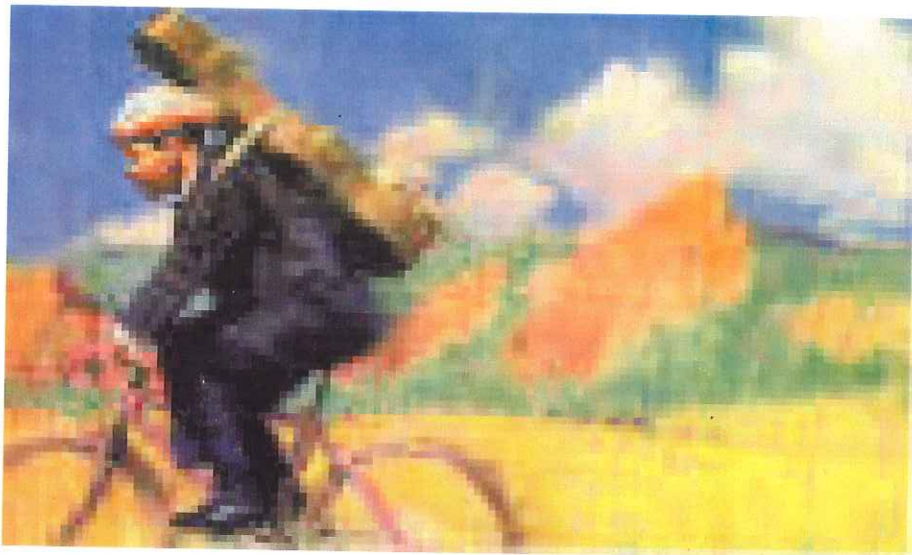


Sustainable Transportation Senior Project

By
Eric Anderson
Kari Casey
Miguel Flynn
Renee Stork



Dr. Richard Hansis
Environmental Science 411
Sustainable Campus

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1.0 Problem Statement

An increasingly excessive amount of Single Occupancy Vehicles (SOVs) and a lack of wise planning characterize transportation at HSU. Although awareness of the need for alternative transportation appears to be growing, HSU is lacking in its support for AT.

2.0 Situational Analysis

SOVs are a problem when they are the primary form of transportation. Too many SOVs create problems such as: air pollution, traffic congestion, lack of parking, accidents, injuries, and public expenditures for road construction and maintenance (these funds, though they may come from gas taxes and licensing fees could be seen as a hidden subsidy). Excessive amounts of SOVs also decrease quality of life, increase dependence on distant fossil fuel sources, and promote war. The alternative is to promote viable transportation choices that include bicycling, busing, walking, skating, and carpooling.

2.1 Spring 2002 Transportation Study

A recent study done on HSU transportation issues and greenhouse gases by HSU Graduate Student Sean Kinghorn reveals that the most utilized form of transportation by HSU students, faculty and staff is the single occupancy vehicle. Sean based his study off a volunteer online commuter survey that consisted of 29 questions. Based from his results: ^{of} all HSU students, 72% live off campus and 57% live in Arcata with the average commute distance being 12.1 miles. While ^{Forty three percent} 43% of the trips made per week are done by SOV, 12% by carpooling, 12% by bus, 13% by bike or skateboard, and 20% by walking. ~~Of the~~ 13% of HSU students who live on campus, ~~67%~~ reported that they drive to class at least one day per week because of the distance

form their dormitories to their classes. ^{Forty-four percent of} Considering the faculty, ~~100% live off campus and 44%~~ live in Arcata with the average commute being 11.36 miles. For their travel faculty made 64% of by SOV, 5% by carpooling, 7% by bus, 9% by bikes or skateboard, and 15% by walking. While ^{all} ~~100%~~ of staff live off campus, 27% live in Arcata and 30% live in Eureka with an average commuter distance of 16.4 miles. Finally considering HSU staff, 75.5% commute by SOV, 10% by carpooling, 4.5% by bus, 5% by bike or skateboard, and 4% by walking (Humboldt State University Transportation Study). Because SOV's are the main source of transportation among HSU students, faculty and staff, the parking situation on and off campus is severely impacted. Most utilize on campus parking and the areas south of 14th street and many report having to use metered parking occasionally due to a lack of permitted parking places.

Traffic on campus and in the surrounding areas is increasingly dangerous and congested. Cars are able to access the interior roads of campus, ^{These} ~~which~~ ^{that have} are major pedestrian walkways with small sidewalks ^{limited by} ~~because of~~ parking spaces and traffic. This is a very dangerous area for pedestrians, bicyclists, and skateboarders because they come in close contact with vehicle traffic.)

HSU celebrated ~~the first~~ Car-Free Day on Monday September the 22nd ~~because of this~~ event ~~our~~ group conducted a survey to try and measure how effective ~~the event~~ was on reducing the number of SOVs on campus. We sampled parking areas that consisted of interior campus parking lots as well as streets south of campus. We felt that these were representative parking trends after consulting with Steve Sullivan Director of Commuter Services as well as a traffic officer from City of Arcata. We counted on two consecutive [?] starting on September 15 and then on Car-Free Day. From our sample it was determined that there was a 5.5% drop in cars parked off campus and an 11.4% drop in cars parked on campus after Car-Free Day. [?]

2.2 Carpooling

Many students carpool without knowing of the benefits and services offered to help them. The carpool-matching program at HSU implemented through Parking and Commuter Services (PCS) historically has had an extremely low rate of use. During the school year of 2002-2203 from a campus community population of over 7000 people, two individuals applied for a carpool. Until very recently, in order to apply for a carpool, one would obtain a hard copy of the application at the university Police Department or the parking kiosk located at the far west end of the campus. After submitting the application, matching was handled by the director of PCS. The person applying would be mailed a list of other applicants living in their vicinity. If there were no other applicants close to their locale, a letter was mailed informing them that their name was placed on a waiting list.

As of September 2003, the Alternative Transportation Club developed a website for online access for carpool applicants. Information submitted is sent directly to Parking and Commuter Services. The director currently handles matching, and lists of interested car-poolers in common areas are emailed to participants. Very little publicity informing the campus community of the online application access, or the preferential parking ^{that} which is available to car-poolers, has occurred. Preferential parking for carpools with 3 or more people can park all day at any 6-hour parking meter. Although this feature has been offered for more than a year, it is rarely used and most of the campus community is not aware of this benefit.

2.3 Wise Planning

In the past there has been a lack of planning for alternative transportation on the HSU campus. Looking at the old master plan there are three parking structures proposed to help

alleviate the parking problems. Recently a process began to revamp the old master plan and redesign the campus. Our group attended the first of these planning meetings and expressed the need for the campus to incorporate strategies that would foster the use of alternative transportation rather than looking to a parking structure to alleviate the parking situation.

Upon Viewing the current Master Plan for Humboldt State University and attending the first open forum on the drafting of a new Master Plan, our group was left with some concerns which pertain directly to our problem statement.

The first of these concerns that we see as being a problem on this campus, ^{is that} parking is too decentralized. Small lots dispersed all over campus are the cause of excess driving between classes; drivers go from lot to lot in the rushed effort to find a place to park their cars. All this driving between parking lots reinforces the perceived need for all the roads connecting these lots on campus. In effect by using many small parking lots instead of one larger centralized facility, the university is not efficiently using space on campus. The overflow from overcrowded lots ^{is the reason that} makes it so many students, faculty and staff park their cars on the sides of the street; ~~we are~~ ^{especially on} mainly concerned with B St., 17th, and Laurel. All these cars parked on the street raise many potential safety concerns ~~when we~~ ^{ing} consider the high volumes of pedestrian, skateboard and bicycle traffic in these areas; this is mostly due to a decrease in visibility. Another significant problem that should be considered when examining the physical layout of the campus is security; these concerns apply to personal property as well as personal safety. It is problematic for University Police to protect property in cars as well as ~~the~~ ^{ing} their drivers' safety in so many remote locations.

Another concern that we think is under addressed in this current Master Plan is bicycle commuter needs. Most of the bike racks on campus are outdated and in need of replacement. The

style of most of the racks holds the bicycle by its downtube, the opening was designed for older steel framed bicycles ^{while} where most newer bicycles use oversized tubing for the frame and therefore do not fit well in this style rack. The bike racks that are T-shaped and have sliding bars to lock bike into place are inconvenient for many bicyclists. The rubber coating to prevent scratching the paint on bike frames is worn off on most of the bike racks, and many of these racks have no place to fit a U-Lock ~~through~~ without using the cables (which are easily cut by a determined bike thief). Another obvious problem with bicycle parking is that most of the racks that exist are full during regular hours of the day. The campus lacks covered and secure bike racks for commuters. This lack of bike racks causes many students to lock up their bikes inappropriately on handrails, on pillars or other ~~such secure objects~~, ^{and creating a safety} ~~this is seen as a problem~~ because it is a safety concern for all of us who share this campus. The current Master Plan underrepresents these needs, ^{and} another problem is that the plan does not currently allocate space for a productive Bicycle Learning Center and Library Bike Lending Station.

We also find the current Master Plan lacking in terms of sidewalk and walkway space. These sidewalks and walkways see heavy use and are too narrow; they feel like cramped hallways. Many students in passing are forced into the street or opt to walk there. Holding conversations with fellow students is difficult especially considering that stopping to talk could cause a traffic jam. The problem is that too much space has been allocated for the automobile instead of students using alternative transportation, including those on foot. These narrow sidewalks and walkways detract from the student, faculty, staff and visitor experience when traveling around campus.

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2.4 **Bicycling, Skating, and Walking**

~~A~~ recent study done by HSU Graduate student Sean Kinghorn in the spring of 2002 on transportation at HSU reveals that “walking and biking/skating are the two most frequently used alternatives” to SOVs. According to the study, 12% of total commuting trips per week for students, faculty, and staff are biking/skating and 18% are walking. With increased enrollment at HSU since spring 2002, the numbers of people walking, skating, and biking most likely have increased as well.

There are several facilities and organizations in existence on campus and in the community that are working towards improving conditions for biking, walking, and skating. Some of these organizations include the Bicycle Learning Center (BLC), the Alternative Transportation Club (ATC), and the Arcata Bicycle Library Program. All work to promote human-powered transportation.

2.5 **Roads and Paths**

Few roads on or near campus have bike lanes. Many roads have cars parked all along either side, narrowing the roads and putting bikers and skaters in trouble of hitting an opening door. There is only one path that is closed to motor vehicle traffic (from the NE corner of 14th and LK Wood Blvd to Rossow St) and not alongside a road. This path is not even open to bicycles. B Street in particular is of concern. A high volume of traffic, crowded parking, narrow sidewalks, and no bike lanes, make it a particularly dangerous place to bike, skate, or walk.

