



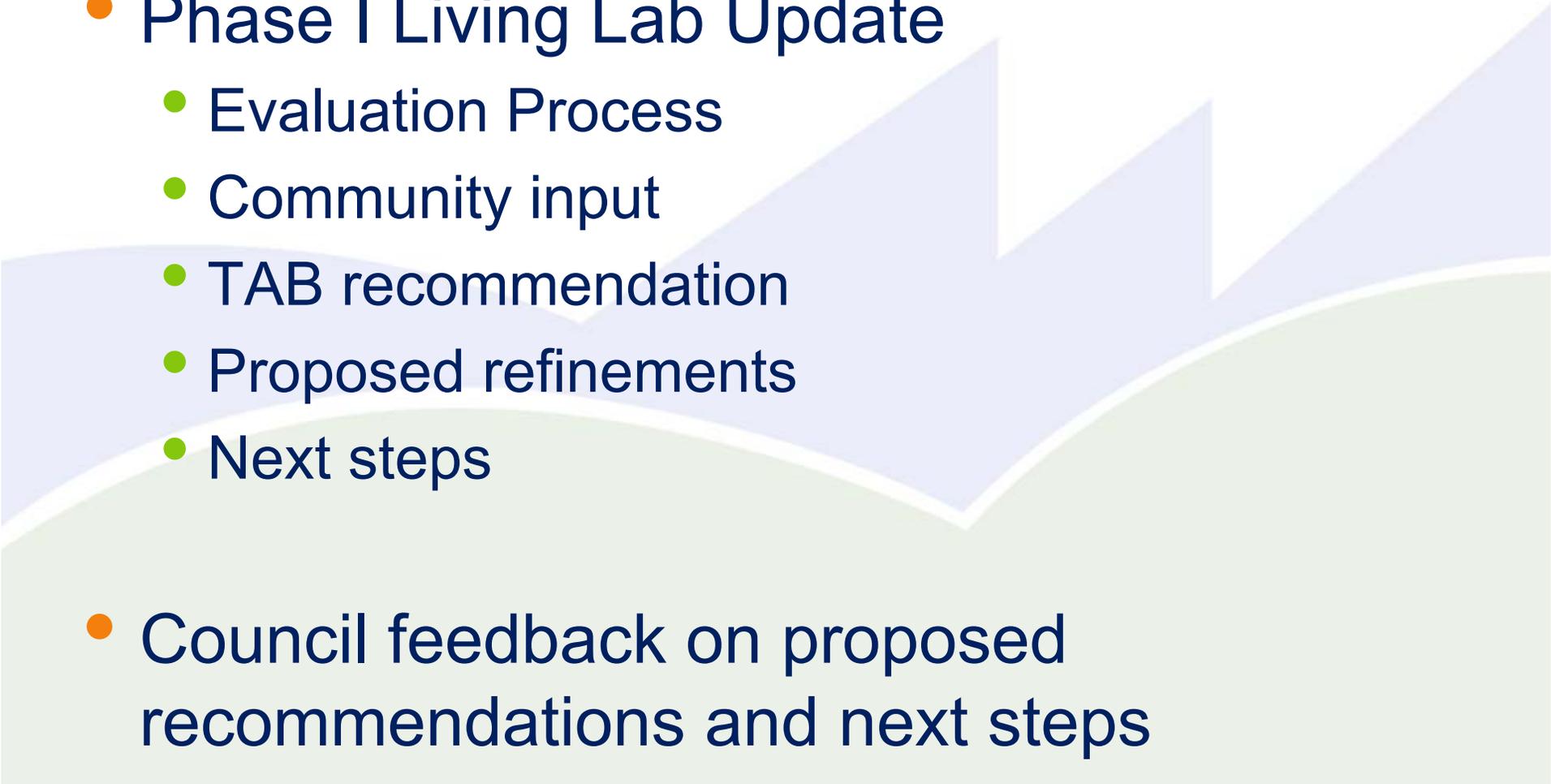
Living Laboratory Phase I Update



City Council
January 19, 2016



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**





The TMP sets ambitious yet realistic mode share goals of:



