Purpose

• Phase I Living Lab Update
  • Evaluation Process
  • Community input
  • TAB recommendation
  • Proposed refinements
  • Next steps

• Council feedback on proposed recommendations and next steps
> Action item of the 2014 TMP
> Enhance on-street system to be more safe and comfortable to all users
> Test innovative engineering treatments and programs
> Develop tools for city’s Street Design Guidelines
> Used to develop 2.0 bike network
### Objectives

- Reduce Vehicle Miles Traveled (VMT) by 20%
- Reduce Single Occupant Vehicles (SOV) to 20% of all trips
- Reduce mobile source emissions
- Max of 20% roadways at LOS F
- Expand fiscally viable alternatives for residents & employees
- Increase alternatives with rate of employee growth
- Toward Vision Zero traffic injuries
- Increase neighborhood accessibility

The TMP sets ambitious yet realistic mode share goals of:

<table>
<thead>
<tr>
<th>Mode</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bike</td>
<td>30%</td>
</tr>
<tr>
<td>Walk</td>
<td>25%</td>
</tr>
<tr>
<td>Transit</td>
<td>10%</td>
</tr>
</tbody>
</table>

**4 MILES:** Average Boulder Trip

**2/3 OF COMMUNITY**

less confident & comfortable biking or walking
Initial Phase I Pilot Projects

- Back in angle parking - University (Installed Sept. 2013)
- Protected bike lanes - Baseline (Installed Sept. 2013)
- Buffered bike lanes - Spruce & University (Installed Sept. 2013)
- Parking protected bike lanes - University (Installed Oct. 2014)
Additional Phase I Pilot Projects

- Dashed bike lanes - Harvard
  - Installed Oct. 2014
- Shared street – Junction Place
  - Installed July 2015
- Bike Box - Folsom
  - Installed July 2015
- Multi-way Blvd – Pearl Pkwy
  - Installed July 2015
Evaluation Methodology & Criteria
(Location Specific & Design Guide Applicability)

Technical data
- Vehicle speed & volume
- Collisions

Observation Surveys
- Parking
- Direction of bicycle travel
- Lane positioning
- Maintenance

Community Feedback
- User experience
- Neighborhood feedback
On-going Community Engagement

> Bike audits
> On-line surveys
> In-person feedback
> Social media (Twitter, Facebook)
> Inspire Boulder
Community Engagement
Fall 2015

- Open House meeting (Nov. 2015)
- Online comment forms
- Direct correspondence
- Community stakeholder meetings
## Community feedback

### What we are hearing…

<table>
<thead>
<tr>
<th>Project</th>
<th>Continue it</th>
<th>Refine It</th>
<th>Remove It</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffered bike lanes – Spruce Street</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Protected Bike Lanes - Baseline Road</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Protected Bike Lanes - University Avenue</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Back-in angle parking – University Avenue</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
Evaluation Process

- Combination of technical and observational data plus community feedback
- Unique for each treatment and location
- Inform recommendations for specific locations and applicability of treatment for future Street Design Guide
Buffered Bike Lanes - Spruce Street

Key Findings:
> Bicyclists using new lanes
> Decrease “dooring” type of collisions
> Acceptable maintenance practices
> Community feedback is favorable
> Ample space w/o tradeoffs to traffic and parking

Recommendation:
> Keep the buffered bike lanes
> Add buffered bike lane treatment to future Street Design Guidelines
Protected Bike Lanes - Baseline Rd.

Key Findings:
> Good visibility and sight lines from side-streets
> Acceptable maintenance practices
> Community feedback concerned with aesthetics and restrictive bicycle left turning movement
> Mixed community feedback

Recommendation:
> Keep the protected bike lanes in place, and remove concrete blocks
> Extend to Mohawk Dr.
> Continue evaluation and public outreach
> Add treatment to future Street Design Guidelines
Protected Bike Lanes
University Avenue

Key Findings:
> Increase in wrong-way bicycle riding
> Increase in parking-related and left turn collisions
> Maintenance extremely challenging
> Community concerns regarding narrower auto lanes, aesthetics, parking, and lack of visibility from side streets

Recommendation:
> Remove the protected bike lanes
> Re-install buffered bike lanes
> Consider adding treatment to future Street Design Guidelines
Back in angle parking
University Avenue

Key Findings:
> Decrease in number of parking citations and improved compliance
> Decrease in bicycle related collisions
> Community feedback ranges from continuing, to refining, to removing

Recommendation:
> Continue the back-in angle parking treatment through 2016 to further evaluate collisions.
Staff Recommendation

Maintain
- Buffered bike lanes – Spruce St.
- Back-in angle parking – University Ave

Refine & Extend
- Protected bike lanes – Baseline Rd.

Remove & Replace
- Parking protected bike lanes
- Convert to buffered – University Ave
TAB Recommendation

TAB Motion: “Motion to recommend to council retention of buffered bike lanes on Spruce Street, extension of protected bike lanes on Baseline Road, conversion of protected bike lanes on University to buffered bike lanes, retention of back-in angle parking on University Avenue, and continued monitoring and evaluation of remaining Phase I projects.”
Next steps

> Based on feedback from Council, proceed with implementing modifications (1st quarter 2016, weather dependent)

> Continue evaluation of following Phase I projects
  • Back-in angle parking (University)
  • Protected bike lane (Baseline)
  • Dashed bike lanes (Harvard)
  • Bike box (Folsom)
  • Shared street & multi-way boulevard (Boulder Junction)

> Next Living Lab update (Phase I & II)
  • May 31st City Council Study Session, as part of overall TMP implementation progress update

> Apply lessons learned from Living Lab program:
  • Corridor plans & future projects
  • Future street design guidelines
Council Feedback Requested

1. Questions or comments regarding the Living Lab Phase I staff recommendations?

2. Questions or comments regarding proposed Next Steps for the Phase I pilot project treatments?
Thank You!

www.BoulderLivingLab.net
Living Lab

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