East Arapahoe
Transportation Plan

CITY OF BOULDER

EAST ARAPAHOE TRANSPORTATION PLAN
Public Input Summary

November 2015 to February 2016 – DRAFT

(3.8.2016)

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SUMMARY OF PUBLIC INPUT

1. DOCUMENT OVERVIEW

This document is a summary of public input received by the East Arapahoe Transportation Plan project team as of March 1, 2016. It highlights major themes, ideas, concerns and suggestions raised by members of the public through a series of public engagement activities conducted over a five month period between November 2015 and March 2016. Opportunities for public input included the following:

- An online questionnaire was launched on the project web site on November 19, 2015. The online questionnaire was publicized at the public workshop, through a series of email blasts, social media pushes, via postcards that were hand delivered to businesses along the East Arapahoe corridor and through stakeholder meetings and pop-up events held along the corridor. 126 people completed the questionnaire.
- A public workshop was held on November 19, 2015. Approximately 30 community members attended the interactive public workshop during which they had a chance to review the range of transportation improvement alternatives being considered and to discuss the strengths and weaknesses of each. Participants also provided feedback on a set of evaluation criteria by which to evaluate potential improvements.
- Between November 2015 and March 2016, the project team held individual meetings with over 15 stakeholder groups along the corridor to present project information and receive input.
- In February 2016, the project team held a number of small group outreach activities, including two pop-up events at the BVSD administrative office and bus drivers lounge, an open house for residents of the Peloton, a focus group for Boulder Community Health employees, and a presentation and workshop at Connect Boulder luncheon.
- The project team has also been receiving public comments and feedback via direct email.

2. SUMMARY OF ONLINE QUESTIONNAIRE RESULTS

The online questionnaire asked a range of questions to assess the primary concerns of those who use Arapahoe Avenue, to gauge reaction to a variety of potential transportation improvement alternatives and to understand what is most important to travelers. There were 126 responses, most of which were complete. The following is a summary of responses to each question.

Question 1. As we plan for the future, what would make it easier for you to travel within the East Arapahoe corridor?

This was an open ended question, and the responses varied widely. What follows is a snapshot of the most common themes in these responses. As shown in Figure 1, the need for more general purpose lanes received the most responses, followed by improved bicycle infrastructure, a better pedestrian environment, bus frequency, safety, completing the multi-use paths, and adding more bus destinations.

Note that these responses were cross tabulated with Question 4 in the questionnaire that asks respondents where they live. This gives some indication of what improvements are most important to residents, and what are most important to daily in-commuters. The results of this cross-tabulation show that those respondents who would like more general purpose lanes are evenly distributed between people who live within Boulder and those who in-commute. However, respondents who live in the City of Boulder were most likely to ask for bicycle, pedestrian, and transit improvements.

Figure 1: "As we plan for the future, what would make it easier for you to travel within the East Arapahoe corridor?"

40 responses mentioned another 14 more potential improvements, including:

- Changes to traffic signals
- Make no changes
- Aesthetics
- Land-use matters
- Bus system amenities
- Park-n-Rides
- Auto congestion
- Streetcar or light rail
- Side-running BRT
- Roadway connections
- Center-running BRT
- Wider lanes
- Street drainage
- Express lanes

Questions 2 & 3. What are the strengths and weaknesses of the preliminary corridor alternatives?

Based on the vision for East Arapahoe articulated by community members, staff developed a range of potential design alternatives that incorporate complete street elements, in various combinations. These alternatives are intended to illustrate a range of potential complete street design options for East Arapahoe, from a No Change Alternative whereby no transportation improvements are made, to Alternative A, which represents the most minimal investment in complete street features (like completing gaps in the multiuse path and adding more transit vehicles and enhancing stops, but not changing the current roadway design) to Alternative D which represents the largest investment in complete street features (like maintaining current general purpose lanes and widening the street to add exclusive BRT lanes and on-street bicycle facilities and pedestrian treatments).

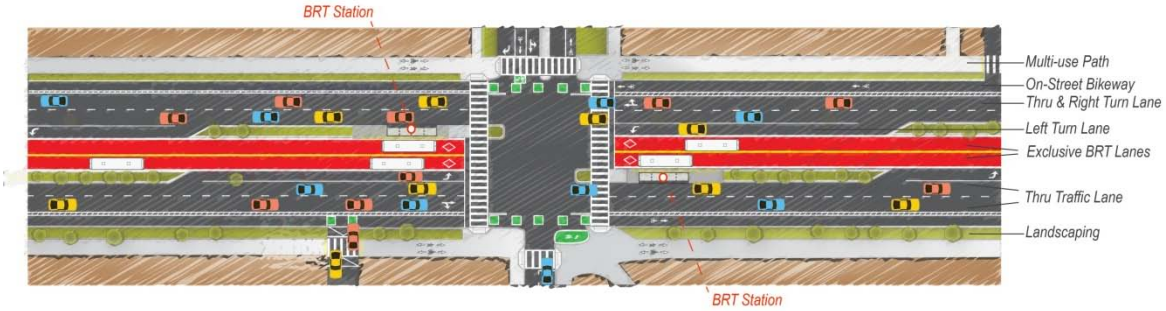
Respondents were asked to provide feedback on the following Conceptual Design Alternatives:

