City of Boulder

Downtown Boulder Station Improvements Project

2020-2023 DRCOG Transportation Improvements Program (TIP) Subregional Share Project Application Form

Part 1 Base Information

1. Project Title	**Downtown Boulder Station Improvements**
2. Project *Start/End* points or Geographic Area *Provide a map with submittal, as appropriate*	SH 119/Canyon Blvd from 14th- 16th streets and 14th Street from SH119/Canyon Blvd-north of Arapahoe Avenue.
3. Project Sponsor *(entity that will construct/ complete and be financially responsible for the project)*	City of Boulder
4. Project Contact Person, Title, Phone Number, and Email	Gerrit Slatter, Principal Transportation Projects Engineer, 303-441-1978, slatterg@bouldercolorado.gov
5. Does this project touch CDOT Right-of-Way, involve a CDOT roadway, access RTD property, or request RTD involvement to operate service?	X Yes ☐ No *If yes, provide applicable concurrence documentation with submittal*

6. What planning document(s) identifies this project?

☒ DRCOG 2040 Fiscally Constrained Regional Transportation Plan (2040 FCRTP)

X Local plan:	City of Boulder Transportation Master Plan, Downtown Boulder Station Study, City of Boulder Civic Area Master Plan, and Canyon Boulevard (9th-17th) Complete Streets Study.
☒ Other(s):	Boulder County Transportation Management Plan, 2010 and the existing conditions summary for the current Boulder County Transportation Master Plan Update, Northwest Area Mobility Study

Provide link to document/s and referenced page number if possible, or provide documentation with submittal

7. Identify the project's **key elements**.

- ☐ Rapid Transit Capacity (2040 FCRTP)
- ☒ Transit Other:
- ☐ Bicycle Facility
- ☒ Pedestrian Facility
- ☐ Safety Improvements
- ☐ Roadway Capacity or Managed Lanes (2040 FCRTP)
- ☐ Roadway Operational

Grade Separation
- ☐ Roadway
- ☐ Railway
- ☐ Bicycle
- ☐ Pedestrian

- ☐ Roadway Pavement Reconstruction/Rehab
- ☐ Bridge Replace/Reconstruct/Rehab
- ☐ Study
- ☐ Design
- ☐ Transportation Technology Components
- ☐ Other:

8. **Problem Statement** What specific Metro Vision-related subregional problem/issue will the transportation project address?

As covered in this response and others that follow in this application, the proposed project would address several guiding issues within Metro Vision 2040 including:

- Reducing vehicle-miles traveled and single occupancy vehicle (SOV) travel;
- Enhancing multimodal connections to major employment centers;
- Growing the percentage of our region's housing and employment near high frequency transit;

- Improving access to transit within and between designated urban centers;

Today, the Downtown Boulder Station serves nearly the same number of bus routes as Denver's Union Station, but it occupies less than one-eighth of Union Station's space and has half the gate capacity. The station serves over 1,200 daily bus trips and over 3,300 passenger boardings with an estimated 420 passengers currently board buses at Downtown boulder Station during rush hour. The majority of the daily bus trips and passenger demand is for regional transit routes.

Photographs of existing conditions at the Downtown Boulder Station:

Gate K on Canyon Blvd

Gate L on Canyon Blvd

In recent years the station has had more buses and passengers than its current size was designed to serve and the needs for station capacity is expected to continue to increase as the Northwest Area Mobility Study for bus rapid transit along SH119 and SH7 are implemented.

Table 1- RTD estimated needs in station capacity

	Existing	Near term needs	Long term needs
Gates (40’ vehicles)	10	1	2 to 3
Gates (45’ vehicles)	4	1	5 to 6
Gates (60' vehicles)	0	1 to 2	3 to 4
Total gates	**14**	**4 to 5**	**10 to 13**

**Available on a limited time basis. Source: RTD (November, 2016)*

The Downtown Boulder Station Improvements will address the capacity needs at the bus station improving operational efficiency and pedestrian and transit rider access experience. This project addresses the Metro Vision focus areas of improvements to the mobility infrastructure serving regional and local travel needs including vulnerable populations (21% of RTD riders are low-income) and increasing the reliability of the existing multimodal transportation network.

This project also supports the city's local transportation goals and vision. As noted in the city's 2014 Transportation Master Plan, the City of Boulder aims to reduce the single-occupancy (SOV) mode share to 60 percent of work trips for non-residents and 20 percent of all trips for residents. Transit is expected to account for 8 percent of the shift for non-resident trips and 19 percent of the total shift from SOV for resident trips. The TMP also calls for a Renewed Vision for Transit. The City envisions increases to both local and regional transit service to include more routes serving a larger area, as well as increased frequency of service for those routes. By providing additional gate capacity, enhanced on-street bus stops and designated space for shared mobility services and microtransit providers, the local and regional goals and priorities can be met. See recently completed study by the University of Utah on the impacts of Bus Stop Improvements.