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2.6 Bike Parking

With an increasing number of bikes on campus, bike parking is more of a problem. Areas of particular concern are the ENVIS and NR building, Harry Griffith Hall, Gist Hall, Siemens Hall, the Library, and Nelson Hall. The only covered bike parking available on campus is in front of the Theatre building, part of the exterior of the library, part of some of the dorm buildings (for dorm residents only), ~~the area hidden behind the NR building,~~ and alongside the Art building facing Founders Hall.

2.7 Organizations and Facilities

The BLC has a small bike shop shed behind Nelson Hall. The shop is open to the public during the posted hours when it is staffed by volunteers. Volunteers show other bicyclists how to work on their bike or merely have the shop open for those that need a space and tools. The ~~S~~chedule is very limited ^{owing to} a small number of volunteers.

The Alternative Transportation Club has been very active on campus since the spring of 2003. World Car Free Day was their big event on September 22, 2003. ^{members} They work to raise awareness and get involved in planning and implementation process of promoting AT.

The Arcata Bike Library Program has its ~~main headquarters on the south side of 8th St between H and I in downtown Arcata.~~ ~~The Bike Library~~ collects donated used bikes, repairs them and offers them to the public. According to Bill Burton, the founder of the program, most of the checkouts go to students. A significantly ^{number} large amount of students on campus still are unaware of the Bike Library Program.

3.0 Goals and Objectives

3.1 Goal

After evaluating the problem statement our group developed this specific goal:

Reduce the number of single occupancy vehicles (SOVs) to and from campus and increase awareness of Alternative Transportation at HSU.

3.2 Objectives

- Specific ways to accomplish goal

To achieve this goal we developed these specific objectives:

- Increase the number of car-pool signups by twenty people this semester
- Integrate alternative transportation concerns into HSU planning process
- Increase the number of Library Bikes ^{on} the HSU campus by ten bikes

4.0 Evaluating Alternatives

Our group has considered a number of alternative ~~solution~~ projects that would help us address our problem: An increasingly excessive amount of Single Occupancy Vehicles (SOVs) and a lack of wise planning characterize transportation at HSU. Although awareness of the need for alternative transportation appears to be growing, HSU is lacking in its support for AT.

4.1 Alternatives

1. Increase bus rider ^{ship} and transit service.
2. Focus on assessing the campus parking situation through a car counting survey to gain baseline data, measure effectiveness of current and recent efforts (Car Free Day!), and help decide on a solution project.
3. Develop a transportation survey to acquire statistics on the different modes of transport, assess changes since Sean Kinghorn's Spring 2002 survey, and gain knowledge on opinions as to what it would take to get more people out of their SOVs.

4. Biodiesel Bar Bus that would give rides to HSU community members to bars and special events as an alternative to driving SOVs drunk.
5. Form biking and walking pools.
6. Become involved in the campus Master Plan process
7. Replace dilapidating^{ed} and non-compatible bike racks with wave racks and increase overall bike parking spots as well as convenience.
8. Work towards the creation of a car-sharing cooperative on campus.
9. Develop a shuttle service for HSU community members^{who} that live in Eureka, Ferndale, Mckinleyville, Westhaven, and other outlying areas.
10. HSU library bike lending station
11. Carpool promotion campaign

4.2 Pros and Cons

1. Pro- Increasing transit service and bus rider ship would help to alleviate the congestion of SOVs on campus and surrounding areas, make campus a more accessible and safe atmosphere for people free from cars, and help to reduce air pollution.

Con- To effectively increase transit service and bus rider ship^{will} requires a long term effort of surveying current use and needs, creating a plan to meet those needs, gaining financial support for increased service^{developing} an extensive publicity campaign to interest people in riding buses and monitoring of success. Considering that this is a one-semester class project, we would not be able to get very far in completing this project. In addition, the Alternative Transportation Club has already been working on this project.

2. Pro- A car counting survey helps us to quantify the parking situation on campus.

Surveys before and after the Car Free Day and interspersed throughout the semester help us to assess the effectiveness of our efforts.

Con- A car counting survey is a long and sometimes tedious task. Doing several surveys requires that the same people count the same areas each time, at the same times of day. A standardized process with maps needs to be in place to really create usable data. Since this is a study in a real world situation and not in a lab, many factors are not under our control, increasing the skewing of our data. While assessing the effectiveness of our efforts is important, spending too much time on a car counting survey would prevent us from spending more time on agents of change.

3. Pro- Creating a survey of current transportation uses and needs would help us to understand trends since Sean Kinghorn did his survey almost 2 years ago. In addition, we would have a greater understanding on where to focus our efforts to be as effective as possible.

Con- Creating a survey that deals directly with people requires a tedious bureaucratic paperwork process that would consume much of our time and energy. The survey would not really be an agent of change. Too much time doing paperwork and dealing with bureaucracy and not enough time actually creating would stifle our creativity and inspiration.

4. Pro- A biodiesel bar bus would encourage people to drive their SOVs less, decrease air pollution and traffic congestion, increase the safety of people that choose to ride the bus instead of driving while inebriated, increase the safety of pedestrians, bicyclists, and skaters that do not have to deal with as many SOVs on the road, increase awareness of

biodiesel as an alternative fuel, and the ~~bus would~~ increase community through the camaraderie of riding a bus together.

Con- A biodiesel bar bus would not affect greatly the overall problem of too much SOV traffic. The bus would not really address the problem of lack of wise planning. The bus would not be so much a campus project ^{as} but a community project.

5. Pro- Biking and walking pools would increase the appeal and safety of walking and biking to school.

Con- While the pool would be a good idea; there are other more pertinent areas where we would rather focus our efforts.

6. Pro- Getting involved with the campus Master Planning process would help to assure that the new plan would promote alternatives to SOVs as much as possible. In addition, increasing student and community involvement in the process would help to encourage sustained wise planning.

Con- The Master Plan process is longer than this class, so we might not see a whole lot of evidence of our accomplishment at the end of the semester. To really be effective we would need to extend our efforts into the next semester. Administrators undemocratically control the process; in fact the final decision is at the discretion of the President of HSU.

Students have no guaranteed power in the decision-making process so there is the possibility ^{for} with frustration and disillusionment if our efforts are not fruitful.

7. Pro- Replacing old bike racks and increasing the overall number and convenience of bike racks would increase the appeal and ease of bicycling to class. This effort can be integrated into solution #6.

Con- This project is small in scope compared to the big picture described in our problem statement.

8. Pro- Car sharing cooperatives would make it easier for car-dependent people to come to HSU without their own cars. It would, in effect, decrease the SOV congestion, air pollution, and dangers associated with too many SOVs. A cooperative would augment community organization.

Con- This program focuses on cars and does not address issues relating to lack of use of other alternative transportation modes. This does not really challenge the pre-eminence of car culture on our campus. This project is big in scope and so requires extensive planning, funding, bureaucratic bumbling, and follow through. It would require a lot more than one semester.

9. Pro- Shuttles would make it much easier and less expensive for people living outside Arcata to have access to campus. They would increase safety for shuttle riders who leave their cars at home, increase safety for people-powered transportation modes, and decrease air pollution.

Con- Once again, establishing shuttle service is a project larger in scope than a one-semester student project. Extensive time and energy requirements for dealing with bureaucracy, funding, and insurance preclude investment in projects that might produce more immediate ^{results} fruitfulness.

10. Pro- Developing a library bike lending station on campus would allow students greater access to affordable transportation and reduce the campus contribution to greenhouse gases.

Con- The BLC tried to take on such a program two years ago but because the operation of the program was based on student efforts the program died because of lack of student volunteers. There is the potential that a similar program would have similar results.

There is also limited space to house a library bike program.

11. Pro- Carpooling would be the most inexpensive type of alternative transportation that could be implemented. There is a website that is being developed called the Information Resource Center (IRC) that will make carpool signups more convenient for students and our efforts could be focused on promoting the website and Carpool Days set-up by the Alternative Transportation Club

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Con- Because the Alternative Transportation Club is working on this same problem it may be difficult to create a project separate from what is currently being done by members of the ATC.

4.3 Preferred Alternatives

After thoroughly considering our various alternatives, we have agreed to focus on numbers 6, 10 and 11. We see these areas have the largest need and the most overall effectiveness as far as addressing our problem statement and meeting our goals and objectives. We have integrated parts of other solutions so that they can be incorporated into the master plan.

5.0 Strategies for Implementation

Our first objective is to become involved in the Master Planning process because we feel that this will have the greatest impact for not only this semester but for the next 10 to 20 years. As a part of this process we are planning a ^{to give} power point presentation to give to the Master Plan Committee on issues pertaining to campus access. We also will develop a suggested plan of

action for the development of alternative transportation which we will present to the committee and to President Richmond. Each of us is involved in researching different aspects of the presentation. Renee ~~will be~~ ^{ed} researching parking problems, Transportation Demand Management, and providing an economic analysis parking and parking structures vs. the investment in alternatives. Eric ~~will be~~ ^{ing} researching how housing effects transportation in Arcata and also discussing Arcata community planning; specifically the Arcata Master Plan, Pedestrian and Bicycle Master Plan for the City of Arcata, and the Greenhouse Gas Emission plan. Miguel ~~will be~~ ^{found} finding examples of other college campuses that have successfully implemented Alternative Transportation and specifically those campuses that have similar student enrollment and communities. Kari ~~will be~~ ^{ing} researching the current situation at HSU along with the reputation of the school and impacts of increasing enrollment. We ~~will be~~ ^{ing on} working on collaboratively to create a power point slide show, perfect ^d the presentation and develop ^d a suggested plan of action for the HSU campus.

The second part of our project is to develop a Library Bike lending station on campus. To accomplish this, the group has to meet with Steve Sullivan Director of Parking and Commuter Services, Dick Giacolini Director of Procurement, Micheal Wilcoxon Clubs Coordinator, John Ericson University Center Manager and Bill Burton Arcata Library Bike Coordinator. Renee ~~will~~ set up the meetings with Steve Sullivan to discuss the use of four bike racks located behind the Art building. She ~~will~~ ^{ed} also contact John Ericson to ask if the Information desk would be able to run the program. Miguel ~~will~~ ^d contact Bill Burton to ask if he wants to donate bikes and to speak on campus about the library bike program. Kari ~~is going to~~ ^{Spoke will} make an appointment with Dick Giacolini to discuss University liability issues.

As part of the promotion for the new Library Bike program we ~~have~~ reserved the quad for Friday November 7th. We ^{have} will be making announcements about the new program and have a few Library bikes on display. This would be a perfect opportunity for Bill Burton to come and speak ^{change} which Miguel is going to inquire about. As a group we are going to make a banner and get both ^{the} the Bicycle Learning Center and the Alternative Transportation Club to promote the program though tabling on the quad.

The last objective is get 40 people to sign up for carpools which will be accomplished by using the reserved time on the quad and through tabling efforts of both the Alternative Transportation Club and the Bicycle Learning Center. We will also send out announcements through the campus Bulk Email and make fliers for the Alternative Transportation Club's website www.humboldt.edu/~alttrans in which HSU faculty, staff and students can sign up for carpools. We are also going to try to organize a car stuffing event Monday December 1st before Carpool day. Kari will talk to Risk Management about legal issues and Renee will see about reserving the quad for that day.