No Change: Side-running bus with three general purpose lanes in each direction and existing pedestrian and bicycle facilities and landscaping

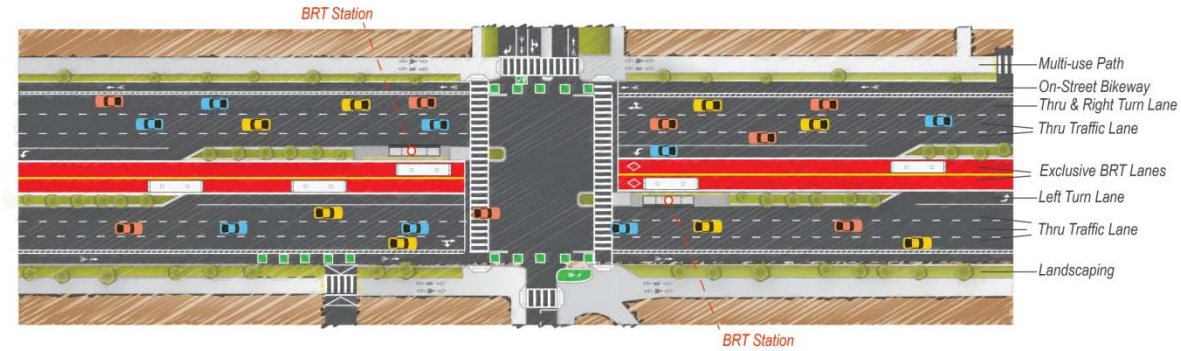
Alternative A: Enhanced bus in mixed-traffic with three general-purpose lanes and a completed multi-use path for pedestrians and bicycles

Alternative B: Side-running BRT in a semi-exclusive business-and-transit (BAT) lane (allows right turns) with two general purpose lanes, an on-street bikeway, and a completed multi-use path

Alternative C: Center-running BRT in an exclusive transit lane with two general purpose lanes, an on-street bikeway, and a completed multi-use path



Alternative D: Center-running BRT in an exclusive transit lane with three general purpose lanes, an on-street bikeway, and a completed multi-use path



The two open ended questions related to the strengths and weaknesses of each alternative allowed respondents to answer differently. Some respondents gave pros and cons for all alternatives, while others specifically cited a specific alternative as being either positive or negative. In tandem, the two questions related to strengths and weaknesses tell a similar story about respondent's general thoughts on the alternatives, as summarized here:

- Alternative A: Cited as a positive most often by those who prefer the lowest-impact option. When Alternative A was mentioned for its weaknesses, it has mostly to do with the minimal investment in transit and on-street bike facilities.
- Alternatives B and C: Those respondents generally in support of changes gravitate to either Alternative B or C, with various justifications given for side vs. center-running BRT. Alternatives B and C were cited as being weak primarily by respondents who do not want to see any automobile lanes repurposed for other uses.
- Alternative D: Most respondents who mentioned Alternative D expressed skepticism about the alternative because it is perceived as too wide.

Question 4. Do the preliminary alternatives presented represent a good range of transportation improvement options? If not, what other alternatives should be studied?

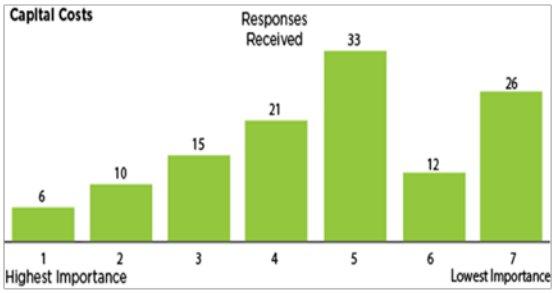
Some chose to answer simply that yes, this is a good range of alternatives. Other responses to this question answered that no, there are other transportation improvements that should be looked at, and these revealed several new ideas. These are listed below.

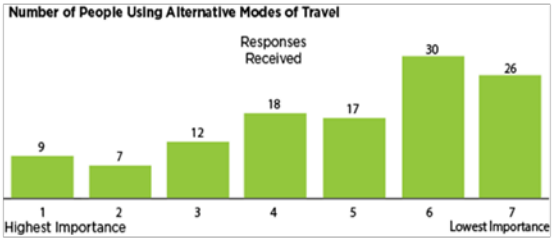
- Carpool lanes
- Additional automobile lanes
- Light rail or streetcar
- New exclusive off-street bike path
- Reversible general purpose lanes, with more lanes coming into Boulder in the morning and leaving in the afternoon
- Exclusive BRT lanes only during peak travel hours
- Traffic circles to replace traditional intersections
- Streetscape beautification as part of each alternative