The Downtown Boulder Station Study looked at near and long term solutions and this project's purpose is to provide an incremental solution addressing current capacity and operational needs as well as a portion of future transit needs.

City of Boulder 2014 Transportation Master Plan

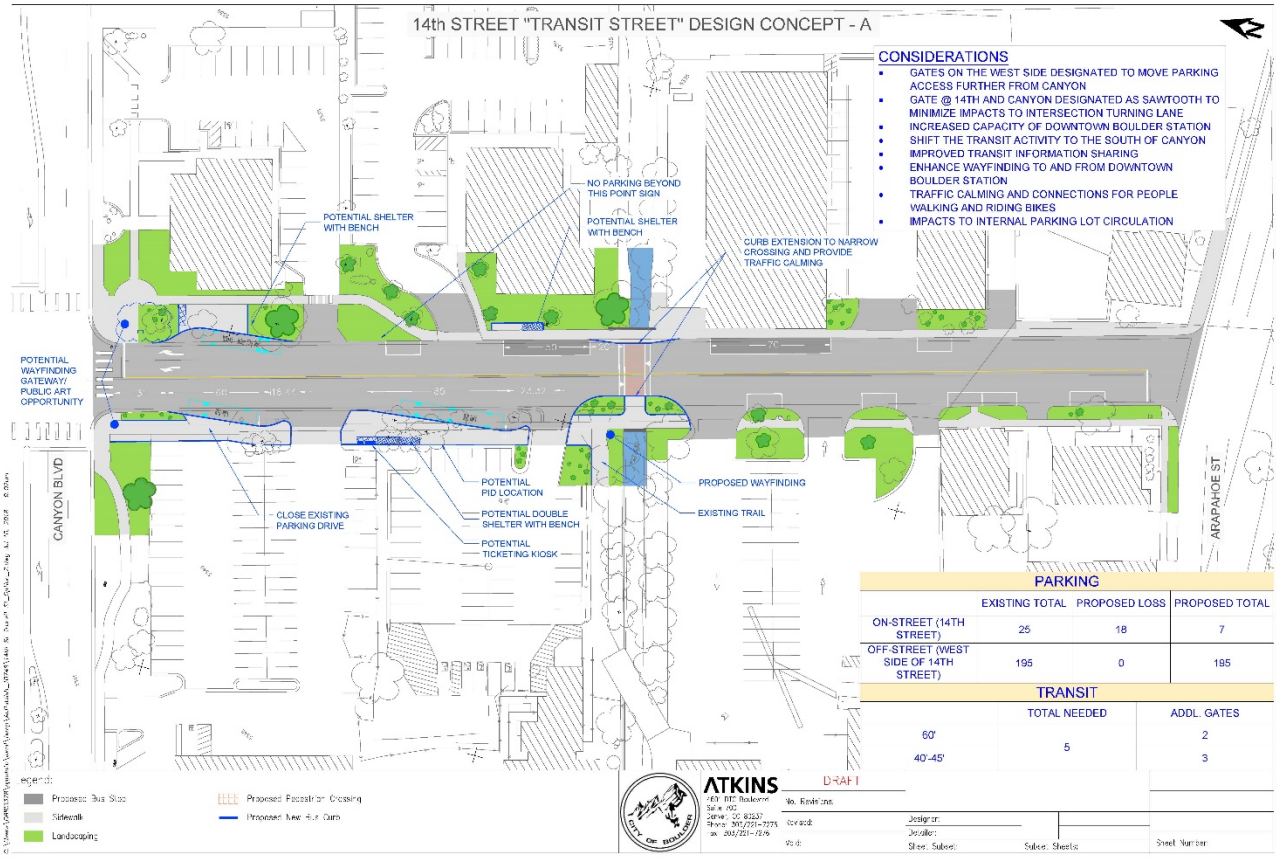
Downtown Boulder Station Feasibility Study and Downtown Boulder Station Feasibility Study

City of Boulder Civic Area Master Plan and Canyon Boulevard/SH119 Complete Streets Study

