

**CITY OF BOULDER
TRANSPORTATION ADVISORY BOARD
AGENDA ITEM**

MEETING DATE: November 14, 2016

AGENDA TITLE: Staff briefing and TAB input regarding the *Transportation Master Plan* Progress Update: Focus on the Complete Streets Focus Area - Renewed Vision for Transit City Council Study Session material for November 29, 2016

PRESENTERS: Michael Gardner-Sweeney, Director of Public Works for
Transportation
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I. EXECUTIVE SUMMARY

The *2014 Transportation Master Plan (TMP)* was most recently updated in 2014 and serves as Boulder's vision for creating a safe and connected multimodal transportation system in support of the community's broader sustainability and resilience goals. The *TMP* provides the policy guidance for the city's annual work program and investment priorities. As part of council's approval of the *2014 TMP*, staff committed to periodic discussions with council on implementation activities to ensure these match council priorities and expectations.

This memo provides the Transportation Advisor Board (TAB) the study session materials that will be going to council. These include an update on core services and safety initiatives, including operations, maintenance, and capital projects. These core services support the city's Toward Vision Zero strategies and action items from the [2016 Safe Streets Boulder Report](#) and the [Transportation Report on Progress](#).

In addition, this update provides an opportunity to highlight current and upcoming transit initiatives based on the *TMP's Transit Modal Plan* reflecting the Renewed Vision for Transit (RVT). The 2016 *Transportation Report on Progress (RoP)* show that while transit ridership increased significantly with the implementation of the Community Transit Network (CTN) services, ridership has minimally increased since the mid-2000s as service hours have been reduced by the Regional Transit District (RTD). The *RoP* shows that the rate of mode shift away from the single occupant vehicle (SOV) needs to more than double to meet the *TMP's* objectives and Climate Commitment goals. Enhancing access to local and regional transit is particularly important for the regional travel of non-resident employees, where SOV mode share has remained at 80 percent since 1991. The *TMP* analysis conducted in support of [Boulder's Climate Commitment](#) strategy illustrated the greenhouse gas (GhG) contribution of these long distance

commuting trips, highlighting the need to focus on improving the regional transit trip. Encouraging more local and regional trips by transit assists the city with achieving a broad array of sustainability principles, including creating an accessible and connected, economically vital, and an environmentally sustainable community.

Highlights are provided on implementation efforts across the five *TMP* Focus Areas: Complete Streets, Regional Travel, Transportation Demand Management, Funding, and Integration with Sustainability Initiatives, with more detailed information provided for TAB feedback on the following efforts relative to the Renewed Vision for Transit:

- **HOP Study Update**- After more than 21 years of service, the RVT identified the need to examine the route and service provided by the HOP. A stakeholder committee has developed a set of alternatives for potential HOP service modifications responding to existing conditions and demands, as well as future opportunities.
- **East Arapahoe Transportation Plan**- Since the last full update to council at the December 8, 2015 Study Session, a community working group has been formed and has developed a plan purpose and project goals and objectives. The working group has considered a range of potential improvement elements for the corridor and is currently working on character districts and improvement options.
- **US36 Mayors and Commissioners Coalition** – The City of Boulder’s participation in this regional coalition is an important element of building support and securing financing for completing regional travel options along US36, as well as developing a broader network of arterial Bus Rapid Transit (BRT) corridors as identified in RTD’s Northwest Area Mobility Study (NAMS).
- **Transit Service Delivery Model Analysis**- While the city currently supports local and regional transit through a variety of partnerships with Via Mobility Services, Regional Transportation District (RTD), University of Colorado (CU), Boulder County, and Ft. Collins Transfort, the RVT recognizes that new strategies will likely be needed to implement the RVT. This study is examining the potential array of technical, fiscal, and governance structures to achieve the local and regional transit service, capital, and programs envisioned in the RVT and provide sustainable, enhanced levels of transit service for the community.

Questions for TAB

1. Does TAB have feedback regarding the Renewed Vision for Transit initiatives, including the following highlighted projects?
 - i. HOP Study – top priority purposes, evaluation criteria, and draft alternatives
 - ii. East Arapahoe Transportation Plan – project purpose, goals, objectives, potential design and management elements
 - iii. US36 Mayors & Commissioners Coalition – policy agenda and consensus letter
 - iv. Transit Service Delivery Model Analysis – key questions, assumptions, and draft scope of work

2. Does TAB have feedback regarding other current TMP implementation initiatives?

II. BACKGROUND

Transportation Master Plan (TMP)

The [*Transportation Master Plan \(TMP\)*](#) is the city's policy document establishing the goals, objectives and investment priorities for the Boulder community's vision of a multimodal transportation system. The *2014 TMP* update and the [*TMP Action Plan*](#) are organized in five interrelated focus areas: Complete Streets, Regional Travel, Transportation Demand Management (TDM), Funding and Integration with Sustainability Initiatives. Focus Areas identify aspects of transportation where additional work is needed to meet the objectives of the plan.

The [*2016 Transportation Report on Progress*](#) shows the Boulder community is making good strides in areas such as increase travel by walking, biking, and transit by Boulder residents but shows little success in shifting the mode share of non-residential employees. More work is also needed to accelerate the pace of mode shift for both resident and non-resident employees if we are to meet the objectives of the *TMP* and *Climate Commitment*. This is particularly true for non-resident employees as their SOV mode share of 80 percent has not changed since 1991. The impact of these long distance commute trips, averaging 28 miles a day, was shown in the GhG inventory and analysis conducted with the Climate Commitment team as part of the *2014 TMP* update. On-going and projected increases in non-resident employees suggest that this will be a growing share of the city's GhG emissions unless regional transportation options are significantly enhanced. As the recent 45 percent increase in transit ridership on the US 36 BRT service shows, improved transit travel times and reliability can significantly increase ridership.

The *2016 Safe Streets Boulder Report* provides the framework for the city's Toward Vision Zero safety initiatives that are designed to reduce collisions for people using all modes of travel, with the goal of achieving zero serious injury and fatal crashes. Work continues in all of the E's: Engineering, Education, Enforcement, and Evaluation to achieve these goals per the action items identified in the 2016 report as well as subsequent initiatives associated with updating the city's Neighborhood Traffic Mitigation Program (NTMP) in 2017. See **Attachment A** for details regarding Toward Vision Zero and NTMP.

The Transportation Division continues to make progress in implementing the TMP through core services including operations, maintenance, and capital projects. Highlights from 2016 include continued implementation of snow/ice control improvements, the development of standard operating procedures across work groups, and increased hand weeding on medians.

Transportation staff has committed to periodic check-ins with council to ensure *TMP* implementation continues to reflect the city's priorities. This study session is the fourth such check-in since the Aug. 2014 acceptance of the *2014 TMP* update, with the previous study sessions occurring on Feb. 24 and Aug. 25, 2015, and May 31, 2016. The next full *TMP* progress update is scheduled for April of 2017.

III. ANALYSIS AND ISSUES

Complete Streets: The Renewed Vision for Transit

This City Council Study Session is highlighting the *TMP* focus area of Complete Streets with the emphasis on the *Renewed Vision for Transit*.

The 2014 *TMP* created a new transit modal plan reflecting Boulder’s “Renewed Vision for Transit” (RVT) including a comprehensive set of policies and strategies to enhance local and regional transit service, associated capital improvements, policies and programs. These transit initiatives work in concert with broader multimodal transportation system improvements to advance the *TMP* goals and provide enhanced local and regional travel options for Boulder’s residents, visitors, and non-resident employees. Work toward the RVT is guided by the near, mid, and long term work items identified in the *TMP Action Plan*. Progress to date on several key areas of the RVT, plus other current and upcoming transit initiatives are discussed in the following section:

HOP Transit Study

The HOP service is considered the city’s flagship route of the Community Transit Network (CTN) as it was the first of Boulder’s nationally renowned network of innovative, uniquely branded, and community designed transit service. Based on the success of the HOP, the city partnered with RTD, CU, and Boulder County to develop today’s system of CTN services, including the SKIP, JUMP, DASH, BOUND, and STAMPEDE.

The current study builds upon the many years of successful operation of the HOP and CTN by looking at new ways to enhance the customer experience and address changes in land use and transportation options occurring over the last two decades. Since our last check-in with TAB and council in May 2016, the HOP study project team has collected ridership data to establish existing conditions and trends and shared this information with the Stakeholder Committee, developed a set of draft alternatives based on the Stakeholder Committee’s goals and priorities for the HOP, and reviewed the set of alternatives in relationship with the evaluation criteria.

The draft evaluation criteria for the HOP are based on the top-priority purposes for the HOP identified and prioritized by the stakeholders are shown below:

1. Maximize Ridership
2. Reduce Carbon Emissions by being competitive with driving
3. Cover Streets that have no other service nearby
4. Reduce Household/Student Transportation Costs
5. Offer a Fun Experience Riding the HOP

The draft evaluation criteria include the following:

- Operating cost
- Fleet requirements
- percent of residents and jobs within a quarter mile access to frequent service
- percent of residents and jobs within a quarter mile access to any service
- Level of service during commute times for service workers
- Ability to respond to future ridership demand

Based on the stakeholder’s input, four draft alternatives were developed to create a range of possible futures for the city and partner agencies’ investment in HOP service. The draft alternatives would require varying degrees of operational changes and infrastructure - such as layover places, turn-arounds or new stops. Three of the four alternatives have costs within \$100,000 of the existing (2016) HOP budget; with one alternative drafted with an unconstrained budget in mind. In September, the Stakeholder Committee reviewed the draft alternatives and participated in a polling exercise regarding preferences. The results indicate that the stakeholders are in support of modifying the existing HOP loop route into separate segments to provide more direct and uniquely designed service to/from key destinations, including the ability to extend service farther from the center of the city, e.g. north on Folsom and east on Pearl. The stakeholders indicated preference for consistent and reliable frequencies on weekdays and weekends, and longer spans of service all year long. More detailed information regarding the HOP study is provided in **Attachment B**.

Next Steps

Next steps include refining the set of draft alternatives based on stakeholder, TAB, council, and broader community input. Staff will conduct pop-up events focused on CU campus and other key areas to gain community input. In addition, city staff is partnering with Whittier Elementary through Growing Up Boulder to engage English Language Development students on how to improve the HOP for the youth in our community. The fall and winter months will be spent gathering broader community input on the set of draft alternatives for the HOP and opportunities to enhance the future design/branding for the HOP service and stops. Future stakeholder meetings in late 2016/early 2017 will be held to receive input on a preferred design alternative(s) and implementation strategies in regard to stop locations, vehicles, and branding. Staff will return to TAB and council in early 2017 to receive input on a final preferred design alternative for the HOP and discuss budget needs for possible implementation in 2018.

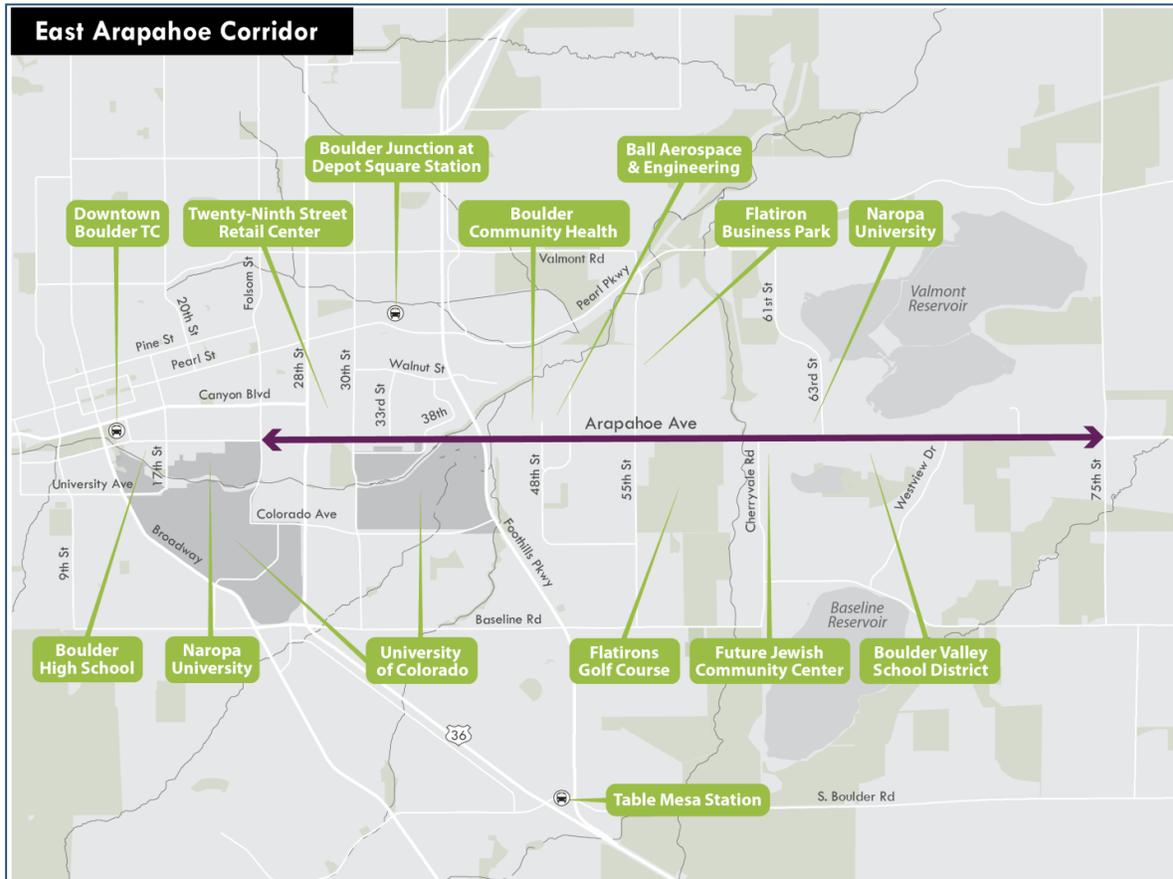
1. Does TAB have feedback regarding the Renewed Vision Transit initiatives, including the following highlighted projects?

- i. HOP Study – top priority purposes, evaluation criteria, and draft alternatives*

East Arapahoe Transportation Plan

The East Arapahoe Transportation Plan planning process is well underway and the project team is in close coordination with the BVCP update to consider future land use scenarios and the integration of these scenarios with potential transportation improvements under consideration. **Figure 1** illustrates the East Arapahoe Transportation Plan study area between the Downtown Boulder Transit Center and 75th Street.

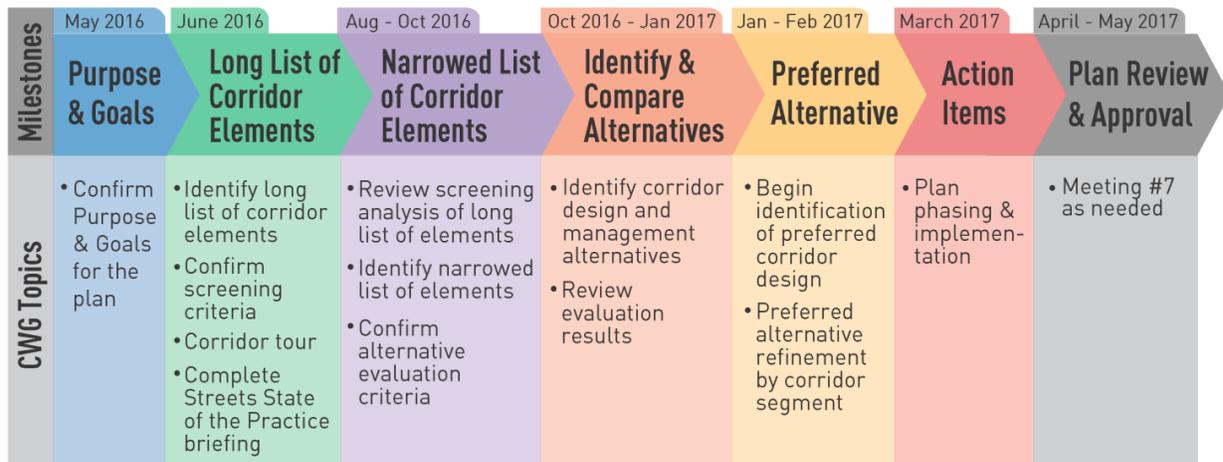
Figure 1: East Arapahoe Transportation Plan Study Area



The project team is working with the project Community Working Group to refine the project purpose, goals, and objectives as well as narrow a long list of potential design and management elements being considered to achieve the goals of the plan. Design elements are physical improvements along the corridor such as enhanced landscaping and roadway configurations. Management elements refer to strategies that influence people's time, route, or mode of travel such as transit service, shared use mobility, and parking management. The project team will carry forward for further consideration those elements that align with the project purpose and goals and meet basic feasibility, cost, or safety criteria.

