES ARE AVAILABLE.

Ribcage™-RC™ Series *Also available in Square Tubing



RC series

- 1 1/2" O.D. Schedule 40 steel pipe loop construction with 3/8" steel flat bar runners
- Double side loading for maximum use of space
- Ideal for schools, universities, apartment complexes and shopping malls where space maximization is a must
- Backward loading of bicycles allowing frame and rear tire to be locked for maximum security
- Available in 6 standard sizes to accommodate between 10 and 20 bicycles (Optional sizes available)

- MOUNTING OPTIONS: Permanent surface mount or freestanding.
- FINISH OPTIONS: Standard hot-dipped galvanized finish.

MODEL #	DESCRIPTION/	DIMENSIONS
	MAXIMUM CAPACITY	
RC 10	5 Loop Ribcage/10 bicycles	58"L x 24"H x 26"W
RC 12	6 Loop Ribcage/12 bicycles	72"L x 24"H x 26"W
RC 14	7 Loop Ribcage/14 bicycles	86"L x 24"H x 26"W
RC 16	8 Loop Ribcage/16 bicycles	100"L x 24"H x 26"W
RC 18	9 Loop Ribcage/18 bicycles	114"L x 24"H x 26"W
RC 20	10 Loop Ribcage/20 bicycles	128"L x 24"H x 26"W

NOTE: OTHER SIZES ARE ALSO AVAILABLE UPON REQUEST

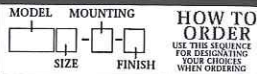
Cyclone™-CY Series™



CY-8-E-P

- Extra heavy 4 1/2" O.D. and 1 1/2" O.D. Schedule 40 steel pipe.
- Embedded or flanged surface mount (embedded model is embedded 24").
- Continuous mig welds at all joints for unsurpassed strength and durability.
- Available in 3 standard sizes to accommodate 6, 8 or 10 bicycles.
- FINISH OPTIONS: Same as Thunderbolt Racks pg. 37.

Model #	Description/Maximum Capacity	Dimensions
CY-6	6 space Cyclone/6 bicycles	52"L x 36"H x 12"W
CY-8	8 space Cyclone/8 bicycles	76"L x 36"H x 12"W
CY-10	10 space Cyclone/10 bicycles	100"L x 36"H x 12"W



Bollard • Tandem • Gauntlet



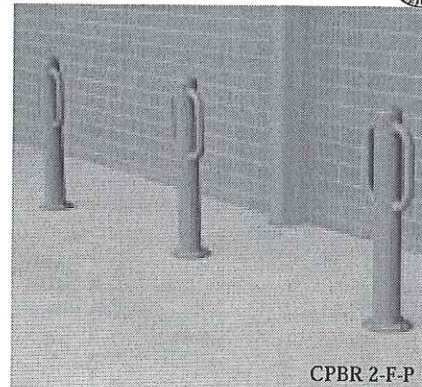
Bollard Bike Rack™-CPBR™ Series *Also available in Square Tubing



- Post is constructed from extra heavy duty 4½" O.D. (.237 wall) Schedule 40 Steel Pipe (other pipe sizes available).
- Locking loops are constructed from 1½" O.D. (.140 wall) Schedule 40 Steel Pipe.
- Available with 1, 2, or 3 locking loops to accommodate 1, 2, or 3 bicycles.
- Available in a standard embedded mount or optional flanged surface mount.
- Standard hot-dipped galvanized finish and optional powder coated, thermoplastic or Satin #4 stainless steel finish.
- Also available in many sizes of square tubing and with solid bar locking loops.

• **MOUNTING OPTIONS:** (Please see "INSTALLATION SECTION" on page 44 for detailed mounting options): embedded mount (standard) or flanged surface mount (optional). Designate "-E" for embedded racks or "-F" for flanged racks after the model number.

• **FINISH OPTIONS:** Hot-dipped galvanized (standard & recommended); polyester powder coated (optional); thermoplastic powder coat (optional); stainless steel with a #4 satin finish (optional). Designate "-G", "-P", "-T", or "-SS" for galvanized, powder coated, thermoplastic coated, or stainless steel finish respectively after the mounting designation.



CPBR 2-F-P

NOTE: For our Standard Bollards please see page 34

MODEL #	CAPACITY	DIMENSIONS
CPBR 1	1	8"L x 35"H x 4.5"W
CPBR 2	2	12"L x 35"H x 4.5"W
CPBR 3	3	12"L x 35"H x 7"W

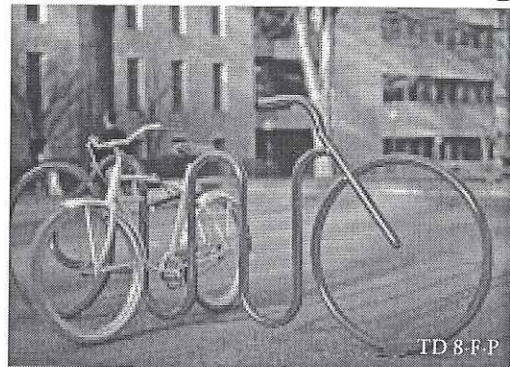
Tandem Rack™-TD™ Series - Patented *Also available in Square Tubing



- Rack is constructed from 1.9" O.D. or 2½" O.D. Schedule 40 steel pipe.
- Attractive design combines the ever popular and functional serpentine style rack, TB™ Series, with an extended bicycle shaped frame that makes it easily identifiable as bicycle parking.
- Bicycles can be parked in the rack's loops as well as to both sides of rack's wheels.

• **MOUNTING OPTIONS:** Embedded mount (optional) or flanged surface mount (standard). Designate "-E" for embedded racks or "-F" for flanged racks after the model number.

• **FINISH OPTIONS:** Hot-dipped galvanized (standard & recommended); polyester powder coated (optional); thermoplastic powder coat (optional); stainless steel with a #4 satin finish (optional). Designate "-G", "-P", "-T", or "-SS" for galvanized, powder coated, thermoplastic coated, or stainless steel finish respectively after the mounting designation.



TD 8-F-P

MODEL #	DESCRIPTION	DIMENSIONS
TD 6	6 space Tandem™	96"L x 42"H
TD 8	8 space Tandem™	120"L x 42"H
TD 10	10 space Tandem™	144"L x 42"H
TD 12	12 space Tandem™	168"L x 42"H

Gauntlet™-GL Series™ *Also available in Square Tubing



- Free standing or permanent surface mount.
- 1½" O.D. Schedule 40 steel pipe with continuous MIG welds at all joints.
- Two point contact of bike frame to rack for added stability and security.
- Available in angle iron, channel (recommended) or flat bar runners.
- Available in 6 standard sizes to accommodate 4 through 14 bicycles.
- Optional sizes and loop spacing available.
- Designed to lock two bicycles per loop.

• **FINISH OPTIONS:** Hot-dipped galvanized (standard & recommended); polyester powder coated (optional); thermoplastic powder coat (optional); stainless steel with a #4 satin finish (optional). Designate "-G", "-P", "-T", or "-SS" for galvanized, powder coated, thermoplastic coated, or stainless steel finish respectively after the mounting designation.



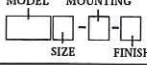
GL 3-G

MODEL #	DESCRIPTION	DIMENSIONS
	/MAXIMUM CAPACITY	
GL-2	2 Loop Gauntlet/4 Bicycles	34"L x 36"H x 26"W
GL-3	3 Loop Gauntlet/6 Bicycles	64"L x 36"H x 26"W
GL-4	4 Loop Gauntlet/8 Bicycles	94"L x 36"H x 26"W
GL-5	5 Loop Gauntlet/10 Bicycles	124"L x 36"H x 26"W
GL-6	6 Loop Gauntlet/12 Bicycles	154"L x 36"H x 26"W
GL-7	7 Loop Gauntlet/14 Bicycles	184"L x 36"H x 26"W

NOTE: DISTANCE BETWEEN LOOPS CAN BE CHANGED.



Wall Mounted • Custom Racks

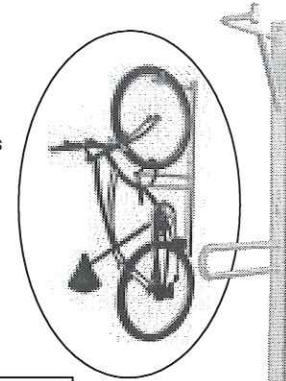
MODEL **MOUNTING** **HOW TO ORDER**

USE THIS SEQUENCE FOR DESIGNATING YOUR CHOICES WHEN ORDERING.