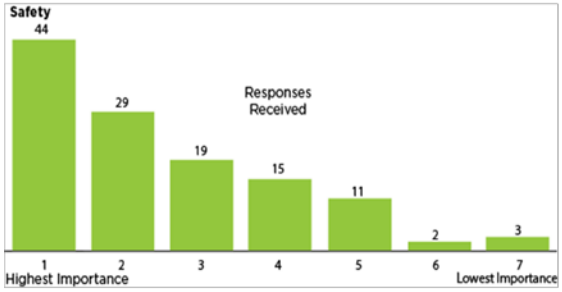
Question 5. In your opinion, which criteria are most important to evaluate the range of alternatives? (Please rank 1 - 7, with 1 being most important)

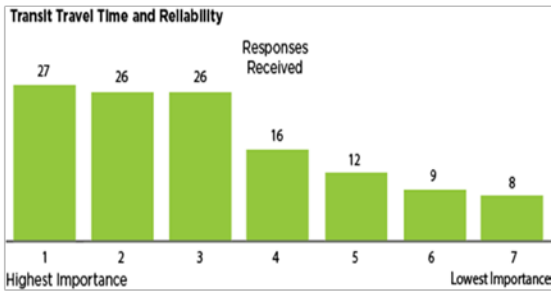
Respondents were asked to rank the following criteria on a scale of 1-7. The following series of graphs provide an idea of what was important to questionnaire respondents.

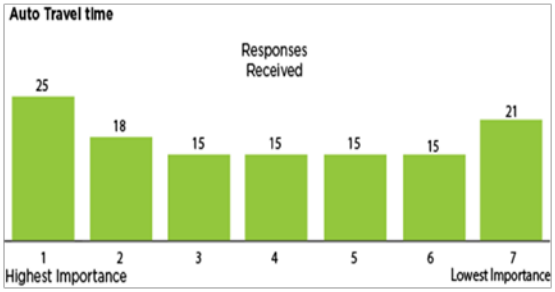
Figure 2: "In your opinion, which criteria are most important to evaluate the range of alternatives?"