Figure 2 illustrates the planning process and schedule, as well as Community Working Group meeting topics.

Figure 2: East Arapahoe Transportation Plan Schedule & Process Diagram



The next steps in the planning process will be to engage the broader community and local and regional agency partners in developing and refining a set of alternatives – or packages of design and management elements – for more detailed evaluation, comparison and refinement. More detailed information regarding the East Arapahoe Transportation Plan, including a summary of the Community Work Group process and input, is available in **Attachment C**.

Next Steps

Upcoming activities for the East Arapahoe Transportation Plan include the following:

- Fall 2016 - Conduct community outreach events to obtain input and feedback on the results of the initial screening.
- Winter 2016 - Collaborate with the Community Working Group to identify alternatives (packages of design and management elements) for detailed evaluation and comparison in Winter 2016/17. Continue coordination with Boulder County SH 7 regional corridor study.
- Spring 2017 - Seek City Council input of selection of preferred alternative.
- Continue on-going coordination with multi-departmental staff team, including collaboration with the Boulder Valley Comprehensive Plan update process, as well as with Boulder County, Colorado Department of Transportation, Regional Transportation District, and other agency partners.

1. ***Does TAB have feedback regarding the Renewed Vision Transit initiatives, including the following highlighted projects?***
 - ii. ***East Arapahoe Transportation Plan – project purpose, goals, objectives, potential design and management elements***

Transit Policy Areas

US 36 Mayors & Commissioners Coalition Update

The City of Boulder continues to actively collaborate with the US36 Mayors and Commissioners Coalition (MCC) to address regional transportation needs. The MCC works from a consensus building approach and includes elected officials and staff from the communities along with US36 corridor, as well as Longmont, Erie, Lafayette, and Adams County. The MCC advocates for federal, state, and regional policy that is informed by RTD's Northwest Area Mobility Study (NAMS). That study identified multimodal improvements remaining along US36 as well as new regional arterial Bus Rapid Transit (BRT) along SH119, SH7, US287, SH42, and South Boulder Road. The MCC elected officials meet monthly to review key regional policy and funding related items, and annually and/or as needed to participate in meetings with state legislators and federal congressional delegation. Boulder's representative to the US36 MCC is Mayor Suzanne Jones, supported by staff from the City Manager's Office and the Transportation Division. See **Attachment D** for a copy of the US36 MCC policy agenda and consensus document.

1. Does TAB have feedback regarding the Renewed Vision Transit initiatives, including the following highlighted projects?

- iii. ***36 Mayors & Commissioner Coalition – policy agenda and consensus letter***

Transit Service Delivery Analysis Update

The City of Boulder's 2014 TMP sets out a Renewed Vision for Transit (RVT) that expands both local and regional transit connections. The implementation challenge of this transit vision is that the current service model, which relies heavily on the Regional Transportation District (RTD) for both local and regional transit service, is constrained to a level that does not meet community expectations. RTD staff is currently sharing with its regional partners that they are facing challenging financial times, particularly with the recent opening of the many new FasTracks passenger rail lines. Their current and projected revenues are falling short, and RTD is planning to reallocate resources from the remaining FasTracks implementation funds as well as from their base operating system (bus transit) to support the operations of the new passenger rail service. RTD's limited resources and competing regional priorities means that the city needs to seek new/additional partnership opportunities to fulfill the RVT and TMP goals.

The city's *TMP Action Plan* calls for exploring alternatives for implementing the RVT. The questions Transit Service Delivery Analysis will ask are two-fold:

1. How can the current service delivery structure deliver the future local and regional transit connections, and where are the challenges?
2. What are potential alternative funding, operating and governance/partnership structures that can optimize opportunities to implement Boulder's Renewed Vision for Transit?

The following are the key assumptions forming the basis for this study:

- **Purpose:** The City is continuing to put more public funds into RTD but is getting less transit service. To advance the Boulder's RVT, the city needs to look at expanded and/or new transit service delivery models. Confirming that the status quo model will not fulfill the city's TMP and sustainability goals, the study will assess the financial, technical and structural/organizational aspects of potential new models.
- **Goal:** It is the goal of this study for the City of Boulder to collaboratively work with regional and local partners to explore and assess all transit service delivery options and to recommend one or more options to move forward for consideration by the city.
- **Partnerships:** It is a priority of the City of Boulder to maintain a partnership with RTD, Boulder County, CU, Transfort, Via and other local and regional agencies to accomplish the Renewed Vision for Transit.
- **Complementary solutions:** New partnerships and service delivery models should augment the existing transit network and create a layered network approach to provide a multimodal transportation network.
- **Fiscal responsibility:** A new service delivery model should prioritize the efficient use of public dollars and should leverage local and regional resources.
- **Timeframe:** The study should identify both short and long-term strategies for implementing a new transit service delivery model(s).

Draft Scope of Work

The work proposed for the Transit Service Delivery Model Analysis includes three phases and extensive community involvement.

Phase 1: Renewed Vision for Transit Implementation Assessment

The first phase of the study is beginning this fall and includes an updated financial analysis of current and planned transit service per the RVT. This financial analysis will also help to inform policy discussions related to city-wide transportation operations and maintenance funding and a potential head tax exploration. The analysis will consider current and planned service levels, funding sources and share of funding inputs versus service outputs to determine current and future funding inequities and/or gaps in service delivery.

This phase will also include an assessment of where the community is on the journey toward accomplishing the RVT and what service planning, programs and operating and capital requirements are yet needed to achieve the RVT Action Plan and 2014 Transit Modal Plan. Acknowledging that the RVT is an aspirational plan that will require an incremental approach to implementation, this phase of the study will prioritize local and regional plan elements to be phased over time and assess the current and future financial gaps in service delivery.

Phase 2: Transit Service Delivery Analysis

This phase of the study will include a peer review to understand lessons learned from other jurisdictions who have implemented local funding and governance initiatives or restructured their partnerships with regional transit service providers. It will also establish the goals for transit service delivery by which alternate structures can be measured.

The focus of this phase is to identify and analyze alternative transit service scenarios and related fiscal impacts. Options for restructuring transit service could range from ideas like the city and Boulder County establishing and operating consolidated transit service, to the city taking over local transit management and operations of the CTN system, to forming a new regional transit authority with a new taxing district. The study will include a detailed analysis of these and other service delivery scenarios to understand and evaluate costs, benefits, opportunities, and challenges.

Phase 3: Refinements & Recommendations

This phase will include an analysis and recommendation to carry forward one or more preferred scenarios. It will involve a detailed financial analysis and recommended sustainable funding mechanisms to support the operations for the preferred governance model(s). This final phase will conclude with recommended next steps and a timeframe to implement.

All Phases: Community and Agency Outreach and Engagement

The study will create a community and agency engagement process that ensures involvement and input by all stakeholders, interested parties, affected publics, and others into the development and recommendations of the study. Early in the study, the project team will identify the specific membership of committees proposed for the public and agency coordination process and what role each will play in decision-making for the project. Examples include a Technical Advisory Committee with membership from multi-department and multi-agency staff and a Policy Advisory Committee with membership from TAB and/or City Council.

A multi-pronged outreach approach will engage a broad cross-section of stakeholders while simultaneously working closely with a core group of interested and influential stakeholders. All outreach will be strategically tied to the milestones in each phase of the project and will seek to:

- Provide clear and consistent messaging to all stakeholders and audiences regarding the study status and milestones.
- Proactively communicate all opportunities for involvement to the public using both traditional and online communication tools.
- Generate accurate and timely media coverage of the Study.
- Help ensure partner agencies and the public is aware of opportunities to provide input that is integrated into decision-making at key milestones.
- Support positive and productive two-way engagement between the city staff and stakeholders.

Figure 4 below shows the proposed schedule for this study.

Figure 4. Draft Schedule



1. Does TAB have feedback regarding the Renewed Vision Transit initiatives, including the following highlighted projects?

- iv. **Transit Service Delivery Model Analysis -- key questions, assumptions, and draft scope of work**

TMP Focus Area -- Additional Complete Streets Initiatives

North Boulder Mobility Hub

The project team has continued work with RTD, Boulder County and CDOT to develop the North Boulder mobility hub – envisioned as a high-quality multimodal transit center and an enhanced gateway into the city at the intersection of North Broadway and US36. The site will be transformed into a multimodal transportation hub to better serve the North Boulder area, which includes linking to local and regional transit routes. Draft concept plans provide a combined set of transportation services on one site; including a transit station and bus turnaround, Boulder B-cycle, a Bike-n-Ride shelter, car share services and placemaking elements, such as architectural and sculptural gateway features. The goal of the mobility hub is to provide seamless mobility by fully integrating the city’s expanding transit network with all modes of transportation. An example of the draft concept plans is shown in **Figure 6**.

The project team is currently working with CDOT to find alternate site for road maintenance materials storage that is currently housed on the site of the future mobility hub. Staff will share draft concept plans with the public in fall/winter 2016-17 in conjunction with the North Broadway Reconstruction Project. Community input and feedback will help shape the preferred alternative for further refinement and detailed site design.

Figure 6. Conceptual schematic of North Boulder Mobility Hub



Update on Railroad Quiet Zones Project

In response to concerns expressed by community members regarding the impacts of train horn noise, city staff is working with agency partners to pursue the implementation of “quiet zones” for railroad crossings impacting Boulder. Council received an update regarding this project as part of the [June 7, 2016 Information Packet](#).

Quiet zones are at-grade railroad crossings that include physical infrastructure and warning systems so that train engineers are not required to sound the train horn at the crossing. The city has been awarded approximately \$1 million in grant funding from the Denver Regional Council of Governments to advance quiet zones for the Boulder community. Staff is updating a 2014 technical study and cost estimates, and is beginning a public engagement process to inform a prioritization and phasing plan for implementation. Staff will seek input on a number of factors to consider when prioritizing the quiet zone crossing improvements, including the number of people living and working within 0.5 miles of the railroad crossings, type and proximity of adjacent land uses (existing and/or planned), as well as street characteristics, safety and costs for installation, plus any potential ongoing maintenance responsibilities.

Upcoming Engagement:

- Fall 2016 – As part of an initial awareness phase, staff will use a variety of communications channels (website, social media, emails, etc.) to inform the community about quiet zones, the project process and upcoming opportunities to provide input. Consistent with this approach, staff attended a recent neighborhood meeting hosted by

the Kings Ridge area neighborhoods to provide more information about quiet zones and the city's planning process. Approximately 50 residents attended, and based on feedback from the host and attendees, people received helpful information and clarity on upcoming process and how to stay involved.

- December and January – During the beginning of the engagement phase, staff will seek community input for the quiet zone planning process. This will kick off at a city hosted public meeting, scheduled for Thursday, Dec. 15, location TBD.

Project Timeline:

- Late 2016 to early 2017 – Staff will update the technical study and cost estimates, begin a community engagement process to identify and prioritize quiet zone crossing improvements, develop phasing plan for implementation, and continue to pursue additional funding strategies.
- Spring 2017 – Update to Transportation Advisory Board and City Council
- Mid-2017 to 2018 – Selection of crossing location(s), crossing improvements, and conduct final design, engineering and permitting process with BNSF, PUC, FRA and other agencies.
- 2018 to 2019 – Construction of selected quiet zone crossing improvements.

Attachment E provides a copy of the city's Railroad Quiet Zone update, including a map of the railroad crossing locations that are being studied for potential quiet zones. Additional information regarding railroad quiet zones, including copies of the quiet zone study reports, are available on the city's [Railroad Quiet Zones](#) website.

Community Wide Eco Pass

The Community Wide Eco Pass Program efforts will continue through participation in RTD's Pass Program Working Group. The purpose of the working group is to evaluate existing pass programs of all kinds in the RTD system and weigh in on the viability of new pass programs. The Community Wide Eco Pass program will be discussed as part of this working group. Working Group members are expected to have access to Smart Card data to evaluate programs. At this time, RTD has selected a facilitator for the working group and is now in the process of forming the stakeholder group, which will consist of up to 25 members from throughout the district. Councilmember Young has been approached by RTD to participate on behalf of the city in this working group. Stakeholder interviews will take place in November/December and the first meeting is expected to be held in January 2017.

Complete Streets Practitioner Panel Event

The City of Boulder recently hosted a national practitioners panel as part of the city's "Connecting People and Places – Sharing the National Experience" panel series. Representatives consisting of staff, elected officials, and researchers from Austin, TX, Cambridge, MA, Davis, CA, Denver, CO, and Eugene, OR visited Boulder to share their experiences. On Oct. 19, 2016 the City of Boulder hosted three activities focusing on local transportation projects while exploring lessons learned at the national level. These activities included:

- a kick-off tour for two new corridor studies on Colorado Avenue and 30th Street;
- a project open house for current complete streets projects and programs; and,

- a national practitioner panel event, which brought together experts from around the country to discuss the multi-faceted elements of implementing complete streets projects in a collaborative learning environment.

Canyon Boulevard Complete Street Study

Since the May 31, 2016 City Council Study Session, the project team has completed an assessment of the conceptual design options to move forward to selection of a design alternative. The assessment process resulted in three design alternatives plus a No Build option that will be shared with the community this fall for their feedback. This assessment process began with a first level of screening where the conceptual options were compared to existing conditions and the other options to identify the best design alternatives for Canyon Boulevard. The team also included a previously considered idea of repurposing a lane for a transit and bicycle lane and an idea of providing a center running bus rapid transit only lane in addition to the 4 vehicular lanes. Following the next phase of community engagement this fall, these design alternatives will be presented to the related advisory boards and commissions for their input. This information will be provided to City Council for their feedback on the design alternatives at a Study Session that will be scheduled in early 2017. For more information, see [Canyon Boulevard Complete Streets Study website](#).

Upcoming 30th & Colorado Corridors Study

The 2014 TMP also identified corridor studies for the 30th Street and Colorado Avenue corridors. The Corridors study will study the transportation conditions and needs for Colorado Avenue from Foothills Parkway-Broadway/Euclid and 30th Street between Baseline Road to Pearl Parkway. The study will develop and evaluate conceptual transportation design options to improve travel for people walking, bicycling, riding transit and driving. The corridors study will begin later this fall and will be conducted in conjunction with the design of the 30th and Colorado bicycle and pedestrian underpass project. This project was awarded federal Transportation Improvement Program (TIP) funds in 2015 and is anticipated to begin construction as early as 2018 or 2019.

General Capital Project Updates

The Transportation Division is responsible for the multimodal capital projects as outline in the city's Capital Improvement Program. These projects are identified through the TMP planning process and prioritized in the three TMP investment program levels (current, action, and vision plans) based on a variety of criteria aligned with the TMP objectives and city's overall sustainability goals. As funding is identified for these projects, they move forward into the planning, design, and construction phases managed by Transportation's Capital Projects team.

There was an increased number of transportation improvements made from 2012-2015 due to the Capital Improvements Bond passed by voters in the November 2011 election and all of these projects were finished within the bond deadline. The majority of the bond funded transportation projects focused on infrastructure maintenance including the pavement reconstruction of Arapahoe Avenue from 15th to Folsom, increased resurfacing of collector and local streets, replacement of substandard signs and the irrigation system for the medians and landscape areas adjacent to Foothills Parkway. Funding was also spent to replace traffic signal incandescent

lamps with LED lamps which used 80% less energy and went towards system enhancements additional pedestrian crossings, intersection improvements, new multi-use paths and sidewalks and improvements to the downtown Boulder transit station.

Following is a brief listing and status summary of current capital improvement projects for Transportation. A map showing the location of these projects is included in **Attachment F**.

28th Street

28th Street between Iris and Yarmouth avenues

Status: This project was complete in the summer of 2016.

