

# Transit

## Background & Planning Process





# Transit Scenarios

A key step in creating a Renewed Vision for Transit is developing and evaluating scenarios to allow the community to weigh the costs and benefits of various approaches to developing a complete transit system in Boulder. Scenarios are used in the planning process to illustrate clear and distinct approaches to transit system design that can be evaluated relative to performance measures and community values. **Scenarios illuminate possible futures, and are not "the" future plan.**

Develop Scenarios

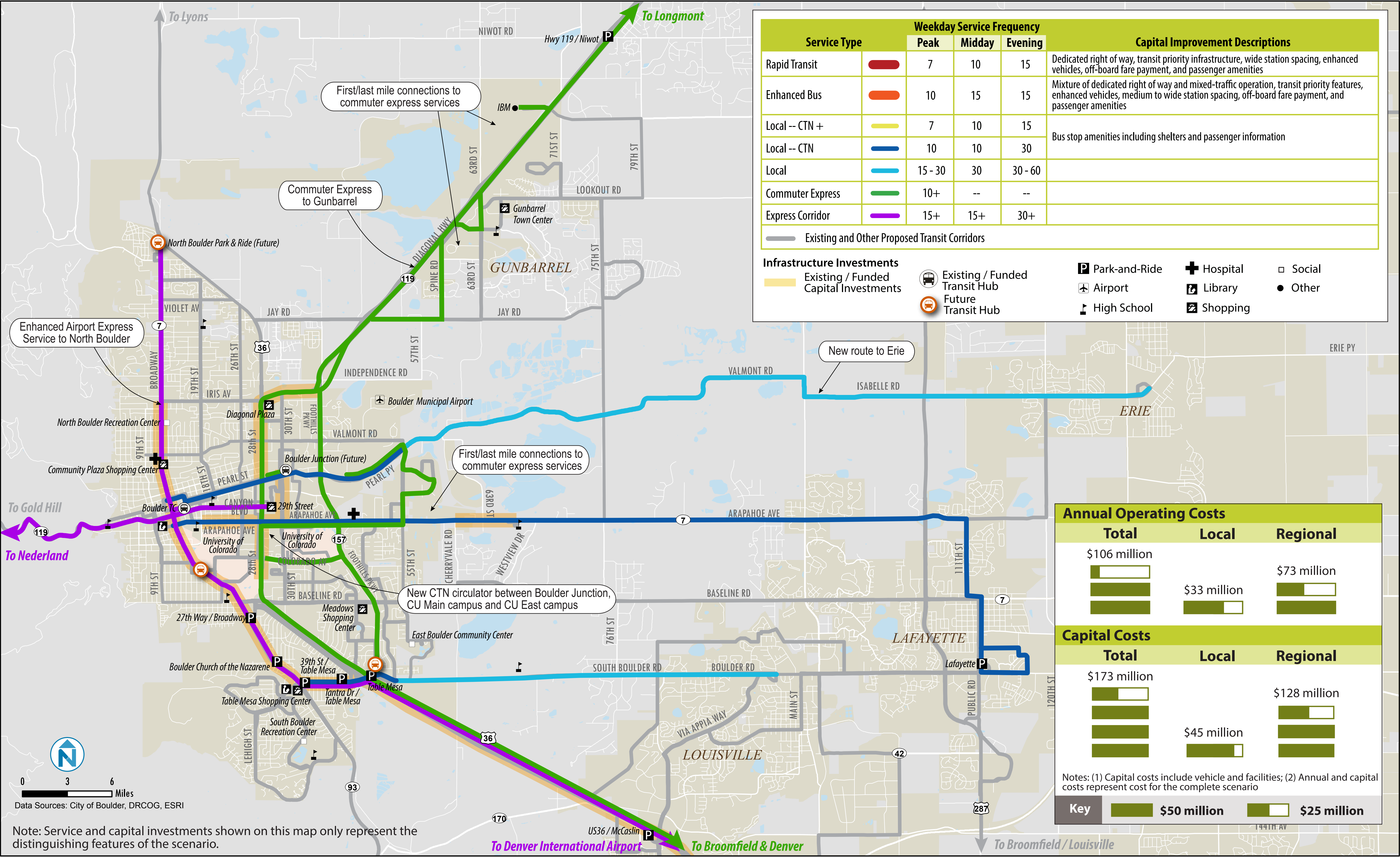
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Scenario	Focus	Service Investment	Capital Investment
<b>Baseline</b> This scenario acts as a point of comparison for Scenarios 1 - 3.	<ul style="list-style-type: none"><li>Current and Funded Service</li></ul>	Base	Base
<b>Scenario 1</b> Local and Regional Enhanced Service	<ul style="list-style-type: none"><li>Local and Regional High Frequency Service</li></ul>	Highest	Lowest
<b>Scenario 2</b> Boulder Local Community Transit Network CTN Build-out	<ul style="list-style-type: none"><li>Build-out of High Frequency grid in Boulder</li></ul>	Moderate	Moderate
<b>Scenario 3</b> Local and Regional Rapid Transit Network	<ul style="list-style-type: none"><li>Network of BRT and Enhanced Bus routes</li></ul>	Moderate	Highest