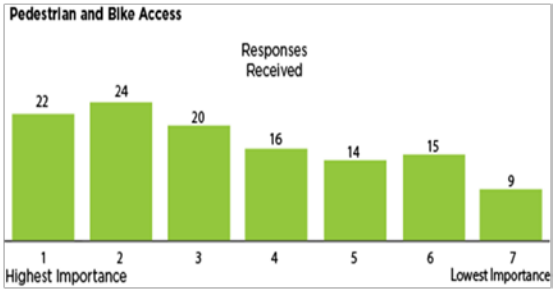


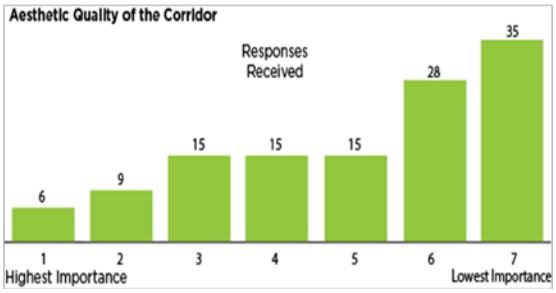










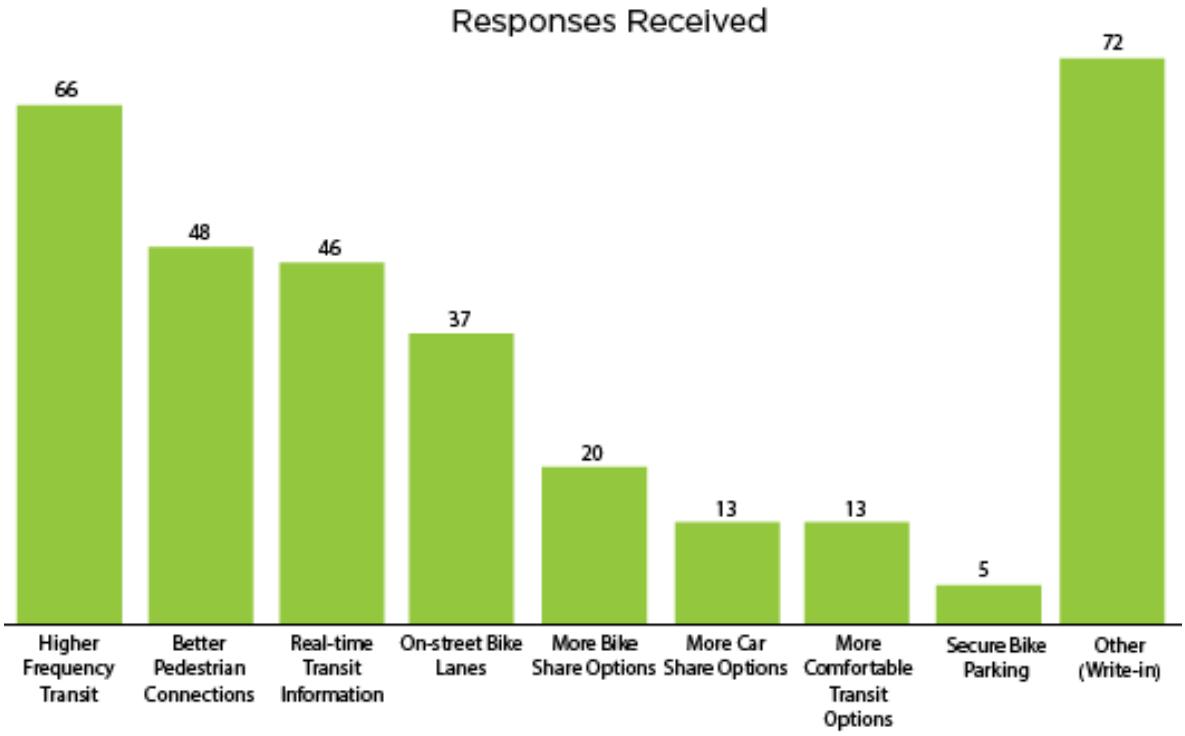


Question 6. What enhancements would allow you to consider other modes of travel than driving alone?

Respondents could choose as many of these options as they desired. They could also click "other" and write-in an answer. As shown in Figure 3, higher frequency transit is an enhancement that was valued by a majority of respondents. Other write-in responses generally reflected some of the other feedback the team has been receiving, including:

- Extending transit service hours
- Fixing the first and last-mile connections
- More transit destinations
- Pedestrian friendly infill
- More off-street bike infrastructure
- Park-n-Rides
- Bike parking
- More north-south bus routes connecting to other destinations

Figure 3: "What enhancements would allow you to consider other modes of travel than driving alone?"



Questions 7 through 10. Where do you live? What is your primary mode of travel? Do you work in Boulder? What is your age?

Figures 4 through 7 illustrate a number of characteristics about quesitionnaire respondents. For example, while most respondents live somewhere in Boulder, with the highest number living near East Arapahoe, the questionairre also attracted a relatively high number of people who live outside of Boulder. As shown in Figures 5 and 6, automobile use as a primary mode of travel is very high for those who responded to the questionnaire, as is the number of people who work inside Boulder. And, the majority of respondents to this online questionnaire were between 37 and 74 years old.

