California Polytechnic State University, San Luis Obispo

From the SelectedWorks of William W. Riggs

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Complete Streets at CalPoly San Luis Obispo

William W Riggs, California Polytechnic State University - San Luis Obispo
Jana Schwartz, California Polytechnic State University - San Luis Obispo

Available at: https://works.bepress.com/williamriggs/42/
Complete Streets at Cal Poly San Luis Obispo
A project by CRP 470 with Dr. William Riggs
What are Complete Streets?

“Complete Streets is a transportation policy and design approach that requires streets to be planned, designed, operated, and maintained to enable safe, convenient and comfortable travel and access for users of all ages and abilities regardless of their mode of transportation. Complete Streets allow for safe travel by those walking, bicycling, driving automobiles, riding public transportation, or delivering goods.”
Where could Cal Poly Implement Complete Streets?

The objective of this task was to find a problematic area(s) of campus to remedy poor circulation and enhance safety and active transportation appeal.

Travelers include:
- Automobile drivers
- Bicyclists/Cyclists
- Pedestrians
- Skateboarders/Scooterists

Problems to be solved:
- Pedestrian Safety
- Bicyclists Safety
- Road Calming (vehicular speed reduction)
Four Focus Areas on the Cal Poly Campus
Four Focus Areas on the Cal Poly Campus

01. Grand + Pacheco
02. Hathaway + Longview
03. Longview + Slack
04. Slack + Grand
Overview + Proposed Solutions

(01) Grand + Pacheco

(02) Hathaway + Longview

(03) Longview + Slack

(04) Grand + Slack
(01) Grand + Pacheco

Existing Conditions | Site Overview
T-intersection
Pedestrian, Bike, Transit, Auto travel modes
Pedestrian Crossings
Class II Bike Lanes
Transit and Auto Travel Lanes
Existing Conditions | Traffic Counts

am
7:00 am - 9:00 am
Pedestrian - 332
Bike - 55
Automobile - 1,082

pm
5:00 pm - 7:00 pm
Pedestrian - 610
Bike - 143
Automobile - 1,518

Most students who live in the freshman dorms would not use the cross-walks and would cross in a diagonal line between grand onto Pacheco as a short cut.

The use of the grand and Pacheco intersection increases when there is an event occurring at the P.A.C.
Case Study | Seattle

An example of Seattle’s bike lanes painted in green

An example of Seattle’s new intersection with bulb outs and shorter pedestrian crosswalks
Conceptual Design Elements | Vision

- Proposed painted class 2 bike lanes
- Proposed pedestrian crosswalks with table top design
- Proposed pedestrian beacon/crossing signals
Conceptual Design Elements | Design Guidelines

Speed tables will be incorporated to provide pedestrians with a safer access and slow down traffic in the area.

The class two bike lanes in the area will continue to be used and will be connected with surrounding bike lanes to achieve continuity.

A diagonal crosswalk will be added to the intersection to continue the pedestrian habit of using the existing short cut.

A pedestrian beacon will be installed in order to stop ongoing traffic at the intersection and allow pedestrians to cross the intersection safely.
(02) Hathaway + Longview

Existing Conditions
Three-way stop
Four-way intersection
Diversity of users

Site Overview
Existing Conditions | Conflict Areas + Traffic Flow
### Existing Conditions | Traffic Counts

**am**

7:00 am - 9:00 am
- Pedestrian: 225
- Bike: 79
- Automobile: 389

**pm**

5:00 pm - 7:00 pm
- Pedestrian: 419
- Bike: 78
- Automobile: 617

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**Hathway and Longview - Peak-hour transit by mode**

<table>
<thead>
<tr>
<th></th>
<th>Morning hours (7 AM-9 AM)</th>
<th>Evening hours (5 PM-7 PM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrian</td>
<td>225</td>
<td>419</td>
</tr>
<tr>
<td>Bicyclist</td>
<td>79</td>
<td>78</td>
</tr>
<tr>
<td>Automobile</td>
<td>389</td>
<td>617</td>
</tr>
</tbody>
</table>
Conceptual Design Elements | Vision

Painted intersection/crosswalk
Bulb-out for shorter crosswalk
Pedestrian scramble
Class II bike lanes
Bollards blocking parking lot access at intersection
Conceptual Design Elements | Inspiration

Houston, TX

San Francisco, CA

Winchester, England

Portland, OR

Winchester, England

Oakland, CA
(03) Longview + Slack

Existing Conditions  | Site Overview
Sidewalks and Bicycle lanes not present
Crosswalk not present
Busy intersections
Sidewalks and bicycle lanes not present
Unsafe design for pedestrians and bicyclist
Down hill grade Increases vehicular speed
Sidewalks and Bicycle lanes not present
Pedestrian traffic crossing through parking lot
Traffic Calming measures should be implemented to reduce vehicular speeds
Sidewalks and Bicycle lanes not present
Visibility restrictions turning right on slack street
Existing Conditions | Traffic Flow

Red = Low Activity-----Yellow = Moderate Activity-----Green = High Activity

Vehicular Usage

Pedestrian Usage

Bicyclist Usage
Existing Conditions | Traffic Counts

**am**
7:00 am - 9:00 am
Pedestrian - 27
Bike - 14
Automobile - 348

**pm**
5:00 pm - 7:00 pm
Pedestrian - 85
Bike - 0
Automobile - 584
Desired Features | Design Concepts

- Incorporate bicycle lanes on Slack and Longview
- Incorporate a protected bicycle lane along Slack street closest to Cal Poly
- Incorporate a wide sidewalk along Slack street
Conceptual Design Elements | Vision 1

Design 1 incorporates bicycle lanes, sidewalks, and a crosswalk. Design 1 focuses more on the connectivity for pedestrians, bicyclist, and automobiles and less on a design of the site.
Conceptual Design Elements  |  Vision 2

The Performance center can include weight lifting machines, specially designed for Cal Poly Athletes, a speed training track, and a smoothie bar.
(04) Slack + Grand

Existing Conditions  |  Site Overview
4-way stop
2 main stops are on Grand Ave.
Most bikers made a left from Grand Ave. to Slack Street
High volumes of traffic near the top of the hour
## Existing Conditions | Traffic Counts

### am

<table>
<thead>
<tr>
<th>Time</th>
<th>Pedestrian</th>
<th>Bike</th>
<th>Automobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 am - 9:00 am</td>
<td>124</td>
<td>85</td>
<td>1,775</td>
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</table>

### pm

<table>
<thead>
<tr>
<th>Time</th>
<th>Pedestrian</th>
<th>Bike</th>
<th>Automobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>5:00 pm - 7:00 pm</td>
<td>105</td>
<td>107</td>
<td>2,274</td>
</tr>
</tbody>
</table>

## Key Elements | Observation

- Increase bicycle and pedestrian safety
- Traffic calming methods: traffic circle with protected bike lane
- Highly visible raised center island
- Grand primary street - need for equitable use between modes and streets
Case Study | La Jolla Boulevard

Before

After
Conceptual Design Elements | Vision

Vegetated roundabout

Bike path separate from car traffic

Barrier separating bike from vehicular traffic

Ped crosswalks with planter buffers
Visitor Center moved
Conceptual Design Elements | Vision Perspective
For more information | A link to the class video on Complete Streets can be found here
https://youtu.be/NKW9-CPcVys

For more information | A link to our data counts can be found here
https://docs.google.com/spreadsheets/d/1cuh01Z9pJUFpmDEMiDGwgOWFpGjih4PU6-4zvBeyXGY/pubhtml