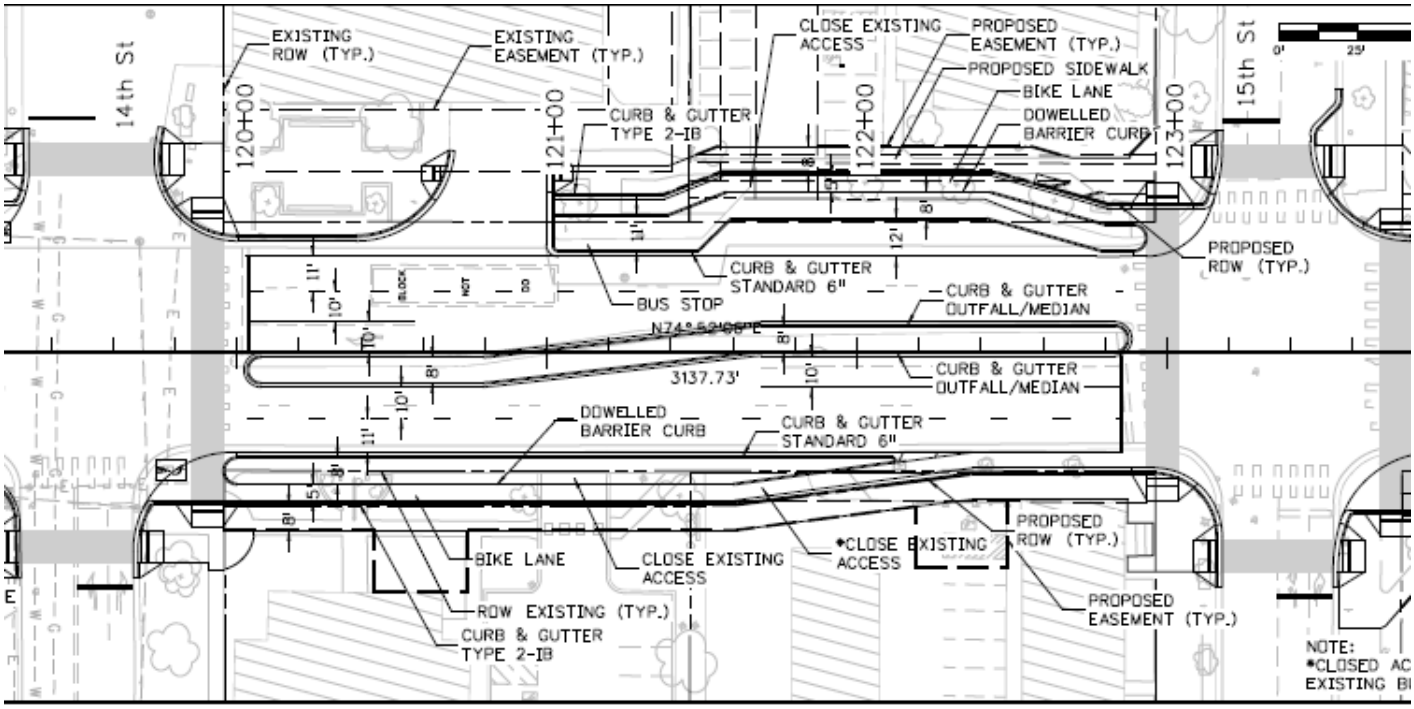
Northwest Area Mobility Study

9. Define the **scope** and **specific elements** of the project.

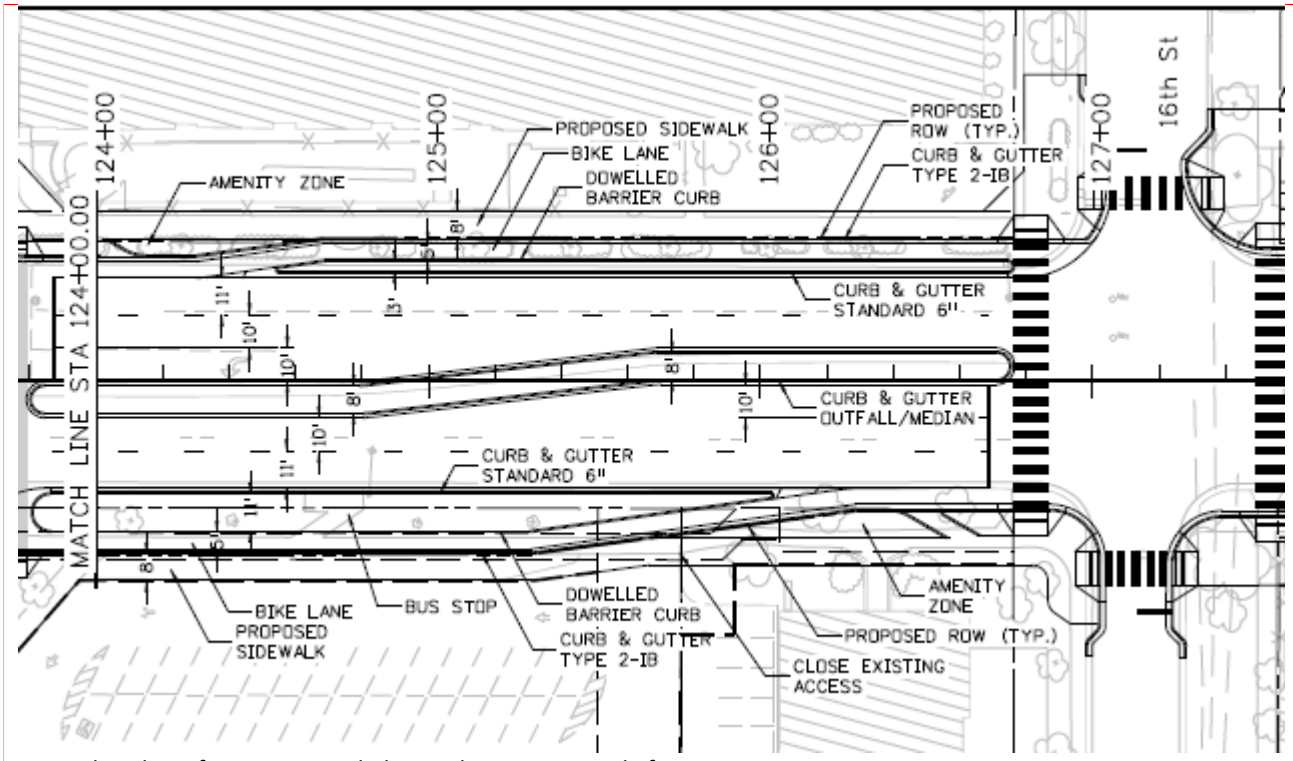
The Downtown Boulder Station Improvements Project would redesign 14th Street between SH 119/Canyon Boulevard to north of Arapahoe Avenue to provide five additional bus gates that would accommodate existing and future transit services stopping and laying over at the Downtown Boulder Station. This would include on-street bus stop and layover space, wider sidewalks, information kiosk, signage, wayfinding, urban design and landscaping treatments. The project would also include assignment of curb space for shared mobility services and microtransit providers. This work will build on the curbside policy management project that the city will begin in late 2019. The two existing gates on SH119/Canyon Blvd, Gates K and L, that are located on the north and south side of Canyon at 14th and 16th respectively would be enhanced with shelters, benches, and accessibility improvements to meet Americans with Disabilities Act (ADA) design guidelines.