Description: Built a multi-use path, multi-use path bridge, bike lane and widened a vehicular bridge over Four Mile Creek

Diagonal Highway reconstruction

Diagonal Highway between 28th Street and Independence Road

Status: Project will be completed by the end of fall, 2016

Description: Reconstructs vehicle traffic lanes, adds protected bicycle lane and multi-use paths

Andrus to Airport multi-use path

Between Andrus Road and Airport Road

Status: Anticipated to begin construction in winter, 2017

Description: Extends 63rd Street multi-use path to Airport Road and connects a missing link between Gunbarrel area and urban Boulder

Frontier Avenue bridge replacement

Frontier Avenue between Pearl Parkway and Pearl Street

Status: Project was completed in spring 2106

Description: Replaced a deteriorated bridge with a new bridge and adds sidewalks.

Boulder Creek at Arapahoe Avenue pedestrian bridge replacement

Boulder Creek at Arapahoe Avenue

Status: Anticipated to begin construction in winter, 2017

Description: Replaces a deteriorated pedestrian and bicycle bridge with a new bridge.

Baseline Underpass

Baseline Road between Broadway and 27th Way

Status: Project will be completed in spring 2017

Description: Builds an underpass to replace the current street-level pedestrian and bike crossing to improve safety.

Hanover Avenue multi-use path

Hanover Avenue between Broadway and 46th Street

Status: Project was completed in summer, 2016

Description: Builds a multi-use path and adds curb extensions and marked crosswalks.

29th and Valmont Intersection

29th Street and Valmont Hanover Avenue between 28th Street and 30th Street

Status: Project will start in fall 2016 and be completed in spring, 2017

Description: Reconstructs Valmont, builds new turn lanes, wider sidewalks, and a new traffic signal

TMP Focus Area -- TDM

City staff collected additional parking supply and demand data in the spring and summer of 2016, to evaluate the effectiveness of a sample of existing TDM Plans that have been implemented through the city's development review process over the years. The primary reasons for conducting this evaluation are to determine if the existing TDM Plans are being implemented and to understand their impact on the travel behavior of residents or employees at those developments. Staff surveyed nine commercial and seven residential developments that were required to submit TDM Plans after going through the city's Site Review process. All developments have been completed and occupied before 2008. Employers and property managers were interviewed and employees and residents were surveyed.

The resulting report clearly shows that there is a disconnect between what the developers are required to do and what is communicated to the future tenants and property managers regarding on-going responsibilities for offering and monitoring the on-site TDM programs. Requirements that are tied to capital infrastructure or financial guarantees have been implemented at a higher rate than the requirements that rely on the tenant/property management company implementing a program or service for its employees or residents over time. The report also highlights the difficulty of conducting evaluations with tenants that are unaware of requirements and do not have a means to distribute surveys electronically. Despite providing incentives to respond to the surveys, response rates were generally low which, in turn, impacts the reliability of survey results due to high sampling errors.

Based on the report findings and recommendations, staff will be making adjustments to the proposed TDM Plan ordinance design and bring this forward for Board and City Council consideration in early 2017. Staff will develop a database to track existing and future TDM Plans, establish a method to assist developers in communicating requirements to future tenants, identify ways to require high response rates, and work with the City Attorney's Office to determine how to tie the ordinance to the property and future tenants after the developer fulfills their initial requirements. Staff will present this information to Planning Board and City Council and staff will use this new information to further develop and modify design the TDM Plan ordinance.

TMP Focus Area -- Funding

Staff continues to work on the transportation development excise tax and impact fees work for new commercial and residential development. Staff will be returning to City Council for a public hearing in November which will include an update to the transportation development excise tax and a new transportation impact fee which will provide funding for capital improvements related to new development. As part of the impact fee and excise tax analysis, City Council also requested that staff examine the issue of on-going funding for transportation operations and maintenance.

TMP Focus Area -- Integrated sustainability initiatives

The fifth Focus Area of 'Integration with Sustainability Initiatives' is intended to identify policies and opportunities for integrated, inter-departmental efforts. These activities continue on

an on-going basis in a number of work areas to ensure collaboration with transportation and land use planning, supporting community goals for sustainability and resiliency. Continuing 2016-17 activities include:

Boulder Valley Comprehensive Plan Update (BVCP)

Transportation staff members are part of the core team for the BVCP update and participated in developing the trends reports and the first phase public outreach effort. Staff and transportation consultants are engaged in the quantitative and qualitative analysis of the BVCP scenarios. The Neighborhood Access Tool created during the TMP process will also be used as part of evaluating the scenarios.

Climate Commitment

Transportation staff continues to participate in the on-going development of the Climate Commitment, including the interdepartmental implementation group and the preparation of the East Arapahoe area case study for the Energy Planning Pilot project.

AMPS – Coordination with Civic Area and Chautauqua Plans

The multi-departmental initiative to create an Access Management and Parking Strategy is continuing in 2016, with a focus on collaboration with key work program items such as the Civic Area and Chautauqua Access Management Plan (CAMP), as well as updating TDM plans for new development projects.

Staff working on the development of the CAMP completed data collection over the summer of 2016 and are currently working with a Community Working Group to review these findings and develop potential strategies to test during a pilot program in the summer of 2017. Staff will be returning to City Council with a proposal in April, 2017.

What's coming in 2017?

Safe Streets Boulder – Toward Vision Zero Safety Initiatives

On-going implementation continues for the Toward Vision Zero safety initiatives as identified in the *2016 Safe Streets Boulder* report. Staff is also following City Council direction in the 2017 Budget Ordinance to develop a new program for implementing engineering treatments on neighborhood streets to calm speeding traffic. Implementation will focus on the 4 E's of Engineering, Education, Enforcement and on-going evaluation. The city will work with community organizations, neighborhoods, and other agencies to partner on wide array of safety initiatives to reduce crashes for people using all modes. Highlights of the implementation include location-specific changes in signing, striping and signal operation, more robust use of green paint at potential conflict zones for bicycles, and continued education programs such as the "Heads Up" Campaign.

Pedestrian Plan Update and Multimodal Low Stress Network Analysis

Staff will kick-off the process to update the city's Pedestrian Plan while integrating the 2.0 multimodal low stress network analysis to improve safety and enhance pedestrian, bicycle, and

transit vehicle connections in Boulder. Objectives of these planning initiatives will include auditing and inventorying existing pedestrian facilities, identifying new pedestrian-focused projects and programs while linking low stress routes for bicycling and walking including accessibility to transit.

Transportation Funding Analysis

In 2017, Transportation Division staff will continue working on the exploration of potential Head Tax funding as part of the city-wide team. .

2. Does TAB have feedback regarding other current TMP implementation initiatives?

V. NEXT STEPS

The TMP implementation continues to be guided by the [TMP Action Plan](#) in alignment with the annual City Council work program and city budgeting process, as well as by input from TAB and the City Council via periodic study sessions. The next full TMP progress update is scheduled for first quarter of 2017 and will include highlights from all of the TMP focus areas, with an emphasis on Complete Streets, TDM, and Funding.

Staff continues work in all of the TMP focus areas as well as in collaboration with other city-wide planning initiatives, including coordination with the Boulder Valley Comprehensive Plan update, Access Management and Parking Strategy, Chautauqua Access Management Plan, and the Climate Commitment.

Staff continues with ongoing community engagement and will be returning to discuss key milestones with the boards and council throughout 2017.

For more information and updates regarding the 2014 Transportation Master Plan, please visit: www.bouldertmp.net

ATTACHMENTS

- A. Safe Streets Boulder – Toward Vision Zero Update**
- B. HOP Study Information**
- C. East Arapahoe Transportation Plan Information**
- D. US36 Mayors & Commissioners Policy Agenda**
- E. Railroad Quiet Zone update**
- F. Capital Projects Map**

Text to assist with the Safe Streets Boulder – Toward Vision Zero attachment.....

Toward Vision Zero Transportation Safety Strategy

The “Toward Vision Zero” goal of eliminating fatal and serious injury collisions is outlined in the *2014 TMP*. An important step in meeting the Toward Vision Zero objective is the [2016 Safe Streets Report](#), which provides an overview of the city’s efforts to continuously improve safety for all modes of travel. The report was included in the packet for the May 31 study session and analyzes traffic safety data from 2009 to 2014.

Examples of [key findings](#) from the report include the following:

- Bicyclists and pedestrians are overrepresented in collisions that result in serious injuries and fatalities
- 12 percent of serious injuries and 38 percent of fatalities involve an impaired person
- Nearly half of all collisions within city limits occur at intersections

A plan of action for reducing the number and severity of collisions is included in the *2016 Safe Streets Report*. It represents a comprehensive approach that combines engineering, education, enforcement and evaluation strategies (the “Four Es”). While a complete list of city activities in support of the Four Es is included in the *Safe Streets Report*, examples include the following.

Engineering

- The 29th Street and Valmont Road intersection has an identified pattern of rear-end, left-turn, and sideswipe collisions involving pedestrians, cyclists, and motor vehicles. In response, intersection improvements are being made, including widening bike lanes, the addition of left-turn lanes, and the installation of a traffic signal.
- Converting permissive left-turn signal displays from circular green ball indications to flashing yellow arrow indications has been shown to reduce collisions involving left-turn movements, due to the improved clarity of the flashing yellow arrow displays. Conversions to flashing yellow arrow displays are being made at a number of traffic signals in boulder, prioritizing intersections with higher numbers of left-turn collisions. Examples of locations already converted include Arapahoe Avenue and 30th Street, and Colorado Avenue and Regent Drive, with more locations scheduled to be converted next year.
- Modifications to traffic signal operation in response to identified collision patterns are being made in a number of locations, including Baseline Road and 30th Street (southbound left-turn and eastbound left-turn protected-only operation during weekday PM peaks), the Diagonal Highway and 30th Street (increased westbound left-turn green arrow time during the PM peak), and Broadway and Spruce Street (providing east/west advance pedestrian interval).
- Installing signs and pavement markings around the city to reduce conflicts between turning vehicles and bicycles and pedestrians, including dashed lines and yield marking for drivers, and markings reminding cyclists of the 8 mph speed limit at intersections.

Education and Enforcement

Transportation safety is also dependent on human behavior that engineering solutions alone cannot address. That is why cross-departmental initiatives are underway to support safety education and enforcement within the community. Examples include:

- The Heads Up Boulder campaign, a collaborative effort between the Transportation Division, the Police Department to reduce pedestrian, bicyclist and vehicle collisions at crosswalks
- Staff working with the University of Colorado Boulder and Boulder County staff to deliver safety messaging to students and across the county
- The Way of the Path outreach program, which seeks to improve bicycle and pedestrian safety along the city's multi-use path network
- Partnerships with local partners and schools to teach children safety tips when walking or biking to school

Transportation Division staff also has identified impaired driving, walking and biking as a safety concern and is working with the Police Department to develop enforcement strategies.

Evaluation

In addition to the *Safe Streets Report*, staff continually collects and assesses safety data to evaluate whether a strategy is working, when immediate action is required and what solutions would be most effective in the long term. Preliminary findings are presented to the City Council and community during the Transportation Master Plan updates provided during the year. The Transportation Division also will publish a new *Safe Streets Report* in 2018.

The Four Es represent a comprehensive strategy that is flexible to meet a variety of transportation safety challenges. For example, communitywide education, enforcement and evaluation are well-suited to discourage behaviors such as impaired driving or bicycling. In the case of engineering, a narrower approach focused on specific places and/or problems is often more effective. Staff seeks to identify the worst locations, behaviors and trends so the city can take targeted action. We believe this to be more effective than blanket strategies that might not address the underlying safety challenges and could cause unforeseen issues.

Staff will continue to work with all stakeholders to identify issues, evaluate ongoing work and consider the additional changes that may be needed to respond to the analysis and concerns.

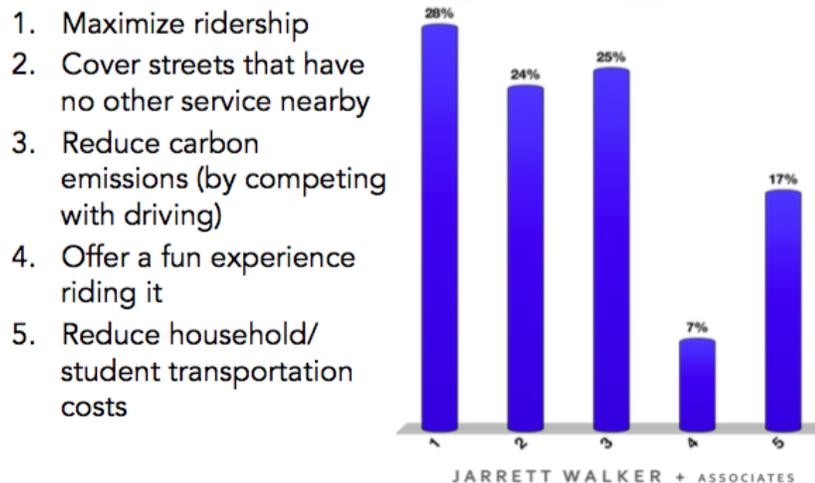
Attachment " – HOP Transit Study

HOP Purposes and Evaluation Criteria

The draft evaluation criteria for the HOP are based on the top-priority purposes for the HOP identified by the stakeholders at their second meeting in July. The purposes prioritized by the stakeholders are shown below. The graph below shows the top three purposes ranking far above the last two therefore the last two were not used as criteria for developing the set of alternatives.

1. Maximize Ridership
2. Reduce Carbon Emissions by being competitive with driving
3. Cover Streets that have no other service nearby
4. Reduce Household/Student Transportation Costs
5. Offer a Fun Experience Riding the HOP

Of the HOP's potential purposes, what are your top three priorities?



The draft criteria to evaluate the performance of each alternative in achieving the top 3 purposes are as follows:

- Operating cost
- Fleet requirements
- percent of residents and jobs within a quarter mile access to frequent service
- percent of residents and jobs within a quarter mile access to any service
- Level of service during commute times for service workers
- Ability to respond to future ridership demand

Measure	Purpose(s) addressed by measure		Why use this measure?
Percent of residents and jobs near <i>frequent</i> transit	Maximize ridership	Reduce carbon emissions (by competing with driving)	In a walkable urban environment like Boulder, frequency is a major predictor of transit ridership, as long as there are many people, jobs and activities near that frequent service. Getting frequent service close to concentrations of residents and jobs is a proven strategy for increasing transit ridership and thereby reducing VMT and carbon emissions.
Level of service during commute times for service workers and lower-income people	Maximize ridership	Reduce carbon emissions (by competing with driving)	Low-income people and service workers have many incentives to use transit. Yet transit may not run when they need to commute, or if it does run, poor frequency provides little choice in when to travel. In a city with a booming service, recreational and tourism economy, providing more frequent transit on evenings and weekends is a proven strategy for increasing total transit ridership.
Ability to serve longer-distance trips (i.e. compete with driving, rather than walking or cycling)		Reduce carbon emissions (by competing with driving)	Today the HOP is useful only for short trips, which can also be made by bike and often by foot. Transfer data shows that the HOP is little used as a "last mile" connection for regional transit trips. The ability of the Boulder transit network to serve longer trips will be directly related to its ability to competing with driving. Different transit network designs are better or worse at serving longer-distance trips.
Percent of residents and jobs with access to <i>any</i> service	Cover streets that have no other service nearby		Covering places with at least some transit service ensures that people with special needs (and mobility impairments) have access to service if they need it. The percent of residents and jobs within a certain distance of any service - of any frequency - measures this "coverage" purpose of transit.
Ability to adapt and response to future ridership demands	Maximize ridership	Reduce carbon emissions (by competing with driving)	Some transit network designs offer more choices for future investments and expansions of transit services, which would make it more feasible for the City to serve growth in transit ridership potential. Other network designs are more constraining and make growth of the network more difficult and expensive.
Operating costs	All purposes		The cost of any alternative is a measure of how well it meets all of its purposes. If an alternative offers a lower operating cost, that frees up more of the

		City's resources (or partners resources) to be spent on further achievements.
Fleet requirement	All purposes	Fleet requirement reflects an operating cost (the cost to store, maintain and repair the vehicles) and a capital cost (the cost to purchase the vehicles). As above, a lower cost means that more of any purpose can be achieved with City resources.