6.0 Project Monitoring and Evaluation Plan

6.1 Master Plan Presentation

The presentation to the Master Plan committee was on December 1, 2003. The Sustainable Transportation Senior Project group will also give the presentation to the following groups and organizations during spring 2004 to spread knowledge and research about issues addressed in the presentation and hopefully inspire a campus movement for sustainable transportation:

- 1) the spring course Environmental Science Practicum

- 2) Associated Students
- 3) Sustainable campus coalition
- 4) Campus wide- next semester

Making a presentation to the student body would not only inform students about parking issues and solutions but would start a dialogue on campus among the students as to whether a parking structure is the answer to our parking problems. Furthermore, it would encourage students to get involved in the planning process and make sure that the students' vision is included in the final campus master plan.

Our efforts will also be continued by the Bicycle Learning Center and the Alternative Transportation Club. We will be attending open forum meetings, writing letters of support for sustainable transportation and organizing through the Sustainable Campus Coalition.

Another monitoring strategy we are considering is to place a referendum question on the Associated Students Ballot in the spring which would provide information about campus wide opinions about parking structures and increased parking permit fees and whether or not they would be a solution to the current parking situation. If a recommendation is made to President Richmond by the Master plan committee that deviates from the majority student opinion as revealed in the AS ballot, then President Richmond would be pressured to follow student opinion by students pointing to the results of the AS ballot question.

6.2 HSU Bike Library Lending Station

The primary responsibility for continuing the HSU Bike Library Lending Station after fall semester 2003 will lie in the hands of the Bicycle Learning Center. The Bicycle Learning Center is responsible for maintaining bikes, checking out bikes, and publicizing the HSU Bike

Library Lending Station. The Alternative Transportation Club (ATC) will also help with publicizing and possibly checking out bikes. Michael Wilcoxon in the Clubs and Activities Office has expressed interest and support in arranging ~~so~~ that the library bikes could be checked out through the Clubs and Activities Office.

The Bicycle Learning Center is working in support of the Arcata Bike Library Program and intermediary between the Program and the HSU campus community. The Bicycle Learning Center is meeting during the last weeks of fall semester to arrange the continuance of the library lending station into spring semester and fall 2004 semester. Miguel Flynn and Eric Anderson, core volunteer members of the BLC, are committed to being primary volunteers for the new lending station into the spring 2004 semester and summer session. In the summer, Miguel will leave Arcata, but Eric will continue to be involved in the BLC and the lending station through fall 2004. Since Miguel is graduating in the spring and Eric is graduating in the fall of 2004, they are committed to finding responsible BLC volunteers to pass their roles on to.

The BLC will assure that library bikes are consistently available on campus to check out. This will include collecting bikes ready to use from the Arcata Bike Library downtown, collecting donated bikes from the Arcata Bike Library (ABL) to repair on campus in the BLC for check out and use, and collecting our own donated bikes from individuals.

Publicizing the HSU BLLS is underway currently and more efforts are planned. A large banner announcing the BLLS has already been made, a page in the campus publication "Voice" (a zine project of the Campus Coalition for Independent Media) email, announcements, tabling by the ATC, and word-of-mouth are some of the current publicizing efforts. In addition, bikes, ~~are~~ currently being decorated ^{with} wild colors ^{will} to be checked out and used as a way to attract attention

to the HSU BLLS. Future plans include bulk email announcements, more decorated bikes, more banners, flyers, and announcements in campus publications.

Miguel met with Michael Wilcoxon on Wednesday, 12 November 2003, to discuss ways that the Clubs and Activities office can support the lending station. Michael and Miguel discussed the possibility of having the Clubs and Activities staff be trained in how to check out bikes so that bike check outs could occur anytime the Clubs and Activities office is open. One issue is how to collect and store the deposits, since the ABL simply places the twenty dollar cash in labeled envelopes and then stores the envelopes in a secure place. Michael suggested that we could have a safe in his office where the deposits are stored. Miguel drafted a proposal of what the lending station would ideally desire as far as how the Clubs and Activities office can help. The next step will be for Michael to go over the proposal with Miguel and discuss what can and cannot be done.

The Bicycle Learning Center and Library Bike Lending Station will see future expansion. Ideally this would come through a larger space allocation for the facility in the new Transportation Center that the Master Plan Committee has agreed to include in their recommendations. This location should have plenty of covered bicycle parking for Library Bikes stored at the BLC as well as for students, faculty and staff to park there bicycles. The location should be easier to find through better signage and/or relocation of the facility. This location could serve as a central hub for bicycle commuters, ^{an} a place where they can service their bicycle and store it safely. It should be a facility large enough to comfortably service bicycles as well as refurbish Library Bikes.

Our group hopes to promote the Bicycle Learning Center as a campus resource and expand upon its potential. We are currently securing covered bicycle parking on campus for

Library Bikes. In the future the BLC will act as an advocate for its own expansion by speaking with Associated Students and Parking and Commuter Services on campus. These issues were addressed in our group's presentation to the Master Plan Steering Committee.

To meet the objectives of the Sustainable Campus Transportation group in ENVS 411 fall semester 2003, the lending station must bring an additional 10 library bikes to campus during the 2003-2004 academic year. The BLC will take primary responsibility for the lending station. The ATC will help publicize the lending station, and the Clubs and Activities office will possibly assist in checking out bikes and storing the deposits. In the future, the BLC hopes to be allocated a larger space with covered parking for library and non-library bicycles and an area for bicycle commuters to rest and work on their bikes. Through increasing the number of library bikes on campus, the BLC will succeed in freeing up parking spots on campus, and contributing to a decrease in the amount of single occupancy vehicle traffic.

6.3 Carpool Promotion Campaign

The Alternative Transportation Club will continue with the promotion of carpooling after this semester by continuing Carpool Days and the annual Car-Free Day event. Car Pool days are first Tuesday of every month. Activities to promote carpooling will include:

1. Staking and Chalking for Carpool Days
2. Publicizing current carpool programs
3. Permanent preferential carpool parking
4. Car-stuffing event
5. More promotional efforts

Also the development of the Informational Resource Center (IRC) which will be up and running by the Fall of 2004 will provide students, faculty, and staff easier access to alternative transportation and carpool signups.

7.0 Master Plan Presentation

“A University is a diverse community held together by common complaints about parking”

-Clark Kerr, former Chancellor of UC Berkley

7.1 Introduction and Campus Access

Our group has researched campus master plans focusing specifically on transportation issues and campus access issues. In our research we have found two types of planning processes:

1. Automobile Accommodation
2. Transportation Demand Management (TDM)

Planning for Automobile accommodation reduces the amount of viable transportation options for commuters as well as creating problems with increased traffic and parking inadequacies which often leads to the construction of parking structures. This type of planning characterizes Humboldt State University; the physical layout currently supports automobile transportation with interior roads, inadequate bicycle parking and unsafe pedestrian walkways. But HSU has a unique opportunity to change and start planning using TDM strategies.

Transportation Demand Management is an innovative type of transportation planning that is focused on reducing the demand for parking and traffic congestion by implementing viable transportation options. These types of strategies include things such as:

- Increased frequency and affordability of public transportation
- Carpooling, car-sharing, or car rental programs

- Increased parking and services for bicyclists
- Encouraging walking by making it easy to access campus by pedestrian lanes and bulb-outs at intersections
- Increase housing in close proximity to campus

Many Universities have had great success with implementing TDM strategies such as:

University of Washington, Colorado State University, UC Davis, UC Santa Barbara, University of Oregon, University of Iowa, Cornell, Victoria, UC San Diego, and Stanford. Many of these Universities have been able to increase the amount of educational space and open spaces on campuses without having to increase parking. For example Stanford University added 5 million square feet of new building space with no net increase in parking (Siegman, 1994).

Humboldt State University has received a reputation of being an Environmental leader in sustainability that is present in everything associated with this university. The Third Iteration Draft Vision Statement states "The heart of our campus culture will be social, economic and environmental responsibility." Likewise the Second Iteration Draft Mission Statement states: "The University provides a wide array of programs and activities that promote an understanding of social, economic, and environmental issues, and prepares individuals to be responsible members of society." President Richmond has outlined goals for Humboldt State University that contains this same language:

- Be student-centered.
- Promote diversity of people and perspectives.
- Practice social and environmental responsibility.
- Be a role model for community involvement.
- Promote responsible economic development

~~Not only that but~~ current campus programs support the same ideals such as, The Campus Recycling Program, The Campus Center for Appropriate Technology, Schatz Energy Lab and Gold LEED certification on new BSS building. If HSU adopts TDM strategies into the Master planning process it will not only uphold the reputation that HSU has so rightly ^{earned} ~~been~~ ~~deemed~~ as well as providing it students, facility and staff with viable transportation options.

7.2 Economic Analysis of Parking

Reframing the Issue

Currently the HSU Master Planning Committee frames campus access issues as parking problems. Addressing and attempting to solve parking issues is similar to treating a symptom rather than the cause. Although the campus and surrounding communities may commonly refer to a shortage of parking on the HSU campus as the problem, the true identity of the core predicament is a lack of viable transportation options to and from our campus. Focusing on parking shortages and ratios and directly linking student enrollment appears to be the course of action and focus for the committee. In each proposal of various enrollment caps, AC Martin, the hired architectural firm, suggests parking structures to accommodate an expanding campus population. However, building parking structures at HSU to accommodate campus access and enrollment growth is economically inefficient compared with implementing an extensive Transportation Demand Management program which stimulates a healthier transportation market.

Conventional transportation planning for campuses, also known as campus access planning, tends to primarily focus on automobile transportation and providing parking accommodations, while undervaluing other modes of transport. Due to this narrow focus, it is

important to consider the economic inefficiencies that are generated from planning decisions based on automobile and parking criteria.

Transportation Market Principles

Efficient and healthy markets exist when levels of consumption offer the optimal or greatest overall benefits from resources. An optimal transportation market consists of several choices of transportation modes that provide the greatest overall benefits to consumers. Beyond this most favorable consumption level, additional vehicular transportation is economically excessive and generally harmful to a community and the environment. Certainly, transportation can be extremely beneficial, but considering the concept of diminishing returns, the incremental benefits of additional travel tend to decline once the most beneficial trips are taken and consist of increasingly lower value mobility.

Viable choices for consumers also factor into an efficient transportation market. During an average week a person may take several trips that they value differently according to their needs. An individual might highly value an ambulance ride to the emergency room. However a trip to the local movie theatre may have far less value. Potentially a person may usually drive because it appears convenient and cheap, but if rush hour traffic, finding a parking space, or expensive parking rates seems undesirable, they might instead walk, cycle, or take public transit if it is available. If alternative modes of transport are not available or appealing, the consumer feels they have little choice but to drive their vehicle, and therefore market inefficiencies are created.

