Berkeley Bicycle Plan
Berkeley Transportation Commission

October 15, 2015
Overview

1. Existing Conditions and Needs Analysis

2. Bike Network & Programs Development and Implementation

3. Design, Funding, Parking Guidelines, Bike Boulevard Design Update


5. Final Draft Plan

6. City Council Adoption

Public Input
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 2014</td>
<td>Bicycle Subcommittee</td>
</tr>
<tr>
<td>March 2-28 2015</td>
<td>Public Survey (random sample)</td>
</tr>
<tr>
<td>March - Present</td>
<td>Public Survey (opt-in)</td>
</tr>
<tr>
<td>March 2015</td>
<td>Bicycle Subcommittee</td>
</tr>
<tr>
<td>April 2015</td>
<td>Community Open House #1</td>
</tr>
<tr>
<td>May 2015</td>
<td>Bike to Work Day Morning Event</td>
</tr>
<tr>
<td>May 2015</td>
<td>Bike to Work Day Evening Event</td>
</tr>
<tr>
<td>May 2015</td>
<td>Love Your Neighborhood Day</td>
</tr>
<tr>
<td>June 2013</td>
<td>Adeline Corridor Community “Pop-Up”</td>
</tr>
<tr>
<td>August 2015</td>
<td>Caltopia</td>
</tr>
<tr>
<td>September 2015</td>
<td>Bicycle Subcommittee Bike Tour</td>
</tr>
<tr>
<td>October 2015</td>
<td>Sunday Streets</td>
</tr>
</tbody>
</table>

Public Input
Bikeway Classifications

**CLASS I**
**Multi-Use Path**

Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with crossflow minimized.

**Sub-Classifications**
- 1A Paved Path
- 1B Unpaved Path
Bikeway Classifications

**CLASS II**
Bike Lane

Provides a striped lane for one-way bike travel on a street or highway.

**Sub-Classification**
- 2A Standard Bike Lane
- 2B Upgraded Bike Lane
- 2C Climbing Bike Lane
- 2D Contraflow Bike Lane
CLASS III
Bike Route
Signed Shared Roadway

Provides for shared use with pedestrian or motor vehicle traffic, typically on lower volume roadways.

Sub-Classification
• 3A Signage-only Route
• 3B Wide Curb Lane or Shoulder
• 3C Standard Sharrows
• 3D Green-backed Sharrows
• 3E Bicycle Boulevard
Bikeway Classifications

**CLASS IV**

**Cycle Track**

Provides a separated path for bicycle travel adjacent to a street or highway. Bicycles are separated from motor vehicle traffic by a raised curb, bollards, parking with a painted buffer, or other vertical physical barrier.

**Sub-Classification**

- 4A Cycletrack
- 4B Two-way Cycletrack
EXISTING BICYCLE BOULEVARD NETWORK
BICYCLE COLLISIONS (2000-2012)
Top Issues:

“need bike lane” 62
“poor pavement condition” 50
“convert to two-way street” 6
“need bike boulevard” 5
“dangerous” 5
Top Issues:

“need safe crossing” 42
“need traffic signal” 34
“need four-way stop” 16
“need safe bike access to Bay Trail” 15
“need stop sign” 10
Q) What types of facilities will encourage more residents to bicycle in Berkeley?

**FOUR TYPES OF BICYCLISTS**

<table>
<thead>
<tr>
<th>Strong and Fearless</th>
<th>Enthusiastic and Confident</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Bicyclist" /></td>
<td><img src="image2" alt="Bicyclist" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interested but Concerned</th>
<th>No Way No How</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3" alt="Bicyclist with passenger" /></td>
<td><img src="image4" alt="Stop sign" /></td>
</tr>
</tbody>
</table>
FOUR TYPES OF BICYCLISTS

Strong and Fearless
- Berkeley: 3%
- Portland: 1%
- Edmonton: 4%
- Austin: 2%

Enthusiastic and Confident
- Berkeley: 16%
- Portland: 7%
- Edmonton: 13%
- Austin: 15%

Interested but Concerned
- Berkeley: 71%
- Portland: 60%
- Edmonton: 45%
- Austin: 39%

No Way No How
- Berkeley: 10%
- Portland: 33%
- Edmonton: 38%
- Austin: 44%
Level of Comfort

1. Very Comfortable
   - Residents feel the most comfortable biking on this facility
   - A two-lane commercial street with a separated bike lane

2. Somewhat Comfortable
   - A residential street with Bicycle Boulevard markings
   - A quiet, residential street with light traffic
   - A four-lane street with a separated bike lane

3. Somewhat Uncomfortable
   - A two-lane commercial street with "sharrows"
   - A four-lane street with a bike lane
   - A street with two lanes in each direction and a center divider with a striped bike lane

4. Very Uncomfortable
   - A two-lane commercial shopping street
   - A street with two lanes in each direction and a center divider
   - A four-lane street with faster, heavier traffic

*Level of comfort on bicycle facilities as reported by survey respondents who were identified as interested but concerned.*
Level of Comfort: How comfortable do you feel riding in different environments, from a 1 (very comfortable) to a 4 (very uncomfortable)?