Draft Alternatives

Based on the stakeholder's prioritization of purposes for the HOP, four draft alternatives, shown on the following four pages, were developed to show stakeholders the range of possible futures for the City and partner agencies' investment in HOP service.

ALTERNATIVE 0: NO CHANGE

Frequencies and Spans:

The HOP comes every 12 minutes on non-CU weekdays. On CU school days, it comes every 9 minutes, on average. Weekday evenings and weekends it comes every 18 minutes.

The span on service on weekdays is 15 hours; on Saturdays, 13 hours; and on Sundays and holidays, 8 hours. (Service runs later on all days, in the other Alternatives.)

Showing local and regional RTD, City of Boulder, and CU Routes.

Prevailing Midday Frequencies

The prevailing midday frequency is the typical interval between arriving buses at each stop.

-  0 - 15 minutes
-  0 - 15 minutes on CU school days
-  16 - 45 minutes (typically 30 minutes)
-  Regional routes (typically longer than 60 minutes, or limited daily trips)
-  CU routes
-  One-way service
-  Route continues at lower frequency

CU Routes

These routes are operated by CU and are only open to students and others affiliated with the university.

-  **Athens Court Shuttle**
AM/PM only, every 15 minutes.
-  **Will Vill**
Fall & Spring only, every 5 minutes.
-  **Discovery Express**
Every 15 minutes.

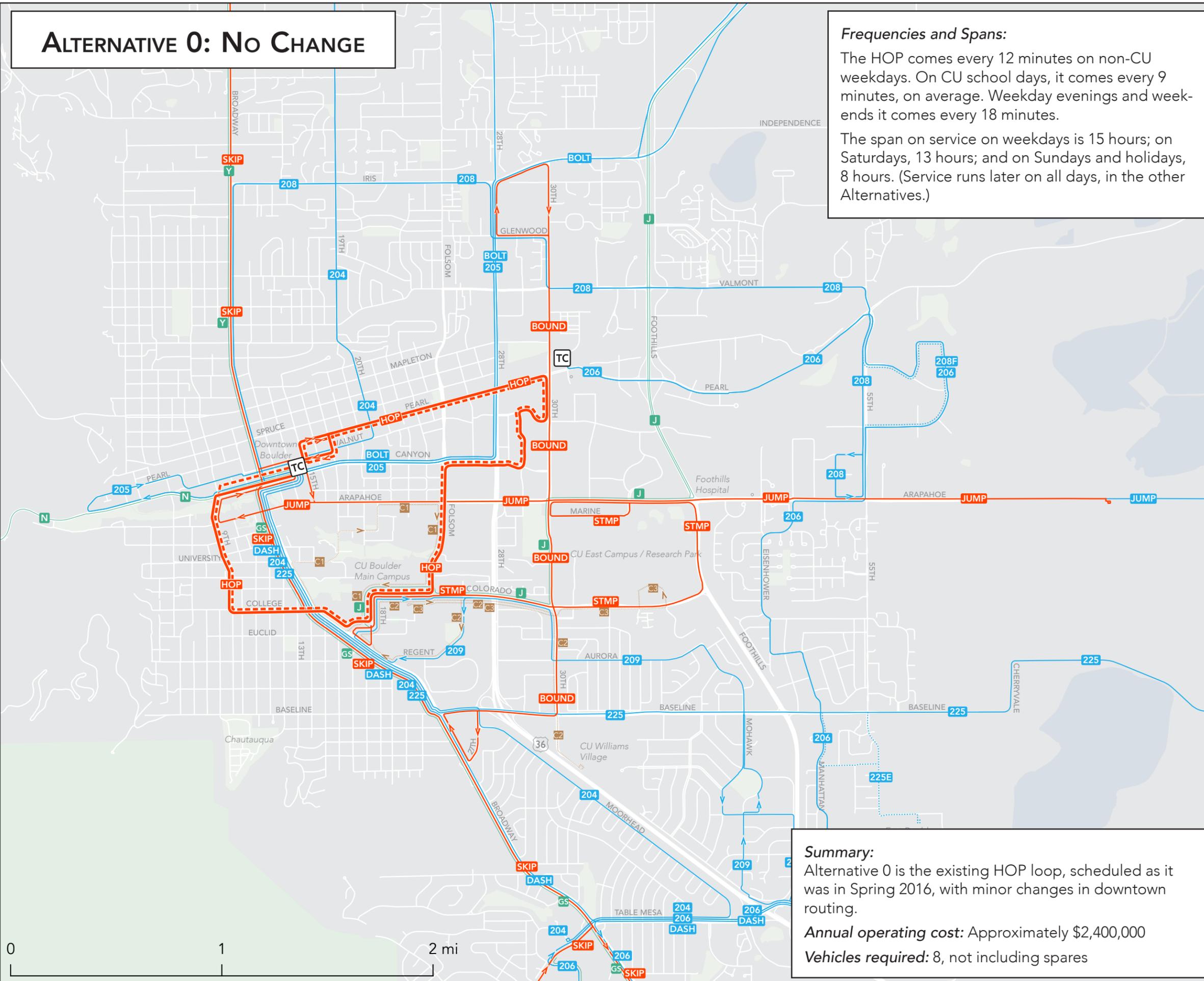
Summary:

Alternative 0 is the existing HOP loop, scheduled as it was in Spring 2016, with minor changes in downtown routing.

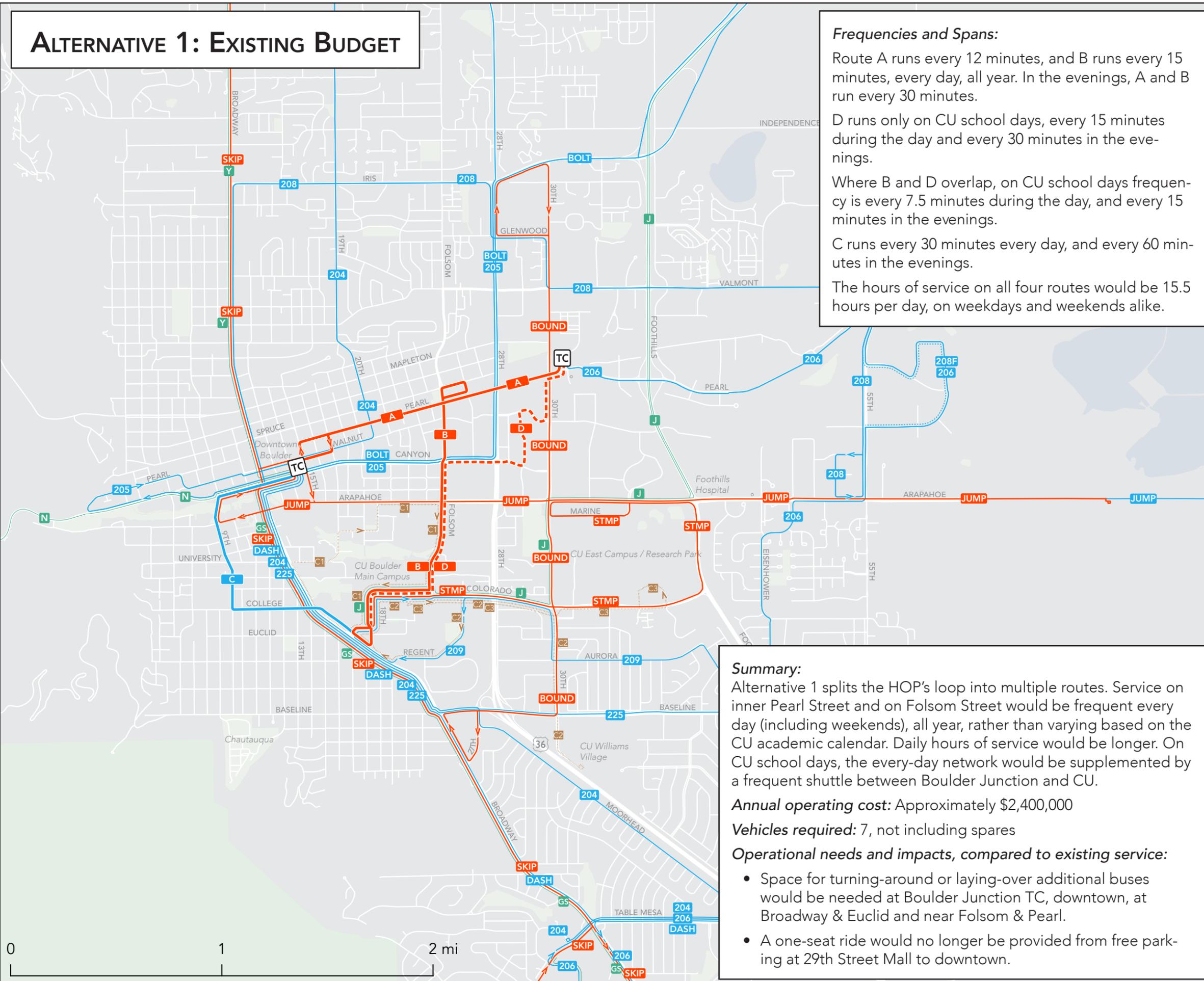
Annual operating cost: Approximately \$2,400,000

Vehicles required: 8, not including spares

-  Natural Area
-  Water
-  Boulder City Limits



ALTERNATIVE 1: EXISTING BUDGET



Frequencies and Spans:
 Route A runs every 12 minutes, and B runs every 15 minutes, every day, all year. In the evenings, A and B run every 30 minutes.
 D runs only on CU school days, every 15 minutes during the day and every 30 minutes in the evenings.
 C runs every 30 minutes every day, and every 60 minutes in the evenings.
 The hours of service on all four routes would be 15.5 hours per day, on weekdays and weekends alike.

Summary:
 Alternative 1 splits the HOP's loop into multiple routes. Service on inner Pearl Street and on Folsom Street would be frequent every day (including weekends), all year, rather than varying based on the CU academic calendar. Daily hours of service would be longer. On CU school days, the every-day network would be supplemented by a frequent shuttle between Boulder Junction and CU.
Annual operating cost: Approximately \$2,400,000
Vehicles required: 7, not including spares
Operational needs and impacts, compared to existing service:

- Space for turning-around or laying-over additional buses would be needed at Boulder Junction TC, downtown, at Broadway & Euclid and near Folsom & Pearl.
- A one-seat ride would no longer be provided from free parking at 29th Street Mall to downtown.

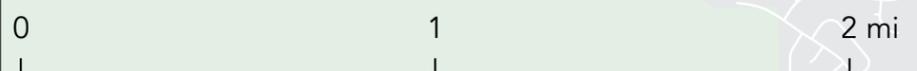
Showing local and regional RTD, City of Boulder, and CU Routes.

Prevailing Midday Frequencies
 The prevailing midday frequency is the typical interval between arriving buses at each stop.

- 0 - 15 minutes
- 0 - 15 minutes on CU school days only
- 16 - 45 minutes (typically 30 minutes)
- Regional routes (typically longer than 60 minutes, or limited daily trips)
- CU routes
- One-way service
- Route continues at lower frequency

- CU Routes**
 These routes are operated by CU and are only open to students and others affiliated with the university.
- C1 Athens Court Shuttle**
AM/PM only, every 15 minutes.
 - C2 Will Vill**
Fall & Spring only, every 5 minutes.
 - C3 Discovery Express**
Every 15 minutes.

- Natural Area
- Water
- Boulder City Limits



ALTERNATIVE 2: ADDITIONAL BUDGET

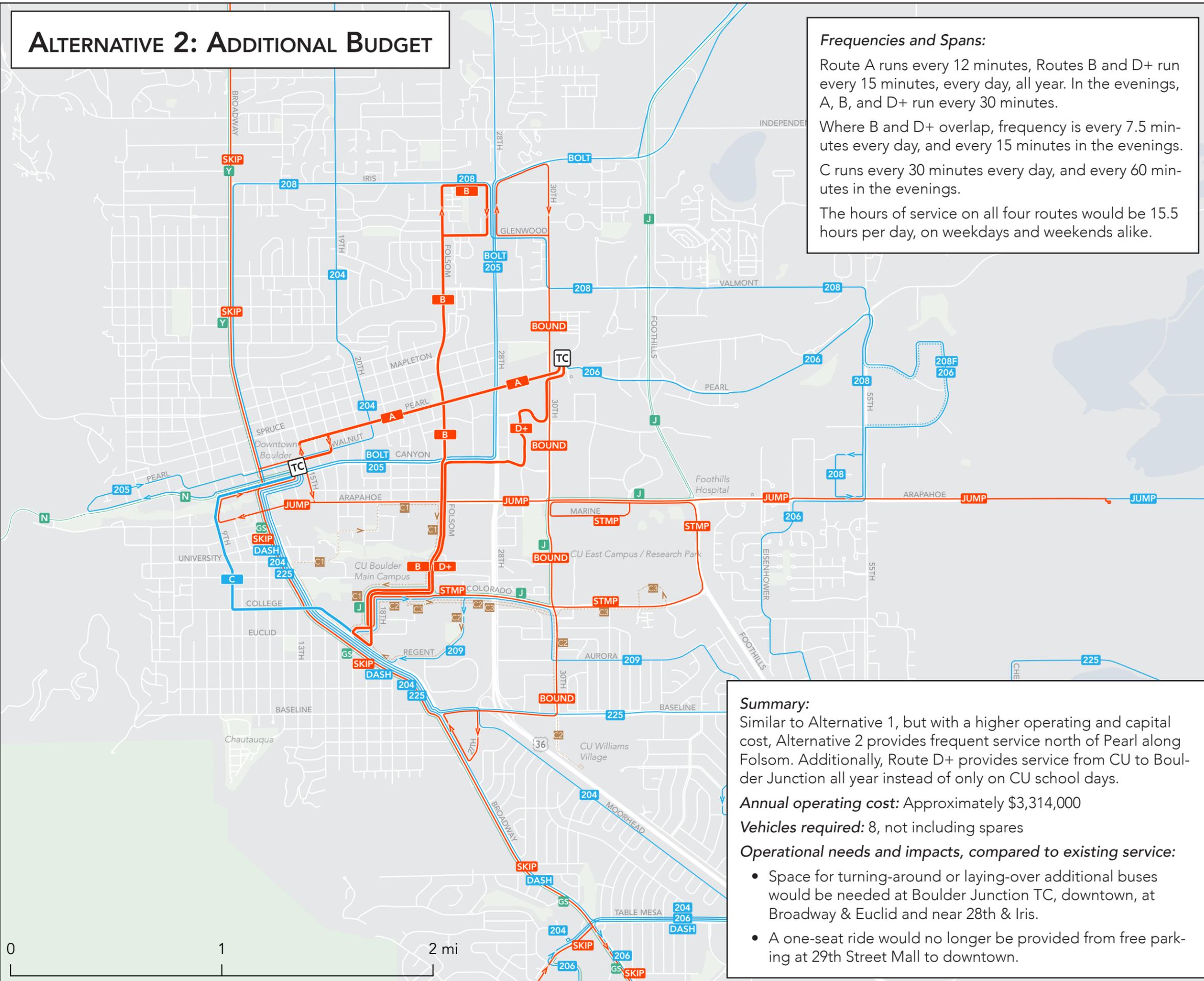
Frequencies and Spans:
Route A runs every 12 minutes, Routes B and D+ run every 15 minutes, every day, all year. In the evenings, A, B, and D+ run every 30 minutes. Where B and D+ overlap, frequency is every 7.5 minutes every day, and every 15 minutes in the evenings. C runs every 30 minutes every day, and every 60 minutes in the evenings.
The hours of service on all four routes would be 15.5 hours per day, on weekdays and weekends alike.

Showing local and regional RTD, City of Boulder, and CU Routes.

Prevailing Midday Frequencies

The prevailing midday frequency is the typical interval between arriving buses at each stop.