Driving a vehicle also inflicts many external costs on society and the environment, which dramatically increases inefficiencies. Prices of commercial goods increase due to parking

subsidies, increased local taxes pay for road services, accidents and pollution increase injury and illness, heavily used roadways decrease residential property values, ^{and incur} and the immeasurable ^{re do} environmental impacts ^{due to} excessive carbon dioxide emissions ^{are} just a few external costs imposed by motor vehicle dependency. (Littman, 2003) In turn, expanding parking capacity directly increases automobile use and dependency.

Transportation planning is the basis for exacerbating or relieving automobile dependency. For example, roads designed to accommodate and maximize traffic volumes and speeds tend to create environments that discourage walking or cycling. Ample parking provisions result in low-density development patterns that are inappropriate for walking, cycling or transit transportation. Therefore planning that favors preferential treatment of automobile travel and automobile dependency reduces the diversity of viable transportation options for consumers. As a special note, this type of planning benefits people with higher incomes. "Improvements to affordable transportation options such as walking, cycling, ridesharing and public transit, tend to be particularly beneficial for people who have low incomes (students for instance) or limited mobility, since their options are already constrained." (Toor, 2002) Primarily focusing transportation planning on parking issues decreases transportation options and increases inefficiencies in the market.

Parking Structure Cost

Where land is plentiful and campuses can easily sprawl, most of the parking supply consists of surface parking lots. Although there is no general answer to the question of land value, university planners need to determine the land costs of their school property in order to properly calculate total costs of parking. Typically surfaced parking lot spaces require 350 square feet or

124 spaces per acre of land. Table #1 (see appendix) shows a variety of land values and their relative land costs for a parking space. Although a university owns the land, an accurate assessment of parking costs should include land value. Opportunity costs for allocating land for parking versus other uses such as an academic building, student housing, or open green space should be considered. On a campus where land is restricted, such as Humboldt State University, other land uses must be sacrificed or additional properties purchased if precious land is designated for parking automobiles. However for the purpose of simplifying calculating costs in the following case, the property value will be designated a value of zero.

Due to scarcity of land at HSU, it may appear that it would be preferable to accommodate parking by building vertically rather than horizontally. Particularly when valuable land may be optimally used for buildings that contain classrooms which results in decreasing existing parking, considering a parking structure may appear to be a good alternative. However the costs incurred in a parking structure are exorbitant as will be briefly outlined here.

The capital cost of a parking structure is determined both by the construction costs in an area, and by campus design standards. The average cost of a parking structure ranges between \$10,000 and \$20,000 per parking space. Underground parking is considerably more expensive. When a structure is built on an existing surface lot, the cost per net new space created increases. (Toor, 2002) In a parking construction study at UCLA, Donald Shoup examined the cost of 4912 spaces added since 1977, and found that the average cost/new space is \$23,600, and that the average monthly cost, including operating expenditures, is \$124. (Shoup, 1995) A 1995 study at Stanford University found a capital cost /net new space of \$18,235, and a monthly cost of \$121. (Siegman, 1994) A 1998 study at the University of Colorado-Boulder (Cook, 1999) found a monthly cost for structured parking of \$197/ net new space. (Toor, 2002) These studies

show that although parking structures produce a higher parking capacity on campuses, each space actually costs ^{more than} hundreds of dollars per semester!

HSU's master plan proposal for an enrollment increase of 2000 FTES (full time enrolled students) includes parking structures providing approximately 1000 additional parking spaces. This particular scenario suggests that 40% of campus parking would consist of structured parking. According to University of Colorado-Boulder transportation manager David Cook's 1999 study of the monthly fees of parking listed in Table #2 (see appendix), if 40% of campus parking is structured, the average monthly cost for each parking space is \$89. (Cook, 1999) Therefore, in order for permits to reflect the true costs for parking on the HSU campus, based on parking ratios the fees would be approximately \$190 per semester, an increase of approximately 280%. Under the second master plan proposed scenario of increasing FTES by 4500, in order to reflect true costs, semester permits would cost nearly \$380. The HSU parking permit fees at the current \$67.50 rate would need to increase a mere 565%. However if fees were not increased, parking costs would need to be subsidized by the university in other manners.

Considering the extreme costs of parking structures and automobile dependency, the university could ^{greatly} highly benefit by developing alternative modes of campus access. Paying employees not to drive, improving public transit and infrastructure for cyclists, ^{and} developing pedestrian malls and walkways that encourage walking are a few examples from a mixed mode of alternatives that combined are less expensive than the related costs to building parking structures. Satellite parking using existing surfaced parking lots with shuttle service proves to be a successful means of managing traffic. Implementing a comprehensive alternative transportation program at HSU versus building parking structures is not only cost effective, but it creates a healthier market, a cleaner environment, a nicer community and a better school.

7.3 Housing and Community

Housing

While 18 percent of students currently live on campus and 44 percent in the City of Arcata, there is a need for more affordable housing both on the campus, as well as in close proximity to HSU. Data from the 2000 Census denotes that 73.1 percent of household ages 15-24 are paying more than 35 percent of their income towards rent. This is known as a "housing overpayment situation", this supports the need for more affordable housing for undergraduate students, graduate students, faculty and staff.

It is important to consider housing proximity when considering transportation issues on campus since housing locations impact localized traffic volumes. According to Sean Kinghorn's study of transportation on the HSU campus, the average roundtrip commute distance to HSU is 12.1 miles. If our university increases the enrollment cap and anticipates growth, traffic impacts could be significant upon the existing infrastructure.

When discussing increased enrollment and transportation issues, there is growing concern with incoming freshmen bringing an automobile to campus. In order to discourage this situation incoming students need to be provided with incentives to leave their cars behind. A rental car service or car sharing cooperative on the campus could provide the appropriate level of automobile transportation, mostly facilitating weekend travel by students. Also inner campus shuttles could run from the residence halls to different areas of campus. These shuttles combined with limited access parking permits for residence hall occupants could curb the problem of students driving their cars across campus from their room to their class.

Community

Our group also thought it was appropriate to discuss the Arcata Pedestrian and Bicycle Master Plan. The goal of this plan is to increase the number of people walking or bicycling for utilitarian trips for work, school, shopping and recreation. More specifically stated, to “work towards a 50% mode share of all trips beginning and ending in Arcata, made by non-motorized modes by the year 2020.” Currently it is estimated that 20% of trips in Arcata are made by foot or bicycle. Increasing travel by foot and bicycles will come about through pedestrian projects, bikeway facilities (including on-street bikeways, shared use trails, increased bicycle parking facilities), and educational programs.

In regard to transportation, the Arcata General Plan 2020 calls for the city to update the Pedestrian and Bicycle Master Plan every two years. The General Plan 2020 also contains the objective of “creating a complete interconnected bicycle and pedestrian circulation system”. This objective will be met by providing Class I, II and III bikeways to allocate space for cyclists, increasing secure and covered bicycle parking facilities, as well as enhancing the quality of the pedestrian experience by calming traffic, establishing pedestrian islands, shortening crosswalk distance with bulb-outs at corners and increasing signage.

Humboldt State University has the opportunity to collaborate with the City of Arcata by looking to the Arcata General Plan as well as the Pedestrian and Bicycle Master Plan when considering future development. The physical campus needs to see changes to better facilitate increased travel by foot and by bicycle. These changes include designated bikeways (Class I), painted bike lanes (Class II), and lanes designated as shared use (Class III), combined with increased covered and secure parking facilities, ^{and} changing facilities with lockers and showers, as well as pedestrian enhancements.

Another important factor to consider when addressing campus transportation issues is air quality. The City of Arcata in August of 2000 adopted a proclamation to support the "7 by 07" and Cities for Climate Protection Campaign. This is in response to the Kyoto Protocol which would require the United States to reduce greenhouse gas emissions to a level seven percent below 1990 levels by the year 2007. The City of Arcata Greenhouse Gas Action Plan identifies transportation as the most significant source of greenhouse gas emissions. Measures that have been identified to reduce the impacts of transportation on the atmosphere include: designing promotional & educational campaign to discourage driving and support existing viable transportation options, providing incentives not to drive ^{or car} /disincentives to those who do drive, greening-up Mass Transit and city vehicles by purchasing hybrid and other ~~wise~~ maximizing efficiency ~~with~~ newer vehicles, and lobbying and using political action to promote efficient transportation in the region.

since
then
objective
increased

Effective planning must include goals and objectives found in the Arcata General Plan 2020, the Pedestrian and Bicycle Master Plan and the Greenhouse Gas Action Plan. This collaboration will strengthen the surrounding community as well as improve the quality of the HSU experience.

good
just

7.4 Transportation Demand Management/ Other Campuses

Infrastructure determines people's transportation choices. If there are not any or enough sustainable transportation options for campus community members, they will continue to drive alone- if they can afford to. The intention of this section is to share research and analyses on the success of Transportation Demand Management (TDM) strategies on other campuses and to make specific recommendation for HSU. As part of a Transportation Demand Management

Strategy to reduce the perceived need for automobile parking, HSU could expand public transit, expand and encourage carpooling, help start up a car sharing cooperative program, and implement a stronger human-powered transport program including bicycles, skateboards, and walking.

Public Transit

Some key elements of a successful and effective public transit system to serve the needs of the HSU community are expansion of public transit, improving its affordability and convenience, and assuring that the benefits and services offered by public transit are well known by all campus community members.

Public transit ridership at HSU could increase by expanding the frequency and area served by Arcata & Mad River Transit System (AMRTS) and the Redwood Transit System (part of Humboldt Transit Authority (HTA)). According to Sean Kinghorn's HSU Transportation Study of spring 2002, 24% of student, faculty, and staff respondents to the survey said they would ride the bus if there were extended bus routes. 54% said they would ride the bus if there were increased frequency of bus trips. 6% total but 19% of students (by far the largest segment of HSU community) said they would ride the bus if there were subsidized HTA passes, and 16% of total student, staff, and faculty respondents said they would ride the bus if there were better coordinated HTA/ AMRTS bus routes.

As clearly shown in the community forums and emailed comments on the HSU Master Plan website (HSU Master Plan website 2003), demand for increased public transit and "alternative" transportation is high. In particular, there have been requests for shuttle buses around campus and going to Eureka. While shuttle buses to HSU related facilities in Eureka and Trinidad (at a cost of about \$150,000 a per year according to Stephen Sullivan, Director of

Parking and Commuter Services) are a great move in the direction of sustainable transportation, and direct shuttle service would ensure maximum usage, making the HTA buses free for HSU community members would probably be more quickly attainable, possibly a more cost-effective measure, and perhaps a good first step.