Conceptual plan for 14th Street (SH119/Canyon Blvd to Arapahoe Ave)



Plan sheet from Canyon Blvd Complete Street Study for Gate K



Plan sheet from Canyon Blvd Complete Street Study for Gate L

10. What is the status of the proposed project? Preliminary plans and cost estimates have been developed through the Canyon Blvd/SH119 (9th-17th streets) Complete Streets Study and the Downtown Boulder Station Study. These planning efforts have included community engagement processes and input from area transportation agencies such as RTD and Boulder County as well as community feedback by nearby residents, travelers and the downtown.
The improvements are expected to be constructed within existing easements or right-of-way on 14th Street. Improvements to bus stops on Canyon Blvd may need easements.

11. Would a smaller DRCOG-allocated funding amount than requested be acceptable, while maintaining the original intent of the project? ☐ Yes ☒ No

If yes, define smaller meaningful limits, size, service level, phases, or scopes, along with the cost for each.

A. Project Financial Information and Funding Request

1. Total Project Cost		**$982,000**
2. Total amount of DRCOG Subregional Share Funding Request	**$370,000**	**40% of total project cost**
3. Outside Funding Partners ***(other than DRCOG Subregional Share funds)*** List each funding partner and contribution amount.	**$$ Contribution Amount**	**% of Contribution to Overall Total Project Cost**
RTD - See attached letter of Support indicating Match amount	$200,000	20
City of Boulder	$389,200	40
	$	
	$	
Total amount of funding provided by other funding partners *(private, local, state, Regional, or federal)*	**$589,200**	60%

Funding Breakdown (year by year)*

**The proposed funding plan is not guaranteed if the project is selected for funding. While DRCOG will do everything it can to accommodate the applicants' request, final funding will be assigned at DRCOG's discretion within fiscal constraint. Funding amounts must be provided in year of expenditure dollars using an inflation factor of 3% per year from 2019.*

	FY 2020	FY 2021	FY 2022	FY 2023	Total
Federal Funds		$76,969	$	$315,831	**$392,800**
RTD Funds		$	$	$200,000	**$200,000**
Local Funds		$76,264	$	$312,936	**$389,200**
Total Funding		$153,233	$0	$828,767	**$982,000**
4. Phase to be Initiated *Choose from Design, ENV, ROW, CON, Study, Service, Equip. Purchase, Other*		Design	ROW	Construction	

5. By checking this box, the applicant's Chief Elected Official (Mayor or County Commission Chair) or City/County Manager for local governments or Agency Director or equivalent for others, has certified it allows this project request to be submitted for DRCOG-allocated funding and will follow all DRCOG policies and state and federal regulations when completing this project, if funded. ☒

Part 2 Evaluation Criteria, Questions, and Scoring

A. Subregional significance of proposed project

WEIGHT **40%**

*Provide **qualitative and quantitative** (derived from Part 3 of the application) responses to the following questions on the subregional significance of the proposed project.*

1. Why is this project important to your subregion?

The Downtown Boulder Station is a local and regional transit hub serving the City of Boulder as a regional employment center. As identified in the 2017 *Existing Capacity Assessment (2017)*, the station serves multiple bus lines including:

- Local routes servicing the immediate areas around Boulder;
- Regional routes servicing the greater Boulder regions of Lyons and Nederland;
- BRT routes providing high-frequency bus service between Boulder and Denver; and
- Skyride route providing service to Denver International Airport.