Figure 4: Respondent's Place of Residence

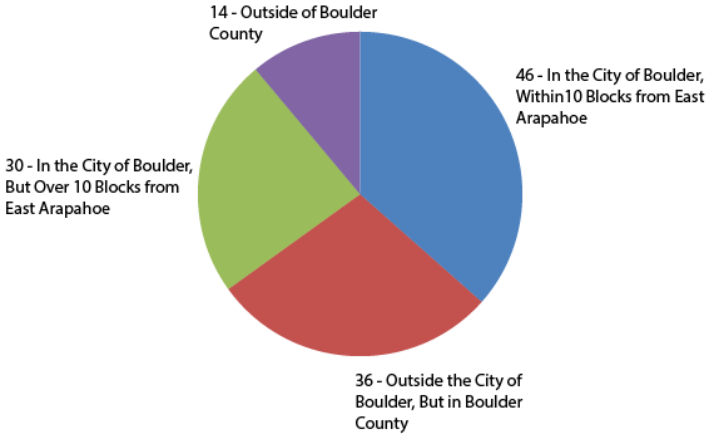


Figure 5: Respondent's Primary Mode of Travel

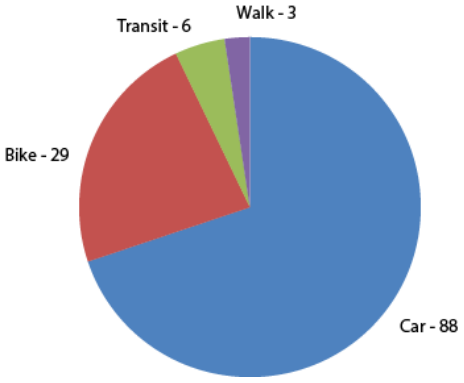


Figure 6: Respondent's Place of Work

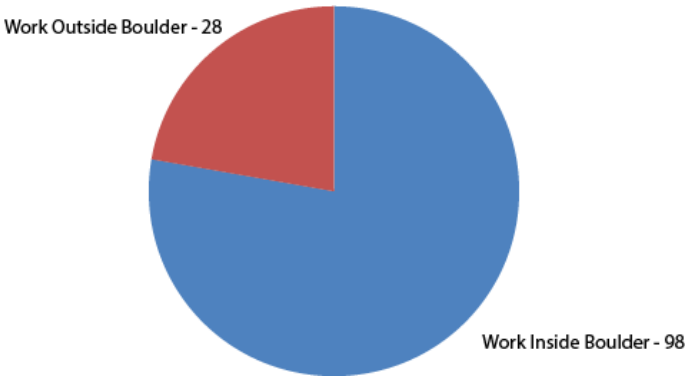
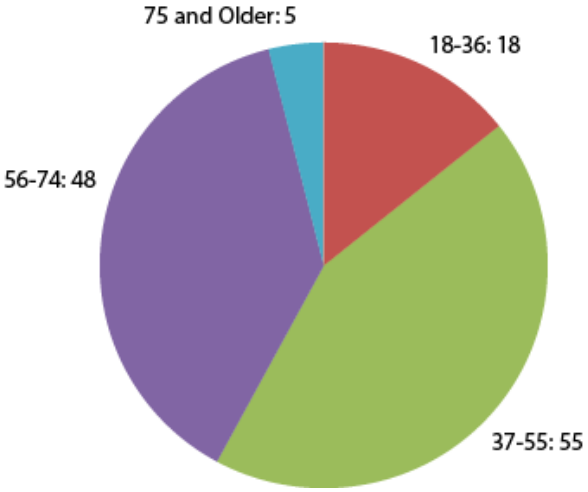
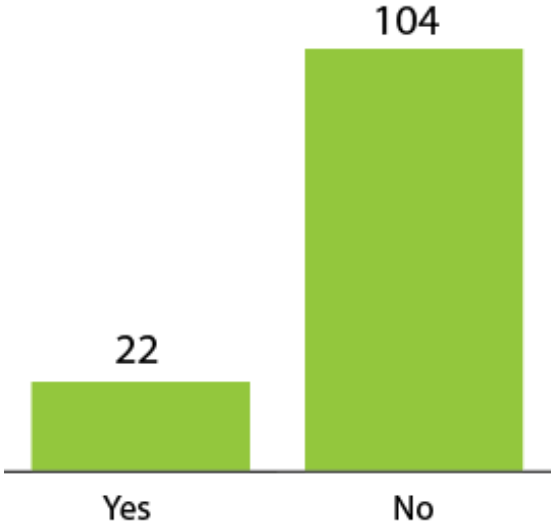


Figure 7: Respondent's Age



Question 11. Did you attend the East Arapahoe Transportation Plan Public Workshop on Thursday, Nov. 19?