Parking & Commuter Services already has an abundance of evidence in support of expanding public transit to reduce demand for parking. Each new surface parking spot costs HSU \$2024 per year for maintenance and debt servicing. Cost will be increasing soon because the City of Arcata requires by 2005 for HSU to filter pavement runoff at the drain or treat all runoff at a treatment plant. In contrast, HSU subsidizes AMRTS with \$6600 per year. For a little more than the cost of 3 parking spots, HSU guarantees HSU community members free local bus rides! Demand for increased bus service and frequency has been shown, and the cost effectiveness of transit service versus increased parking has been shown, so why not increase bus service?

Open subsidies for increased public transit instead of hidden subsidies for car parking are a great idea. The Victoria Transportation Policy Institute, one of the most respected authorities on transportation issues notes that "transit fare discounts are likely to be the largest single motive for mode shifting..." Increased affordability for transit service is a great incentive to encourage people to get out of their cars and onto the bus! (citation)

The UPASS system is a popular program for increasing the affordability of bus service for university community members. HSU already has a form of the UPASS system present in the arrangement for HSU community members to ride the AMRTS buses for free. However, there is still a lot of potential for expanding the UPASS program following the example of other university campuses.

The University of Wisconsin at Milwaukee funded an extensive UPASS program through a \$29 student fee. Even though student fees increased- not a popular move- Edward Beimborn, professor of Urban Studies at UWM, figured that the amount of value associated with the UPASS program compared to the cost of driving a personal automobile to campus amounted to a \$3000 scholarship for UWM students, a factor that many lower income students say was a primary reason they were able to attend UWM (Poinsatte and Toor 1999, 17). For HSU, this shows how, at a cost much cheaper than paying for a parking spot, HSU can guarantee affordable, convenient access to campus, and possibly increase access for those with lower incomes.

University of Colorado Boulder was faced with a ~~similar~~ ^{similar to that of} challenge as HSU. Increased enrollment, more staff, and higher parking demand than supply led to a dilemma. UC Boulder decided to take the TDM approach. At an annual cost of about \$390,000, they expanded the frequency and service area of the transit system. This succeeded in freeing up 350 parking spots. It is understandable why they chose the TDM option. Just compare the \$390,000 cost of expanding public transit to the cost of debt servicing 350 new parking spots: \$945,000. That is almost 2 and-a-half times as expensive (UC Environmental Center 2002)! UC Boulder initiated a UPASS program for students and an Eco-Pass program for University employees as part of a TDM strategy instead of expanding parking. Through an extensive public participation process in the designing of the expanded public transit program, Boulder assured that the transit would have optimal use and convenience for users. Transit riders helped make decisions about where, when, how often, and what kind of buses are operating. In response to concerns expressed during the public meeting process, an emergency taxi ride home is included in the Eco-Pass program (Go Boulder 2003). The Eco-Pass program was so successful that there was an 84% increase in bus trips during the first year of operation (Poinsatte and Toor 1999, 19)!

At the University of Washington, the UPASS program's success can be attributed to the versatility of use that comes with the UPASS. UPASS holders can use their pass to park a limited number of times on campus, ride the bus, shuttles, and more.

The University of California in San Diego also has a successful UPASS program. UCSD students, faculty, and staff can use their UCSD ID's with special stickers to ride the San Diego buses for free within a specific radius of campus. In addition to free access to city buses, shuttles are operated by UCSD that offer frequent and free service to the UCSD Medical Center, train stations, the airport before and after holidays, and the Scripps Institution of Oceanography (UCSD Transportation and Parking Services 2003). In an area increasingly characterized by traffic congestion, the UPASS program offers a viable alternative to UCSD community members who don't drive to campus.

At the University of Montana in Missoula, a UPASS program combined with other TDM strategies mentioned a little later in this section have met much success. UMM is particularly interesting because of the similarities to HSU. UMM has a student population of 15,000 in a city of 50,000 (UMM 2003).

Carpooling

Carpooling is great because it's one of the most inexpensive ways to reduce demand for car parking. Carpooling takes advantage of the potential for energy conservation in cars that are already coming to campus, so it requires no significant purchases or large investments. Cornell University has had a lot of success encouraging carpooling through an online database through which those seeking carpools can register online and find a match in their neighborhood. Also at Cornell, carpools of three or more people can actually receive rebate payments (Toor 2003, 135)

UMM also has an online program for matching carpools with three sections of the carpool-matching program online for long distance rides, local carpools, and recreational ride carpools. HSU has a similar online carpool matching program that will be ready in fall 2004, the Informational Resource Center, a senior project of Guy-Alain Amoussou and Dr. Sharon Tuttle's Computer Information Systems capstone course.

Car-Sharing Cooperative

Car sharing is a program similar to a car rental service that is an incentive for people to come to campus without their own personal automobile. UC Boulder, the city of Victoria, Vancouver, San Francisco, Los Angeles, and more places have had success with car-sharing programs (UC Environmental Center 2003). Members pay an affordable, but small amount of money to reserve a car for certain dates. Most of the car-sharing programs are non-profit organizations. Some are cooperatives. HSU could be an innovator in sustainable transportation by starting a car-sharing cooperative on campus or offering space to a car sharing non-profit. The price of borrowing a car for a few weekend excursions should be comparable to the cost of a semester long parking permit. This would also encourage students to carpool because they can save money by splitting the cost of a shared car.

A student-run cooperative would be a valuable asset for HSU. At other schools, such as UC Davis and UCSD, the Associated Students student government has helped to invest in the creation of student-run cooperatives as a way to expand the learning opportunities available on campus. Experience running a small business is a great way for students to explore their interests and expand their resume. In addition student-run cooperatives offer goods and services

to campus community members at an affordable price and with accountability- something that is lacking when doing business with a private company. More information on student-run cooperatives is available for the North American Student Cooperative Association (NASCO website 2003).

Human Powered Transport: Bicycling, Skateboarding, and Walking

Many campuses, such as University of California Davis, University of California Santa Barbara, U of Montana Missoula and U of Oregon in Eugene have found bicycling to be the most effective part of their TDM strategies. Davis has been called the Bicycle Capital of the U.S. Davis has more bicycles per person than any other U.S. city (Poinsatte and Toor 1999, 26). Associate Students of UC Davis operates a Bike Barn where students may work on their bikes, borrow tools, or rent a bike. UC Davis re-engineered much of the campus area to accommodate bikes. For example, special stoplight signals let bikes pass through intersections safely before cars can go. A comprehensive network of well-labeled walking and biking paths connects different parts of the campus to the community. As a result of UC Davis's efforts, 60% of student trips to campus are on foot or by bike, 15% by bus, and only 21% driving alone (Poinsatte and Toor 2003, 26) UMM, along with many other campuses, offer a version of the library bike program, where UMM community members can use their "Griz Card" UMM Ids to check out yellow cruiser bikes or a tandem "date bike" for free (UMM 2003). At UCSB, biking programs have been so successful that 14,000 people commute to campus each day by bicycle (UCSB 2003)!

Considering that 57% of HSU students live in Arcata, there is a lot of potential for increasing the proportion of students who walk, bike, and skate to campus. Local affordable

This line is out of place

housing is a must! The University of Iowa in Iowa City successfully redesigned campus to be optimally walkable. UT's *Pedestrian-Oriented Campus Plan* included making pedestrian movement first priority above vehicular movement, so vehicles and bicycles must always yield to pedestrians. They minimized vehicle intrusion into campus and created a comprehensive system of walking paths connecting all areas of campus (Poinsatte and Toor 1999, 33). Closing off the core area of campus to most car traffic is a popular measure to ensure pedestrian safety and appeal. The University of New Mexico and UC Davis are a couple among many campuses that have taken this path.

Skateboarding, despite often being seen as a nuisance, is in fact a very popular transportation choice in Arcata even though it is not accommodated for and is even discouraged. Currently at HSU, skateboarding is illegal on streets, and limited to sidewalks. This is opposite from skateboarding policy in Arcata. Because no other ~~known~~ ^{are known to} campuses have measures in place to actually encourage skateboarding, HSU could be an innovator in sustainable transportation by promoting skateboarding as a viable transportation option. Because sidewalks are too narrow and crowded for skateboards, HSU could change policy to treat skateboards much the same as bikes. Let them ride in the street with bikes! HSU could create special paths for skateboarding, walking, and biking and even a skate park. In California, where skateboarding began, skateboarding is an ever-growing recreational and commuting choice. Promoting skateboarding could attract new students to HSU!

Exclamation points are normally not used except when people are quoted!

Funding Options

According to Stephen Sullivan of HSU Parking & Commuter Services, the state of California mandates only parking revenues be spent on parking facilities and services. Currently,

is this saying they can ~~only~~ only be spent on parking?

according to another state law, parking fine fees pay for the AMRTS subsidy. However, using parking permit fees to pay for sustainable transportation options is possible. Considering that parking permit fees will need to be raised if parking is to be expanded, parking permit fees could be raised to pay for sustainable transportation options. The increased cost of driving, combined with the increased affordability and convenience of new transit and human-powered transport programs would decrease the demand for parking.

UC Boulder considered the option of using parking permit fees solely to fund its TDM programs, but after concern was expressed by University community members, planners decided to use a combination of parking fees and general funds to pay for TDM programs (Poinsatte and Toor 2003, 18). UC Berkeley students' transit costs are covered through a portion of their registration fees. At UC Berkeley, students can ride all AC transit buses for free with their "Class Pass" - even buses that go to San Francisco! At a value of more than \$400, students have a great deal. \$34 of the student registration fees are allocated to transit costs (UCB 2003).

Other funding options include grants through the state Air Quality Control Board. The Arcata Bike library is currently funded through an Air Quality Control Board grant.

Conclusion

This section is intended to provide useful information on successful sustainable transportation planning on college campuses. Hopefully, the current Master Planning process will include the ideas and resources discussed here. Transportation Demand Management has been shown to work. It makes sense economically, environmentally, and socially. By implementing TDM programs in expanding transit, encouraging carpooling, creating a car-sharing program, and promoting human-powered transport such as walking, skateboarding, and

bicycling, HSU can successfully manage increased enrollment and employment without expanding parking.

In addition, there is a great opportunity in the relationship between HSU and Arcata, because the City of Arcata has already begun implementing sustainable transportation measures described in the General Plan 2020, the Pedestrian and Bicycle Master Plan, and the Greenhouse Gas Reduction Plan. HSU has a responsibility and reputation as an innovator in sustainability, and thus should cooperate to the fullest extent with the city to promote sustainable transportation options.