1.1 Most Comfortable

Class IVA A two-lane commercial street with a separated bike lane

3.6 Least Comfortable

No Facility A four-lane street with faster, heavier traffic
**Public Survey**

**Class IVA:** A two-lane commercial street with a separated bike lane.

**Class IA:** A paved path separate from the street.

**Class IVA:** A street with two lanes in each direction and a center divider with a separated bike lane.

**Comfort Level Scale:**

- **Most Comfortable:** 1
- **Somewhat Comfortable:** 2
- **Somewhat Uncomfortable:** 3
- **Most Uncomfortable:** 4
### Class IVA: A four-lane street with a separated bike lane

### Class IIB: A two-lane commercial street with a buffered bike lane

<table>
<thead>
<tr>
<th>Most Comfortable</th>
<th>Somewhat Comfortable</th>
<th>Somewhat Uncomfortable</th>
<th>Most Uncomfortable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Public Survey

**Class IIIe:** A residential street with Bicycle Boulevard markings

**No Facility:** A quiet, residential street with light traffic

---

1.5

Most Comfortable

Somewhat Comfortable

Somewhat Uncomfortable

Most Uncomfortable

1 2 3 4
Public Survey

Class IIB: A four-lane street with a buffered bike lane

Class IIA: A two-lane commercial

Class IIB: A street with two lanes in each direction and a center divider with a buffered bike lane

Most Comfortable | Somewhat Comfortable | Somewhat Uncomfortable | Most Uncomfortable
---|---|---|---
1 | 2 | 3 | 4
### Public Survey

#### Class IIIC: A two-lane commercial street with “sharrows”

#### Class IIA: A four-lane street with a bike lane

#### Class IIA: A street with two lanes in each direction and a center divider with a striped bike lane

<table>
<thead>
<tr>
<th>Comfort Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Comfortable</td>
<td>1</td>
</tr>
<tr>
<td>Somewhat Comfortable</td>
<td>2</td>
</tr>
<tr>
<td>Somewhat Uncomfortable</td>
<td>3</td>
</tr>
<tr>
<td>Most Uncomfortable</td>
<td>4</td>
</tr>
</tbody>
</table>
Public Survey

No Facility: A two-lane commercial shopping street

No Facility: A street with two lanes in each direction and a center divider

No Facility: A four-lane street with faster, heavier traffic

Most Comfortable

Somewhat Comfortable

Somewhat Uncomfortable

Most Uncomfortable

1

2

3

4
Traffic stress is the perceived sense of danger associated with riding in or adjacent to vehicle traffic.

- **LTS 1**
  - Low Stress
  - Suitable for all ages and abilities
  - Most Comfortable

- **LTS 2**
  - Low Stress, with attention required
  - Suitable for most adults and some children
  - Somewhat Comfortable

- **LTS 3**
  - More stressful than LTS 2
  - Requires attention and suitable for adults with confidence to bicycle
  - Somewhat Uncomfortable

- **LTS 4**
  - Most stressful
  - Suitable only for most experienced
  - Most Uncomfortable
Level of Traffic Stress Analysis

Traffic stress is the perceived sense of danger associated with riding in or adjacent to vehicle traffic.

- **LTS 1**: Low Stress, suitable for all ages and abilities
- **LTS 2**: Low Stress, with attention required, suitable for most adults and some children
- **LTS 3**: More stressful than LTS 2, requires attention and suitable for adults with confidence to bicycle
- **LTS 4**: Most stressful, suitable only for most experienced

**Interest Levels:**
- Interested but Concerned
- Enthusiastic and Confident
- Strong and fearless
- No Way, No How
LEVEL OF TRAFFIC STRESS METHODOLOGY

STEP 1

Link inputs

Intersection inputs


STEP 2

Calibration
# LEVEL OF TRAFFIC STRESS RESULTS

## LTS 2

- Low Stress, with attention required
- Suitable for most adults and some children

**Channing Way & San Pablo Ave**
STEP 2 – CALIBRATION - Bike Tour
1. Average Daily Traffic volumes applied to unsignalized intersections on bikeways that cross another bikeway or a major street.
2. **Link LTS score** applied to signalized intersections on bikeways that cross another bikeway or a major street
LEVEL OF TRAFFIC STRESS RESULTS

- LTS 1 - ALL BICYCLISTS
- LTS 2 - INTERESTED BUT CONCERNED
- LTS 3 - ENTHUSIASTIC AND CONFIDENT
- LTS 4 - STRONG AND FEARLESS
Next Steps

1. Complete the needs analysis and present to TAC
2. Begin draft recommendations based upon needs analysis
3. Opportunities for public input:
   • **March 2016**: Public Workshop and Outreach
   • **October 2016**: Public Draft
   • **October 2016**: Transportation Commission
   • **December 2016**: City Council
   • **BikeBerkeley.com**
Contact: Eric Anderson, EAnderson@ci.berkeley.ca.us
Visit: www.BikeBerkeley.com