Distinguishing Features of Scenario 1

Local and Regional Enhanced Service

Serves Regional Commute Trip

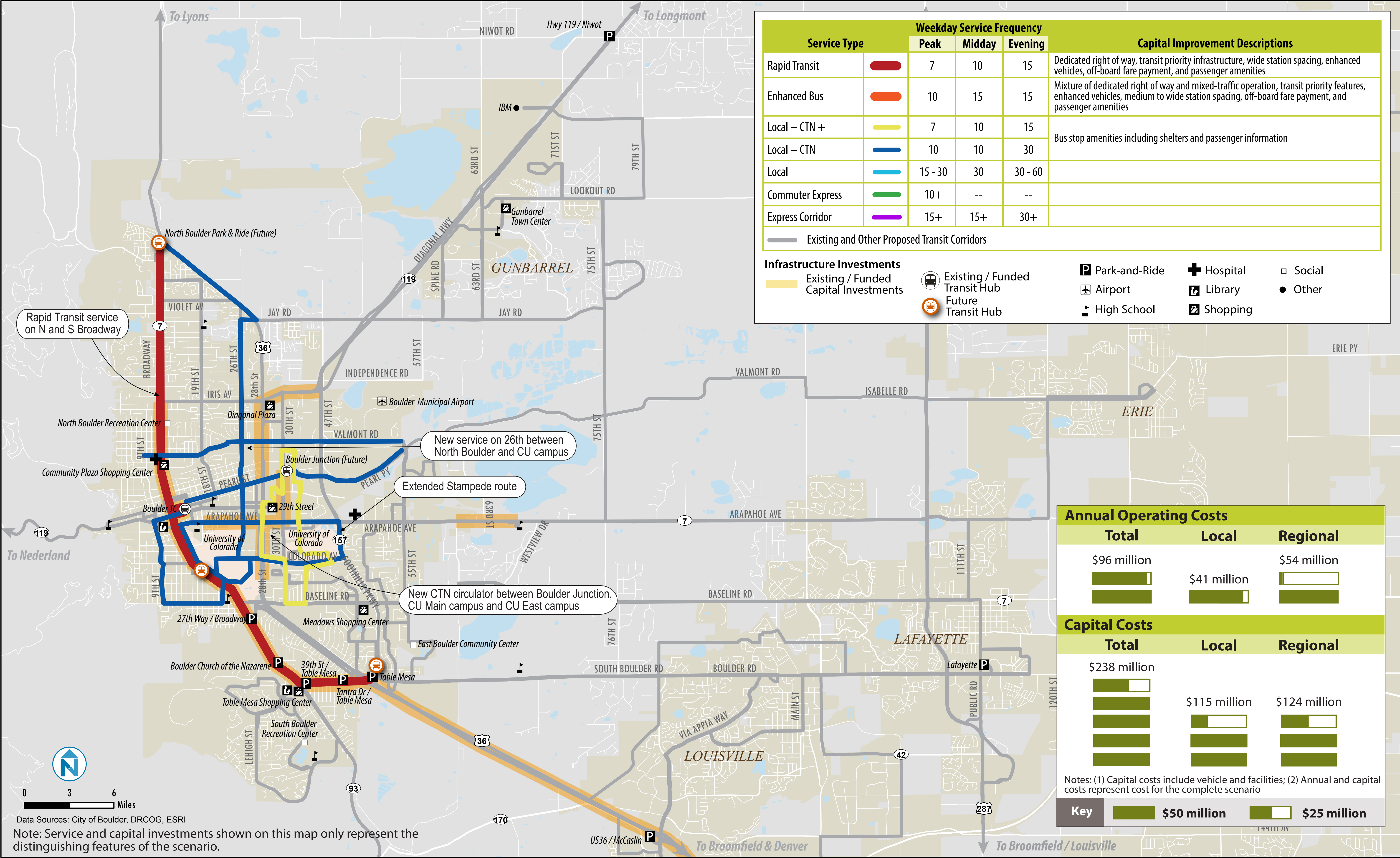




# Distinguishing Features of Scenario 2

## Boulder Local Community Transit Network (CTN) Build-out

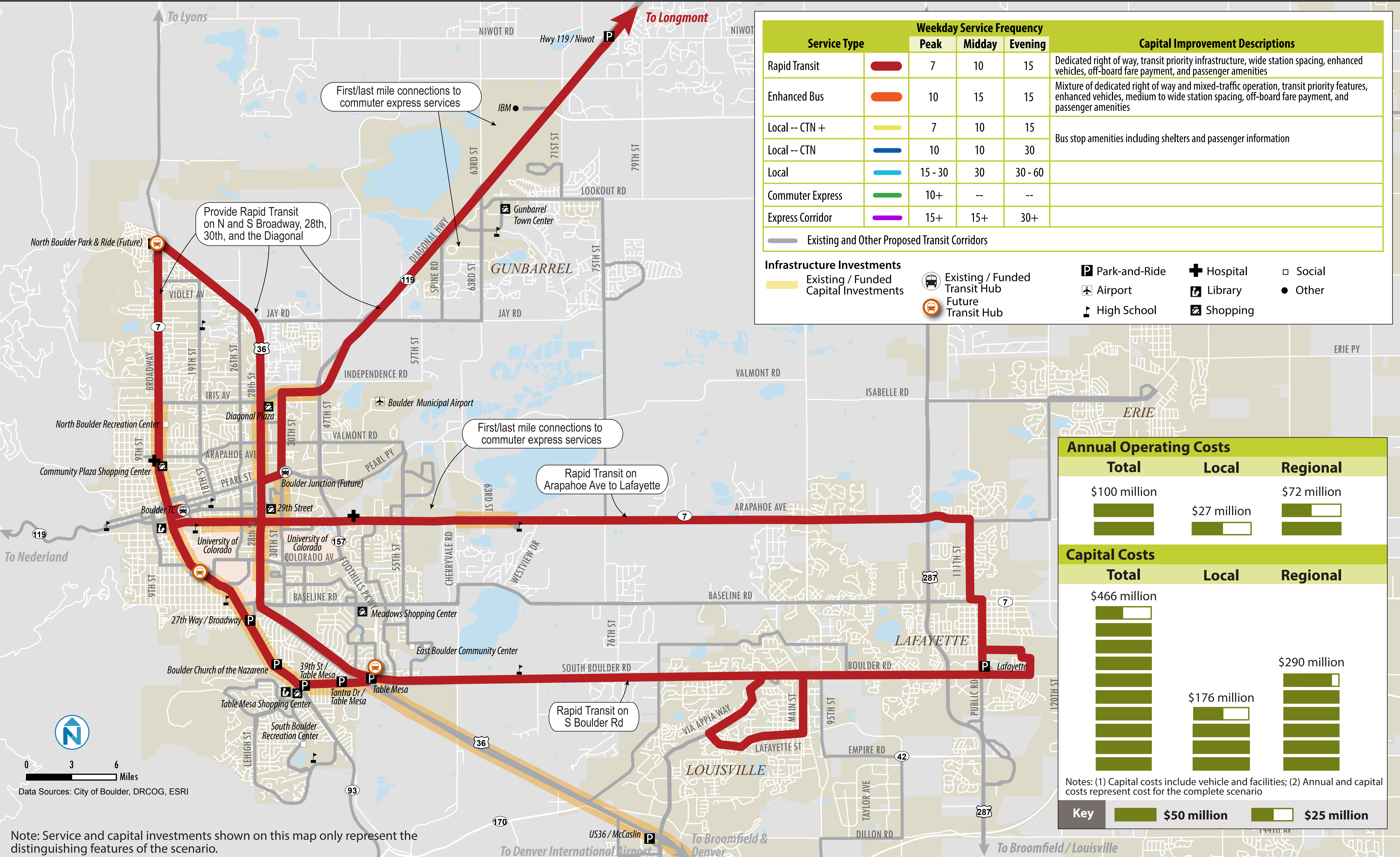
## Embrace the Future of East and North Boulder



# Distinguishing Features of Scenario 3

## Local and Regional Rapid Transit Network

## Heavy Service and Capital Investment on Busy Corridors





# Transit

## Evaluation Framework

Performance measures have been used to evaluate and compare the transit scenarios. This will help us understand various “trade offs” of different transit investments and transit strategies. The results of the transit scenario evaluation, using the performance measures indicated below will help in the development of the “Renewed Vision for Transit” in Boulder. [Results of the transit scenario analysis are available at \[www.BoulderTMP.net\]\(http://www.BoulderTMP.net\)](#)

Establish  
Performance  
Measures

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Performance measures are developed to align with key City/Regional goals.