Time Sheets

Eric Anderson	Tasks completed	Hours
Carpool Promotion	<ul style="list-style-type: none"> • Car counting survey 	3
Library Bike Program	<ul style="list-style-type: none"> • Meeting with Steve Sullivan • Meeting with Bill Burton • Collecting and Refurbishing bikes 	1.0 1.5 12
Master plan Presentation	<ul style="list-style-type: none"> • Meeting with Steve Sullivan • Research • Letter to Master Plan Committee • Presentation Preparation • Slides 31-40 • Handout Preparation • Attending Meetings • Giving Presentation 	1.0 10 .5 15 3 1 6 2
Documentation	<ul style="list-style-type: none"> • Problem Statement • Goals and Objectives • Situational Analysis (Wise Planning) • Monitoring and Evaluation (HSU Bike Library Lending Station) • Final editing 	1.5 1 2 3 1
Contacts	<ul style="list-style-type: none"> • letter to Pres. Richmond • letter to MPC • Tom Conlon 	.25 .25 1
Total Hours		67.0

* Total Hours does not include number of hours attending BLC meetings, ATC meetings, events or class time discussions that relate to the project

Kari Casey	Tasks completed	Hours
Carpool Promotion	<ul style="list-style-type: none"> • Staking/ preparation • ATC tabling • Other Carpool Day Promotion • Car Counting Survey 	1.5 5.0 2.0 3.0
Library Bike Program	<ul style="list-style-type: none"> • Meeting with Steve Sullivan • Meeting with Bill Burton 	1.0 1.5
Master plan Presentation	<ul style="list-style-type: none"> • Meeting with Steve Sullivan • Research • Letter to Master Plan Committee • Presentation Preparation • Slides 1-18 • Handout Preparation • Attending Meetings • Giving Presentation 	1.0 10 0.5 15 4 2.5 6.0 2.0
Documentation	<ul style="list-style-type: none"> • Problem Statement • Goals and objectives • Situational Analysis (Spring 2002 Transportation Study) • Implementation Strategies • Monitoring and Evaluation (Master Plan Presentation, Carpool Promotion Campaign) • Final Editing and Formatting 	1.5 1.0 1.0 2.0 1.5 4.0
Contacts	<ul style="list-style-type: none"> • letter to Susan Painter • letter to UPASS program • letter to Dick Giacolini • letter to Pres. Richmond • letter to MPC 	.25 .25 .25 .25 .25
Total Hours		67.25

* Total Hours does not include number of hours attending ATC meetings, planning events, or class time discussions that relate to the project

Miguel Flynn	Tasks completed	Hours
Carpool Promotion	<ul style="list-style-type: none"> • Car Counting Survey 	3.0
Library Bike Program	<ul style="list-style-type: none"> • meetings with Bill Burton • proposal and meeting with Michael Wilcoxon • collecting and refurbishing bikes • making banner with Renee • promotion in CCIM publication 	1.5 1.5 12 1.5 1.5
Master plan Presentation	<ul style="list-style-type: none"> • Presentation research • Presentation preparation • Presentation to MP committee • Presentation to Exec Committee • Attending Open Forum Meetings • Slides 40-52 	10 15 .5 1 4 4
Documentation	<ul style="list-style-type: none"> • Problem Statement • Goals and Objectives • Situational Analysis (Bicycling, Skating, Walking, Roads & Paths, Bicycle Parking, Organizations & Facilities) • Evaluating Alternatives • Monitoring and Evaluation (HSU Bike Library Lending Station) • MP presentation document 	1.5 1 2 1.5 2 2.5
Contacts	<ul style="list-style-type: none"> • letter to Steve Sullivan • letter to Dick Giacolini • letter to MPC • letter to Steve Sullivan 	.25 .25 .25 .25
	Total Hours	67.0

* Total Hours does not include number of hours attending BLC or ATC meetings, planning for events or class time discussions that relate to the project

Renee Stork	Tasks completed	Hours
Carpool Promotion	• Designed &, laminated flyers	2
	• Meeting w/Steve Sullivan	1.5
	• ATC tabling on quad	5
	• painted canvas banner	2
	• made paper banners & posters	2
	• staking & chalking	2
	Lumberjack ad	1
Library Bike Program	• Met w/ HSU procurement, information desk	2
	• Bill Burton and HSU Club's office	1
	• Made banner & booked quad.	2
Master plan Presentation	• Economic research	10
	• Attending Open Forum Meetings	6
	• Gathering MPC meeting reviews	3
	• Presentation preparation	15
	• Presentation to MP committee	.5
	• Presentation to Exec Committee	1
	• Slides 19-30	2
Documentation	• Problem Statement	1
	• Goals and Objectives	1.5
	• Situational Analysis (Carpooling)	1
Contacts	Bob Schulz, Dick Giacolini, Michael Wilcoxon, Rollin Richmond, Gretchen Kinney-Newsome, Todd Litman, Steve Hackett, Bill Burton, John Ericson	6
Total Hours		67.5

* Total Hours does not include number of hours attending ATC meetings, planning events or class time discussions that relate to the project.

Appendix A

Campus Access Issues

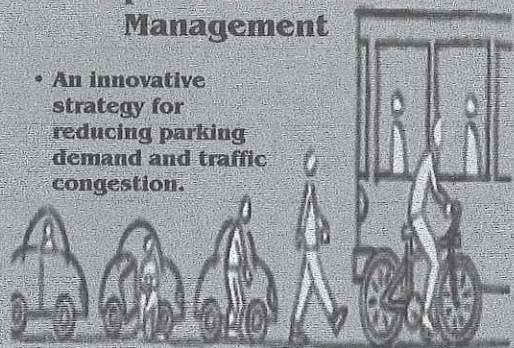
Presented by:
Kari Casey
Renee Stork
Eric Anderson
Miguel Flynn

"A University is a diverse community held together by common complaints about parking"

-Clark Kerr, former Chancellor of UC Berkeley

Transportation Demand Management

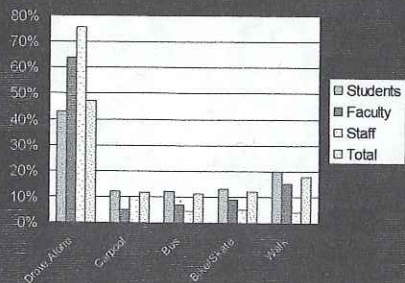
• An innovative strategy for reducing parking demand and traffic congestion.

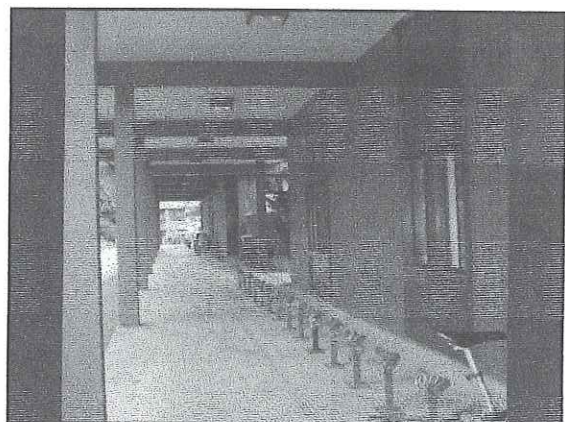
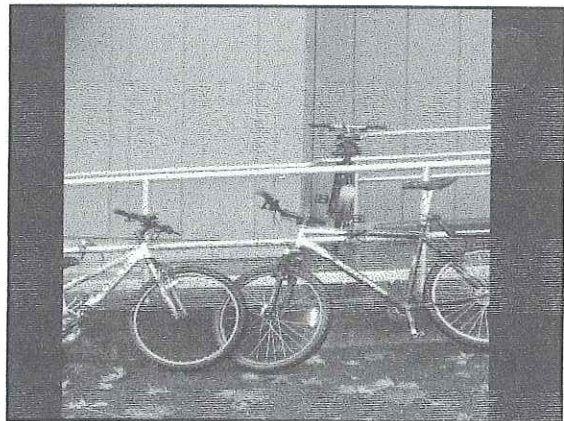
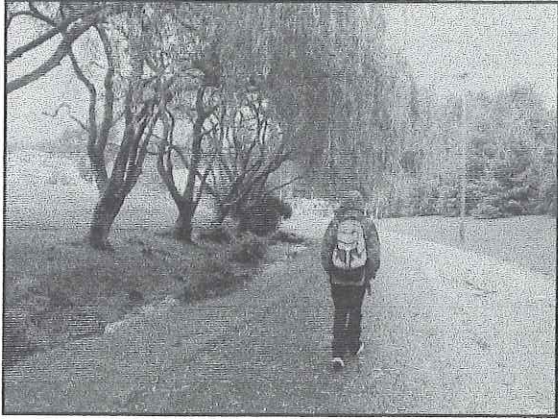


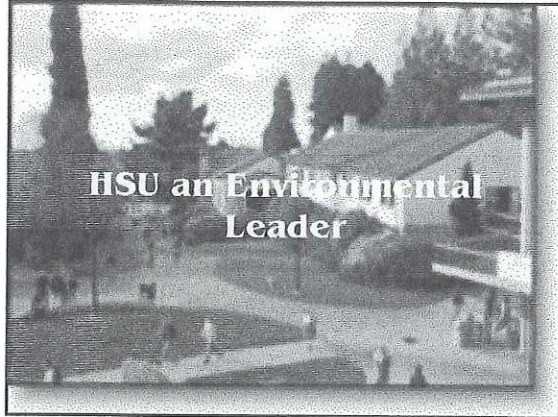
TDM Success Stories

- University of Washington
- Colorado State University
- UC Davis
- UC Santa Barbara
- University of Oregon
- University of Iowa
- Cornell
- Victoria
- UC San Diego
- Stanford

Trips per week to HSU by Commute Mode







Vision Statement

Humboldt State University is and will be shaped by the beautiful ecologically- and culturally-rich environment of the far north coast of California. Learning, discovery, and creative activity will be central to the University's vision. We will be a close-knit community of students and university mentors who develop strong partnerships with the community. The heart of our campus culture will be social, economic and environmental responsibility. We will value the diversity of people and ideas by integrating multiple perspectives into the curriculum, in campus life, and in community relations. Humboldt State University will be a nationally distinctive learning center that will foster student leadership and responsible, ethical citizenship.

Mission Statement

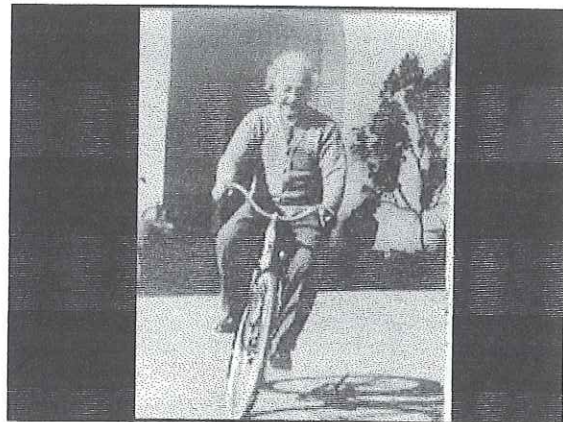
...The University provides a wide array of programs and activities that promote an understanding of social, economic, and environmental issues, and prepares individuals to be responsible members of society. We seek to develop an appreciation for the complex nature of life and for the nature of human impacts on the environment. Active learning takes place both inside and outside the classroom...

