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Table of Contents

1.0 INTRODUCTION .......................................................................................................................... 1
2.0 ISSUE IDENTIFICATION ............................................................................................................. 2
  2.1 – BICYCLE PARKING ............................................................................................................... 3
  2.2 – BICYCLE SAFETY ............................................................................................................... 6
  2.3 – THROUGH ROUTES ............................................................................................................ 8
  2.4 – COMMUNITY ISSUES ........................................................................................................ 9
3.0 CONCLUSION .............................................................................................................................10
1.0 INTRODUCTION

In an effort to reduce greenhouse gas emissions and otherwise meet the goals set forth in the American College and University Presidents’ Climate Commitment, the University has identified alternative transportation as a factor of key importance in attaining these goals.

With the 2009 Transportation Demand Management Plan showing that approximately 50% of students live within one mile of campus, with another 30% within two miles, the University has been faced with the question of how to get these students – who are often driving to campus – out of their cars, and onto other modes of transportation.

Seeking out innovative ways to promote efficient, safe, and convenient bicycle access is of particular importance in order to promote bicycling as a mode choice among University students, staff, and faculty. Encouraging bicycle use as a choice over single occupancy vehicles is a challenge that must be met with informed decisions on the most effective use of University resources to improve the bicycle facilities used by the community.

The student-led CSU, Chico Alternative Transportation Group (ATG), in conjunction with The Institute for Sustainable Development (ISD), and the Associated Students, recently hosted an open forum for Bicycle Advocacy. The goal of the forum was to promote community discussion and allow for input regarding bicycle issues on the University campus. The information gathered at this forum, along with input from the Alternative Transportation Group and the 2009 Transportation Demand Management Plan, has highlighted a number of concerns related to campus bicycle use.

This report is the summary of these issues and their relation to the cycling community. In addition, a number of achievable solutions are highlighted that would promote bicycle use while improving campus circulation overall.
2.0 ISSUE IDENTIFICATION

The bicycle advocacy forum was held Tuesday, November 8th on the CSU Chico campus at 5:00 PM. Attendees included students, staff, and faculty of the CSU Chico campus, as well as community cyclists and advocates. The forum was advertised via the weekly campus-wide announcement email, facebook, and general flyer postings (Figure 1).

![Bike Advocacy Forum Flyer](image)

After a brief introduction and discussion of the ATG’s goals for the forum, attendees were directed to choose a small group to work in with the goal of identifying specific problems under each main subject. Small groups were prompted with specific questions, and given suggestions of the types of problems that would face particular categories. Please see Attachment 1 for more information.

A more thorough discussion of each section is crucial to understanding the concerns of the campus community, and how all concerns are interrelated, and serve the campus goals of encouraging efficient, safe, and convenient bicycle access. The sections that follow summarize the concerns expressed in each workgroup, while discussing a range of solutions applicable to each issue.

The demographic of the attending community members may have resulted in some bias toward specific issues, in terms of issues that may impact faculty and staff more than students. However, there was a general concern for all bicycle-related issues.

Prior to the forum, the ATG identified four main subject areas for campus bicycle concerns. Those areas were bicycle parking (racks), safety, through routes, and City-related issues. These categories were decided upon after input from CSU Chico Police Captain Robyn Hearne, in conjunction with an analysis of recent student activity (newspaper stories, past survey results, etc.).
2.1 – BICYCLE PARKING

The campus community has recently indicated bicycle racks as an issue affecting campus commuter bicycle use. Outreach through an ISD transportation survey and other forms of student and faculty input have shown that a lack of convenient bicycle parking can dissuade would-be commuters from cycling to campus due to difficulties finding available parking, concerns for safety of their bicycles, or convenience of parking near classes or other campus activities.

The CSU, Chico campus has 5,334 available bicycle parking stalls as of the Fall 2011 Bicycle Parking Survey conducted by Transportation and Parking Services (Attachment 2). Of these parking stalls, the one-day survey indicates that 60% of stalls are in use during the day. While the survey answers the overall usage question, it fails to address other critical issues.

A survey involving a more thorough methodology would allow for empirical analysis of bicycle parking. A 2010 study at Portland State University, for example, was conducted using a methodology involving series photography to analyze bicycle parking turnover, duration, and peak times – all factors that are ignored by the current survey conducted by TAPS. Such a study on the CSU, Chico campus would be feasible, requiring little to no funding, or additional project management workload. The study in its entirety could be organized, conducted, and reported on by the ATG, all within one semester. The results of the survey would provide valuable input to the Campus Transportation Committee and the Institute for Sustainable Development in addressing the severity and demand for resolution of the parking related issues covered in this section.

Another major problem identified by the workgroup was the type of bicycle racks available for parking. The “schoolyard” or “toaster” type racks that are prevalent throughout campus are considered to be the least desirable racks.