### Evaluation Accounts and Performance Measures

A standard set of performance measures will be used to evaluate and compare each scenario. [This chart displays the relationship of those performance measures to the city-wide sustainability framework.](#)

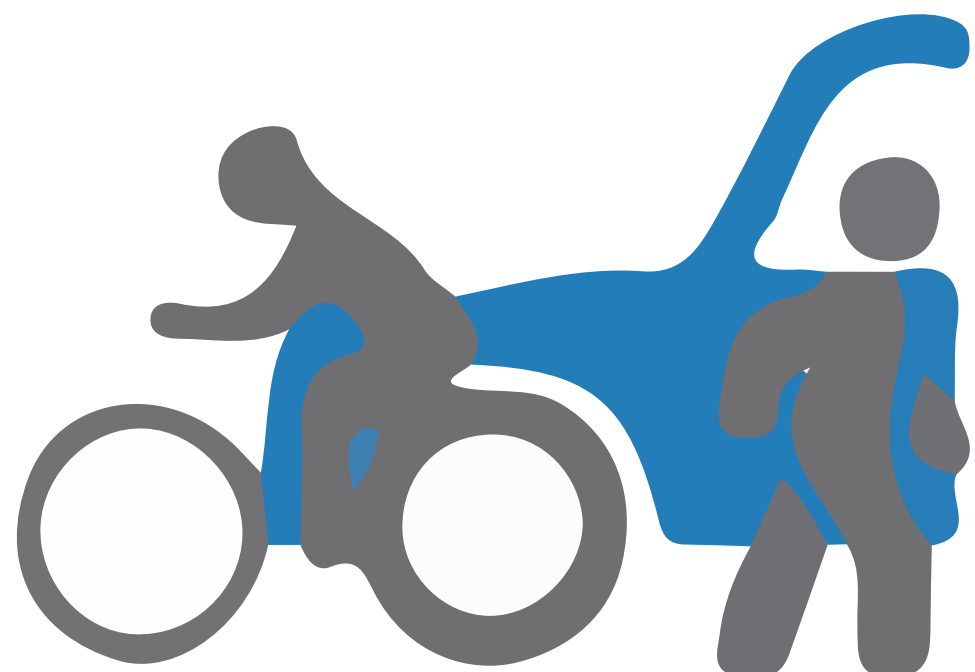


### Programmatic Elements

In addition to analyzing the account, sensitivity testing was conducted to better understand the affects of policy and programmatic changes on transit ridership and performance.



Eco Pass



TDM Programs



Access District



Access/Connectivity  
Improvements



First Mile / Last  
Mile Programs



# Transit

## Scenario Analysis Key Findings

### Evaluate Scenarios

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The scenario evaluation process is an iterative process that provides the opportunity to test various levels and types of investment. **The analysis results answer these key tradeoff questions, among others:**

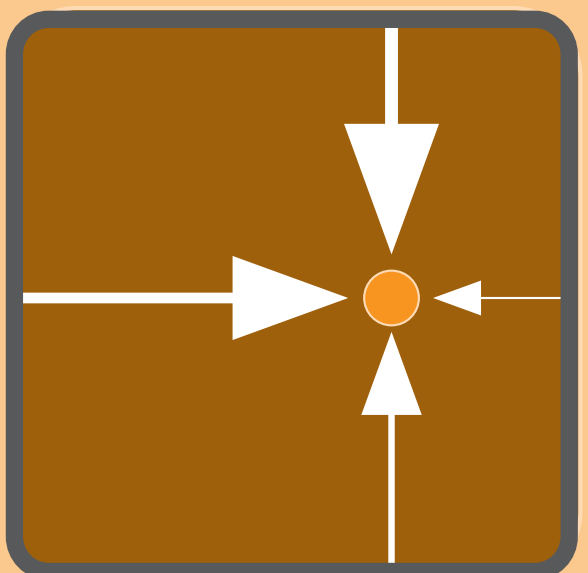
- Which scenario results in the most cost effective investment from a ridership standpoint?
- Which scenario has the greatest impact on greenhouse gas reduction?
- Which scenario most effectively captures regional transit riders?
- Which scenario most effectively serves job access and transit dependent riders?