As the study indicated, on an average weekday, there are approximately 1,200 bus trips through DBS, with around 3,283 boardings and 2,568 alightings.

In 2014, RTD released the **Northwest Area Mobility Study (NAMS).** This document studied future transportation options between the City and County of Denver, Interstate 25 (I-25), the City of Longmont, and the City of Boulder. Potential future BRT routes identified in the study that would use DBS include SH 119, South Boulder Road, and SH7/East Arapahoe, with each of these routes having 15-minute peak period headways at the current station location.

This project is also locally important. As noted in response to Question 5, the City of Boulder's 2014 Transportation Master Plan (TMP) outlines the City's goals and objectives for future travel demand. This document calls for the reduction in single-occupancy vehicle (SOV) trips; increases in walking, bicycling, and transit use; and improved safety for all travelers. The TMP calls for increases to both local and regional transit service including more routes serving a larger area, as well as increased frequency of service on those routes.

2. Does the proposed project cross and/or benefit multiple **municipalities**? If yes, which ones and how?

Yes. While the physical improvements are located in the City of Boulder, this would enhance transit operations for routes that cross and serve multiple municipalities throughout the DRCOG region, including several urban centers.

3. Does the proposed project cross and/or benefit another **subregion(s)**? If yes, which ones and how?

Yes. While physical improvements would be limited to the Boulder County subregion, expansions in regional transit service and operational improvements would benefit other subregions including the City and County of Denver, City and County of Broomfield, Jefferson, Weld and Adams counties. The project will directly support the improved regional transit service envisioned by the RTD SH 119 Bus Rapid Transit Study between Boulder and Longmont and the Boulder County SH 7 Bus Rapid Transit Study covering Boulder to Brighton. This station also serves the existing inter-regional FLEX route between Boulder and Fort Collins.

4. How will the proposed project address the specific transportation problem described in the **Problem Statement** *(as submitted in Part 1, #8)*?

A shortage of needed capacity at DBS is the specific transportation problem identified. This project will address the problem by providing needed capacity for existing operations and expansion for future operations. More specifically, the project will provide needed relief to gates on 14th north of Canyon, which are currently experiencing excess demand. The proposed project would add gates located south of Canyon on 14th and

construct improvements to bus stops on-street on Canyon to provide additional capacity downtown for local and regional services now and in the future.

The project will also allocate space for pick-up/drop-off including Transportation Network Carrier Companies (ie Uber, Lyft) so that these type of shared ride services are available for first and final mile access to transit services, and are not parking at transit gates in the station and negatively impacting travel time and reliability, and public safety.

5. One foundation of a sustainable and resilient economy is physical infrastructure and transportation. How will the **completed** project allow people and businesses to thrive and prosper?

This project supports thriving and properous business and quality of life by supporting the operations of existing and future regional and local transit services using the Downtown Boulder Station which residents, employees and visitors use to access their jobs, home and other destinations. As indicated in the 2010 census data provided by DRCOG, over 78,000 people live or work within 1 mile of the Downtown Boulder Station (37,463 residents and 40,860 jobs). The project's operational and capacity improvements will benefit current and anticipated riders at the downtown station location.

The increased access and connections for a number of travel modes benefits local businesses through improved transportation for customers, services and employees. As evidenced by the past federal stimulus efforts, construction of transportation infrastructure is considered a good mechanism for stimulating local economies through the creation of direct construction jobs and supporting positions and the purchases of goods and services.

6. How will connectivity to different travel modes be improved by the proposed project?

The designated curb space for shared mobility services and microtransit providers as well as the wider sidewalks, landscaping and streetscape features and ADA accessibility designs will provide better access for the first and final mile components for transit riders by foot, wheel or vehicle. The project area is also well-served by existing on-street and multiuse paths to provide high quality bicycle connections.

7. Describe funding and/or project partnerships *(other subregions, regional agencies, municipalities, private, etc.)* established in association with this project.

Partnerships with RTD and CDOT have continued from their initial participation in the Canyon Blvd Complete Streets and Downtown Boulder Station studies to their consultation on this grant submittal. RTD will provide $200,000 in local match funds. Other project partners include other transit service providers such as Via Mobility Services, City of Fort Collins/Transfort, and Boulder County, as well as the City's Community Vitality Department, and the Downtown Boulder Partnership.