-  0 - 15 minutes
-  0 - 15 minutes on CU school days only
-  16 - 45 minutes (typically 30 minutes)
-  Regional routes (typically longer than 60 minutes, or limited daily trips)
-  CU routes
-  One-way service
-  Route continues at lower frequency



Summary:
Similar to Alternative 1, but with a higher operating and capital cost, Alternative 2 provides frequent service north of Pearl along Folsom. Additionally, Route D+ provides service from CU to Boulder Junction all year instead of only on CU school days.
Annual operating cost: Approximately \$3,314,000
Vehicles required: 8, not including spares
Operational needs and impacts, compared to existing service:

- Space for turning-around or laying-over additional buses would be needed at Boulder Junction TC, downtown, at Broadway & Euclid and near 28th & Iris.
- A one-seat ride would no longer be provided from free parking at 29th Street Mall to downtown.

CU Routes

These routes are operated by CU and are only open to students and others affiliated with the university.

-  **Athens Court Shuttle**
AM/PM only, every 15 minutes.
-  **Will Vill**
Fall & Spring only, every 5 minutes.
-  **Discovery Express**
Every 15 minutes.

-  Natural Area
-  Water
-  Boulder City Limits

ALTERNATIVE 3: EXISTING BUDGET

Attachment B Boulder Transit Network

Showing local and regional RTD, City of Boulder, and CU Routes.

Prevailing Midday Frequencies

The prevailing midday frequency is the typical interval between arriving buses at each stop.

-  0 - 15 minutes
-  0 - 15 minutes on CU school days only
-  16 - 45 minutes (typically 30 minutes)
-  Regional routes (typically longer than 60 minutes, or limited daily trips)
-  CU routes
-  One-way service
-  Route continues at lower frequency

Frequencies and Spans:

Route A runs every 12 minutes, and B runs every 15 minutes, every day, all year. In the evenings, A and B run every 30 minutes.

Where B and D overlap, on CU school days frequency is every 7.5 minutes during the day, and every 15 minutes in the evenings.

C runs every 30 minutes every day, and every 60 minutes in the evenings.

The hours of service on all four routes would be 15.5 hours per day, on weekdays and weekends alike.

Summary:

Alternative 3 is similar to Alternatives 1 and 2, but it includes changes to the Bound, Stampede and CU's C3 shuttle. This alternative would require more detailed analysis and planning among the City, VIA, RTD and CU.

Service on inner Pearl Street and on Folsom Street would be frequent every day (including weekends), all year, rather than varying based on the CU academic calendar. Daily spans of service would be longer. On CU school days, the every-day network would be supplemented by a frequent shuttle on Folsom between Arapahoe and Euclid.

The Bound would go a little farther, at its southern end, to CU campus. People riding the HOP or the Stampede from 30th to the center of CU campus could now use the Bound for that trip. The cost of operating the Bound would increase, but the Stampede would be shortened and its schedule harmonized with CU's C3 shuttle to cover that new cost.

Annual operating cost: Approximately \$2,300,000

Vehicles required: 6, not including spares

Operational needs and impacts, compared to existing service:

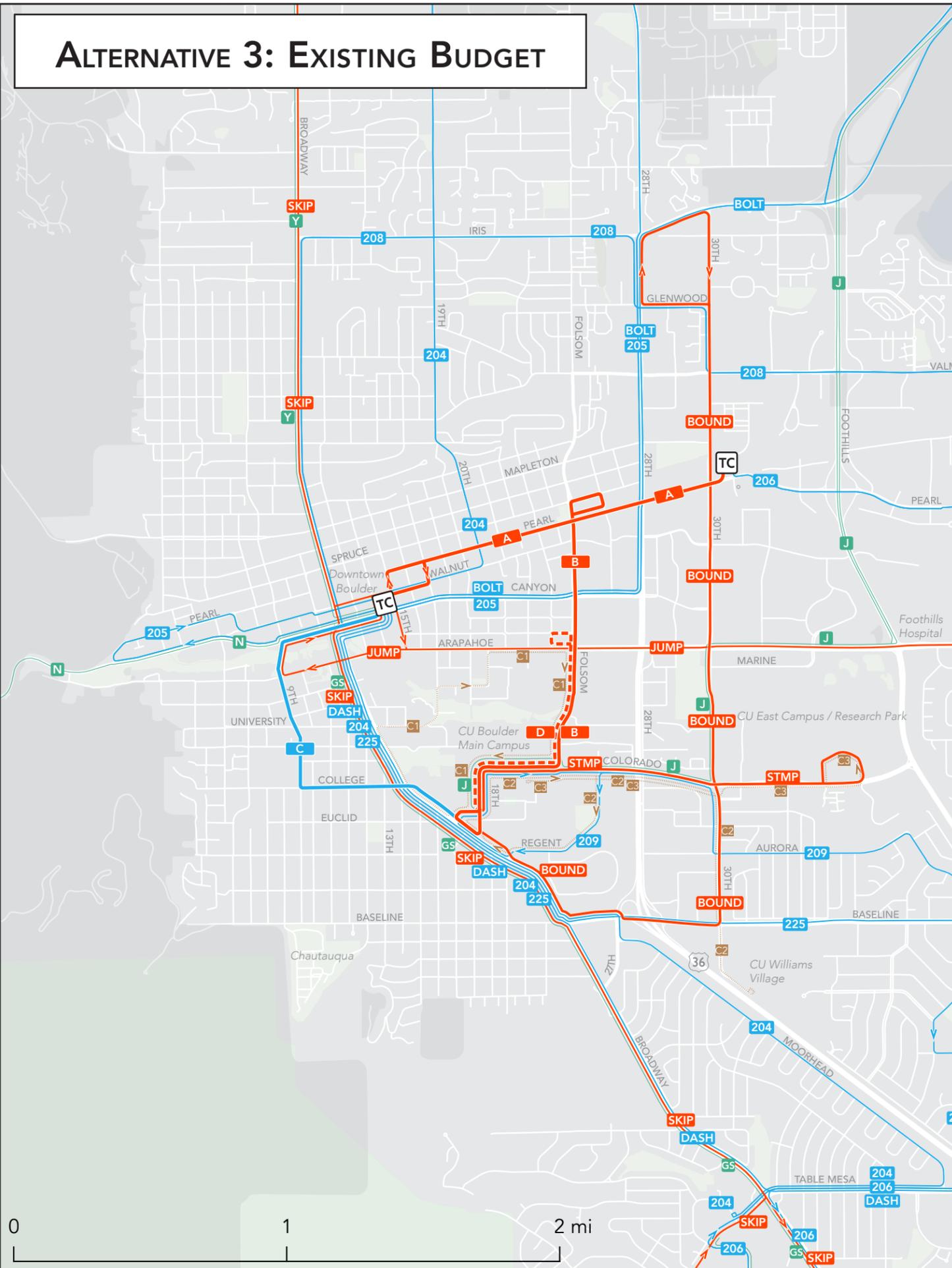
- All assumptions about the Bound, Stampede and C3 must be checked and analyzed with RTD and CU.
- Space for turning-around or laying-over additional buses would be needed at Boulder Junction TC, downtown, at Broadway & Euclid and near Folsom & Pearl.
- Transit would no longer pass through the *middle* of 29th Street Mall. However, the Bound would offer a one-seat-ride from the Mall to CU, and with a 1/4 mile walk Route A or the Jump would take people to downtown.

CU Routes

These routes are operated by CU and are only open to students and others affiliated with the university.

-  **Athens Court Shuttle**
AM/PM only, every 15 minutes.
-  **Will Vill**
Fall & Spring only, every 5 minutes.
-  **Discovery Express**
Every 15 minutes.

-  Natural Area
-  Water
-  Boulder City Limits



Summary of Draft Alternatives

Below is a summary of unique features for each draft alternative:

- **Alternative 0: No Change.**
 - Because it is a loop, all places served by the HOP receive the same frequency and span of service.
- **Alternative 1 – Constrained Budget**
 - The HOP is split into linear routes.
 - Frequent service is maintained on Pearl Street.
 - While the peak frequency on Pearl and Folsom Streets is not as high as with the current HOP, the frequency is more consistent throughout the week and the year. Also, total spans of service, and spans of frequent service, are longer each day.
 - North-south frequent service is added over a short distance on Folsom Street.
 - The diagonal trip from Boulder Junction or 29th Street Mall to CU could be made using the frequent grid with a transfer. However, during CU school days, a special shuttle makes this diagonal trip.
 - University Hill is served by a route running every 30 minutes, between downtown and CU. This is common to all of the following Alternatives.
 - The cost of this Alternative is very similar to 2016 HOP operating costs, though it requires one fewer bus in the fleet and would therefore save capital and maintenance costs.
- **Alternative 2 – Unconstrained budget**
 - This is very similar to Alternative 1, with these additions:
 - The diagonal route from Boulder Junction to CU runs everyday, all year and not just on CU-school-weekdays.
 - The north-south route on Folsom continues all the way to Iris Street.
 - As in Alternative 1, all of the routes have longer spans of service each day, week and year and longer spans of their most frequent service than the HOP does today.
 - The cost of Alternative 2 is \$1 million more than 2016 HOP operating costs, but requires the same number of buses.
- **Alternative 3: Network Changes, Constrained Budget**
 - This Alternative is much more complex than the others, and relies on as-yet-untested assumptions about RTD and CU bus operations.

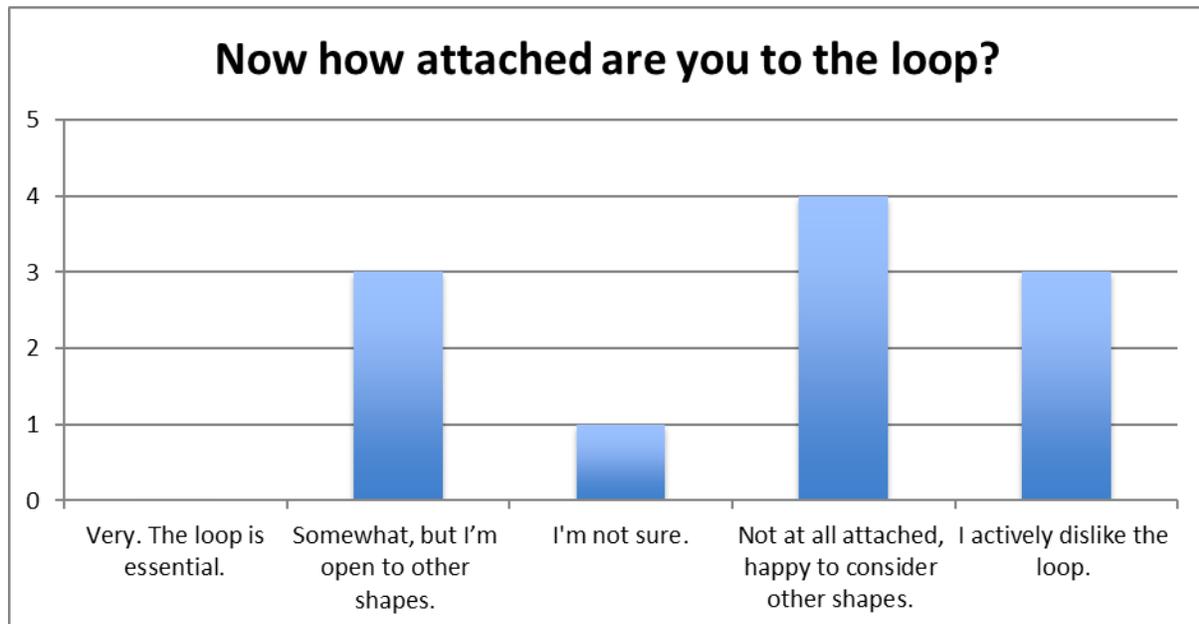
- The spans and frequencies of new routes are as described for Alternatives 1 and 2.
- To address the desire for a diagonal, "one seat ride" from places on 30th such as Boulder Junction, the 29th Street Mall and CU facilities into campus, we have altered the Bound. This may obviate the need for a special CU shuttle identified as "Route D" in other alternatives for many trips.
 - This change to the Bound also may obviate the need for the doubling-back of the Stampede. Eliminating this part of the Stampede could cover some of the cost of extending the Bound.
 - Once the Stampede is shortened, its route is very similar to CU's C3 shuttle. Harmonizing these two schedules may provide further savings.
- In short, there is a great deal of service converging on CU. Rethinking the network in this area may produce some savings, or new uniquely-useful services. This particular proposal is but one of many possibilities.
- Apart from the Bound, Stampede and C3 shuttle, this Alternative would cost slightly less to operate than the current HOP and would require only 6 buses. However, it is possible that the suggested changes to non-HOP services might require additional revenue hours or fleet.

Stakeholder Committee Input on Draft Alternatives

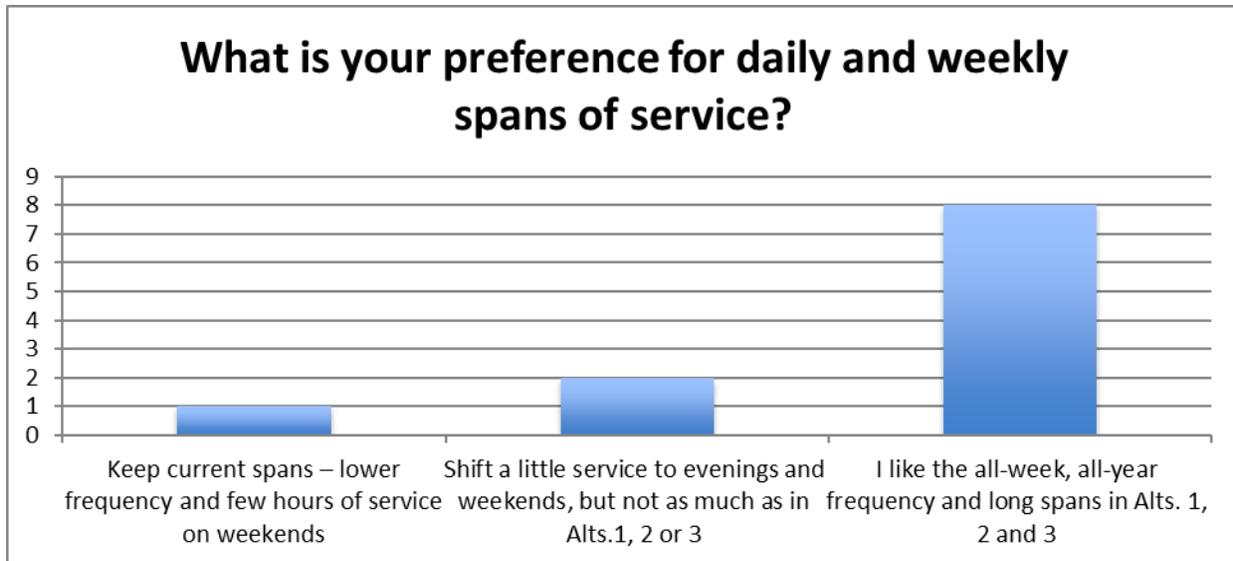
In September, we met with the Stakeholder Committee to review the set of draft alternatives. The stakeholders were also polled on their preferences regarding downtown routing and span of service, again on the importance of maintaining the loop, prioritization of the constrained alternatives, and prioritization for unfunded network routing ideas. The results from the polling are shown in the figures below.