Wall Hook

- Ideal for areas such as parking garages where space is limited
- Works equally well with bikes of all sizes
- Simple, inexpensive design allows the cyclist to lock both the frame and the tire of the bicycle to the locking loop for maximum security
- Design distributes the weight of the bike on the wheel frame instead of on one of the spokes as is typical with most other wall rack products thereby eliminating the risk of bending or breaking costly spokes
- Hook, brace and locking loop are constructed from extra stout $\frac{3}{4}$ " solid round bar
- Mounting flange is constructed from $\frac{3}{8}$ " X 2" flat bar
- Rack bolts to any wall, pillar, brace, or beam in three places

- and features a diagonal brace for unsurpassed strength and security
 - Rack height can be staggered to maximize space
 - Ideal for popular U-shaped, chain and cable bicycle locks
- Mounting Options:** Surface Wall Mounted

Finish Options: Hot-dip galvanized (standard & recommended) polyester powder coat (optional), thermoplastic powder coat (optional), and stainless steel (optional).



WH1

Model #	Description/Maximum Capacity	Dimensions
WH1	Wall Hook Bicycle Rack/1 bicycle	48"L X 19"H X 6"W

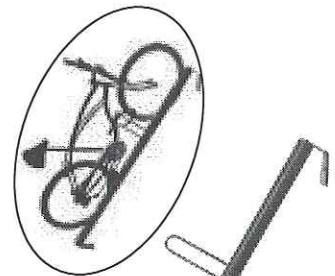
Wall Ramp

- Our stoutest, most elaborate and most user friendly vertical wall rack design
- Ideal for areas such as garages where floor space is limited
- Unique ramp design allows the cyclist to walk the bike up and into place and eliminates the need to physically lift the bicycle
- Front tire drops into a formed upper "pocket" which offers the following advantages:
 1. Accommodates wheels of various sizes
 2. Holds the bike in a secure, upright and aligned position
 3. Prevents the bike from rolling backwards or tipping side to side
 4. Allows the cyclist to release the bicycle, freeing both hands to lock the bicycle
 5. Allows the weight of the bicycle to be distributed on both tires

- $\frac{1}{4}$ " X 2" formed flat bar with $\frac{3}{4}$ " solid round bar locking loops
- Rack allows cyclist to lock both the frame and tire of the bicycle to the locking loop for maximum security
- Formed channel guides the bicycle's tires into place
- Wall ramp comes in two different lengths to maximize space by allowing rack heights to be staggered
- Unique mounting plates allow the rack to mount to both the wall and floor for extra security and stability
- Ideal for U-Shaped, cable and chain locks

Mounting Options: Surface wall mounted

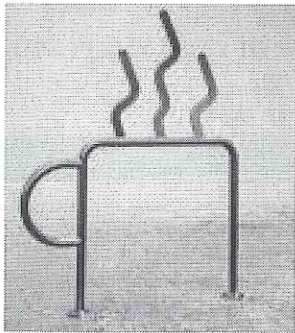
Finish Options: Hot-dip galvanized (standard and recommended), polyester powder coat (optional), thermoplastic powder coat (optional), and stainless steel (optional).



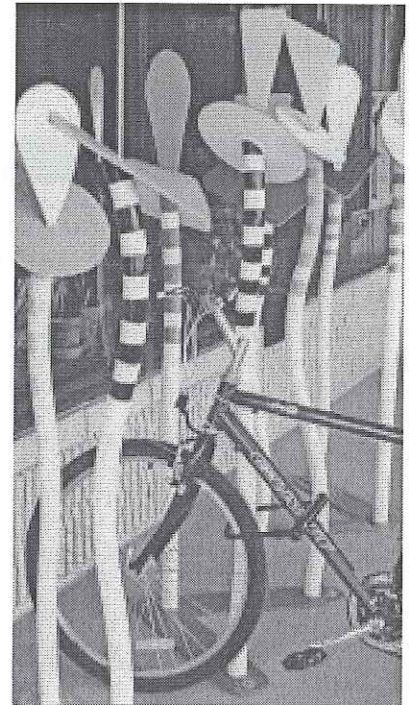
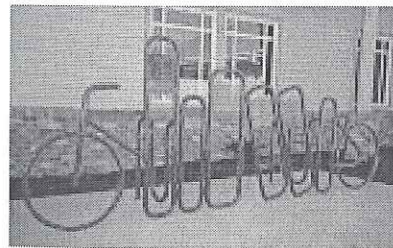
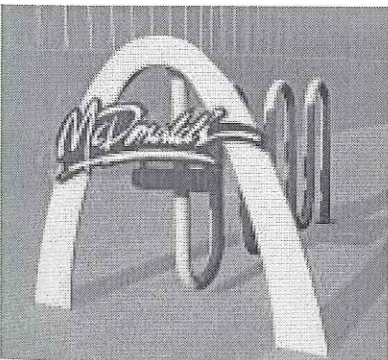
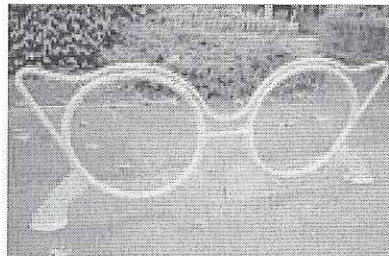
WR1

Model #	Description/Maximum Capacity	Dimensions
WR1	Wall Ramp Bicycle Rack/1 bicycle	69"L X 5"W X 32"D
WR1-X	Extended Wall Ramp/1 bicycle	73"L X 5"W X 32"D

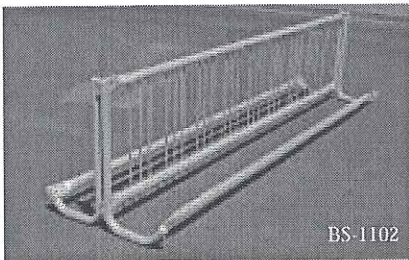
Custom Racks and Designs



At Creative Pipe, Inc. we have a huge bending and fabrication facility and have the ability to make custom racks, benches, tables, sculptures, fence rails and other site furnishings. We also have state-of-the-art laser cutting capabilities and are willing and able to work with customers to fulfill requests for custom products. Call us today and see what we can do for you.



Bike Stall™ - BS™



BS-1102

- Our most moderately priced bicycle rack for moderate security.
- Enables bicycles to stand upright in the rack in an orderly, stable fashion.
- Free standing or permanent surface mount.
- Available in 10 standard sizes to accommodate 4 through 36 bicycles.
- 1-5/8" steel tubing headers and 1" steel tubing slats.
- Double or single-sided loading.

MODEL #	DESCRIPTION / MAXIMUM CAPACITY	DIMENSIONS
BS-1051	4 stall single-sided / 4 bicycles	60"L x 27" H x 15" w
BS-1052	8 stall double-sided / 8 bicycles	60"L x 27" H x 30" w
BS-1081	7 stall single-sided / 7 bicycles	96"L x 27" H x 15" w
BS-1082	14 stall double-sided / 14 bicycles	96"L x 27" H x 30" w
BS-1101	9 stall single-sided / 9 bicycles	120"L x 27" H x 15" w
BS-1102	18 stall double-sided / 18 bicycles	120"L x 27" H x 30" w
BS-1161	14 stall single-sided / 14 bicycles	192"L x 27" H x 15" w
BS-1162	28 stall double-sided / 28 bicycles	192"L x 27" H x 30" w
BS-1201	18 stall single-sided / 18 bicycles	240"L x 27" H x 15" w
BS-1202	36 stall double-sided / 36 bicycles	240"L x 27" H x 30" w

MATERIALS: 1-5/8" steel tubing frame with 1" steel tubing verticals.

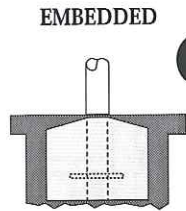
MOUNTING: Freestanding or permanent surface mount.

CAPACITY: Between 1 to 36 bikes depending on model chosen.

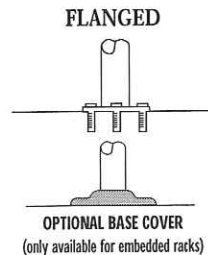
NOTE: BS SERIES RACKS ARE AVAILABLE IN A GALVANIZED FINISH. POWDER COATING IS EXTRA.

Installation: Mounting options for the serpentine style and inverted "U" bicycle racks

- 1 Embedded Anchor Mount**
Embedded racks are direct buried a minimum of 10 1/4" underground and fitted with a steel cross member. The cross member is welded into place, lies horizontally, and acts as an anchor.



- 2 Flanged Surface Mount**
Surface mounted racks have pre-drilled flanges which accept concrete anchor bolts and which are welded to the racks prior to the application of a finish.