B. DRCOG Board-approved Metro Vision TIP Focus Areas

WEIGHT **30%**

*Provide **qualitative and quantitative** (derived from Part 3 of the application) responses to the following questions on how the proposed project addresses the three DRCOG Board-approved Focus Areas (in bold).*

1. Describe how the project will **improve mobility infrastructure and services for vulnerable populations (including improved transportation access to health services).**

Vulnerable populations, as identified in Metro Vision 2040, include but aren't limited to older adults, people with disabilities and low-income populations. Vulnerable populations disproportionately rely on transit service for mobility and for access to jobs. Existing transit service to the Downtown Boulder Station as well as the enhanced transit service planned for SH 119 and SH 7 will increase access to jobs for lower income populations according to the analysis performed for the Renewed Vision for Transit of the 2014 TMP. According to a 2018 RTD Fare Study, 21% of RTD riders are low-income. For people in the region entirely or mostly dependent on transit for mobility, those using Downtown Boulder Station / 14th Street as their primary access point would experience the most direct benefits from the project. The 2010 census data provided by DRCOG indicated that within 1 mile of the Downtown Boulder Station, over 10% of the households are without a motor vehicle and over 27% are low-

income households. Additionally, many other patrons throughout the region would also experience benefits. Operational improvements at DBS would have a trickle-down effect; if a greater number of local and regional lines can access DBS and future on-time performance is improved through additional storage capacity, there will be down-stream benefits to patrons who access the system at other locations.

2. Describe how the project will **increase reliability of existing multimodal transportation network.**
Based on the existing conditions of the Downtown Boulder Station, the station experiences periods of the day when it is operating at or beyond capacity. While recent upgrades in gate design have allowed for more efficient vehicle circulation, there are several gates that are limited in platform length, and are therefore not as flexible in terms of vehicle types they will accommodate. During the peak period, several gates are over-parked with a cumulative 19 percent of time over capacity during a typical weekday. It is possible that during seasonal peaks, this figure is higher. There are inefficiencies in particular for regional routes loading at Gate 1, which is unable to load mobility devices from the existing platform. The limited availability of layover space at the station impacts the ability of bus staging positions during typical heavy travel times. This limits RTD's ability to recover and increase capacity during busy travel periods.
The project improvements will provide additional bus gates address capacity and operational needs which will increase the reliability of the regional and local transit services.

3. Describe how the project will **improve transportation safety and security.**

The project will increase safety and security for customers by improving access to transit, and providing a well-lit and comfortable environment on 14th Street with enhanced sidewalks and lighting. In addition to the proposed project, the city is considering a mid-block crossing on this block that would enable safe east to west pedestrian crossings. The city is also planning to review signal timing to prioritize pedestrian crossings north-south at 14th and Canyon.

C. Consistency & Contributions to Transportation-focused Metro Vision Objectives

WEIGHT 20%

*Provide **qualitative and quantitative** responses (derived from Part 3 of the application) to the following items on how the proposed project contributes to Transportation-focused Objectives (in bold) in the adopted Metro Vision plan. Refer to the expanded Metro Vision Objective by clicking on links.*

MV objective 2	**Contain urban development in locations designated for urban growth and services**.

1. Will this project help focus and facilitate future growth in locations where urban-level infrastructure already exists or areas where plans for infrastructure and service expansion are in place? ☒ Yes ☐ No

Describe, *including supporting quantitative analysis*

This project is within the City of Boulder's Area 1 Planning Area, as defined Boulder in the Valley Comprehensive Plan (BVCP) which fully supports growth where urban-level infrastructure already exists and/or there are plans in place for infrastructure and service expansion. Consistent with the BVCP, the urban level infrastructure has been planned to accommodate any and all future redevelopment. This area is also served by complete multimodal transportation facilities, facilitating first and last mile connections and supporting transit ridership.

MV objective 3	**Increase housing and employment in urban centers**.

2. Will this project help establish a network of clear and direct multimodal connections within and between urban centers, or other key destinations? ☒ Yes ☐ No

Describe, *including supporting quantitative analysis*

This project is within downtown Boulder a higher density area in town and allows residents, employees and visitors to access regional transit service linking Boulder with Denver and other urban centers in the metro region.

MV objective 4	**Improve or expand the region's multimodal transportation system, services, and connections**.

3. Will this project help increase mobility choices within and beyond your subregion for people, goods, or services? ☒ Yes ☐ No

Describe, *including supporting quantitative analysis*

The components of this project provide for improved transit operations and address capacity issues at the station which will benefit existing transit services and users and support future BRT service and transit riders. The complete multimodal transportation facilities in the area will facilitate first and last mile connections and support increased transit ridership.

MV objective 6a	**Improve air quality and reduce greenhouse gas emissions**.

4. Will this project help reduce ground-level ozone, greenhouse gas emissions, carbon monoxide, particulate matter, or other air pollutants? ☒ Yes ☐ No

Describe, *including supporting quantitative analysis*

This project supports and encourages the shift towards transit use and reduces auto trips which leads to a reduction in greenhouse gas (GhG) emissions.