According to the Bicycle Parking Guidelines published by the Association of Pedestrian and Bicycle Professionals (APBP):

“The rack element should:

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

Comb, toast, schoolyard, and other wheel-bending racks that provide no support for the bicycle frame are not recommended.”
As the predominant rack on campus, the schoolyard racks are inherently prohibitive to encouraging bicycle use by not meeting the standards identified by the APBP. In addition, the workgroup commented that many of the schoolyard racks are oriented improperly (Figures 3 and 4), not allowing bicycles to be locked with wheel to frame, only further decreasing the usability of the rack. Simply re-orienting the racks would increase the desirability of these parking areas.

The University has recently made efforts to transition to "lighting bolt" style parking racks for newly constructed parking areas. The southeast corner of the Bell Memorial Union and the southern side of Laxson Auditorium are locations that contain these styles of rack.

Faculty and staff within the workgroup – many of whom commute by bicycle daily – identified the lack of secure parking as a deterrent to parking their bikes in established parking areas. Several faculty at the meeting commented that they regularly bring their bicycles into their offices with them instead of leaving them parked outside. Increasing security and safety of bicycle parking areas would serve a dual benefit of increasing bicycle use while encouraging faculty and staff to park their bicycles outside of buildings as intended.

The university has previously addressed the issue of security by installing bicycle lockers adjacent to Meriam Library. These lockers can be rented on a semester-to-semester basis, and currently have a waiting list for their rental. Installation of additional lockers is one alternative to increasing security for particularly concerned commuters. This option, however, can be costly when compared to other, more general solutions such as improved racks or lighting.

To increase security and safety of bicycle parking, the group identified two key aspects – covered parking, and well-lit, monitored areas. Both of these aspects would significantly increase bicycle use, especially during foul-weather, when cyclists do not wish to leave their bicycles parked in the rain during the day.

The only covered parking on campus exists outside of Sutter Hall, where approximately one-third of the parking stalls are covered. However, this area is always impacted, likely due to the proximity of dormitories. Regardless, the high use of the area speaks to the community desire for such facilities. Covering major parking areas on campus would allow for riders to be sure that their bicycle was protected from weather.
To further increase the security of these areas, lighting should be introduced to the structure, increasing visibility and deterring vandalism or theft. Solar lighting, or lighting tied to a motion sensor would mitigate the impacts of increased energy use. Ensuring that parking areas are in areas that are well-traveled by pedestrians, or proximity to emergency “blue lights” are several ways to further increase security.

A simple potential solution that would serve cyclists parking their bicycles for the long term would be the introduction of a "bicycle corral" in one or both of the parking structures. A bicycle corral would use the space of one to two auto parking spaces for the purpose of bicycle parking. Allowing bicycle parking within the structure would provide a secure, covered, well-lit parking option. It must be ensured, however, that the bicycle corral is near an easily-accessible, pedestrian and bicycle friendly access point within the structure.

Fully enclosing a corral and restricting access to users that apply for parking and pay a small fee ($5-10 per semester) would further ensure security, alleviating previously mentioned faculty concerns.
2.2 – BICYCLE SAFETY

A common theme in all workgroups during the forum was bicycle safety. There was particular concern from all forum attendees for the safety of cyclists both on and off campus. Concerns were expressed both for the conditions of bicycle facilities, and the lack of enforcement surrounding campus.

The most pressing issue identified by the group was the lack of lighting among campus bicycle racks as well as along campus and City bikeways. Combined with the conditions of many pathways, and the moratorium on on-campus bicycle use, the group felt that cyclists are being consigned to the less-safe perimeter of campus in the name of pedestrian safety.

Figure 8 shows the existing bicycle path adjacent to the Union Pacific railroad west of campus. This path in particular has been the site of a number of assaults over the past year, likely due to the relatively remote location, and severe lack of lighting. Jurisdictional issues between the City of Chico, CSU Chico, and Union Pacific Railroad have led to difficulties in collaborative efforts surrounding improvements to the pathway. Currently, the University is working with Fehr & Peers Transportation Consultants in conducting a feasibility study of a dedicated bicycle pathway on the west side of campus (discussed in further detail in section 2.3 – Through Routes). One aspect of this study seeks to identify the jurisdictional boundaries applicable to each stakeholder in order to more clearly identify responsible agencies.

Additionally, the study seeks to identify the measures that can be taken to improve the safety of the pathway. Creating pathway ingress/egress points, improving lighting, and widening the pathway are several alternatives that are being examined.

The University has recently made efforts to increase the safety in this area of campus. Improved pathway lighting has been installed near the northwest corner of O’Connell hall, and UPD has coordinated with Chico Police to increase patrols of the area. The University has also planned for installation of an emergency “blue light” phone adjacent to the northwest corner of the west campus tennis courts, allowing immediate emergency contact for any pathway users.