Stakeholder Meeting #3 Polling Results

NOW how attached to are you to the loop?		
	Count	Percent
Very. The loop is essential.	0	0%
Somewhat, but I'm open to other shapes.	3	27%
I'm not sure.	1	9%
Not at all attached, happy to consider other shapes.	4	36%
I actively dislike the loop.	3	27%
Total	11	

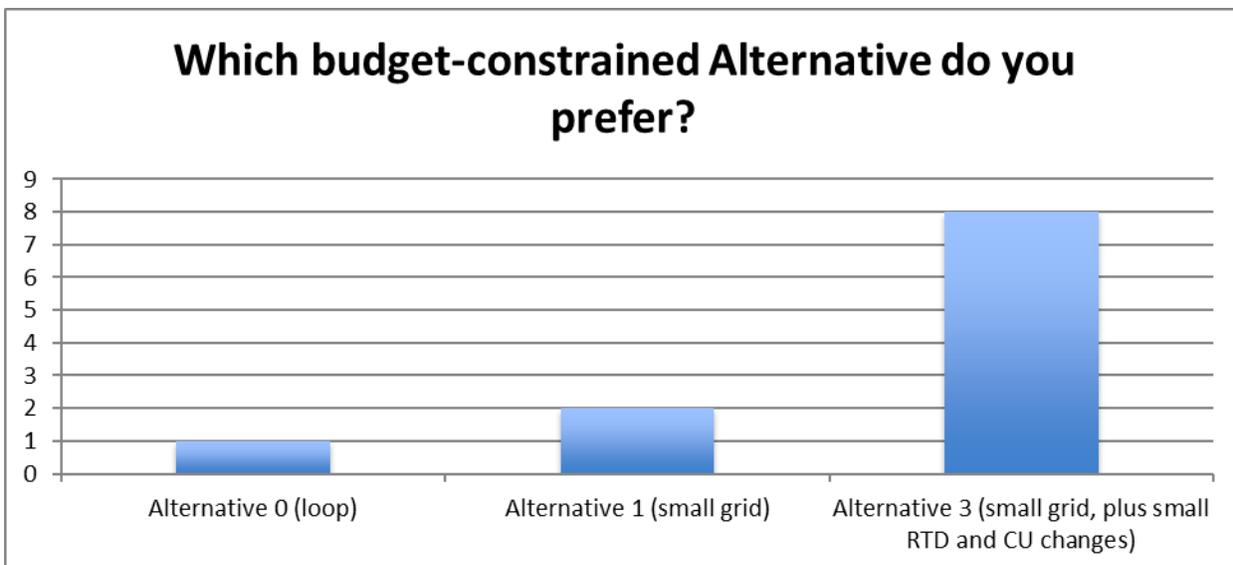


What is your preference for spans of service?		
	Count	Percent
Keep current spans – lower frequency and few hours of service on weekends	1	9%
Shift a little service to evenings and weekends, but not as much as in Alts.1, 2 or 3	2	18%
I like the all-week, all-year frequency and long spans in Alts. 1, 2 and 3	8	73%
Total	11	

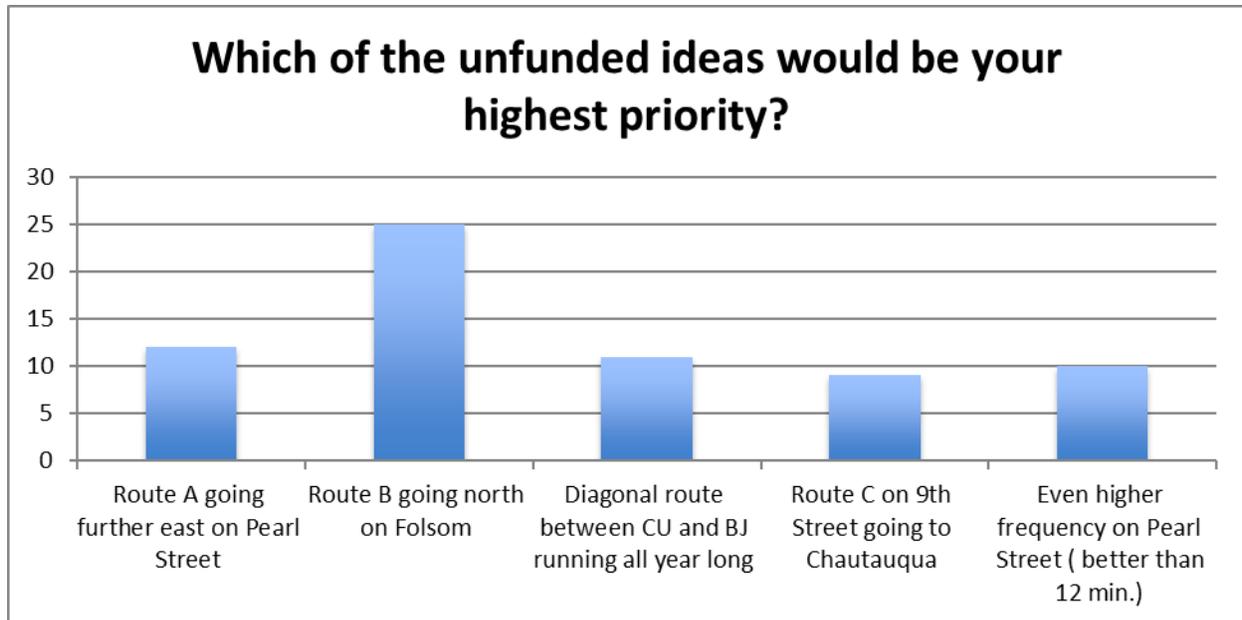


Of Alternatives 0, 1 and 3, which do you prefer?

	Count	Percent
Alternative 0 (loop)	1	9%
Alternative 1 (small grid)	2	18%
Alternative 3 (small grid, plus small RTD and CU changes)	8	73%
Total	11	



Which of the unfunded ideas would be your highest priority?	
	Ranking
Route A going further east on Pearl Street	12
Route B going north on Folsom	25
Diagonal route between CU and BJ running all year long	11
Route C on 9th Street going to Chautauqua	9
Even higher frequency on Pearl Street (better than 12 min.)	10
<i>*(1st choices got 3 points; 2nd choices got 2 points; 3rd choices got 1 point)</i>	





Attachment D:

EAST ARAPAHOE TRANSPORTATION PLAN Planning Update

N NELSON
NYGAARD

FOX TUTTLE HERNANDEZ
TRANSPORTATION GROUP

DRAFT

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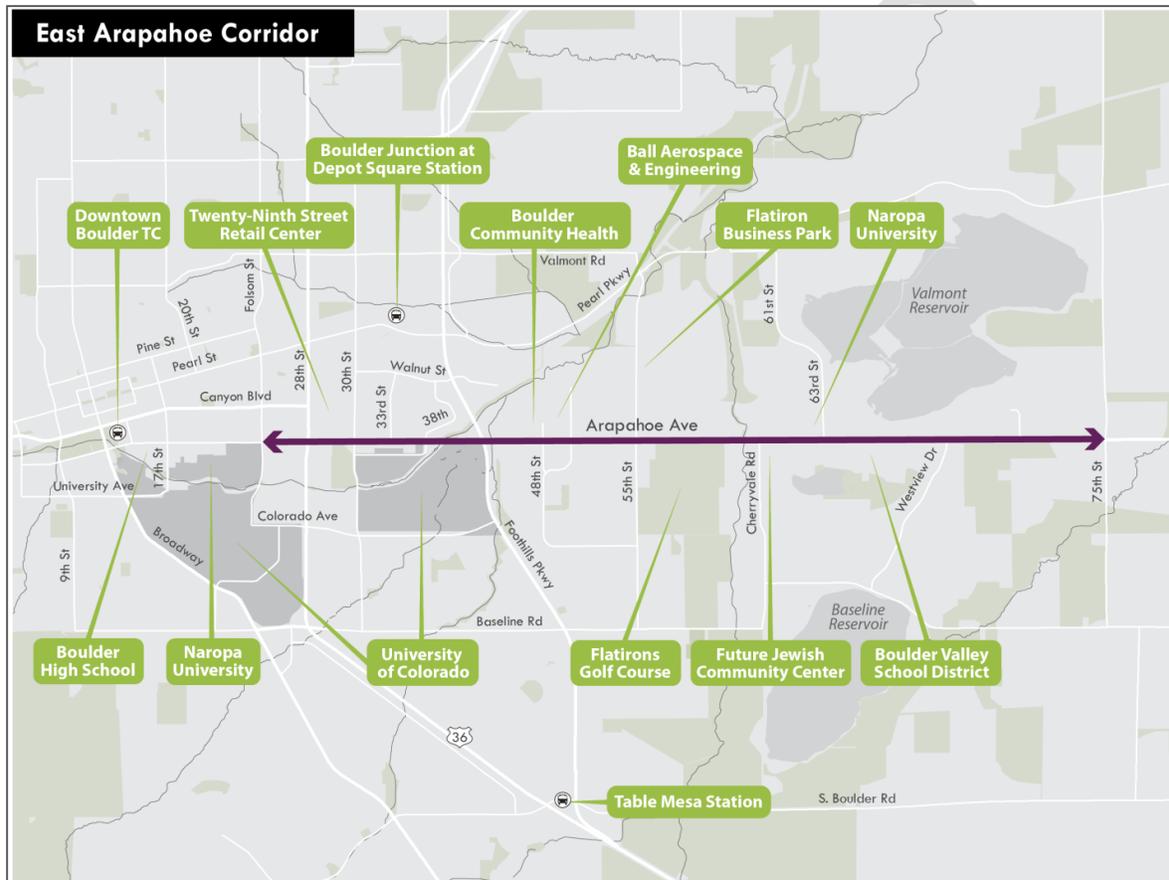
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EAST ARAPAHOE TRANSPORTATION PLAN UPDATE

The East Arapahoe Transportation Plan planning process is well underway and the project team is in close coordination with the BVCP Update to consider future land use scenarios and the integration of these scenarios with potential transportation improvements under consideration. Figure 1 illustrates the East Arapahoe Transportation Plan study area between the Downtown Boulder Transit Center and 75th Street.

Figure 2: Study Area



The project team is currently in the process of working with the newly established Community Working Group to narrow a long list of potential design and management elements being considered to achieve the goals of the plan. Design elements are physical improvements along the corridor such as enhanced landscaping and roadway configurations. Management elements refer to strategies that influence people's time, route, or mode of travel such as transit service, shared use mobility, and parking management. The project team will carry forward for further consideration those elements that align with the project purpose and goals and meet basic feasibility, cost, or safety criteria.

The next steps in the planning process will be to engage the broader community and local and regional agency partners in developing and refining a set of alternatives – or packages of design and management elements – for more detailed evaluation, comparison and refinement.

SUMMARY OF COMMUNITY WORKING GROUP MEETINGS & PLANNING PROCESS

Since the last full update to City Council on the East Arapahoe Transportation Plan at the December 8, 2015 Study Session, staff has convened a Community Working Group (CWG) of twenty-two members who have met three times to date. The working group, which represents different interests and perspectives, is providing input and feedback to the project team during the East Arapahoe planning process. Topics discussed in each CWG meeting are summarized below:

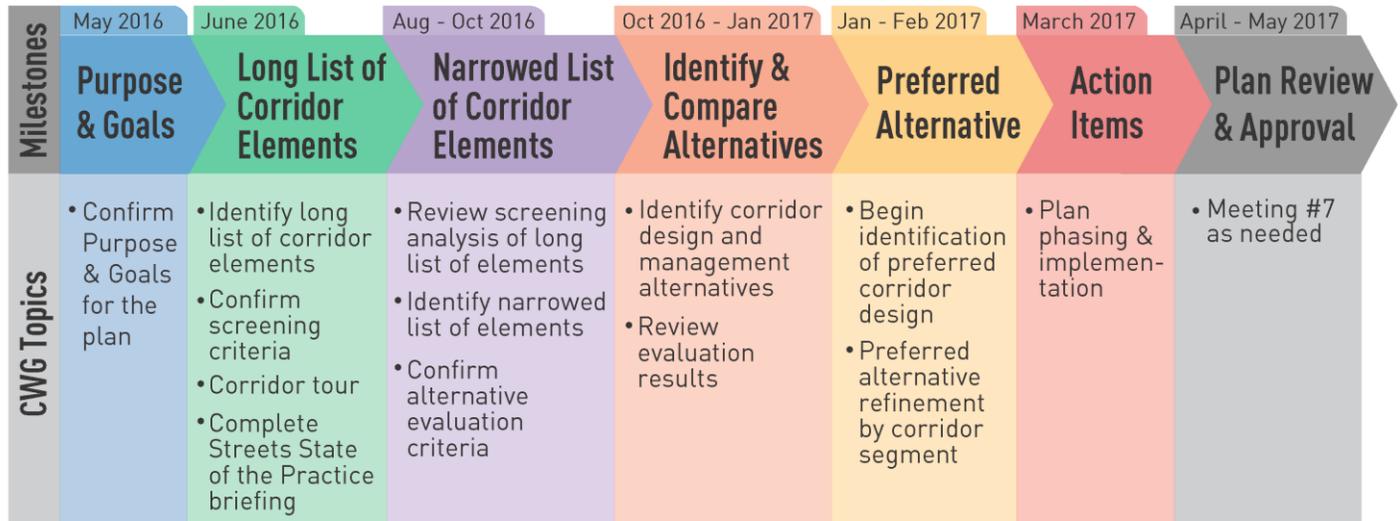
- The first CWG meeting, held on May 5, 2016 was an opportunity to introduce the project, the role of the working group and for the working group members to engage in small group discussions about the purpose and goals of the plan.
- At the second CWG meeting, held on June 15, 2016, city staff presented and obtained input on the Plan Purpose, Goals and Objectives, which has been revised based on input from the first working group meeting. The project team also provided the working group with information about current conditions in the corridor. Much of the meeting discussion centered on best practices for multimodal corridor planning and obtaining input from the working group on the wide range of transportation design and management elements to be considered for the East Arapahoe corridor.

A corridor tour was held in conjunction with second meeting. Members of the working group walked many portions of the corridor, pointing out and discussing potential issues and opportunities related to current conditions such as vehicle speeds, noise, pedestrian crossings, bicycle travel, landscaping and urban design, sidewalks and multiuse paths and transit stops and service.

- The third CWG meeting, held on August 3, 2016, provided an opportunity for the working group to review and provide feedback on an initial screening of design and management elements. Discussion and key pad polling resulted in the elimination of some potential design ideas that had been proposed by the public for the corridor.
- At the fourth CWG meeting, held on October 6, 2016, the working group helped the project team define distinct character districts within the corridor and potential design and management elements appropriate for each district.

Figure 2 illustrates the planning process and schedule, as well as Community Working Group meeting topics.

Figure 2: Schedule & Process Diagram



PLAN PURPOSE, GOALS AND OBJECTIVES

City staff has collaborated with the Community Working Group, TAB, City Council and other stakeholders to establish a Plan Purpose, Goals and Objectives. The Purpose, Goals and Objectives reflect public input received in prior phases of the planning process and expand on and refine the guiding principles which had previously been developed as part of Envision East Arapahoe. The Goals and Objectives will serve as the framework to guide the development of the East Arapahoe Transportation Plan, including the development and analysis of alternative solutions to multimodal transportation needs along the corridor, though recognizing the unique needs of each segment.

Plan Purpose

The Plan Purpose has been crafted as a narrative that describes why the city is undertaking this planning process and what the long term plan aims to accomplish:

Today, the East Arapahoe Corridor is one of the city's busiest regional travel corridors. As we plan for the future, exponential growth in surrounding communities will likely place additional demands on the corridor's existing transportation system. From people commuting into Boulder for work or school, traveling to Boulder for healthcare services, or simply accessing recreational and shopping amenities – forecasted regional transportation demands on the East Arapahoe Corridor will change how the corridor functions today.

Coupled with increased regional transportation demand, are the changing local travel needs for people working, living and accessing services within the East Arapahoe corridor itself. East Arapahoe is no longer seen as a “pass through” corridor for in-commuters; and has, in fact, become one of Boulder's largest employment centers. People are looking for safe and convenient ways to travel between destinations along Arapahoe and other areas of the city. From students

traveling between university campuses, to employees wanting to grab lunch – the need for people to move safely and conveniently via walking, biking, transit, ride sharing, driving plus moving goods and services changes how we think about travel and transportation options in this transitioning area of the city.

Recognizing these changing regional and local conditions, the East Arapahoe Transportation Plan is a long-range plan that considers a number of potential transportation improvements within the East Arapahoe corridor, including safety for people using all modes, walking and biking enhancements, improved regional and local transit, efficient vehicular travel, as well as urban design features that work hand in hand with mobility improvements to truly transform the corridor. As East Arapahoe becomes more of a destination, people using all modes are looking for a more comfortable experience – with features that are scaled for people and create a place that is attractive to both travel through and spend time in.

Importantly, transportation improvements will support the goals and objectives of the Boulder Valley Comprehensive Plan, the Transportation Master Plan (TMP), Access Management and Parking Strategy (AMPS), and the city’s Climate Commitment and Sustainability Framework.

Plan Goals and Objectives

Each of the goals and objectives listed below support the Boulder Valley Comprehensive Plan, the Boulder TMP and the city’s Sustainability Framework. They are categorized by the 2014 TMP Focus Areas – including Complete Streets, Regional Travel, Transportation Demand Management (TDM), Funding and Integration with Sustainability Initiatives, and are aligned with the TMP objectives. While organized by Focus Area, each goal and associated objective is interrelated and mutually supporting to achieve the desired outcome.