MV objective 7b	**Connect people to natural resource or recreational areas**.

5. Will this project help complete missing links in the regional trail and greenways network or improve other multimodal connections that increase accessibility to our region's open space assets? ☒ Yes ☐ No

Describe, *including supporting quantitative analysis*

The project's elements contribute to improved operations and ease to accessing transit. Transit users can then access adjacent City of Boulder open space properties and the Boulder Creek Greenway system as well as access the hiking and biking trail system in Nederland (and in the winter months, access to skiing) by boarding those transit services at the Downtown Boulder Station.

MV objective 10	**Increase access to amenities that support healthy, active choices.**

6. Will this project expand opportunities for residents to lead healthy and active lifestyles? ☒ Yes ☐ No

Describe, *including supporting quantitative analysis*

Numerous studies support the health benefits of transit commuting over driving due to the associated walking portions of the transit trip. The complete multimodal transportation facilities in the area will facilitate first and last mile connections and support increased transit ridership. This project also supports existing and future transit users to access the adjacent Boulder Creek Greenway system and other nearby City of Boulder open space properties.

MV objective 13	**Improve access to opportunity**.

7. Will this project help reduce critical health, education, income, and opportunity disparities by promoting reliable transportation connections to key destinations and other amenities? ☒ Yes ☐ No

Describe, *including supporting quantitative analysis*

The improvements will support safety and access for employees, residents and customers to access their jobs and/or daily activities by address transit capacity needs at the Downtown Boulder Station. The additional bus gates and transit stop enhancements will lead to improved transit operations which supports the statistically proven safest travel mode. This project's bus stop enhancements and designated curb space for passenger drop-off/loading will support first and final mile access to transit at the Downtown Boulder Station which provides a connection to the US 36 Flatirons Flyer BRT service and the AB Airport bus service and the future SH119 and SH7 BRT services. The enhanced transit service planned for SH 119 and SH 7 will increase access to jobs for lower income populations according to the analysis performed in the Renewed Vision for Transit of the 2014 TMP.

MV objective 14	**Improve the region's competitive position**.

8. Will this project help support and contribute to the growth of the subregion's economic health and vitality? ☒ Yes ☐ No

Describe, *including supporting quantitative analysis*

Providing additional bus gates and enhanced bus stops supports the operations, access and connections to and from local and regional transit service. This increases the attractiveness and usage of this travel option for residents and employees accessing downtown Boulder, Denver and other urban centers and employment along the US 36 corridor. Improved access to jobs by transit, particularly combined with the strong Eco Pass program in Boulder businesses and Downtown, can reduce the Housing + Transportation (H+T) fixed costs for households, which is shown to increase affordability and economic vitality in a region.

D. Project Leveraging

WEIGHT 10%

9. What percent of outside funding sources (non-DRCOG-allocated Subregional Share funding) does this project have?	60%	60%+ outside funding sources .....High 30-59% .....Medium 29% and below .....Low

Part 3 Project Data Worksheet – Calculations and Estimates

(Complete all subsections applicable to the project)

A. Transit Use

1.	Current ridership weekday boardings	3,283
2.	Population and Employment	

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	37,463	40,860	**78,323**
2040	38,410	44,763	**83,173**

Transit Use Calculations	Year of Opening	2040 Weekday Estimate
3. Enter estimated additional daily transit boardings after project is completed. *(Using 50% growth above year of opening for 2040 value, unless justified)*	165	247
4. Enter number of the additional transit boardings (from #3 above) that were previously using a different transit route. (Example: **{#3 X 25%}** *or other percent, if justified)*	0	0
5. Enter number of the new transit boardings (from #3 above) that were previously using other non-SOV modes (walk, bicycle, HOV, etc.) (Example: **{#3 X 25%}** *or other percent, if justified)*	0	0
6. = Number of SOV one-way trips reduced per day (#3 – #4 – #5)	**165**	**247**
7. Enter the value of **{#6 x 9 miles}**. (= **the VMT reduced per day**) *(Values other than the default 9 miles must be justified by sponsor; e.g., 15 miles for regional service or 6 miles for local service)*	1,485	2,227
8. = Number of pounds GHG emissions reduced (#7 x 0.95 lbs.)	**1,410**	**2,115**

9. If values would be distinctly greater for weekends, describe the magnitude of difference:

10. If different values other than the suggested are used, please explain here:

For this project, we assume an increase in transit ridership, because with additional gate capacity RTD will be able to add more service to the Downtown Boulder Station. A modest 5% increase in ridership is assumed. RTD reports an 8% increase in Flatiron Flyer ridership from 2017 to 2018, so 5% overall for total station activity is a conservative projection. We assume no shift from other transit or non-transit modes for the 5% increase.