Figure 8: Attendance at Public Workshop

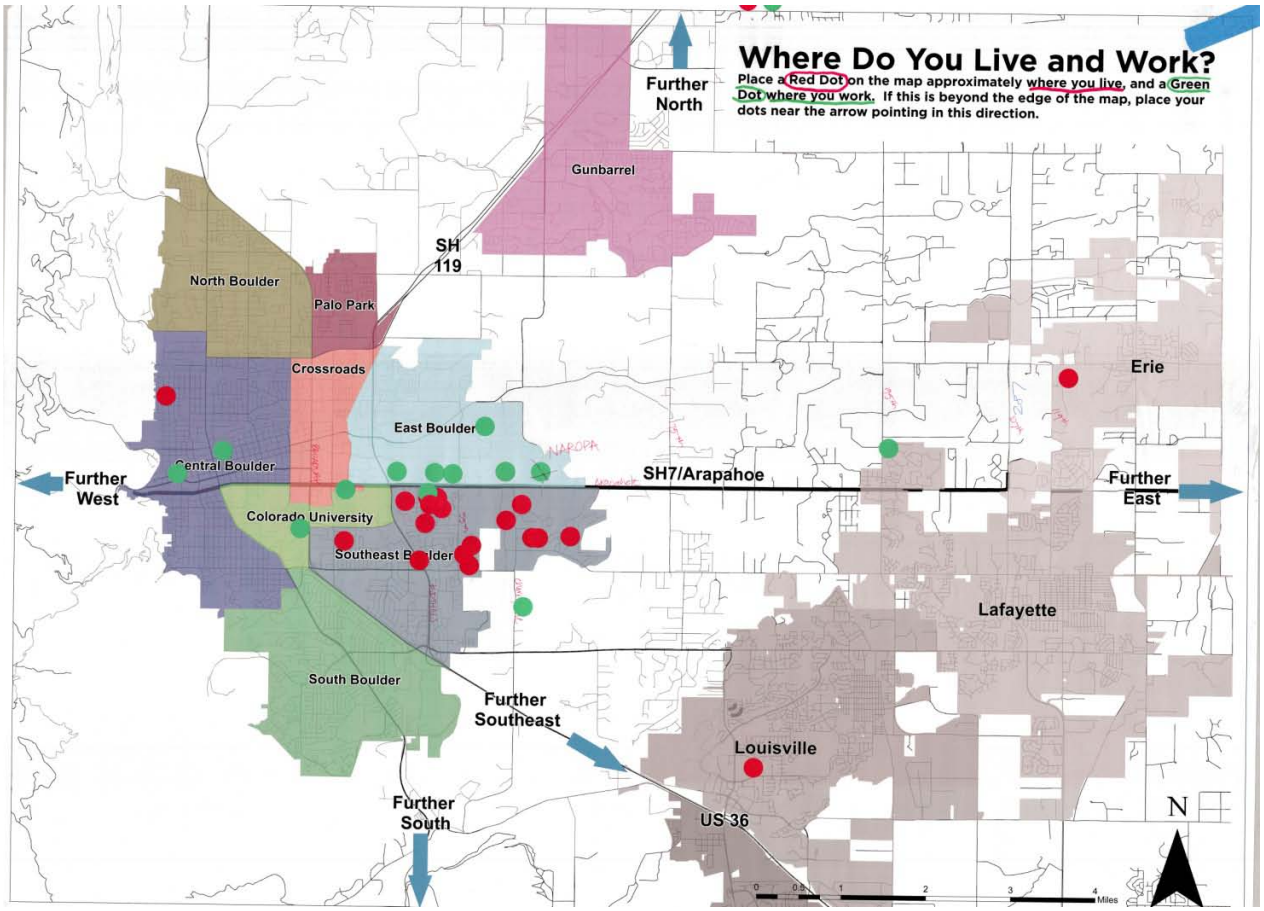


This question reveals that the majority of people who took the online questionnaire did *not* attend the public meeting in November, and this may have been their only method of feedback.

3. SUMMARY OF PUBLIC WORKSHOP INPUT

The project team held a public workshop at Naropa's Nalanda Campus on November 19, 2015. Approximately 30 people were in attendance. As shown in Figure 9, most meeting attendees either live or work in the East Arapahoe corridor, with red dots indicating where participants work and green dots indicating where they live.

Figure 9: Geographic Representation of Workshop Attendees



Participants at the workshop were given a brief overview of the status of the East Arapahoe Transportation Plan and a chance to view the preliminary conceptual design alternatives. Participants then broke into tables and discussed the opportunities and challenges associated with each alternative. Finally, all meeting attendees were asked to weigh in on what evaluation criteria are the most important to them.

Feedback on Conceptual Design Alternatives

The results from the small group discussions on design alternatives are shown in Figure 10. Generally, the following themes emerged from the conversations:

- No Change: Current conditions were called out as being unpleasant and aesthetically unpleasing.
- Alternative A: Those who would like to see minimal disruption to the corridor see strength Alternative A. Participants generally agreed that multi-use paths need to be completed as shown in Alternative A.
- Alternatives B and C: Seen as strong in the way that they enhance both bus service and the pedestrian and bicycle environment. Weaknesses seen in these two alternatives are their potential to create congestion, and skepticism that the investment will be worth the bus ridership that will result.
- Alternative D had the most weaknesses called out. Though Alternative D offers separated space for every mode of travel, it generated a negative reaction. Many people disliked its sheer width, and the potential impacts to private property.

Figure 10: Responses to Strengths and Weaknesses of Alternatives

Conceptual Design Alternatives

Baseline (No-Build)

Side-running bus with three general purpose lanes in each direction and existing pedestrian and bicycle facilities and landscaping.

Description	Level of New Investment	Lane Repurposing	Roadway Widening (Right-of-Way Expansion)	Bike/Ped Facility Design Treatment	Exclusive BRT Lane	Other BRT Elements	Streetscape Elements
3 general traffic lanes + multi-use path	None	No	No	Off-street: existing multi-use path (with gaps)	No	Existing buses, stops, and shelters	Existing landscaping

Strengths	Weaknesses
Table 2: • Good views • Efficiency (LOS) • Save Money	Table 2: • Safety • Ugly • Limited bike (ped) • Bottleneck at 63rd • Crossing as ped is difficult • Too many driveways Table 3: • No improvement to bike facility

Alternative A

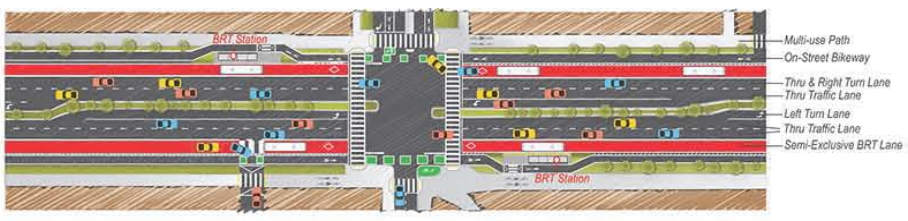
Enhanced bus in mixed-traffic with three general-purpose lanes and a completed multi-use path for pedestrians and bicycles

Description	Level of New Investment	Lane Repurposing	Roadway Widening (Right-of-Way Expansion)	Bike/Ped Facility Design Treatment	Exclusive BRT Lane	Other BRT Elements	Streetscape Elements
3 general traffic lanes + side running Enhanced Bus in mixed traffic + multiuse path	Low	No	No	Off-street: complete gaps in multi-use path	No	Off-board fare payment, high-quality shelters, stylized vehicles with multiple door boarding, branded vehicles and stations	Existing landscaping

Strengths	Weaknesses
Table 1: • Maintains Capacity and Additional Capacities • All modes - completes multi-use path • Inexpensive Table 2: • Complete bike-ped gaps • Enhance bus stops Table 3: • Finish multi-use path • Keeps autos moving	Table 1: • Need buses to come by more often than the current schedule • Doesn't allow for modal shift • Can't deal with increased trip making • Doesn't support transit, bike use - or expansion of that (too car-centric in future) Table 2: • Short-sighted • Does not address growth • No dedicated lane for transit • Doesn't improve capacity • No separation of bike-ped Table 3: • Requires ROW which will impact businesses - Loss of FAR