Goal 1. Complete Streets: Provide Complete Streets in the East Arapahoe corridor that offer people a variety of safe and reliable travel choices.

- Objective 1.a. Provide safe travel for people of all ages and stages of life using all modes along the East Arapahoe corridor.
- Objective 1.b. Improve the ease of access, comfort and experiences for people walking in the East Arapahoe corridor.
- Objective 1.c. Broaden the appeal of bicycling along the East Arapahoe corridor to people of all ages and bicycling abilities.
- Objective 1.d. Make riding transit a convenient and practical travel option in the East Arapahoe corridor.
- Objective 1.e. Move drivers efficiently through the East Arapahoe corridor.

Goal 2. Regional Travel: Increase the number of person trips the East Arapahoe corridor can carry to accommodate growing local and regional transportation needs.

- Objective 2.a. Improve local travel options within the East Arapahoe corridor for residents, employees, and visitors.
- Objective 2.b. Improve regional travel options between Boulder and communities to the east for work and other regional trips, including access to health care facilities.

Goal 3. Transportation Demand Management (TDM): Promote a more efficient use of the transportation system and offer people travel options within the East Arapahoe corridor.

- Goal 3.a. Improve “first-and-last-mile” connections to help people conveniently and safely walk, bike, or make shorter car trips to and from transit.
- Goal 3.b. Promote the use of multiple transportation options and TDM programs in East Boulder by residents and workers (examples include EcoPass programs, shared use mobility and parking management).

Goal 4. Funding: Deliver cost-effective transportation solutions for the East Arapahoe corridor that can be phased over time.

- Objective 4.a. Coordinate with public and private entities, including adjacent land owners and local and regional agency partners, to implement cost-effective transportation improvements (including capital, operating and maintenance investments).

Goal 5. Sustainability Initiatives: Develop transportation improvements in the East Arapahoe corridor that support and integrate with the Boulder Valley Comprehensive Plan and Boulder’s Sustainability Framework (*desired outcomes include a community that is Safe, Healthy & Socially Thriving, Livable, Accessible & Connected, Environmentally Sustainable, and Economically Vital Community and provides Good Governance*).

- Goal 5.a. Reduce greenhouse gas (GhG) emissions and air pollution from vehicle travel within the East Arapahoe corridor.
- Goal 5.b. Improve travel options that promote public health for residents and workers along the East Arapahoe corridor.
- Goal 5.c. Provide access to affordable transit and other travel options to low- and moderate-income residents and workers along the East Arapahoe corridor.
- Goal 5.d. Preserve and enhance economic vitality in the East Arapahoe corridor, working with Boulder businesses.

INITIAL SCREENING OF CORRIDOR DESIGN & MANAGEMENT ELEMENTS

Between June and August 2016, the project team screened a long list of potential corridor design and management elements that can help achieve the stated purpose and goals of the East Arapahoe Transportation Plan. The design and management elements were identified based on national and international best practices, local and regional plans related to the East Arapahoe corridor, previous technical work in this corridor, TAB and City Council input, public and stakeholder outreach completed prior to the formation of the Community Working Group, and input received at the second working group meeting in June 2016.

In coordination with the Community Working Group members at the third meeting in August 2016, the project team conducted an initial “screening” of the long list of potential corridor design and management elements. The purpose of the screening is to eliminate elements that are not aligned with the project purpose and goals or do not meet basic feasibility, cost, or safety criteria. This is the first step in a multi-stage process to develop and refine a set of alternatives,

or packages of design and management elements, that can help to achieve the stated purpose and goals for the corridor.

Figure 3 summarizes the results of the initial screening. The shading of the element indicates the recommendation as follows:

Recommend moving forward for consideration
Recommend using in limited circumstances
Recommend removing from consideration

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EAST ARAPAHOE TRANSPORTATION PLAN | Planning Update
City of Boulder

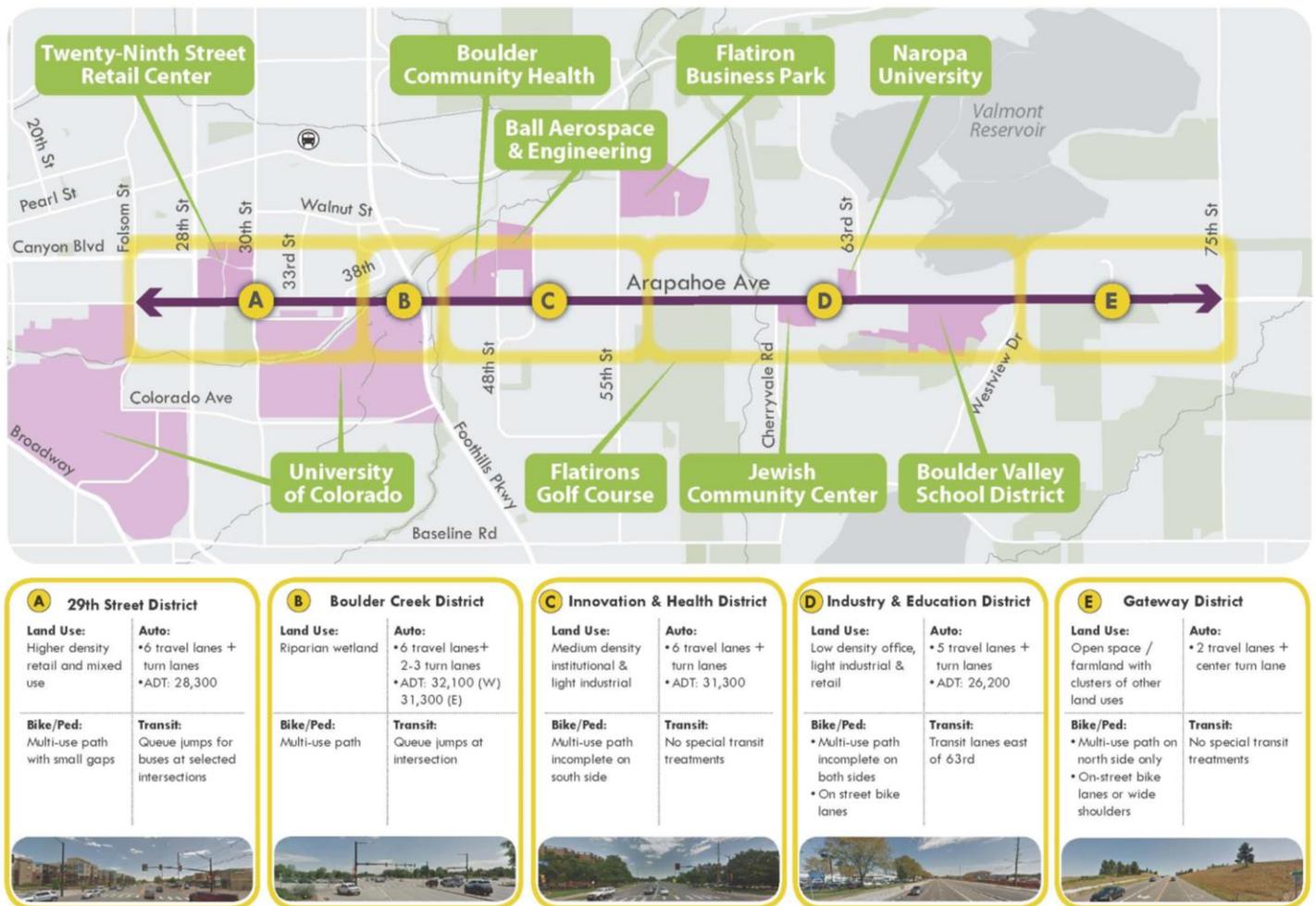
Figure 3: Summary of Screening Results

Bike/Pedestrian/Streetscape		Transit and Transportation Demand Management (TDM)		Vehicular	
S1	Additional crossings	T1	Side running bus in mixed traffic	V1	Three general purpose travel lanes per direction (maintain existing number of lanes)
S2	Intersection enhancements	T2	Enhanced Bus (similar to BRT but without dedicated lanes)	V2	Two general purpose travel lanes per direction with one lane repurposed for enhanced transit (and/or pedestrian, bicycle and/or streetscape enhancements)
S3	Multi-use path (off-street bike facility; shared space)	T3	Bus Rapid Transit (side-running in Business Access and Transit Lane)	V3	Three general purpose travel lanes with an additional transit lane per direction
S4	Enhanced multi-use path (e.g., delineation between bikes and pedestrians)	T4	Bus Rapid Transit (center running in dedicated lanes)	V4	Adding general purpose lanes (east end of corridor)
S5	Shared travel lanes with pavement markings (sharrows)	T5	Streetcar	V5	Reversible traffic lane (zipper lane)
S6	Bike lanes	T6	Light rail transit	V6	Wider general purpose travel lanes
S7	Buffered bicycle lanes	T7	Commuter rail	V7	Narrower general-purpose travel lanes (subject to working with CDOT)
S8	Protected bicycle lanes	T8	Peak-only exclusive transit lanes	V8	High-occupancy vehicle (HOV) lanes
S9	Shared bus & bike lane (11-12' lane that allows bus and bikes)	T9	Better information and timed transfers	V9	Managed lanes (Express lanes)
S10	Amenity zone features (lighting, planters, bus shelters, benches, public art, etc.)	T10	Real-time, app-based information	V10	Signal timing adjustments
S11	Landscaping	T11	Expanded EcoPass	V11	Reduce posted speed limit (assumes reduction of 45 mph segments to 35 mph)
S12	Public art	T12	Reversible transit lane	V12	Access management (assumes closing some driveways and converting parking lots to shared use/access)
S13	Gateway features	T13	Improved transit amenities	V13	Roundabout
		T14	Park and rides (assumed to be edge or satellite parking)	V14	Grade separated interchange (Foothills & Arapahoe)
		T15	Parking management	V15	Speed humps
		T16	First/last-mile connections	V16	Tunnel
		T17	Shared use mobility		

EAST ARAPAHOE CHARACTER DISTRICTS

In the current phase of the planning process, the project team is working with the Community Working Group to define distinct character districts along the corridor. Moving forward, these districts will be used as a framework for considering which transportation design and management elements could meet the specific needs and desired community vision for each district (or segment) of the corridor. Packages of design and management elements will be developed for each character district. Figure 1 illustrates these districts.

Figure 4: East Arapahoe Character Districts



NEXT STEPS

Upcoming activities for the East Arapahoe Transportation Plan include the following:

- Conduct community outreach events in November 2016 to obtain input and feedback on the results of the initial screening and character districts.
- Collaborate with the Community Working Group in December 2016 to identify alternatives (packages of design and management elements) for detailed evaluation and comparison in Winter 2016/17. Continue coordination with Boulder County SH 7 Study.
- Conduct community outreach events in December 2016 to obtain input and feedback on the alternatives for evaluation.
- Seek City Council input of selection of preferred alternative in Spring 2017.
- Continue on-going coordination with multi-departmental staff team, including collaboration with the Boulder Valley Comprehensive Plan update process, as well as with Boulder County, Colorado Department of Transportation, Regional Transportation District, and other agency partners.
- Include connection with BVCP scenario planning process as well as coordination with SH7 regional BRT study by Bo County. Share progress by the Community Working Group (CWG) and narrowed range of elements remaining, seek council input and share next steps and when we will be back at council for selection of preferred alternative.

POLICY AGENDA

US36 Mayors and Commissioner Coalition 36 Commuting Solutions

Approved on Thursday, September 8, 2016

The U.S. 36 Mayors and Commissioners (“MCC”) supports federal, state and regional policy that is consistent with the positions identified in this Policy Agenda. These positions are mostly informed by the 2014 consensus achieved during the Northwest Area Mobility Study (NAMS) which was considered a realistic and equitable approach to furthering the will of the voters that in 2004 approved the FasTracks ballot measure. The agreement was captured in an April 7, 2014 “NAMS Local Stakeholder Consensus Document” (**Attachment A**) which should be read in conjunction with this Policy Agenda in order to understand the specifics on funding sources, projects and the timing and order of priority in which they are each supported.

The Policy Agenda provides representatives of the MCC with the authority to advocate on behalf of the coalition for the stated positions as opportunities arise before legislative, regulatory or administrative bodies and individual leaders. Any potentially controversial or high-profile policy communication made on behalf of the MCC should receive prior-approval from the full MCC, when possible. Regardless, all such communications should subsequently be brought to the attention of the full MCC at the earliest opportunity.

The Policy Agenda is approved by each of the individual governing bodies of the members that make up the MCC. It may be revisited and revised at any time to reflect changing circumstances or to provide specific interpretation of these positions as they apply to any one policy question.

- **Arterial Bus Rapid Transit (BRT)/ Enhanced Bus Service Projects** - Seek non-FasTracks funding and support for capital and operating improvements necessary to implement an arterial BRT/Enhanced Bus Service network, including supportive multimodal system enhancements. State Highway 119 from Longmont to Boulder is the highest priority arterial BRT corridor. The remaining corridors, listed below, should be implemented based on further refinement of regional priorities, project scopes funding availability and leveraging opportunities:
 - State Highway 7 connecting North I-25/North Metro Park-n-Ride/Northglenn, Broomfield, Erie, Lafayette and Boulder
 - State Highway 287 connecting Longmont, Lafayette, Erie and Broomfield to the US 36 Corridor
 - South Boulder Road connecting Lafayette and Louisville to Boulder
 - 28th Street/Broadway (connecting US 36 BRT and South Boulder Road BRT to Boulder Junction/14th & Walnut)
 - Improved transit connection from Louisville/Lafayette/Superior/Broomfield to US 36 via SH 42/95th Street
 - 120th Avenue between Broomfield Park-n-Ride and Adams County Government Center

POLICY AGENDA

US36 Mayors and Commissioner Coalition 36 Commuting Solutions

Approved on Thursday, September 8, 2016

- **Northwest Rail** – Support full completion of the Northwest Commuter Rail Project to Longmont.
 - Support creative and alternative rail implementation strategies (including level of service phasing) as circumstances effecting feasibility, such as change in BNSF position, costs, ridership, and funding sources, evolve.
- **I-25 Bi-Directional Managed Lanes** - Seek funding and support for the construction of additional managed lanes between US 36 and downtown Denver to facilitate bi-directional service to benefit the broader region (both North I-25 and US36 connections to/from Denver) and interim measures, including bus on shoulder service.
- **Managed Lanes** – Support managed lanes as a practical solution for improving mobility by providing viable travel options in congested corridors. Managed lanes should result in regulation of demand to ensure choices for the traveler beyond the single occupancy vehicle by providing for the option of travel by bus and free or discounted access to high occupancy vehicles (“HOVs”), as well as allow pricing to help manage corridor performance, such as dynamic, variable-priced tolls linked to congestion.
 - Support the free-flowing operation of managed lanes while opposing the imposition of arbitrary deadlines for converting from HOV-2 to HOV-3 not tied to either protecting performance of these lanes or to previously-executed agreements.
 - Support funding for education and incentives to promote full utilization of the HOV lanes.
 - Support increased transparency and public involvement in decisions to create future managed lanes, especially those involving private partners.
 - As a general policy, support requirement that any significant new highway (freeway/expressway) lane-capacity (public or private) built with state or federal funds be required to be managed (priced/tolled) to maximize the person-carrying capacity of the facility and to encourage free HOV and transit usage unless reasonable exceptions apply.
- **Rail/Transit Stations** – Support funding and implementation of station investments and First and Final Mile infrastructure and programs that serve both BRT and future rail.
- **Railroad Crossing Quiet Zones** – Support flexibility in, and funding for implementation of, quiet zones along the length of the Northwest Corridor, with a priority on crossings that benefit the greatest number of residents in the most cost effective manner.

POLICY AGENDA

US36 Mayors and Commissioner Coalition 36 Commuting Solutions

Approved on Thursday, September 8, 2016

- **Transportation Funding** – Support state or regional transportation funding that includes a commitment for a substantial percentage of multimodal (i.e., transit, bicycle and pedestrian) investment (e.g., MCC supported MPACT 64’s previous proposal to allocate 33 percent of new statewide transportation funding for transit purposes).
 - Support new bonding or other borrowing for transportation projects only if there are new or existing designated sources of funding identified to pay off those obligations.