- 3 Permanent Surface Mount**
Permanent surface mounted racks have through holes in their legs/base runners for attaching racks to concrete using concrete anchor bolts.
- 4 Freestanding**
Self-explanatory

NOTE: PLEASE REFER TO SPECIFIC RACK MODELS TO DETERMINE AVAILABLE MOUNTING OPTIONS FOR THAT MODEL.

Specifications

Materials

- Hot-dipped galvanized, Powder Coated & Thermoplastic Coat: Bent pipe bicycle racks and bollards are fabricated from Schedule 40 ASTM A53 steel pipe or structural and mechanical square steel tubing.
- Stainless Steel: Optional stainless steel products are constructed from Schedule 40 ASTM A312 TP 304 stainless steel pipe with a #4 satin finish.

Finish

- Hot-dipped Galvanized: Galvanized products are hot-dipped galvanized subsequent to fabrication and hand filed to remove any flash.
- Polyester Powder Coat: Powder coated products are sand blasted subsequent to fabrication to eliminate any rust or other foreign particles. During the powder coating process, the racks are cleaned using the phosphate method, electrostatically sprayed with a triglycidyl

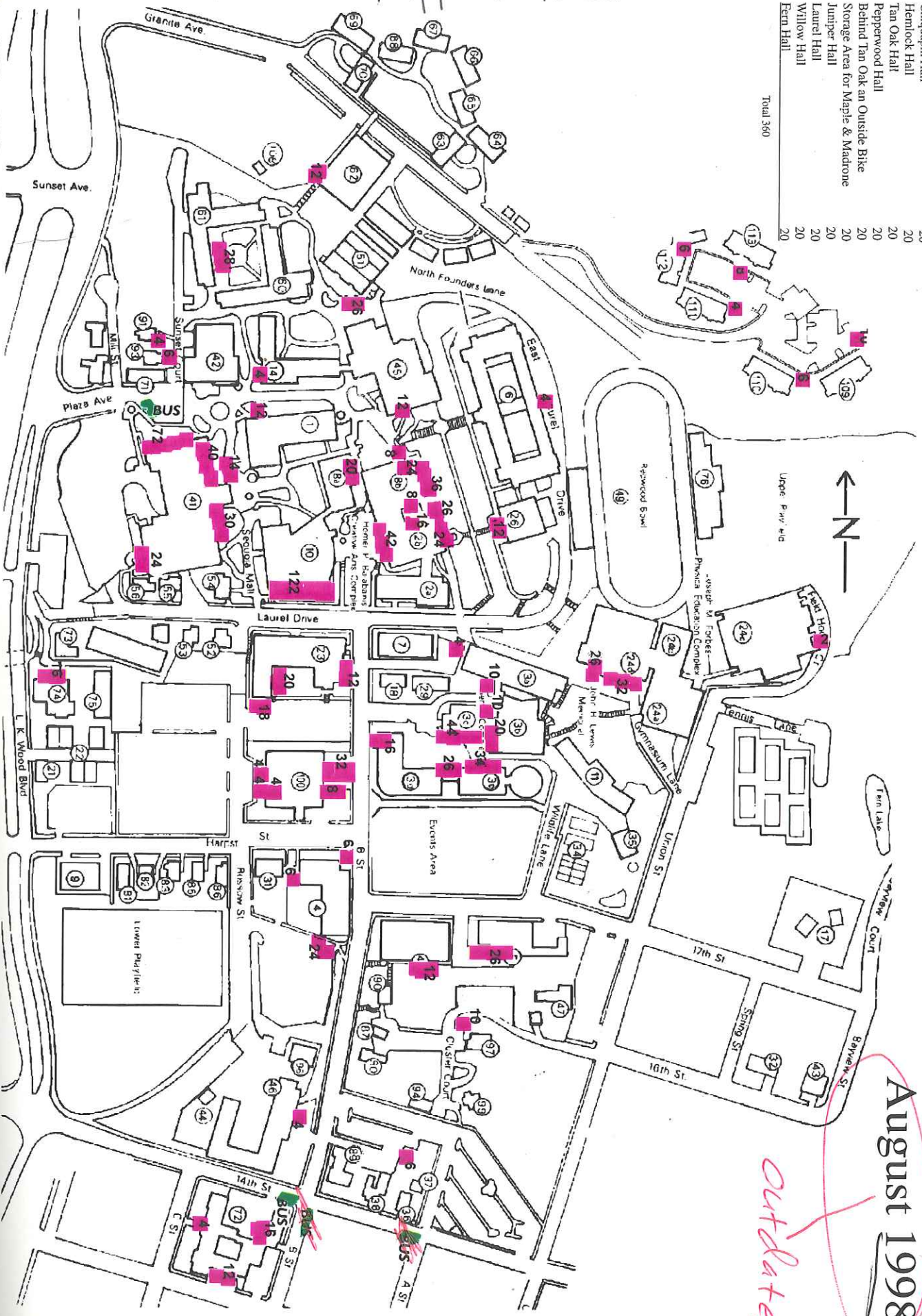
isocyanurate (TGIC) polyester powder coat, and baked in an oven at 400° Fahrenheit.

- Thermoplastic Powder Coat: The application of the thermoplastic powder coat is similar to that for a traditional polyester powder coat. However the end result is a more durable, impact and corrosion resistant, bicycle friendly finish which can be repaired in the field.
- Stainless Steel: Satin #4 finish.

Appendix C

Resident Student (Non Public) Bicycle Storage Spaces

Location	Number of Bikes
Sunset Hall	50
Redwood Hall	50
Alder Hall	20
Cedar Hall	20
Chiquapiin Hall	20
Hemlock Hall	20
Tan Oak Hall	20
Pepperwood Hall	20
Behind Tan Oak an Outside Bike Storage Area for Maple & Madrone	20
Juniper Hall	20
Laurel Hall	20
Willow Hall	20
Fern Hall	20
Total	360



Humboldt State University Public Bicycle Parking and Bus Stops

August 1998

Outdated

Date 4/12 Start Time 1 pm Weather overcast

Please return completed sheets Name TB
 to 4/15 ATC meeting or Tabi Bolton 822-7496

Building	Location #	spaces	occupied	empty	Comments
Annex	1	4			
Annex	2	8			
Annex	3	6			
Plant Ops	1	4			
WWH	1	6			
CCAT	1	12			
Forestry	1	14	10	2pm	7 illegally parked on rail 2 at NR
Ceramics	1	12			
HGH	1	6			
HGH	2	24			
HGH	3	6			
Wildlife	1	8	6	2pm	
SCIE	1	26	0	2pm	
SCID	1	14	0	2pm	
SCIC	1	72	14	16	
SCIB	1	32	8	2pm	
SCIB	2	20	5	4	
SCIA	1	10			
West Gym	1	26			
West Gym	2	32			
SBS	1	8			
SBS	2	40			
Gist	1	12			
Gist	2	14			
Gist	3	12			
Library	1	72			
Library	2	40			
Library	3	14			
Library	4	30			
Library	5	24			
JVD	1	122			
Art	1	66			
Art	2	36			
Music	1	20			
Music	2	16			
Music	3	40			
Siemens	1	8	2		12 noon
Book Store	1	12			
Depo	1	28			
VHM	1	12			
FH	1	4			
Cypress	1	26			
JGC	1	12			
Sunset	1	28			

Date 4/14 Start Time 1030 Weather light rain
 Name TB

Please return completed sheets
 to 4/15 ATC meeting or Tabi Bolton 822-7496

Building	Location #	spaces	occupied	empty	Comments
Annex	1	4			
Annex	2	8			
Annex	3	6			
Plant Ops	1	4			
WWH	1	6			
CCAT	1	12			
Forestry	1	14			
Ceramics	1	12			
HGH	1	6			
HGH	2	24			
HGH	3	6			
Wildlife	1	8			
SCIE	1	26	4		
SCID	1	14	9		
SCIC	1	72	24		Illegal
SCIB	1	32	4		
SCIB	2	20	3		
SCIA	1	10	4		
West Gym	1	26			
West Gym	2	32			
SBS	1	8			
SBS	2	40			
Gist	1	12			
Gist	2	14			
Gist	3	12			
Library	1	72	27	45	
Library	2	40	28	12	
Library	3	14	4		3 illegally parked
Library	4	30	5		
Library	5	24			
JVD	1	122	7		Illegally Parked
Art	1	66	5		
Art	2	36	1		
Music	1	20	1		
Music	2	16	9		
Music	3	40	11		
Siemens	1	8	2		Tren Cars in the way of more parking
Book Store	1	12			
Depot	1	28			
VHM	1	12			
FH	1	4			
Cypress	1	26			
JGC	1	12			
Sunset	1	28			