In regard to overall perceived bicycle access, many forum attendees expressed concern that existing campus facilities and policies do not promote fluid access throughout the general campus area. As a result, cyclists are being pushed to the less than ideal facilities that exist on the campus periphery.

Another issue identified by the workgroup – especially on the areas on the perimeter of campus – is the lack of enforcement surrounding bicycle traffic violations. Violations such as riding on the wrong side of the street, failure to stop at stop signs, and riding on the sidewalk were all seen by forum attendees. These individuals proposed increased enforcement for such offenses in the area surrounding campus by both UPD and Chico PD. This increased enforcement would allow for officers to educate cyclists on the topic of City and campus bicycle rules, while also creating an opportunity to encourage cyclists to register their bicycles through UPD. Further, enhanced enforcement would help foster a culture of safety and adherence to bicycle traffic regulations by bicycle commuters.

Concerns were expressed regarding existing conditions on Second Street, such as the absence of bicycle lanes or the lack of lighting. The 2005 Campus Master Plan, however, designates a future Second Street Streetscape to improve the newly expanded campus edge.
Improvements in collaboration with City of Chico include: street tree planting program, upgraded lighting, entry signage, and some street furnishings. Developments in this area have been held up as the City of Chico has taken longer than planned to begin their 2nd Street Couplet project (Discussed in further detail in section 2.4 – Community Issues). The pedestrian 'paseo'/walk areas would include enhanced paving similar to the treatment already in place at First and Warner Streets.

![Figure 9 - Artist rendering of future 2nd and Normal intersection. Looking north along Normal. From 2005 Campus Master Plan.](image)

Further safety issues expressed by the workgroup included a lack of lighting and security near bicycle parking, as discussed in section 2.1 – Bicycle Parking.
2.3 – THROUGH ROUTES

The existing bicycle facilities throughout the CSU, Chico campus and the surrounding community do not meet the demand for an easily accessible campus, especially with regard to the campus core. Nearby facilities, while allowing some access to campus, fail to provide fluid, direct access to major campus and community destinations. The existing ban of on-campus bicycle use only further prohibits access to campus, causing cyclists to utilize outlying routes and facilities that often fail to meet current design standards. Members of the through routes small group identified the need for a more fluid, connected bicycle system through the campus and the surrounding community.

The group identified two separate, but related “classes” of issues. One set of issues addresses the bicycle facilities existing in the areas immediately adjacent to campus, while the other is more closely linked to establishing acceptable bicycle facilities through the campus core. It is important that these issues be thought of as connected, and not two separate issues. Without a consistent, dependable bicycle system, the campus and community will remain as two disconnected entities.

The workgroup identified the need for several routes running directly through campus, given the campus’ existing infrastructure and use patterns. A main East-West route across campus was seen as the most important, as it would better serve the residential areas on those sides of campus that are currently set apart from other areas of the community due to the “barrier” nature of the campus core.

Specifically, the group identified the need for a dedicated bicycle pathway connecting the west campus pathway to Warner Street, where bicycle facilities currently exist. Attachment 3 shows the bicycle route suggested by the group, in addition to a potential “east-west” route.

All alternatives regarding campus through routes discussed at the forum gave consideration to existing pedestrian and bicycle facilities. It is possible to establish such through routes with minimal cost. In many cases, simply delineating bicycle and pedestrian "lanes" through pathway striping would create a suitable bicycle pathway.

The University is currently working with Fehr & Peers Transportation Consultants to develop a feasibility report on construction of a dedicated bicycle pathway connecting the mixed use path bordering the western edge of campus with the campus core. Such a pathway would allow for direct bicycle access to a parking area near Yolo Hall, at the perimeter of the campus core, increasing safety for both pedestrians and cyclists.

Campus through routes would encourage bicycle use by allowing bicycle commuters more direct access to their campus destinations. In addition, the University campus would no longer act as a “barrier” to bicycle use through the City, encouraging community members to use campus facilities to access local services.

The workgroup recognized the need for increased safety and pathway continuity surrounding campus if through routes are not constructed. The conditions of surrounding pathways are almost universally substandard, and the connections to these pathways often take place on busy arterial streets. Forum participants largely felt that cyclists were being pushed out to these less-than-safe facilities in the name of pedestrian safety.
2.4 – COMMUNITY ISSUES

Many problems present within the community have a profound impact on cycling as a mode choice among campus commuters. Many surrounding facilities do not promote safe and convenient bicycle use.

Cherry Street north of First Street sees high levels of bicycle use due to its proximity to pathways and campus core access. Bicycle facilities on this roadway, however, are non-existent. The street is currently used for parking on both the east and west sides, and striping for bicycle lanes could be an issue due to the width of the roadway. One solution is the use of “sharrows,” (Figure 11) an on-roadway shared lane marking that shows cyclists where they should be riding to avoid travelling within the door zone of parked cars, while also alerting drivers to where they should expect to see cyclists. Sharrows have proven useful in cities with high bicycle use, encouraging drivers and cyclists to share the roadway while designating a street as preferred bicycle route. The University is currently expecting to install sharrows at this location within the next year.