2/3 OF COMMUNITY
less confident & comfortable
biking or walking

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

LIVING LAB PHASE I BIKEWAY PROJECTS





Installed Sept. 2013

Back in angle parking- University



Installed Sept. 2013

Protected bike lanes- Baseline

Initial Phase I Pilot Projects



Installed Sept. 2013

Buffered bike lanes- Spruce & University



Installed Oct. 2014

Parking protected bike lanes- University



Installed Oct. 2014

Dashed bike lanes - Harvard



Installed July 2015

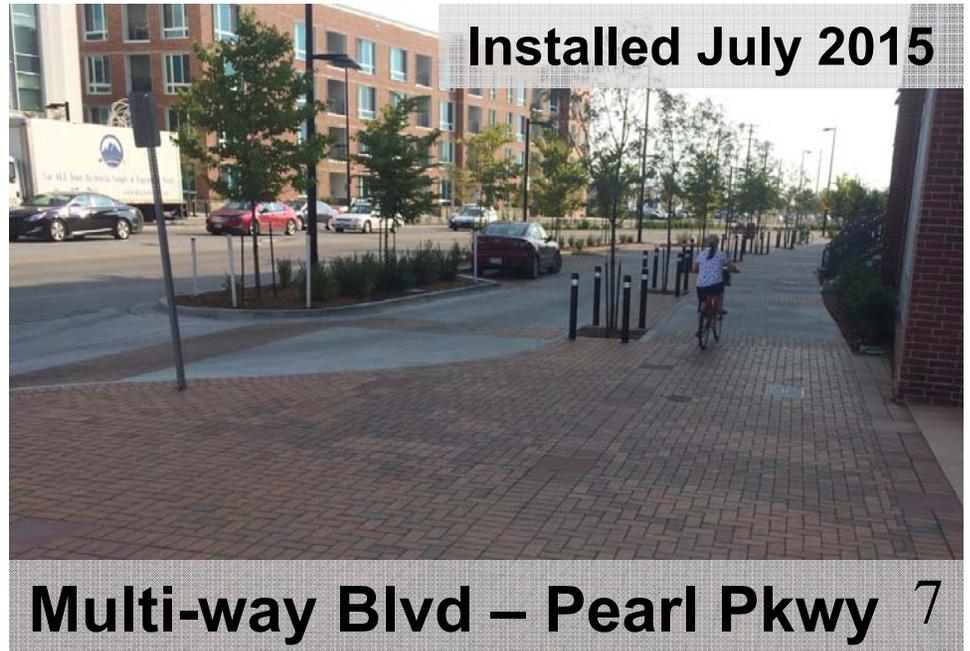
Shared street – Junction Place

Additional Phase I Pilot Projects



Installed July 2015

Bike Box - Folsom



Installed July 2015

Multi-way Blvd – Pearl Pkwy 7

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



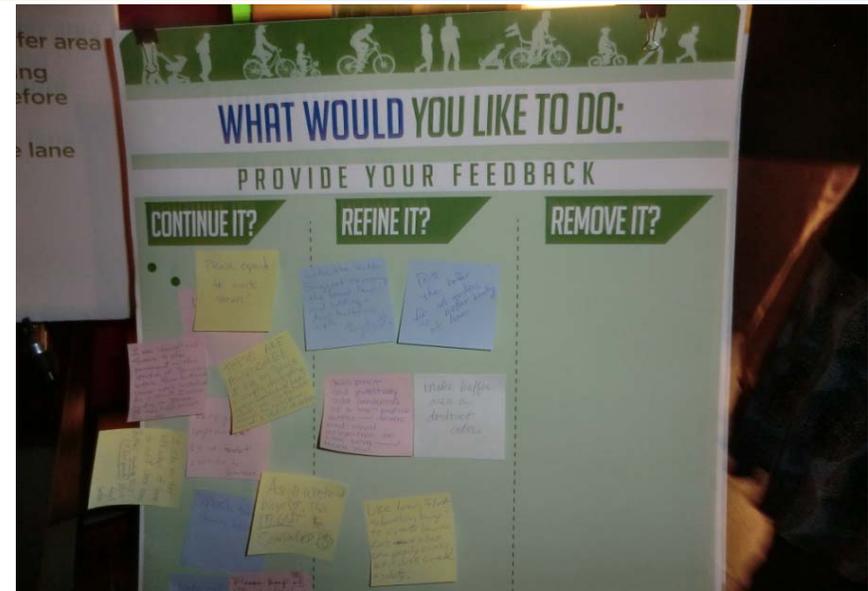
Community Engagement Fall 2015

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



Community feedback

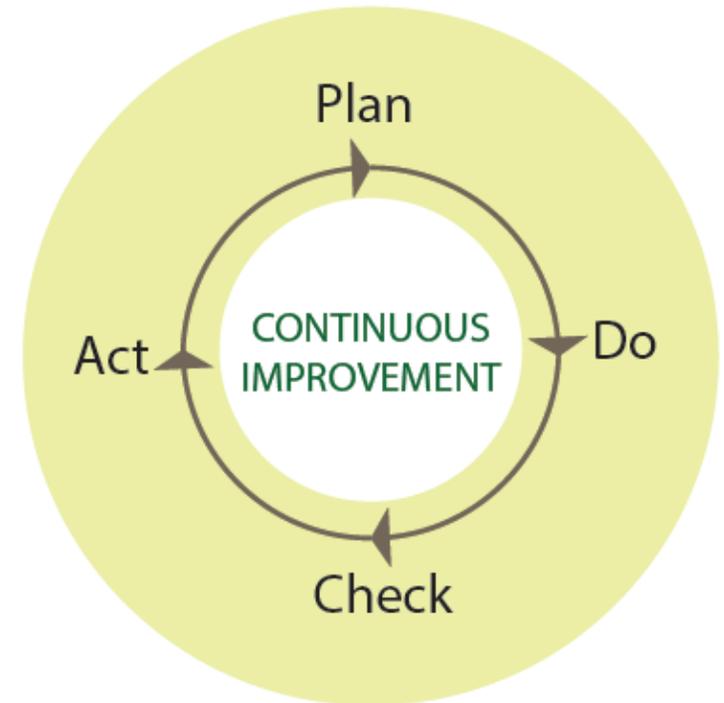
What we are hearing...