Date 4/12 Start Time 14:20 Weather Overcast cool breezy
 Name TB

Please return completed sheets
 to 4/15 ATC meeting or Tabi Bolton 822-7496

Building	Location #	spaces	occupied	empty	Comments
Annex	1	4			
Annex	2	8			
Annex	3	6			
Plant Ops	1	4			
WWH	1	6			
CCAT	1	12			
Forestry	1	14			
Ceramics	1	12			
HGH	1	6			
HGH	2	24			
HGH	3	6			
Wildlife	1	8			
SCIE	1	26			
SCID	1	14		3	3 illegally parked
SCIC	1	72	16		
SCIB	1	32	16 9		
SCIB	2	20	6		
SCIA	1	10	4		2 illegally parked
West Gym	1	26			
West Gym	2	32			
SBS	1	8			
SBS	2	40			
Gist	1	12			
Gist	2	14			
Gist	3	12	0		1 illegal
Library	1	72	25		
Library	2	40	24		
Library	3	14	6		
Library	4	30	10 9		custo
Library	5	24			
JVD	1	122	8		
Art	1	66			
Art	2	36			
Music	1	20			
Music	2	16			
Music	3	40			
Siemens	1	8			
Book Store	1	12			
Depo	1	28			
VHM	1	12			
FH	1	4			
Cypress	1	26			
JGC	1	12			
Sunset	1	28			

SET

Date 15 April Start Time 10:08

Weather intermittent showers

Please return completed sheets to 4/15 ATC meeting or Tabi Bolton 822-7496

Name Chris Rull

Building	Location #	spaces	occupied	empty	Comments
Annex	1	4			
Annex	2	8			
Annex	3	6			
Plant Ops	1	4			
WWH	1	6			
CCAT	1	12			
Forestry	1	14	5		+4 locked to railings
Ceramics	1	12	1		+4 locked to railings
HGH	1	6			
HGH	2	24	6		only place bikes are in lowest quality racks
HGH	3	6	4		+1 locked to parking meter
Wildlife	1	8	6		needs bollard to protect from vehicles
SCIE	1	26	1		
SCID	1	14	9		
SCIC	1	72	18		
SCIB	1	32	1		See trees (it has been there for months)
SCIB	2	20	7		
SCIA	1	10	3		
West Gym	1	26	0		
West Gym	2	32	12		
SBS	1	8			
SBS	2	40	11		6 are under cover
Gist	1	12			
Gist	2	14			
Gist	3	12			
Library	1	72			
Library	2	40			
Library	3	14			
Library	4	30			
Library	5	24			
JVD	1	122			
Art	1	66			
Art	2	36			
Music	1	20			
Music	2	16			
Music	3	40			
Siemens	1	8			
Book Store	1	12			
Depo	1	28			
VHM	1	12			
FH	1	4			
Cypress	1	26			
JGC	1	12			
Sunset	1	28			

~~Not Served~~
 Nat. Resources Back 0 4

Nat. Resources front 0 2

no racks in back anymore. 4 bikes locked to railings (2), themselves (1), column (1) both are locked to railings.

Date 4/14 Start Time 1300 Weather clearing

Please return completed sheets to 4/15 ATC meeting or Tabi Bolton 822-7496 Name TB

Building	Location #	spaces	occupied	empty	Comments
Annex	1	4			
Annex	2	8			
Annex	3	6			
Plant Ops	1	4			
WWH	1	6			
CCAT	1	12			
Forestry	1	14			
Ceramics	1	12			
HGH	1	6			
HGH	2	24			
HGH	3	6			
Wildlife	1	8			
SCIE	1	26			
SCID	1	14	10		
SCIC	1	72	26		
SCIB	1	32			
SCIB	2	20	6		
SCIA	1	10			
West Gym	1	26			
West Gym	2	32			
SBS	1	8			
SBS	2	40			
Gist	1	12			
Gist	2	14			
Gist	3	12			
Library	1	72			
Library	2	40			
Library	3	14			
Library	4	30			
Library	5	24			
JVD	1	122	8		
Art	1	66			
Art	2	36	4		
Music	(1)	20	1		
Music	2	16			
Music	3	40			
Siemens	1	8			
Book Store	1	12			
Depo	1	28			
VHM	1	12			
FH	1	4			
Cypress	1	26			
JGC	1	12			
Sunset	1	28			

Date 4/14 Start Time 1400 Weather Overcast

Please return completed sheets Name TB
 to 4/15 ATC meeting or Tabi Bolton 822-7496

Building	Location #	spaces	occupied	empty	Comments
-1 Annex	1	4			
-2 Annex	2	8			
-3 Annex	3	6			
-4 Plant Ops	1	4			
-5 WWH	1	6			
-6 CCAT	1	12			
-7 Forestry	1	14			
-8 Ceramics	1	12			
-9 HGH	1	6			
-10 HGH	2	24			
-11 HGH	3	6			
-12 Wildlife	1	8	8		3 ill
-13 SCIE	1	26	5		
-14 SCID	1	14			
-15 SCIC	1	72	24		4 ill
-16 SCIB	1	32	5		
-17 SCIB	2	20	6		
-18 SCIA	1	10			
-19 West Gym	1	26			
-20 West Gym	2	32			
-21 SBS	1	8			
-22 SBS	2	40			
-23 Gist	1	12			
-24 Gist	2	14			
-25 Gist	3	12			
-26 Library	1	72			
-27 Library	2	40			
-28 Library	3	14			
-29 Library	4	30			
-30 Library	5	24			
-31 JVD	1	122	7		
-32 Art	1	66			
-33 Art	2	36	5		
-34 Music	1	20	1		
-35 Music	2	16			
-36 Music	3	40			
-37 Siemens	1	8			
-38 Book Store	1	12			
-39 Depo	1	28			
-40 VHM	1	12			
-41 FH	1	4			
-42 Cypress	1	26			
-43 JGC	1	12			
-44 Sunset	1	28			

Date

4/1/04

Start Time

9 AM

Weather
Name

Sunny

Cub & Billie

Building	Location #	spaces	occupied	empty	Comments
Annex	1	4			
Annex	2	8			
Annex	3	6			
Plant Ops	1	4			
WWH	1	6			
CCAT	1	12			
Forestry	1	14			
Ceramics	1	12			
HGH	1	6			
HGH	2	24			
HGH	3	6			
Wildlife	1	8			
SCIE	1	26			
SCID	1	14			
SCIC	1	72			
SCIB	1	32			
SCIB	2	20			
SCIA	1	10			
West Gym	1	26			
West Gym	2	32			
SBS	1	8			
SBS	2	40			
Gist	1	12			
Gist	2	14			
Gist	3	12			
Library	1	72			
Library	2	40			
Library	3	14			
Library	4	30			
Library	5	24			
JVD	1	122	13		wow not many bike here!
Art	1	66	6		
Art	2	36	8		2 broken racks
Music	1	20	4		
Music	2	16	12		
Music	3	40	6		
Siemens	1	8	1		
Book Store	1	12			
Depo	1	28			
VHM	1	12			
FH	1	4			
Cypress	1	26			
JGC	1	12			
Sunset	1	28			

Meet
 by
 present #
 please rekindle all meeting
 2/1/04

Date 4/28 Start Time 10/1 Weather Sunny
 Name SOE

Please return completed sheets
 to 4/15 ATC meeting or Tabi Bolton 822-7496

Building	Location #	spaces	occupied	empty	Comments
Annex	1	4			
Annex	2	8			
Annex	3	6			
Plant Ops	1	4			
WWH	1	6			
CCAT	1	12			
Forestry	1	14	23		- Everywhere
Ceramics	1	12			
HGH	1	6	5		
HGH	2	24	10		
HGH	3	6	5		
Wildlife	1	8	9		
SCIE	1	26	1		
SCID	1	14	16		Scattered
SCIC	1	72	18		
SCIB	1	32	13		
SCIB	2	20	3		
SCIA	1	10			
West Gym	1	26	0		CRAPPY
West Gym	2	32	12		
SBS	1	8	7		
SBS	2	40	17/32		- ONES NOT USED - SOCK
Gist	1	12	10		
Gist	2	14	2		
Gist	3	12	4		CRAPPY RACKS
Library	1	72	28/27		? why not mlbs
Library	2	40	24		
Library	3	14	6/9		
Library	4	24/30	5/7		MOST ATTACHED 2 FINE CRAP RACK
Library	5	24	5/8		
JVD	1	122	10/14		
Art	1	66	16/16		
Art	2	36	6/10		
Music	1	20	5/10		
Music	2	16	14/10		
Music	3	40			
Siemens	1	8	8/4		2 extras
Book Store	1	12	1		
Depo	1	28	6/11		
VHM	1	12			
FH	1	4	3		
Cypress	1	26			
JGC	1	12	3		
Sunset	1	28			

Scattered

Side
 (L) F
 (R) T
 Front
 Back

Front
 + 14
 blood
 marks

Date 4/27 Start Time 1400 Weather Sunny
 Name T.B.