2nd Street was also discussed as an entirely unsafe bicycle corridor. A lack of bicycle lanes and crossing difficulty were specific issues mentioned by the group. As a major corridor for cyclists and pedestrians alike, these issues impact the mode choices of users that must interact with 2nd Street during their commute.

The City of Chico is currently planning and developing a number of projects concerning downtown and the 2nd Street corridor. The 1st/2nd Street couplet project (Attachment 4) will change the circulation pattern of the area adjacent to the southeast corner of campus. Additional plans concerning the design and streetscape of 2nd Street call for on-street bicycle lanes and a reduction in roadway lanes.

Other nearby streets were identified as having similar problems, including Sacramento Avenue (at the entrance to the bicycle path and railroad crossing). This intersection in particular commonly has a queue of bicycles waiting to cross northbound or southbound. Increasing bicycle crossing signage, or simply the presence of a crosswalk would improve such issues.

Other suggestions from the group included increasing outreach regarding bicycle registration, and continuous connections of campus bicycle facilities to City facilities, all issues that could be solved through increased collaboration between the University and the City.

![Figure 11 - A "sharrow" shared lane marking.](image-url)
3.0 CONCLUSION

The issues outlined in this report are some of the primary issues that the University can address in order to increase bicycle use among campus community members and the satisfaction of the existing bicycling community of the campus. Potential solutions to these issues vary widely in terms of complexity and cost, and a multi-stage approach to implementation is suggested.

The issues discussed in this report are the issues that the campus community, as represented at the advocacy forum, is most keenly aware of, and as such they are issues that warrant the attention of the Campus Transportation Committee.

The table below highlights the key projects and potential solutions identified in this report, as well as a prospective time frame for their implementation, and a simple cost estimate ranging from “low” to “high.” Their relation to the campus Transportation Demand Management Plan, and potential stakeholders that could be involved in implementation of projects, are also identified.

Planning, design, and implementation of the projects identified in this report can be conducted in collaboration with various campus divisions and student groups to promote and achieve the educational goals of the University and the Campus Transportation Committee.

Continued development of bicycle facilities in consideration of the needs of campus bicycle commuters is an essential means of supporting progress towards the University’s sustainability goals. In particular, it is a central component of the Climate Action Plan’s primary Transportation Sector Reduction Strategy of reducing single-occupancy vehicle traffic to campus.
### 4.0 RECOMMENDATIONS

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**Attachment 1 – Small Group Prompt Sheet**

2011/2012 Campus Bicycle Facilities Report
**SMALL GROUP INTERACTION**

As a group try to come to an agreement on three or four major concerns regarding your topic. **How do these concerns impact bicycle use?** Rank these issues in terms of importance, and if possible, identify any possible solutions to these issues. Be open and creative, but also realistic as these items will be brought to the Campus Transportation Committee.

After discussing your issue, we will come back into the larger group and share your group’s major concerns as well as any possible solutions for those issues.

CSU Chico has made a commitment to being emissions neutral by the year 2030. Encouraging alternative transportation is extremely important in achieving this goal. In your view, what are some of the major obstacles to **promoting bicycle use** among CSU students, staff, and faculty? How can the University better “market” bicycle use? What do you think the University is doing right in regards to encouraging bicycle use?

**Some Thoughts and Prompts:**

Don’t be afraid to get creative beyond these! These are just some starting points!

- **a) Bicycle racks**
  - a. Numbers
  - b. Locations
  - c. Types
  - d. Covered v. Uncovered Parking
  - e. Are they safe enough?
  - f. Lighting

- **b) Through Routes**
  - a. Where would you like to see a bicycle path on campus?
    - i. Entrances and exits to these paths?
    - ii. How would this path location improve campus access?
    - iii. How would this path promote bicycling as a mode of transportation?
    - iv. What about a partial through route?

- **c) Bicycle safety**
  - a. Conditions of bicycle routes
  - b. Lighting
  - c. Crossings of major routes/roadways
  - d. Access to major roadways and other locations
  - e. Isolation from vehicles
  - f. Theft
  - g. Bicycle Registration

- **d) City Issues**
  - a. Getting to and from campus – off-campus pathways and facilities
    - i. Bidwell Park paths
    - ii. 1st Street Couplet
  - b. Getting around campus – on-campus pathways and facilities
  - c. Safety and conditions of these facilities
    - i. Location
    - ii. Isolation from vehicles
    - iii. Lighting
    - iv. Crossings (if any)
    - v. Sharing with pedestrians
  - d. Getting around with your bicycle on the bus system
  - e. Other