President Richmond's Goals for HSU

- Be student-centered.
- Promote diversity of people and perspectives.
- Practice social and environmental responsibility.
- Be a role model for community involvement.
- Promote responsible economic development

Current Campus Programs

- Campus Recycling Program
- Campus Center for Appropriate Technology
- Gold LEED certification on new BSS building
- Schatz Energy Lab



Conventional Campus Access Planning

Parking Focus

- Automobile transport
- Automobile accommodations
- Parking structures

"Planning that favors preferential treatment
of automobile travel and automobile dependency
reduces the diversity of viable transportation options"

Will Toor

Economic Inefficiencies

Planning based on
Automobile and Parking criteria

- Stanford
- UCLA
- University of Colorado

Parking Structure Option

- Space
Build vertically vs horizontally
- Condenses parking

Parking Structure

Capital Costs

\$10,000-\$20,000 per space

One 900 car structure @ \$15,000 per space
= \$13,500,000

Monthly Costs

\$100 Per month per space

Parking Permit Fee

(Semester)

Current fees= \$67.50

1 structure = \$190*
280% increase

2 structures = \$380*
560% increase

3 structures ?

*Does not include considerations for contracted employees
frozen permit prices

"Downward Death Spiral"

UC Santa Barbara Parking & Transportation Committee

Opportunity Costs

Educational Buildings

External costs

- Parking subsidies
- Roadwork subsidies
- Heavily used roadways decrease property values
- Pollutants and gas emissions
- Accidents, injuries & deaths

Increased Traffic

Road & Ramp work

Aesthetics

Plans which accommodate and maximize traffic volumes create environments that discourage walking and cycling

Beneficiaries

Improved affordable transportation options
(i.e. walking, cycling, ridesharing, public transit)

Low Incomes

Improved automobile accommodations

High Incomes

"Transportation Market"

Healthy & efficient = Greatest overall benefit

Several choices of transportation modes

- Automobiles
- Carpooling
- Public Transit
- Bicycling
- Walking

Innovative Planning

Transportation Demand Management

Satellite Parking
&
Shuttle Services

Transportation & Housing

- 18 % HSU campus
- 44 % Arcata
- 73 % of student households experience housing overpayment situations (Income < \$10,000 - 93%)
- 12.1 miles / average RT commute

Housing Proximity

(10,000-12,000 FTES = doubled campus traffic)

Housing locations impact traffic volumes

Campus Housing

- Incentives for freshmen to leave cars at home
- Rental car service on campus
- Inner campus shuttles
- Limited access to campus lots

Community Aspect

Arcata's Pedestrian/Bicycle Master Plan

Goals

- Increase walking & bicycling utilitarian trips (i.e. work, school, shopping, recreation)
- Increase from 20% to 50% non-motorized trips by 2020

Arcata's General Plan 2020

Objective:

Create complete, interconnected bicycle/pedestrian circulation system.



- Update Pedestrian/Bicycle Master Plan every 2 years.
- Bike lanes
- Increase bicycle parking facilities



Community Collaboration

- Continuous network of bike lanes & paths
- Widening & extending sidewalks
- Traffic calming & pedestrian safety measures

Proclamation - August 2, 2000



Greenhouse Gas Action Plan

Transportation was determined to be the most significant source of greenhouse gas emissions.

Measures to reduce emissions from transportation sources

- Design a promotional & educational campaign to discourage driving and support existing viable transportation options.
- Provide incentives not to drive / disincentives to those who do drive.
- Green-up Mass Transit and city vehicles
- Lobby and use political action to promote efficient transportation.

Progressive Community

- Arcata General Plan 2020, Pedestrian/Bicycle Master Plan and Greenhouse Gas Action Plan collaboration will strengthen community.
- Opportunity to reframe issue, Access to campus

Sustainable Campus Transportation



Infrastructure determines people's transportation choices.

Promoting viable transportation choices as part of a TDM strategy.

- Public Transit
- Carpooling, Car sharing
- Bicycles and Skateboards
- Walking



Keys to effective public transit



- Expansion of public transit
- Improving its affordability and convenience
- assuring that the benefits and services offered by public transit are well known



Shifting to Public Transit

- According to the Victoria Transportation Policy Institute, "transit fare discounts are likely to be the largest single motive for mode shifting..."
- UPass programs: UWM, CU Boulder, UW, UCSD



Expanding Public Transit

CU Boulder's TDM strategy

- expanded public transit system at an annual cost of about \$590,000
- freed up 350 parking spaces
- Compare to cost of debt servicing an additional 350 parking spaces \$945,000



Public Participation

- Key to Boulder's success at increasing public transit ridership has been letting transit riders make as many choices as possible about what kind of buses they ride in, when they operate, how often, and where.



Carpooling, Car-Sharing

- Carpooling is one of the most inexpensive ways of reducing the demand for parking. Cornell
- Car-Sharing is a program similar to a car rental service that encourages people to come to campus without their own cars: Victoria, Boulder, SF, LA, Flexcar
- price of use for weekend trips same or lower cost than a semester parking permit.
- could encourage students to "go in" on the rental fee, further encouraging carpools.



BICYCLES

- Many campuses, such as UCD, UCSB, U of Oregon, and Stanford, have found bicycling to be the most effective part of their TDM programs

Also most fun!



UCD's TDM strategy: bikes bikes bikes!

- Davis: "Bicycle Capital of the U.S." More Bicycles per person than any other city in the nation.
- 60% of student trips to campus are on foot or by bike, 15% buses, and 21% in SOVs.



Walking

- Considering that 57% of HSU students live in Arcata (see an Appendix 2002 transportation study), walking should be a focus for efforts to reduce parking demand.
- UCB, and U of Iowa have had much success with encouraging walking as more appropriate than driving alone.



Encouraging Walking

- U of I: created ***Pedestrian-Oriented Campus Plan***
 - pedestrian movement has priority over vehicular movement
 - continuous pedestrian pathway system
 - aesthetically pleasing walkways
 - minimize intrusion of motor vehicles
- UCB: **safety and housing**
 - abundance of near-campus housing
 - night escort service
 - night shuttle



Transportation Center

- **Reduce demand for parking**
 - bike repair and bike parking facility
 - lockers and showers
 - warm and dry places to relax and wait for a bus
 - carpooling arrangements
 - car and bike rental
 - transportation information center



Appendix B

Recommended Transportation Plan

The purpose of this handout is to assist the Master Plan Committee by providing the information and resources of our research and analysis. We believe that if HSU adopts Transportation Demand Management strategies in the planning process it will not only reduce the demand for parking but provide viable transportation choices for the students, faculty, and staff at Humboldt State University.

Transportation Mode/ Issue	Options for Implementation	Examples of Success	Resources/ Contact Information
Public Transit- Pass Rider Program	<ul style="list-style-type: none"> Increased frequency, area, affordability and convenience of local public transit. Discounts to Regional Travel i.e. Greyhound, Amtrak, Airlines Discounts to local Merchants Shuttle Service- park and ride in Eureka, McKinleyville and Bayside Guaranteed Emergency Ride Home Discounted Carpool permits 	<p><u>UPASS-</u> University of Washington (UW)</p> <p><u>Buff OneCard-</u> Colorado State University(Boulder) Funded by: student fee, parking tickets, parking permits, and general fund CU Boulder Eco-Pass</p>	<p>http://www.washington.edu/upass/</p> <p>http://www.colorado.edu/cuenvironmentalcenter/alt_trans/index.html</p>
Bicycle Promotion Program	<ul style="list-style-type: none"> Better Bicycle access in and around campus Covered bike racks Larger facility for bicycle repair Bike rentals Library bike check out Lockers and showers for commuters 	<p><u>Bike Program/Bike Barn-</u> UC Davis</p> <p>Stanford UCSB U of Oregon</p>	<p>http://www-datetime.ucdavis.edu/062802/bikeplan.html</p> <p>http://vtour.ucdavis.edu/vs_pages/vtour/slides/slide_bikebarn.htm</p> <p>http://www.taps.ucdavis.edu/</p> <p>http://transportation.stanford.edu</p> <p>http://www.tps.ucsb.edu/bicycle.html</p> <p>http://safetyweb.uoregon.edu/bicycling/index.htm</p>
Walk and Skate Program	<ul style="list-style-type: none"> Continuous network of pathways Close off inner core to automobiles Create entrances free from automobile contact Pedestrian Islands Extend sidewalks Create Bulb-outs at intersection corners 	<p>University of New Mexico</p> <p>UC Davis</p> <p>University of Iowa</p> <p>City of Arcata</p>	<p><i>Finding a New Way: Campus Transportation for the 21st Century</i> An article by Francoise Poinette and Will Toor funded through the CU Boulder Environmental Center available at http://www.colorado.edu/cuenvironmentalcenter/alt_trans/index.html Has sections on walking as well as other TDM strategies</p>
Carpooling	<ul style="list-style-type: none"> Promote Information Resource Center Discounts for carpoolers Preferential parking 	<p>IRC- Student Designed website for HSU Cornell</p>	<p>Tuttle Dr., Sharon, M ext. 3381 st10@humboldt.edu Amoussou Dr., Guy-Alain ext. 3380 ga7001@humboldt.edu http://commuterconnection.cornell.edu/cornell_carpools/index.jsp</p>
Cashback for	<ul style="list-style-type: none"> Raise parking permit fee then offer cash to 	<p>Stanford</p>	<p><i>The Road Less Traveled : Sustainable Transportation for Campuses by</i></p>

those that don't drive alone	<ul style="list-style-type: none"> • those that choose not to drive • "Clean Air Cash" : pay employees not to drive • Rebate for carpool of 3 or more 	Cornell	Will Toor. Available at http://www.colorado.edu/cuenvironmentalcenter/alt_trans/index.html
Parking permit policy	<ul style="list-style-type: none"> • Tiered system: higher for those that live within walking/ biking/free public transit distance • Ban purchase by those that live within biking/ walking/ free public transit distance • Ban or limit purchase by freshman 	HSU Transportation Subcommittee Report May 2001	HSU Link: http://www.humboldt.edu/~hsupd/download/Pkgrep.pdf <i>The Road Less Traveled : Sustainable Transportation for Campuses</i> by Will Toor. Available at http://www.colorado.edu/cuenvironmentalcenter/alt_trans
Car-Rental Program	<ul style="list-style-type: none"> • Car rental service that is affordable and will rent to students 	John Hopkins U, Washington U., UCSC, Portland State	http://www.victoriacarshare.ca/ http://www.dancingrabbit.org/drvc/ http://www.flexcar.com/ http://www.wisc.edu/uwcc/links/carshare.html http://bcn.boulder.co.us/transportation/bcs/index.html http://parking.ucsd.edu/shuttle/shut.html
Park and Ride Shuttle System	<ul style="list-style-type: none"> • Locations: Eureka, McKinleyville, Bayside, and Trinidad • Shuttle system • Free RTS access at these locations 	UCSD	http://safetyweb.uoregon.edu/parking/transportation/trc.htm
Transportation Center	<ul style="list-style-type: none"> • Provide access to all programs adopted by HSU • Centralized location 	U of Oregon Transportation Resource Center	
Public Participation	<ul style="list-style-type: none"> • Democratic process involving all stakeholders in decision-making process 	CU Boulder	

Humboldt State University has developed a reputation as a leader in environmental sustainability. The ideas and values set forth by President Richmond and the Vision & Mission Statements further provide goals for a campus characterized by ecological viability. Due to HSU's leadership role, it is important for the Campus Physical Master Plan to demonstrate environmental sustainability in its transportation infrastructure.