**Please return completed sheets
 to 4/15 ATC meeting or Tabi Bolton 822-7496**

Building	Location #	spaces	occupied	empty	Comments
Annex	1	4			
Annex	2	8			
Annex	3	6			
Plant Ops	1	4			
WWH	1	6			
CCAT	1	12			
Forestry	1	14			
Ceramics	1	12			
HGH	1	6			
HGH	2	24			
HGH	3	6			
Wildlife	1	8			
SCIE	1	26			
SCID	1	14			
SCIC	1	72			
SCIB	1	32			
SCIB	2	20			
SCIA	1	10	8		
West Gym	1	26	2		
West Gym	2	32	18		
SBS	1	8			
SBS	2	40			
Gist	1	12	2		
Gist	2	14	4		
Gist	3	12	1		
Library	1	72			
Library	2	40			
Library	3	14			
Library	4	30			
Library	5	24			
JVD	1	122	13		
Art	1	66	3		
Art	2	36	10		
Music	1	20	3		
Music	2	16	11		
Music	3	40	13		
Siemens	1	8			
Book Store	1	12			
Depo	1	28			
VHM	1	12	6		
FH	1	4			
Cypress	1	26			
JGC	1	12			
Sunset	1	28			

Date April 12th Start Time 5:25pm Weather overcast, drizzling earlier this afternoon
 Name Chaire Chapelle

Please return completed sheets to 4/15 ATC meeting or Tabi Bolton 822-7496

Building	Location #	spaces	occupied	empty	Comments
Annex	1	4	X	X	
Annex	2	8	X	X	
Annex	3	6	X	X	
Plant Ops	1	4	0	4	
WWH	1	6	X	X	
CCAT	1	12	X	X	
Forestry	1	14	13	1	
Ceramics	1	12	5	7	
HGH	1	6	4	2	
HGH	2	24	18	6	
HGH	3	6	5	1	
Wildlife	1	8	8	0	
SCIE	1	26	2	24	
SCID	1	14	11	3	1 bike parked in doorway 4/12
SCIC	1	72	5	67	
SCIB	1	32	7	25	
SCIB	2	20	11	9	
SCIA	1	10	6	4	
West Gym	1	26	0	26	
West Gym	2	32	10	22	
SBS	1	8	7	1	
SBS	2	40	8	32	
Gist	1	12	11	1	3 bike tied up to parking meters also. 4/12
Gist	2	14	1	13	
Gist	3	12	3	9	
Library	1	72	17	55	
Library	2	40	16	24	
Library	3	14	8	6	
Library	4	30	5	25	
Library	5	24	13	11	
JVD	1	122	X	X	
Art	1	66	7	59	
Art	2	36	21	15	
Music	1	20	0	20	2 bikes tied to railing 4/12
Music	2	16	4	12	
Music	3	40	7	33	
Siemens	1	8	2	6	
Book Store	1	12	2	10	
Depo	1	28	19	9	
VHM	1	12	9	4	
FH	1	4	0	4	
Cypress	1	26	X	X	
JGC	1	12	X	X	
Sunset	1	28	X	X	

4-22-04 4:00pm
Sunny!

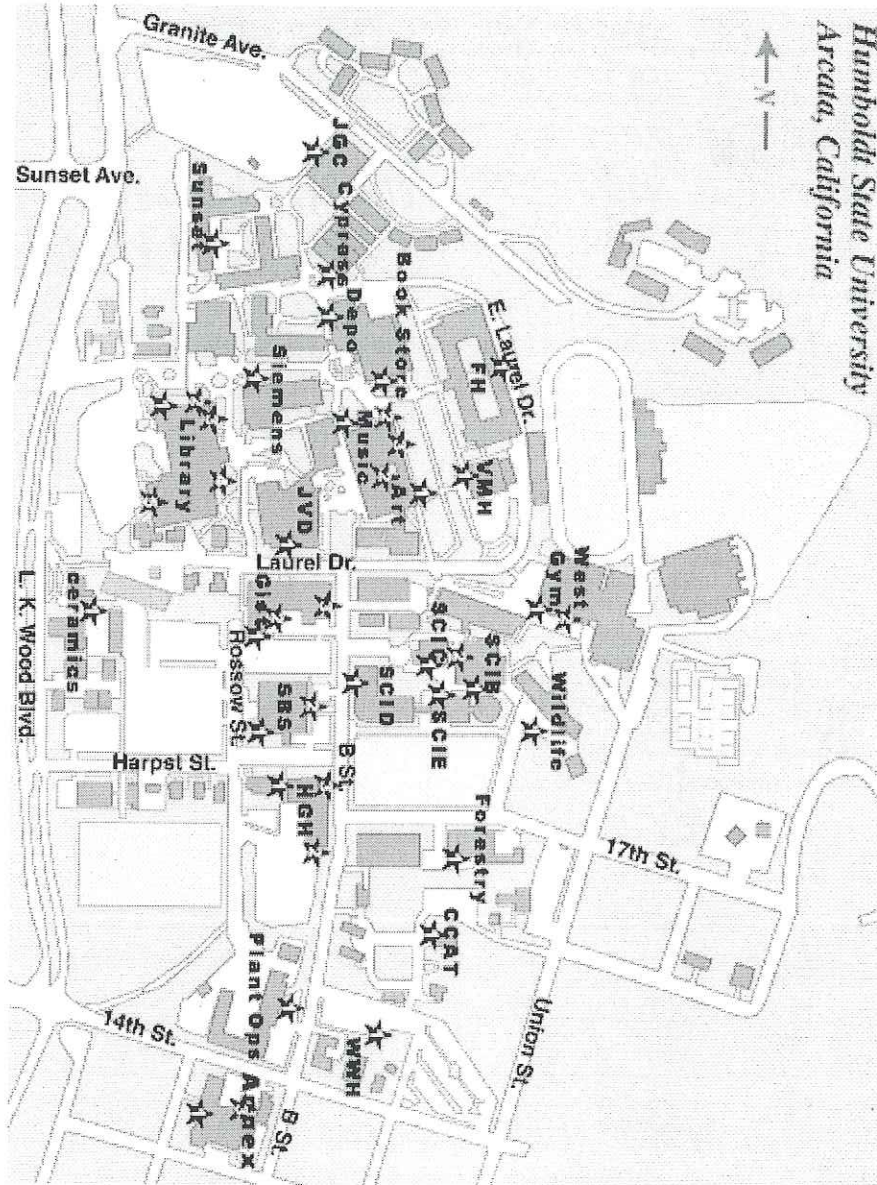
Some (with X's) I just couldn't do!

[Sign Out](#)

[Compose](#) [Addresses](#) [Folders](#) [Options](#) [Search](#) [Help](#)

Viewing an image attachment - [View message](#)

[Download this as a file](#)



W. HG H	6	3
E. HG H	6	5
SW. SBS	8	5
E. SBS	40	15

Wed 4/7/04 2-3:20 PM
~~sun~~ sunny w/ breeze

4/6

6:40-7PM overcast 1st floor SciD

sunset S. Sci C

E. Sci C

2nd floor SciD

Greenhouse

Wildlife

Behind FR

Side FR

Behind UR

Front UR

S. HG H

W. HG H

E. HG H

SW. SBS

E. SBS

11

3

1

2

3

3

4

2

0

0

3

1

0

1

2

14

17

~~17~~ 3

6

12

9

12

7

3

0

7

2

2

3

13

Day/Date

Time weather

location

#spots

bikes

condition

T 4/6/04

7:40-8AM

Sun breaking thru clouds - chilly

bottom of J

Depot +

1st floor Sci D

S. Sci C

E. Sci C

2nd floor Sci D

Greenhouse

Wildlife

forestry

behind NR

front NR

S. HG H

W. HG H

E. HG H

Plant Ops

SW. SBS

E. SBS

14

42

20

26

32

8

14

0

0

24

6

6

4

8

40

8

7

3

8

0

1

2

1

2

2

2

2

1

2

1

2

13

4/7/04 Wed 9AM high Sun breaking

10
6

8:50-9:10

T 4/6

10:40-11AM

cloudy cold

1st floor Sci D

S. Sci C

E. Sci C

2nd floor Sci D

Greenhouse

Wildlife

behind forestry

side forestry

behind NR

front NR

SHGH.