Alternative B

Side-running BRT in a semi-exclusive business-and-transit (BAT) lane (allows right turns) with two general-purpose lanes, an on-street bikeway, and a completed multi-use path



Description	Level of New Investment	Lane Repurposing	Roadway Widening (Right-of-Way Expansion)	Bike/Ped Facility Design Treatment	Exclusive BRT Lane	Other BRT Elements	Streetscape Elements
2 general traffic lanes + side running BAT lane + on-street bike facility + multi-use path	Medium	Partial (outside lane becomes BRT + right turn only lane)	Yes	On-street + off-street	Semi-exclusive	Same as Alternative A	Enhanced landscaping in median and along both sidewalks

Strengths	Weaknesses
Table 1: • Congestion leads to mode shift Table 2: • Trees • Dedicated bus lane • Ped refuge in center • Promote transit use Table 3: • Bus lanes can be shared with cars some times of day Table 4 (individual responses, no facilitator): • Prefer on street bike lane to multi-use paths - would be so FAST to get downtown with on street bike lane • 1 less vehicle lane incentives bike and bus use	Table 1: • Congestion is politically challenging • Two lanes not enough for cars (specifically hospital traffic) Table 2: • Loss of view • Loss of car through lanes • More congestion • Concern about snow removal • Redundancy of cycling facilities Table 3: • Requires ROW which will impact businesses - Loss of FAR • Requires investment by other communities (Park-N-Ride, last mile solutions to the east) Table 4 (individual responses, no facilitator): • Not psyched about right-of-way expansion - street is already huge

Alternative C

Center-running BRT in an exclusive transit lane with two general-purpose lanes, an on-street bikeway, and a completed multi-use path

Description	Level of New Investment	Lane Repurposing	Roadway Widening (Right-of-Way Expansion)	Bike/Ped Facility Design Treatment	Exclusive BRT Lane	Other BRT Elements	Streetscape Elements
2 general traffic lanes + center running BRT lane + on-street bike facility + multi-use path	High	Yes	Yes	On-street + off-street	Yes	Same as Alternative A	Enhanced landscaping in median (and along both sidewalks)

Strengths	Weaknesses
Table 1: • Good transit Table 2: • "Light-Rail feel" - Pleasing to the eye • No conflict with transit for right turning vehicles • Reduce conflict Table 3: • Best aesthetics	Table 1: • Bus in middle needs a huge mind shift • Challenges at unsignalized intersections • 2 vehicle lanes not enough • Buses in center lane requires strange turns Table 2: • Access of peds to BRT • More congestion • No landscaping in center Table 3: • Requires ROW which will impact businesses - Loss of FAR • Cost • Business Access - Left turns

Alternative D

Center-running BRT in an exclusive transit lane with three general-purpose lanes, an on-street bikeway, and a completed multi-use path

Description	Level of New Investment	Lane Repurposing	Roadway Widening (Right-of-Way Expansion)	Bike/Ped Facility Design Treatment	Exclusive BRT Lane	Other BRT Elements	Streetscape Elements
3 general traffic lanes + center running BRT lane + on-street bike facility + multi-use path	Highest	No	Yes	On-street + off-street	Yes	Same as Alternative A	Enhanced landscaping in median (and along both sidewalks)

Strengths	Weaknesses
Table 1: • Good balance Table 2: • Highest capacity • Multi-modal function • Green pavement marking Table 3: • Best aesthetics Table 4 (individual responses, no facilitator): • Excellent traffic flow • "Bikeability" • reduced car traffic from commuters thanks to bus option and bike option	Table 1: • Feasible? • Expensive! • Significant impact to property owners • Not good for neighbors - noise Table 2: • Cost • Wide ROW • Big city feel • Disruption of businesses during construction • Crossing distance increased • Left turning vehicle is difficult • Signal timing investment Table 3: • Requires ROW which will impact businesses - Loss of FAR • Cost • Business Access - Left turns Table 4 (individual responses, no facilitator): • Cost, presumably • Challenges with ROW expansion (private landowners)

Input of Evaluation Criteria

Workshop participants were asked to choose their top five evaluation criteria from a draft list of criteria, or suggest new criteria. The most highly rated criteria were:

- Perceived Ease or Comfort for Bicycling Along/Across the Corridor
- Transit Travel Time and Reliability.

Other criteria scoring highly at this meeting were auto travel time, transit ridership, capital costs, and GhG emissions. Economic Vitality was a new criteria suggested by workshop participants.

4. SUMMARY OF STAKEHOLDER & SMALL MEETING INPUT

The project team has held several one-on-one stakeholder meetings and more organized small group presentations and discussions between November 2015 and March 2016. Figure 11 lists these meetings and outreach events.