Project	Continue it	Refine It	Remove It
Buffered bike lanes – Spruce Street	√	√	
Protected Bike Lanes - Baseline Road		√	√
Protected Bike Lanes - University Avenue		√	√
Back-in angle parking – University Avenue	√	√	√

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



Parking protected bike lanes



Buffered bike lanes

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 lanes – University Ave

Maintain



Refine



Remove & Replace





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.”*

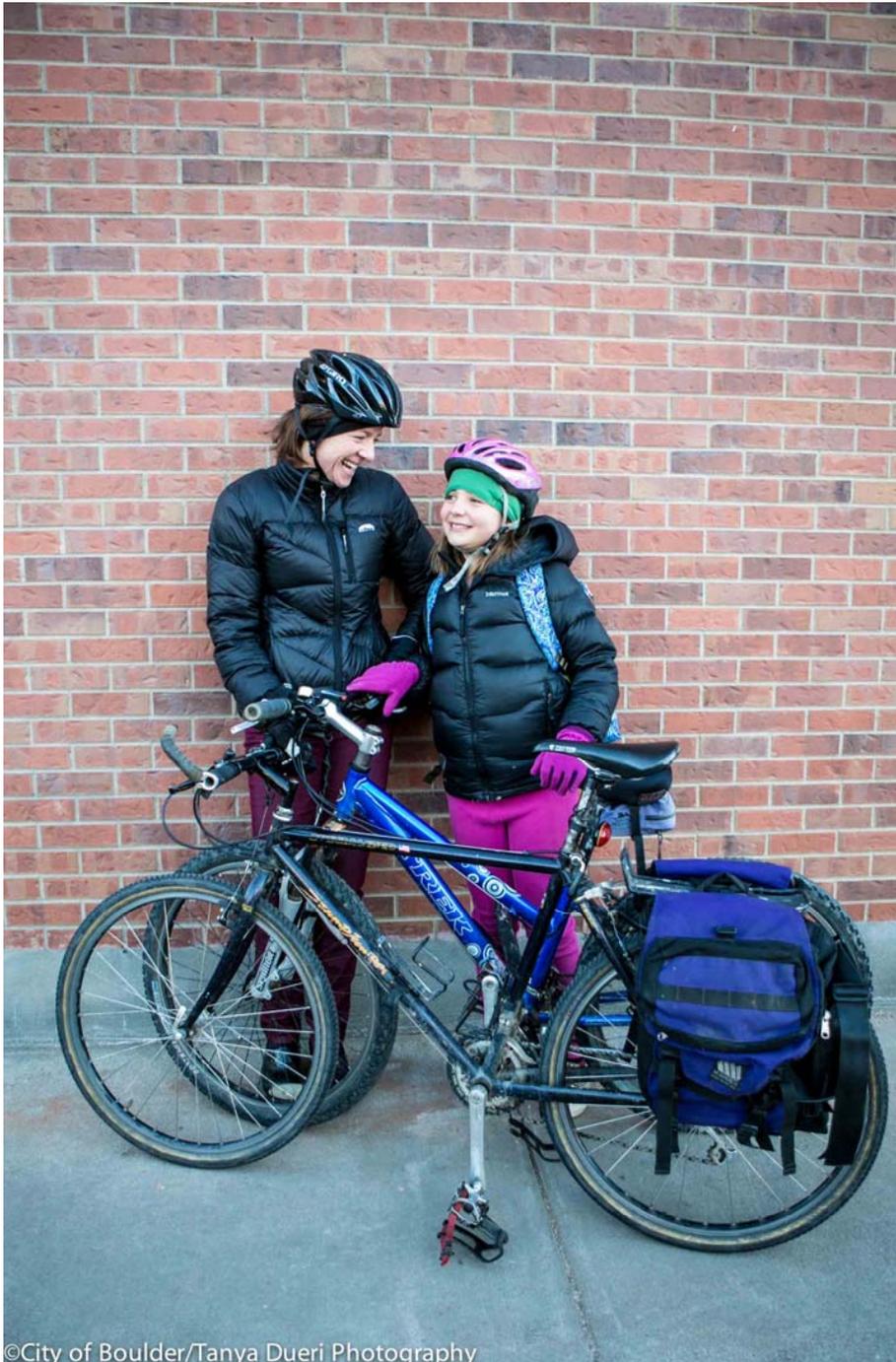
Next steps

- > 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?



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Thank You!



www.BoulderLivingLab.net
Living Lab

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