14

42

20

26

32

8

14

0

0

0

24

17

18

3

6

9

7

11

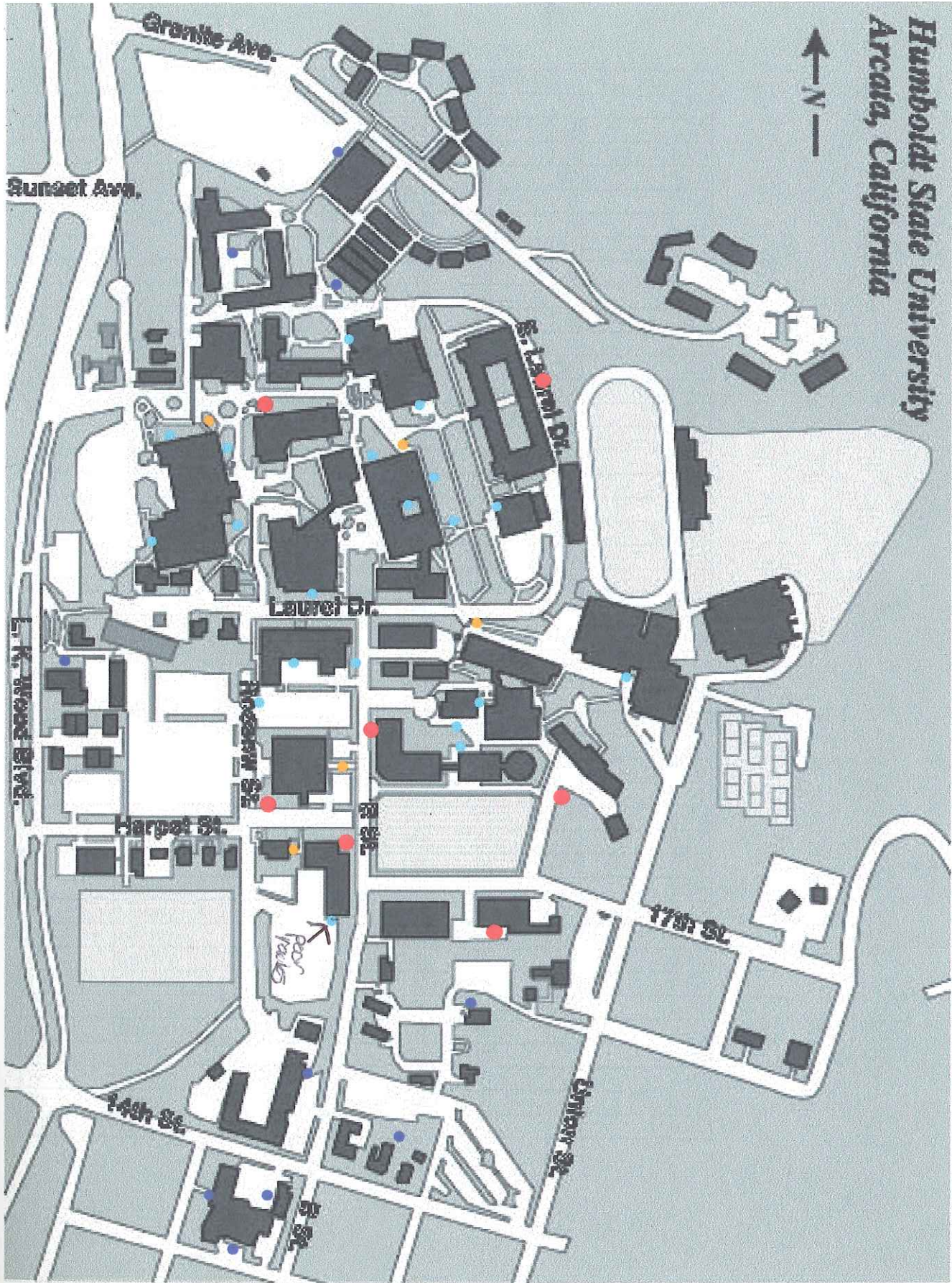
9

3

1

6

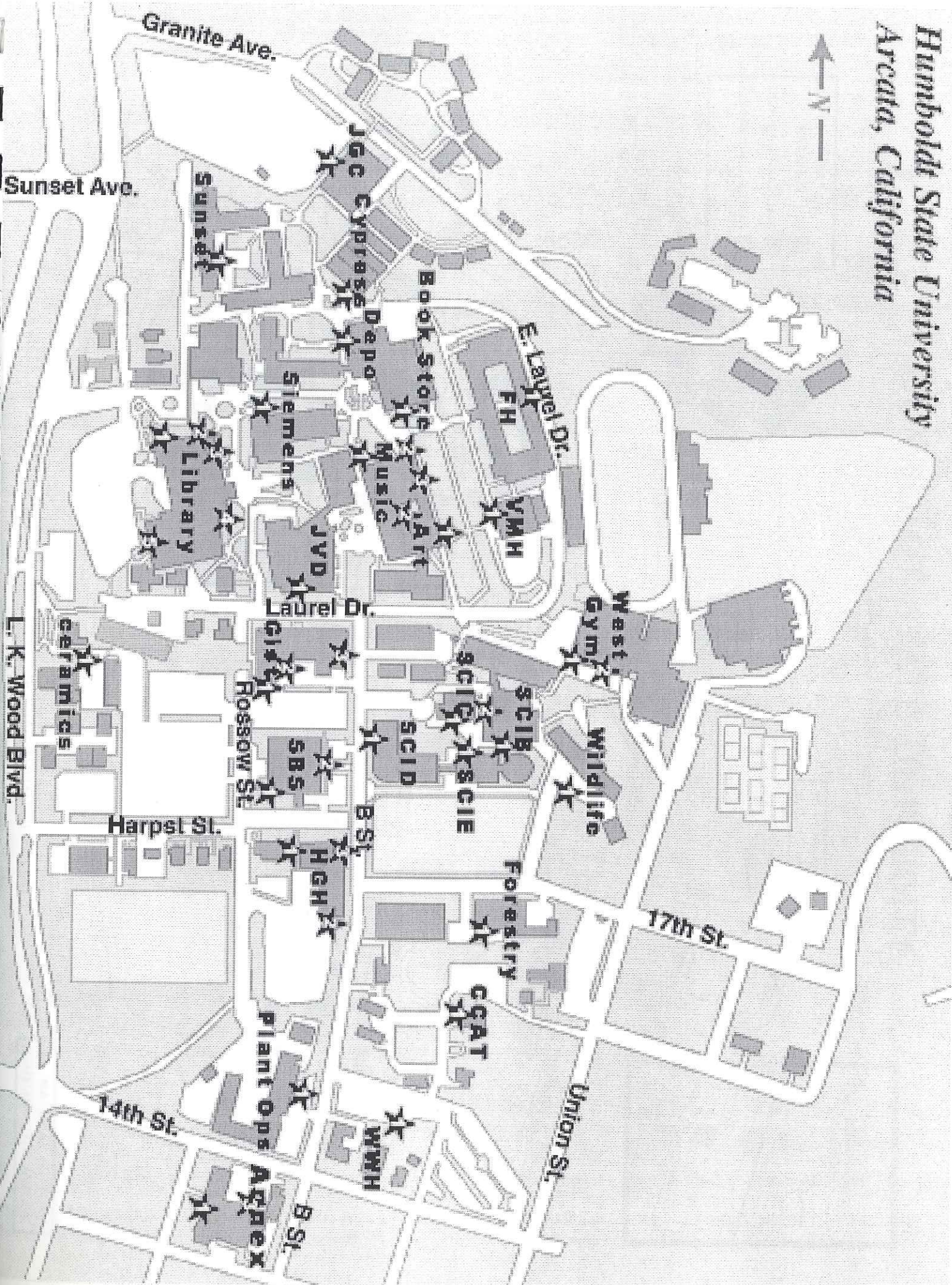
Appendix D



GIS Database

ID	BUILDING	LOCATION	SPACES	RANK	AVEOC	AVG_FULL
8	Ceramics	1	12	0	0	0.00
28	Library	4	30	0	7	0.23
44	Sunset	1	28	0	0	0.00
7	Forrestry	1	14	0	20	1.43
10	HGH	2	24	0	8	0.33
9	HGH	1	6	0	4	0.67
22	SBS	2	40	0	23	0.57
21	SBS	1	8	0	6	0.75
23	Gist	1	12	0	5	0.42
24	Gist	2	14	0	2	0.14
25	Gist	3	12	0	2	0.17
14	SCID	1	14	0	18	1.29
31	JVD	1	122	0	12	0.10
4	Plant Opps	1	4	0	0	0.00
1	Annex	1	4	0	0	0.00
2	Annex	2	8	0	0	0.00
3	Annex	3	6	0	0	0.00
6	CCAT	1	12	0	0	0.00
16	SCIB	1	32	0	3	0.09
13	SCIE	1	26	0	10	0.38
15	SCIC	1	72	0	16	0.22
11	HGH	3	6	0	5	0.83
18	SCIA	1	10	0	6	0.60
19	West Gym	1	26	0	1	0.04
20	West Gym	2	32	0	13	0.41
17	SCIB	2	20	0	3	0.15
5	WWH	1	6	0	0	0.00
41	FH	1	4	0	3	0.75
40	VMH	1	12	0	4	0.33
32	Art	1	66	0	10	0.15
33	Art	2	36	0	7	0.19
34	Music	1	20	0	5	0.25
35	Music	2	16	0	11	0.69
36	Music	3	40	0	11	0.28
26	Library	1	72	0	30	0.42
27	Library	2	40	0	24	0.60
28	Library	3	14	0	6	0.43
37	Siemen	1	8	0	7	0.88
42	Cypress	1	26	0	0	0.00
38	Bookstore	1	12	0	4	0.33
39	Depot	1	28	0	7	0.25
12	Wildlife	1	8	0	7	0.88
30	Library	5	24	0	5	0.21
43	JGC	1	12	0	0	0.00