Figure 11: List of Stakeholder Outreach Meetings

Date	Organization
11/2/2015	Boulder Chamber
11/3/2015	Naropa (East Campus)
11/5/2015	University of Colorado
11/5/2015	BVSD
11/9/2015	Boulder Community Health
11/9/2015	Transportation Advisory Board
11/12/2015	Western Disposal
11/19/2016	Public Workshop
12/8/2016	City Council Study Session
12/10/2016	Transit Open House
12/14/2016	Premiere Credit Union
12/16/2015	Schacht Spindle
1/18/2016	ReSource
1/25/2016	BVSD
1/26/2016	Peloton
1/27/2016	Ball Aerospace
2/9/2016	BVSD Bus Drivers
2/11/2016	Fisher Auto
2/17/2016	Boulder Community Health
2/18/2016	Boulder Transportation Connections
2/16/2016	EcoCycle

The following is a summary of ideas, concerns and suggestions raised through these one-on-one conversations and small group meetings:

- **Eastern gateway concept:** Several businesses and organizations at the eastern end of the corridor consider themselves the eastern gateway into Boulder and see opportunities to identify the area as such, through streetscape improvements, public art and transportation amenities like enhanced bus stops.
- **Transit connections:** Direct and efficient bus connections for students and employees between CU East campus and main campus are extremely important. Similarly, frequent bus connections between activity centers along Arapahoe Avenue and downtown Boulder or the 29th Street Mall would provide a convenient option for employees to run errands or grab a bite to eat.
- **Daytime driving within the corridor:** Employees in the corridor express that mid-day travel is a major consideration for them. Destinations like lunchtime food options can be out of range without a car, and can become inundated with automobile traffic certain times of day. The shopping center and intersection at Conestoga in specific have been mentioned as a problem spot.
- **Regional commuting:** In conversations with businesses along the corridor, it was apparent that the majority of employees do not live in Boulder, but come from as far away as south Denver and Fort Collins. Most travel by single occupant vehicles to and from work. To attract and retain employees, commutes should be easy and inexpensive. Eliminating a general purpose lane would be extremely concerning to many businesses.
- **Bicycle travel:** While improving bicycle and pedestrian travel on Arapahoe Avenue is important, making direct connections to businesses located off Arapahoe is just as important. Improved bicycle access is important for businesses, but not at the expense of reducing vehicle access.
- **Multiuse path:** The existing multiuse path works for families, but not for commuters. It feels dangerous at driveways because drivers are not looking for pedestrians and cyclists and signage is lacking. More education is also needed for motorists and cyclists.
- **Large vehicle travel:** Businesses and organizations that rely on truck and bus access prioritize minimizing congestion and providing as much separation between large vehicles and bicyclists/pedestrians as possible.
- **Speed limit:** The idea of reducing the speed limit on Arapahoe was mentioned by residents and employees alike. It feels like a highway and is not conducive to walking or bicycling.
- **Parking:** Managing parking will be key to considering any of the conceptual design alternatives that reduce general purpose lanes and enhance transit service.
- **Access on to Arapahoe:** Turning onto and off of Arapahoe can be problematic without a traffic signal. Many drivers in the area will cut through private properties in order to reach a traffic signal, and then these access points can become backed-up as a result.
- **Large institutional master plans:** Many institutions have expansion plans over time. Coordination with both their neighbors and the city will be essential.

5. SUMMARY OF EMAIL COMMENTS

Several emails have been sent directly to the East Arapahoe Transportation Plan project team to date. They generally reflect some of the other feedback the team has been receiving via in-person meetings. The following is a summary of email comments received:

- Auto travel: There is concern about (1) doing nothing, (2) adding general-purpose lanes, and (3) removing existing general purpose lanes.
- Transit travel: Bus service hours and frequency continue to be mentioned as a major obstacle for those who would like to ride the bus. Bus service directly to CU or other major destinations is also important to people; and transfers can be a major inhibitor to bus use. Nicer bus stations and shelters are another improvement cited by respondents.
- Bicycle travel: The existing bike infrastructure causes a lot of frustration. Multi-use paths and bike lanes that simply end are seen to be dangerous, and a major inhibiter to bike use.

6. NEXT STEPS

Moving forward, there will be a number of ways to provide input into the East Arapahoe planning process. Future and on-going opportunities for community input include:

- The formation of an East Arapahoe Transportation Plan Community Working Group. The purpose of the working group will be to provide input and feedback, from different interests and perspectives, to the city staff during the planning process.
- Staff is available for one-on-one meetings to present project information and receive input. Staff is also available to conduct ongoing small group outreach activities, like information tables, focus groups and small group presentations to neighborhoods, businesses and community organizations.
- Future public meetings will be held in the spring/summer 2016.
- Public comments and feedback can be emailed directly to the project manager, Jean Sanson at SansonJ@bouldercolorado.gov

For more information regarding the East Arapahoe Transportation Plan, detailed community input, and future opportunities to get involved, visit www.EastArapahoeTransportationPlan.net