A great opportunity exists in the relationship between HSU and the City of Arcata. The City of Arcata is in the process of implementing sustainable transportation programs outlined in the General Plan 2020, the Pedestrian and Bicycle Master Plan, and the Greenhouse Gas Reduction Plan. It is the responsibility of HSU to collaborate with the City and create a integrated system of viable transportation choices for students, faculty, and staff.

Appendix C

Campus Master Plan Committee:

October 29, 2003

We are a group of seniors in our capstone course in Environmental Science: Sustainable Campus (ENVS 411), taught by Richard Hansis. We understand that the committee is looking for information on other campuses' master plans. We have been researching this topic paying particular attention to transportation and campus access issues. Our time spent on research has provided us with an abundance of knowledge and analysis of what has and has not worked on other college campuses.

Inspired by President Richmond's and Robert Schulz's encouragement of student involvement we have prepared a short 20-25 minute power point presentation on these issues and would like to share our research with the committee at the next meeting. We understand that you are on an aggressive timeline and we feel that this presentation will provide the committee pertinent information that will help expedite the process.

Sincerely,
Transportation Group of ENVS 411
Kari Casey, Renee Stork, Eric Anderson, Miguel Flynn

Appendix D

December 2, 2003

Dear Dr. Richmond,

We are a group of seniors in our capstone course in Environmental Science: Sustainable Campus (ENVS 411), taught by Richard Hansis. We have been researching other campuses comparable to HSU and their master plans paying particular attention to transportation and campus access issues. Our time spent on research has provided us with an abundance of knowledge and analysis of what has and has not worked on other college campuses.

Inspired by your encouragement of student involvement we have prepared a short 20-25 minute power point presentation on these issues and would like to share our research with you. Recently we offered this presentation to the Master Plan Committee but felt that you should have the opportunity to the same information first hand. We understand the aggressive timeline for our school's master plan, and we think this presentation will provide you pertinent information that will help in decision making.

Sincerely,
Transportation Group of ENVS 411
Eric Anderson, Kari Casey, Miguel Flynn, Renee Stork

Appendix E

11/12/03

Hi Steve,

I just wanted to send you a list of some of the questions we will be asking during our meeting this Wednesday @ 2pm.

How will parking be handled during construction if existing parking lots are used for new construction as proposed in the master plan scenarios?

How many more parking spaces could be available if some lots were modified with angled and designated compact vehicle parking? What costs would be involved?

What are the current annual costs for UPD monitoring parking?

How much would it cost to significantly increase bus service (very broad I know, but perhaps per bus running all day on a new route)?

Approximately what is the annual cost of maintaining a parking space on our campus?

How much does it cost to build a new surface parking space?

Thanks again Steve. See you Wednesday-Renee

Appendix F

At 09:50 AM 10/31/2003 -0800, rds9@humboldt.edu wrote:
Hello!

I am a part of a committed group of students at Humboldt State University in northern California who are working very hard to develop alternative transportation use to and from our campus and throughout our surrounding communities. We sponsored the first HSU Car-Free Day! this past September 22nd, and it was a successful event in many ways. We are very curious if you have any information about any other campuses in the U.S. holding such an event. Although this is important info to us, we have a much more pressing matter at hand.

HSU is in the midst of developing its revised physical campus master plan. The school is on a very aggressive schedule due to funding being available for only a short time period. The plan is scheduled to be finished by June 2004. In its entirety of development, the plan will be completed in less than half the time of most campus master plans.

Similar to most campuses in the California State University system, we have many campus access issues and problems. Our alternative transportation program is grossly underdeveloped, and SOV's and adequate parking for those vehicles continues to be a heated issue at HSU. What appears to be in the design by the contracted architectural firm, AC Martin, are THREE parking structures for a campus with a ceiling cap of 12,000 students!

Fortunately we have a great new President that supports alternative transportation, but the committee advising him seems set on increasing parking without considering alternatives. We are a group of students actively engaged in researching other campuses with successful alternative transportation programs particularly schools that increased enrollment without increasing parking or traffic congestion. We are offering to do a presentation for this committee to give them solid facts on how innovative campus access planning can save money, decrease traffic congestion, be actively supportive of the adjacent city's 2020 Greenhouse Gas Action Plan, improve the quality of our physical campus and become a more attractive university to future students.

At this point we have found several examples of schools that have accomplished these things without building expensive parking structures. What we are most interested in at this time in our research is finding examples of where parking spaces were increased either by lots or structures and the negative impacts that ensued. Some examples might include cases where structures were built, driving increased, and after a short time, a shortage of parking became a recurring problem. Another poignant situation might be where parking spaces increased which led to increased driving which led to bad traffic congestion or due to the high costs of the structure, drivers paid exorbitant prices for parking. We have heard of these situations, but we need some type of documentation to support it.

Because we are dealing with a state institution and academia, strong supportive facts and credible information are crucial to our case and our cause. If you have any information that might help us in this important time that will affect the future of this beautiful place, we would so appreciate your help, advice or direction. Time is truly of the essence for us, and we would appreciate a response as soon as possible.

Thank you for your time and your honorable work,
Renee Stork
President
Alternative Transportation Club
(707)822-0100

Renee,

See the "Campus Transport Management" chapter of our Online TDM Encyclopedia at <http://www.vtpi.org/tdm/tdm5.htm>. It includes case studies and references for more information. Stanford is a particularly good example. Parking management (<http://www.vtpi.org/tdm/tdm28.htm>) often is one of the most effective components of a campus transport management program. Many campus managers mistakenly treat parking facilities as a sunk cost (that is, they expect to rent on land or recovery of capita costs) and so undervalue parking demand reductions. Charging motorists the full cost of using parking facilities is more efficient and equitable, and encourages use of alternative modes.

Best wishes,
-Todd Litman

Sincerely,
Todd Litman, Director
Victoria Transport Policy Institute
"Efficiency - Equity - Clarity"
1250 Rudlin Street

Appendix G

At 11:20 AM 11/12/2003 -0800, klc32@humboldt.edu wrote:

Dear Susan Painter,

I spoke with you at the public forum on October 22, 2003 about AC Martin's involvement with implementing Transportation Demand Management strategies into other campus master plans. In this discussion you said that AC Martin had been involved with such TDM strategies but were not able to provide specific examples at that time. If it is possible could you send me a list of campuses that AC Martin was involved with that implemented alternative transportation measures. I was also wondering if you had some pictures of parking structures built at other college campuses designed by AC Martin.

Thank you,

Kari Casey

Humboldt State University

klc32@humboldt.edu

-No response was given

Appendix H

At 02:50 PM 10/25/2003 -0800, klc32@humboldt.edu wrote:

Hello,

I am a senior at Humboldt State University working on a project involving alternative transportation and was interested in the UPASS program. It is an important time at HSU since we have begun to redraft the Master Plan, our group is actively involved in seeking knowledge about other campuses have addressed parking problems and campus access. If there is any information you could provide about the UPASS program and specifically how effective it has been and how this program was implementation it would be greatly appreciated.

Thank you,

Kari Casey

Humboldt State University

klc32@humboldt.edu

(707)822-7083

Kari,

Thank you for your interest in the UPASS program if you send me your mailing address I will be able to send you a packet of information that may be helpful. Some of the information you requested may also be found on the UPASS website:

<http://www.washington.edu/upass/>

Campus Commuter Services

upass@u.washington.edu

Appendix I

2 December 2003

Michael Wilcoxon:

I appreciate your making the time to meet with me on Wednesday 12 November about the campus bike library lending station. We agreed that the next step in the process in the direction of making possible bike library check-out at the Clubs & Activities Office was for me to write up a proposal as to what the BLC would ideally like to happen. This letter not includes that proposal.

Preliminary Proposal for Clubs & Activities office involvement in HSU Library Bike Lending Station:

The BLC has Arcata library bikes available for check-out at the BLC shop. We are in the process of getting the OK to display the library bikes available for check-out in the covered bike parking area on the east side of the Art Building. Because the open hours of the BLC are limited by the number of volunteers and their schedules, the Clubs & Activities Office could help assure wide usage of the lending station by allowing people to check-out library bikes at the Clubs & Activities office.

As a first step, we could provide the Clubs office with the three items of paperwork necessary for library bike check-out: a waiver and a labeled deposit envelope. When a person wants to check out a bike, they fill out a waiver that releases the Arcata library bike program from legal responsibility if a person were to have an accident while riding a library bike. (I haven't heard a response yet from Dick Giacolini of Risk Management as to whether or not we should alter the waivers to also mention HSU as released from liability.) After a person signs the waiver, they fill out the back of the deposit envelope with the specific info describing the bike (manufacturer, model, color, size, registration #- all the info available to recognize the bike in the future) Their name and phone number are optional on the deposit envelope. After sufficient information has been filled out on the envelope, the person places a \$20 cash deposit in the envelope. That's it, the bike is checked out!

Then, the Clubs office would store the deposit and waiver in a safe location with any other deposit envelopes or waivers accumulated. The deposits and waivers could be stored in the Clubs office temporarily until a BLC volunteer comes by weekly or biweekly to pick up this paperwork and take it to "the Hub," the Arcata Bike Library headquarters by the post office in downtown Arcata. If a person that checked out a bike desires to return the bike, they should be directed to go to "the Hub." The only exception to this might be if a person wants to return a library bike very soon (1-7 days) after checking out it. In this case, the paperwork would probably still be in the Clubs office, so the Clubs office could have the person fill out a bike return survey and return their deposit.

I believe that is all for this first proposal. If it is acceptable, we can go ahead with it and make changes when needed. If it is not acceptable, we can meet to make necessary adjustments.

Thanks for your time and consideration,
Miguel Flynn
Bicycle Learning Center

Appendix J

Carpool to H.S.U.!

Carpool sign-up: www.humboldt.edu/~alttrans

Park all day at any 10 hr. meter
on Harpst or Rossow St.

with

- Carpool of 3 or more people
- valid H.S.U. parking pass (semester or daily)

To receive daily carpool permit, visit parking office on Harpst st

Carpool Day!

1st Tuesday of every month

more info: parking@humboldt.edu

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