Humboldt State University
Arcata, California



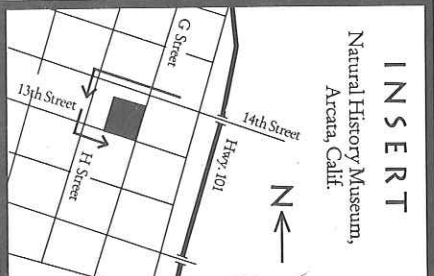
HUMBOLDT STATE UNIVERSITY

ARCATA, CALIFORNIA

 PARKING LOT
 DISABLED PARKING
 PARKING METERS

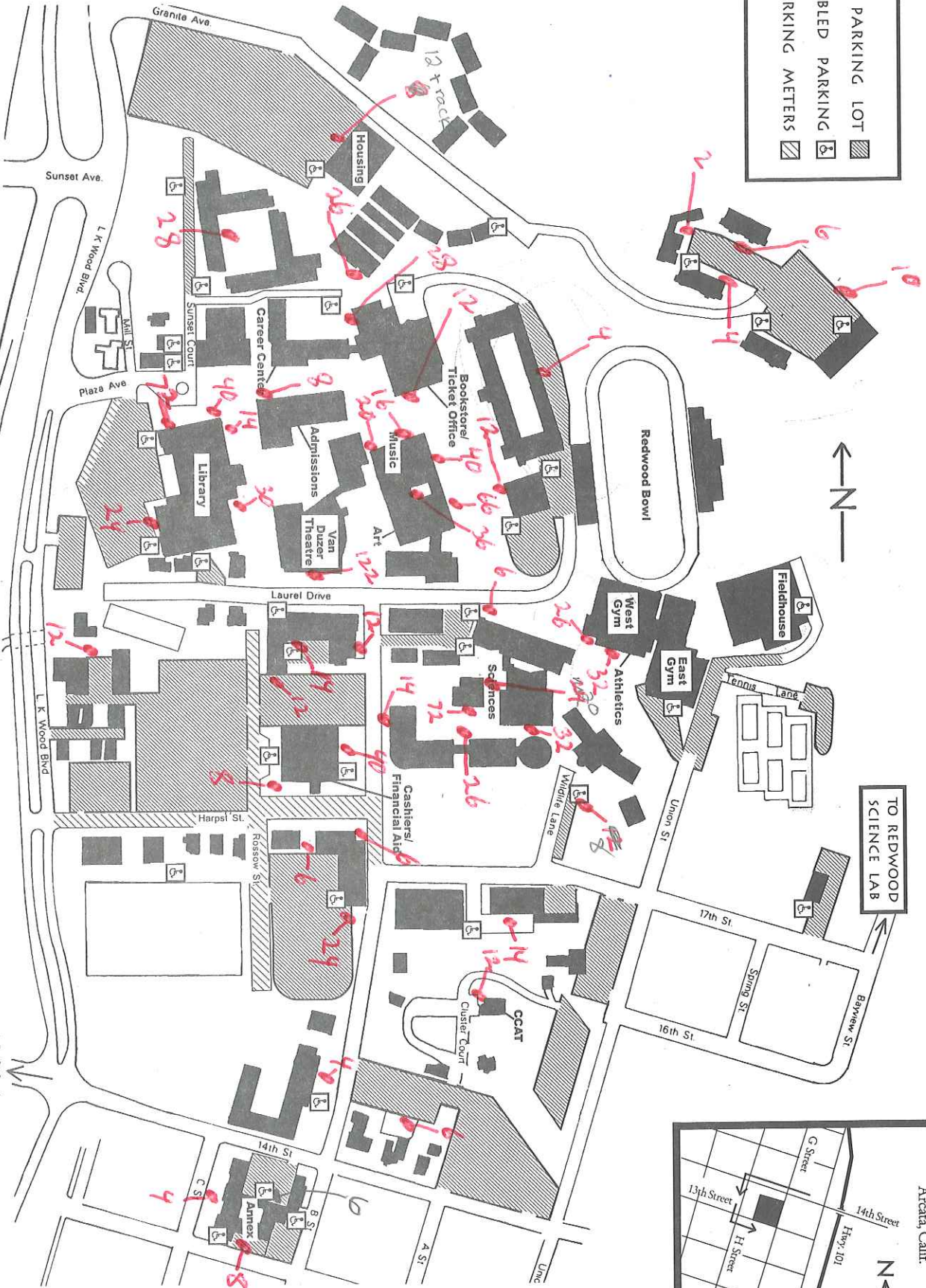


INSERT
 Natural History Museum,
 Arcata, Calif.



G Street
 H Street
 13th Street
 14th Street
 Hwy 101

N



U.S. 101 North & South
 Parking & Commuter Services, 707.826.3842; Fax 707.826.3843; Parking@HUMBOLDT.EDU

U.S. 101 South
 Downtown Arcata
TO NATURAL HISTORY MUSEUM (SEE INSERT)

Appendix E

Contacts

Stephen Sullivan, HSU Parking Director, sas7001@humboldt.edu

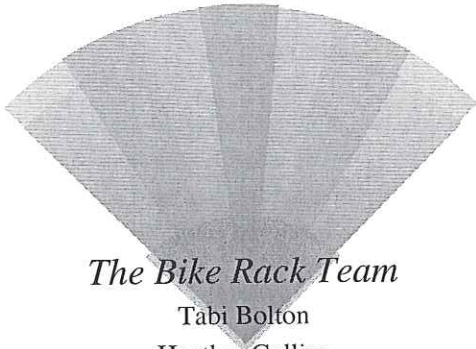
Alternative Transportation Club, Renee Stork, Club President 822-0100

Bicycle Library

Revolution Bike Shop, 822-2562

Eric Anderson, era2@humboldt.edu

Appendix F



The Bike Rack Team

Tabi Bolton
Heather Collins
Joe Rouse

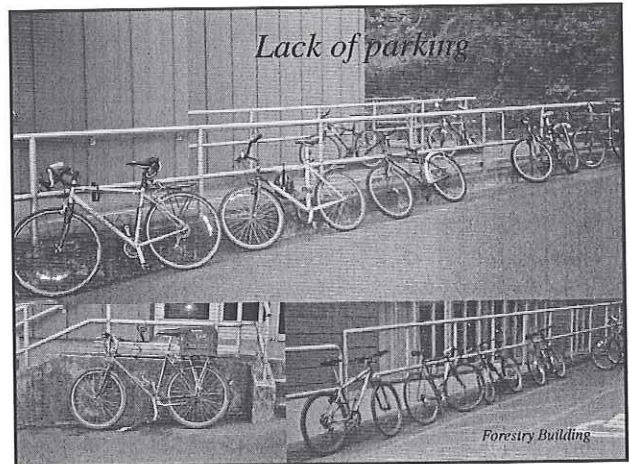
Why We Chose Our Project

- ◆ Desire to improve bicycle parking:
 - modify/update existing
 - increase availability
 - new choices

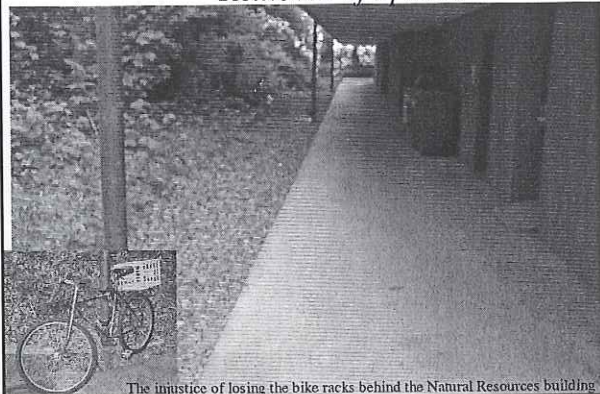
The Problem As We Saw It

A First look

- ◆ Lack of parking
 - Forestry
 - Wildlife
 - Science D
- ◆ Removal of spaces
 - Natural Resources
- ◆ Out of date racks