### **There is no one scenario that performs the “best.”**

**The analysis highlights how local versus regional investments impact these key tradeoff questions differently.**

For example, local investment in transit (i.e. Scenario 2) is the most cost effective but does not perform the best from a transit dependent riders and job access standpoint. By comparison, regional investment (Scenario 1) has the greatest impact on reducing greenhouse gas emissions and capturing retained wealth in the local economy.

## Efficiency



- Scenario 2 (in-city CTN focused strategy) nets the most new riders at the lowest cost per ride
- Reducing travel time attracts regional ridership
- Regional investments are least cost effective but yield other benefits (i.e. travel time, GhG reduction, and other community benefits noted below)
- In Scenario 3, Longmont (119) has highest ridership potential of all regional BRT routes, but Arapahoe and South Boulder are also strong
- Scenario 1 (local and regional investment) captures the most regional riders (total and net new riders)

## Community



- Scenarios with higher service investment outside of Boulder (i.e. Scenario 3) do a better job serving low to mid-income residents, jobs, and transit dependent populations
- Active transportation outcomes are better for in-city routes due to higher net new ridership and higher rates of walk and bicycle access to transit

## Economy



- Scenario 2 has highest access to retail and services within Boulder
- Scenarios that focus on regional investment (i.e. Scenarios 1 and 3) put CTN/frequent service within walking distance of the most jobs and the most low- to mid-wage jobs
- At a corridor level, Rapid Transit on the Diagonal and Arapahoe are among the best performers for GhG reduced and therefore capture the most “retained wealth” (“retained wealth” is derived from VMT reduction)

## Environment



- Scenario 2 maximizes reduction in GhG and VMT within the City of Boulder, but Scenario 1 (local & regional investment) has highest overall GhG and VMT reduction benefit
- Regional investments are a less cost effective way to get people on transit, but trip lengths are longer leading to greater GhG reduction benefits



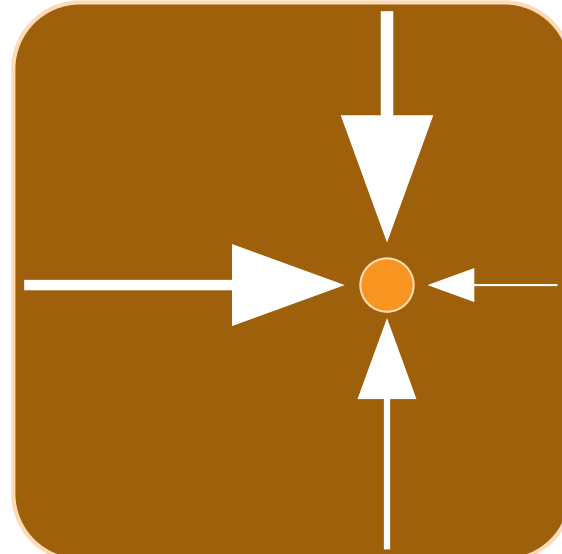
Transit


Scenario Analysis  
Accounts & Measures


Evaluate  
Scenarios


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These charts provide a summary of the Accounts and Measures. To view the detailed Scenario Analysis of Accounts and Measures, visit [BoulderTMP.net](#), click complete Streets, then click the link under 'Transit Scenarios' titled: 'Detailed Accounts and Measures'.

	EFFICIENCY		
	SCENARIO 1 Local & Regional Service	SCENARIO 2 Local CTN Build-out	SCENARIO 3 Rapid Transit/BRT
Ridership/Productivity	2nd	BEST	2nd
Travel Time	3rd	2nd	BEST
Cost Effectivness	2nd	BEST	2nd
User Experience	3rd	2nd	BEST

	COMMUNITY		
	SCENARIO 1 Local & Regional Service	SCENARIO 2 Local CTN Build-out	SCENARIO 3 Rapid Transit/BRT
Transit Accessibility	2nd	3rd	BEST
Transit Mobility	2nd	3rd	BEST
Housing & Transportation Costs	BEST	2nd	BEST
Active Transportation	2nd	BEST	2nd

	ECONOMY		
	SCENARIO 1 Local & Regional Service	SCENARIO 2 Local CTN Build-out	SCENARIO 3 Rapid Transit/BRT
Neighborhood Accessibility	BEST	BEST	2nd
Access to Jobs	BEST	2nd	BEST
Green Dividend	BEST	3rd	2nd

	ENVIRONMENT		
	SCENARIO 1 Local & Regional Service	SCENARIO 2 Local CTN Build-out	SCENARIO 3 Rapid Transit/BRT
Change in VMT	BEST	3rd	2nd
Mobile Source Emissions/ GhG Reduction	BEST	3rd	2nd
Net New Operating Cost	BEST	3rd	2nd