- **US 36 Bus Rapid Transit System** – Seek funding and support for the full implementation of the US 36 BRT system as committed to in the 2004 FasTracks ballot measure, the US 36 Environmental Impact Statement and Record of Decision, the TIGER and TIFIA funding applications and additional elements approved by the RTD Board on September 17, 2013, including relocation of the Church Ranch boarding platforms, improvements to the Westminster Center pedestrian bridge and structured parking in Broomfield.
 - Support Flatiron Flyer BRT service improvements and station area enhancements to more fully serve existing and new Transit Oriented Development in each of the US36 MCC communities.
 - Seek funding for implementation of the US 36 First and Final Mile study recommendations that provide a tangible benefit to residents, employees and commuters in the corridor.
 - Support RTD authority to authorize bus-on-shoulder use on limited corridors to expedite local bus service.

NAMS LOCAL STAKEHOLDER CONSENSUS DOCUMENT

US36 Mayors and Commissioner Coalition 36 Commuting Solutions

April 7, 2014

The local stakeholders thank RTD and our other regional partners for working with us through Northwest Area Mobility Study (NAMS) on this challenging consensus process. Collectively, we believe that the priorities reached through this consensus approach are realistic and equitable, while respecting the will of the voters in 2004.

Local stakeholders actively participating in the NAMS have spent significant effort working together to develop a path forward on transit investments in the Northwest Corridor. Following much discussion, debate and deliberation we have come to a consensus predicated on the information received to date through the NAMS that regional transit operating and infrastructure improvements in the Northwest region should include the following elements.

- **Completion of the US 36 Bus Rapid Transit (BRT) System:** Completion of the US 36 BRT system as committed in the 2004 FasTracks, US 36 Environmental Impact Statement and Record of Decision, TIGER and TIFIA funding applications and additional elements approved by the RTD Board on September 17, 2013, including relocation of the Church Ranch boarding platforms, improvements to the Westminster Center pedestrian bridge and structured parking in Broomfield. Local stakeholders also support implementation of the US 36 First and Final Mile study recommendations that provide a tangible benefit to residents, employees and commuters in the corridor. In order to leverage these capital improvements and show a true net FasTracks benefit to the corridor, service enhancements and a robust operating plan that includes increased bus frequencies must be implemented.
- **Arterial BRT/ Enhanced Bus Service Projects:** Arterial BRT/Enhanced Bus Service system capital and operating improvements should be implemented as soon as feasible. No FasTracks funds should be utilized for these arterial BRT investments.
 - State Highway 119 from Longmont to Boulder is the highest priority arterial BRT corridor.
 - The remaining corridors should be implemented based on further refinement of regional priorities, project scopes funding availability and leveraging opportunities.
 - State Highway 7 connecting North I-25/North Metro Park-n-Ride/Northglenn, Broomfield, Erie, Lafayette and Boulder
 - State Highway 287 connecting Longmont, Lafayette and Broomfield to the US 36 Corridor
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 - Improved transit connection from Louisville/Lafayette/Superior/Broomfield to US 36 via SH 42/95th Street.
 - 120th Avenue between Broomfield Park-n-Ride and Adams County Government Center

- **I-25 Bi-Directional Managed Lanes:** Construction of two additional managed lanes between US 36 and downtown Denver to facilitate bi-directional service that will benefit the broader region (both North I-25 and US36 connections to Denver). Identified interim measures should be implemented as quickly as possible, including bus on shoulder service and downtown Denver circulation improvements, with long term measures to follow.
- **Railroad crossing quiet zones** should be implemented along the length of the Northwest Corridor, with a priority on crossings that benefit the greatest number of residents in the most cost effective manner.
- **Early Action Rail/Transit Stations:** Station investments and US 36 First and Final Mile infrastructure and programs that serve both BRT and future rail should be implemented. \$17 million has already been identified from EAGLE P3 savings for the Downtown Longmont station that will serve both BRT and future rail. Similar investments should be made at other stations that will serve both future rail and BRT/Enhanced Bus Service such as Boulder Transit Village, Gunbarrel, East Arapahoe, Downtown Louisville, Broomfield at Flatirons Crossing and 116th, and Westminster at 104th /Church Ranch and at 88th Avenue.
- **Northwest Rail:** The local stakeholders recognize the commitment made to voters in the 2004 FasTracks election and the ongoing public expectation that rail will be built in the corridor from FasTracks revenue. Local stakeholders support full completion of the Northwest Commuter Rail Project to Longmont. Considering costs, lack of revenues, ridership projections, uncertainty with Burlington Northern Santa Fe (BNSF) and other challenges, completion of Northwest Rail is a longer term goal. Local stakeholders support periodically exploring creative and alternative rail implementation strategies (including phasing) as circumstances effecting feasibility, such as change in BNSF position, costs, ridership, and funding sources, evolve.

Re-evaluation of Priorities: We believe that the public expects and deserves visible cost effective mobility improvements in the short term that form the foundation of our long term transportation system while honoring the vision of rail connecting the corridor communities to each other and the Denver region expressed in the 2004 FasTracks plan approved by the voters.

To that end:

- We support regular monitoring of the factors influencing the costs, revenue and feasibility of the implementation options identified above, including phasing, and, should they significantly change, the reconsideration of investments priorities.
- We recognize that FasTracks funding should be targeted towards those Northwest corridor improvements identified in the FasTracks system approved by the voters in 2004. FasTracks funding should therefore be used to build and operate the US 36 BRT system as well as those improvements that are consistent with implementation of Northwest Rail from Westminster to Longmont and other, nonFasTracks funding sources should be targeted toward those improvements that are not consistent with the FasTracks plan.
- We also firmly believe that the RTD should focus any further FasTracks investments in the Northwest Corridor prior to using FasTracks funds for improvements, or equipment replacement, in any other corridor.

City of Boulder - Railroad Quiet Zones Update

In response to community concerns regarding the impacts of train horn noise, the City of Boulder is pursuing “quiet zones” for railroad crossings that affect the city. A quiet zone is a street-level railroad crossing that includes additional safety measures in compliance with federal requirements that allow a train engineer to forgo sounding a horn at the crossing. This fall, the city is beginning a community engagement process to seek input on potential railroad quiet zones.

The city has worked with agency partners, including the Federal Railroad Administration (FRA), the Colorado Public Utilities Commission (PUC), and Boulder County, as well as the Burlington Northern Santa Fe Railway Company (BNSF) to explore potential quiet zone solutions that improve both safety at crossings and the quality of life for people who live near them.

In 2014, the city completed a quiet zone study of the nine BNSF railroad crossings located within and adjacent to the city (see list of crossings and map on page 2). The report, which included cost estimates, evaluated potential infrastructure improvements and non-infrastructure programs that could reduce or eliminate train horn noise. Based on the study results, the total cost to create quiet zones at these locations was estimated to be approximately \$5 million (in 2013 dollars).

Recently, the Denver Regional Council of Governments (DRCOG) awarded the city of Boulder \$1,056,000 in funding to advance work on Boulder-area quiet zones. The city’s matching this DRCOG funding with \$264,000 in local funding for a total program budget of \$1,320,00. Although less than the total amount needed to complete all proposed city quiet zones, the award allows the city to get started. This next phase of work includes updating the technical requirements and cost estimates, and begins the community engagement process.

The community will be asked to consider how best to prioritize quiet zone crossing improvements based on factors like the number of people living and working within half a mile of the railroad crossings, type and proximity of adjacent land uses (existing and/or planned), as well as street characteristics, costs for installation, potential on-going maintenance responsibilities, opportunities for multi-agency and public/private partnerships, and above all, safety.

Timeline

Fall/Winter 2016-17: Update technical study and cost estimates, begin community engagement process to identify and prioritize potential quiet zone crossing improvements, develop phasing plan recommendations for implementation, and continue to pursue additional funding strategies.

2017-18: Selection of crossing location(s), crossing improvements, final design, engineering, and permitting process with BNSF, PUC, FRA and other agencies.

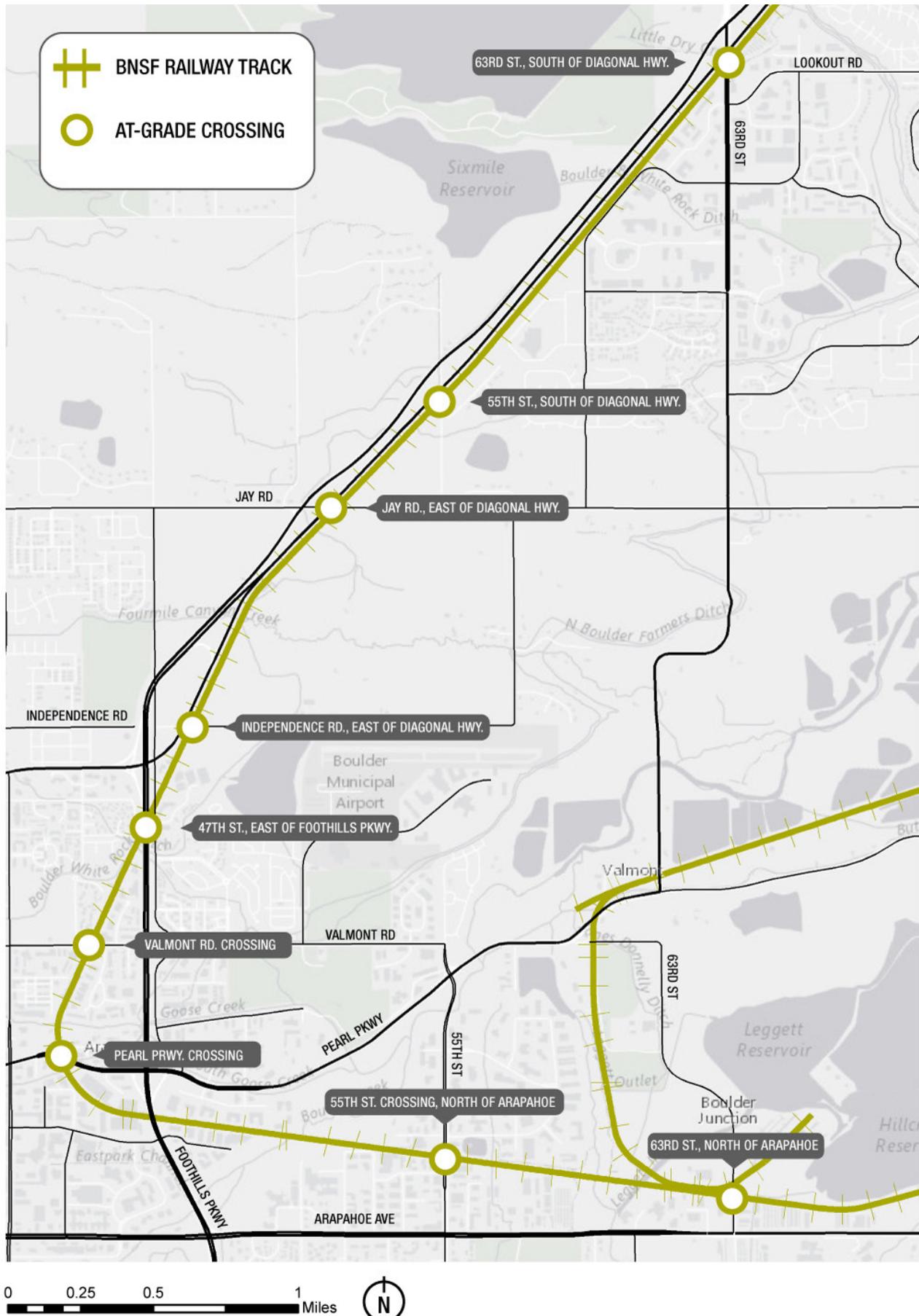
2018-19: Construction of selected quiet zone crossing improvements

More information

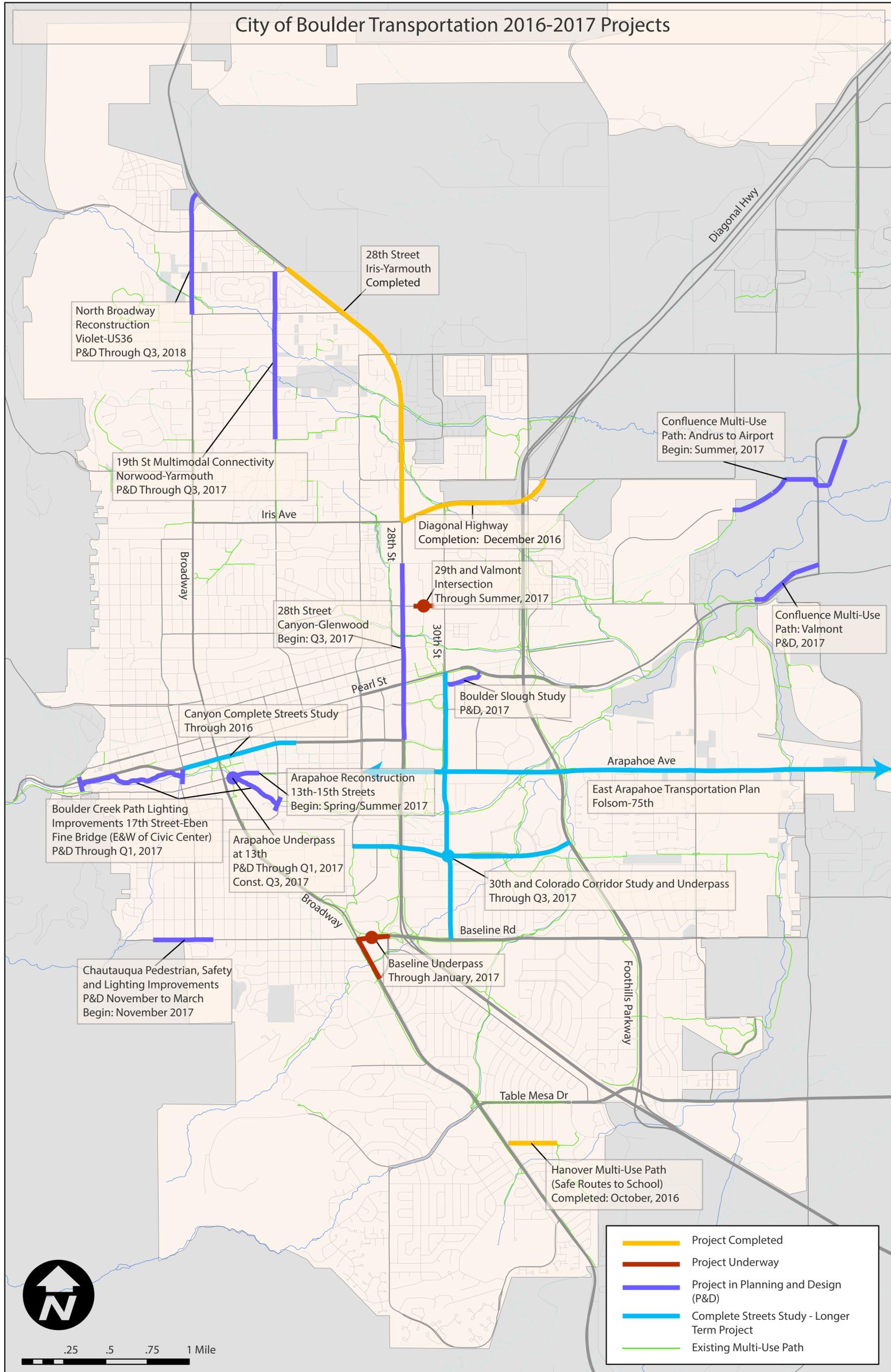
Learn more about railroad quiet zones and review the quiet zone study reports at <https://bouldercolorado.gov/Transportation>. Or contact Kathleen Bracke, GO Boulder Manager with the City of Boulder’s Transportation Division. E-mail: brackek@bouldercolorado.gov and phone: (303) 441-4155. City staff is available to meet with neighborhood groups and individuals to discuss railroad quiet zones in more detail.



City of Boulder - Railroad Quiet Zone Locations



CITY OF BOULDER 2016-2017 PROJECTS



Guide 1" margin

Guide 2" margin