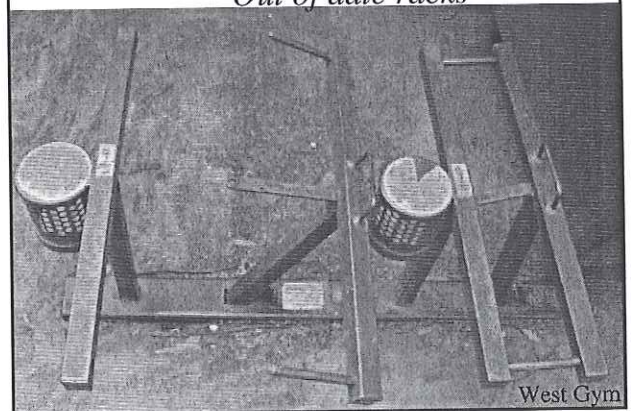


Removal of Spaces



The injustice of losing the bike racks behind the Natural Resources building

Out of date racks



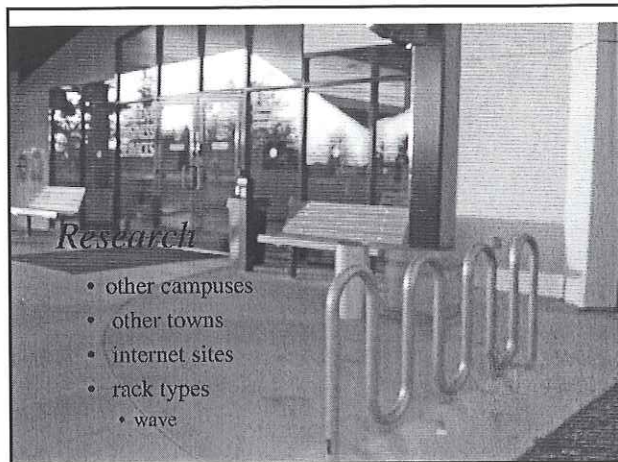
West Gym

Our Goals

- ◆ Promote bicycles as viable transportation to HSU campus
- ◆ Increase the ease of bicycle use on campus
 - increase "parking" options
 - bike lockers
 - different locations/ more efficient spaces
 - update racks

What we Did

- Besides research...
- ◆ Identify and meet with potential parties/stakeholders
- ◆ Survey
- ◆ GIS database

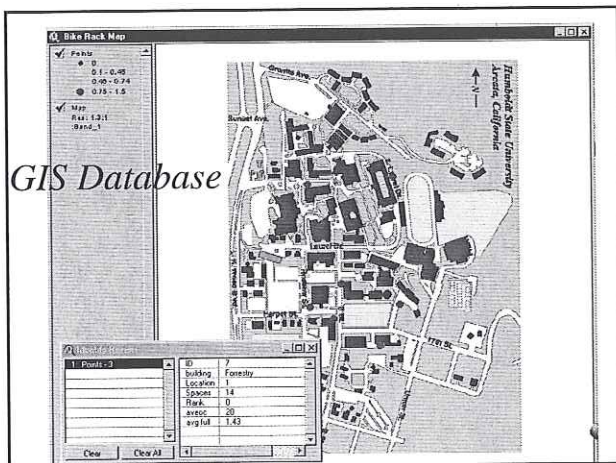
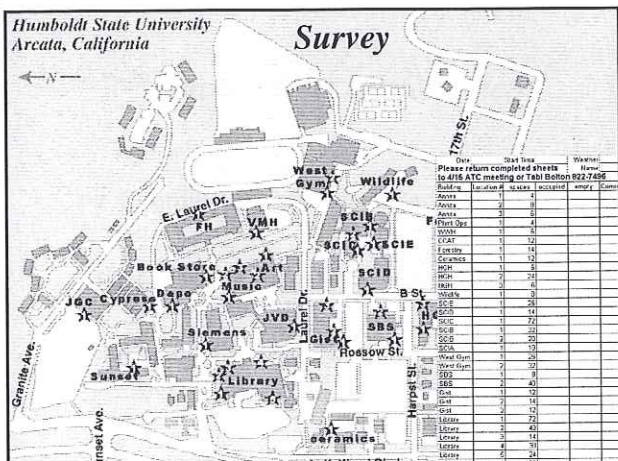


Research

- other campuses
- other towns
- internet sites
- rack types
 - wave

Parties & Stakeholders

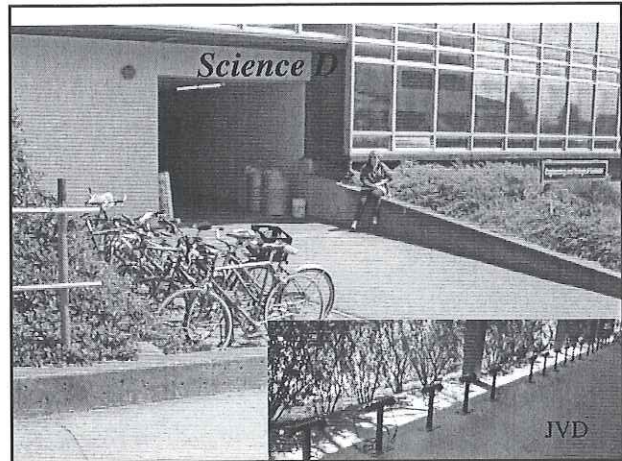
- ◆ Stephen Sullivan, parking director at HSU
- ◆ Alternative Transportation Club



GIS Database

Results

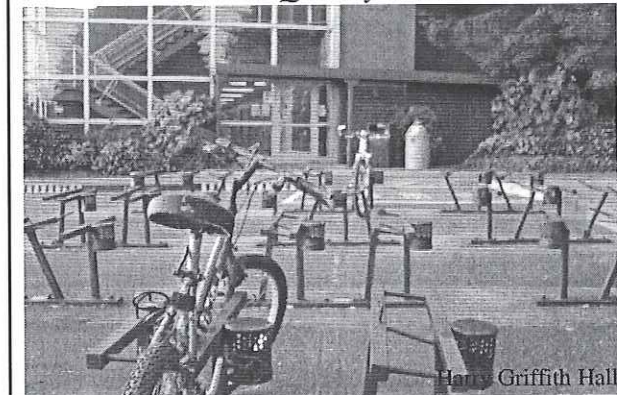
- ◆ Empty and full racks at the same time
 - There *is* enough bike parking on campus
- ◆ Poor quality racks
- ◆ Barriers to replacement



John Van Duzer Theater



Poor Quality Racks



Barriers to Replacement

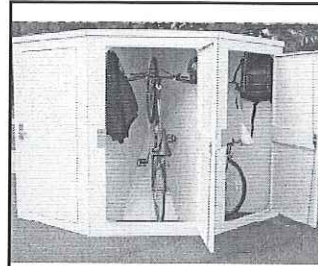
- ◆ Coordination between departments
- ◆ Lack of funding
- ◆ Availability of sites

Recommendations

- ◆ Install more bicycle parking
- ◆ Replace current racks
- ◆ Map on racks
- ◆ Bike lockers
- ◆ Add bike parking to campus maps

Map On Racks

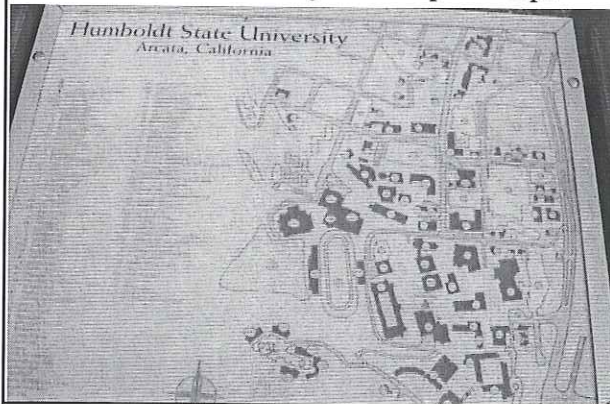
Maps at highly used locations intended to direct over flow parking to under utilized areas



Bike Lockers



Add Bike Parking to Campus Maps



Monitoring and Evaluation

- ◆ Check and balances between
 - Alternative Transportation Club
 - Stephen Sullivan
 - Campus Maintenance
- ◆ Increasing coordination between students and staff

...or just the beginning...