B. Bicycle Use

1.	Current weekday bicyclists	0
2.	Population and Employment	

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	0	0	**0**
2040	0	0	**0**

Bicycle Use Calculations	Year of Opening	2040 Weekday Estimate
3. Enter estimated additional weekday one-way bicycle trips on the facility after project is completed.	0	0
4. Enter number of the bicycle trips (in #3 above) that will be diverting from a different bicycling route. (Example: **{#3 X 50%}** *or other percent, if justified)*	0	0
5. = Initial number of new bicycle trips from project (#3 – #4)	0	0
6. Enter number of the new trips produced (from #5 above) that are replacing an SOV trip. (Example: **{#5 X 30%}** *(or other percent, if justified)*	0	**0**
7. = Number of SOV trips reduced per day (#5 - #6)	0	0
8. Enter the value of **{#7 x 2 miles}**. (= the VMT reduced per day) *(Values other than 2 miles must be justified by sponsor)*	0	0
9. = Number of pounds GHG emissions reduced (#8 x 0.95 lbs.)	0	0
10. If values would be distinctly greater for weekends, describe the magnitude of difference:		
11. If different values other than the suggested are used, please explain here:		

C. Pedestrian Use

1. Current weekday pedestrians (include users of all non-pedaled devices)	0
2. Population and Employment	

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	0	0	**0**
2040	0	0	**0**

Pedestrian Use Calculations	Year of Opening	2040 Weekday Estimate
3. Enter estimated additional weekday pedestrian one-way trips on the facility after project is completed	0	0
4. Enter number of the new pedestrian trips (in #3 above) that will be diverting from a different walking route (Example: **{#3 X 50%}** *or other percent, if justified)*	0	0
5. = Number of new trips from project (#3 – #4)	0	0
6. Enter number of the new trips produced (from #5 above) that are replacing an SOV trip. (Example: **{#5 X 30%}** *or other percent, if justified)*	0	0
7. = Number of SOV trips reduced per day (#5 - #6)	0	0
12. Enter the value of **{#7 x .4 miles}**. (**= the VMT reduced per day**) *(Values other than .4 miles must be justified by sponsor)*	0	0

8. = Number of pounds GHG emissions reduced (#8 x 0.95 lbs.)	0	0
9. If values would be distinctly greater for weekends, describe the magnitude of difference:		
10. If different values other than the suggested are used, please explain here:		

D. Vulnerable Populations

	Vulnerable Populations	Population within 1 mile
Use Current Census Data	**1.** Persons over age 65	3,047
	2. Minority persons	7,344
	3. Low-Income households	4,356
	4. Linguistically-challenged persons	650
	5. Individuals with disabilities	3,117
	6. Households without a motor vehicle	1,578
	7. Children ages 6-17	2,535
	8. Health service facilities served by project	16

E. Travel Delay *(Operational and Congestion Reduction)*

Sponsor must use industry standard Highway Capacity Manual (HCM) based software programs and procedures as a basis to calculate estimated weekday travel delay benefits. *DRCOG staff may be able to use the Regional Travel Model to develop estimates for certain types of large-scale projects.*

1. Current ADT (average daily traffic volume) on applicable segments	0
2. 2040 ADT estimate	0
3. Current weekday vehicle hours of delay (VHD) (before project)	0

Travel Delay Calculations	Year of Opening
4. Enter calculated future weekday VHD (after project)	0
5. Enter value of **{#3 - #4} =** Reduced VHD	0
6. Enter value of **{#5 X 1.4}** = **Reduced person hours of delay** *(Value higher than 1.4 due to high transit ridership must be justified by sponsor)*	0
7. **After project peak hour congested average travel time reduction** per vehicle (includes persons, transit passengers, freight, and service equipment carried by vehicles). *If applicable, denote unique travel time reduction for certain types of vehicles*	0
8. If values would be distinctly different for weekend days or special events, describe the magnitude of difference.	
9. If different values other than the suggested are used, please explain here:	

F. Traffic Crash Reduction

1. Provide the current number of crashes involving motor vehicles, bicyclists, and pedestrians *(most recent **5-year** period of data)*		Sponsor must use industry accepted crash reduction factors (CRF) or accident modification factor (AMF) practices *(e.g., NCHRP Project 17-25, NCHRP Report 617, or DiExSys methodology).*
Fatal crashes	0	
Serious Injury crashes	0	
Other Injury crashes	0	
Property Damage Only crashes	0	
2. Estimated reduction in crashes <u>applicable to the project scope</u> *(per the five-year period used above)*		
Fatal crashes reduced	0	
Serious Injury crashes reduced	0	
Other Injury crashes reduced	0	
Property Damage Only crashes reduced	0	

G. Facility Condition

Sponsor must use a current industry-accepted pavement condition method or system and calculate the average condition across all sections of pavement being replaced or modified.
Applicants will rate as: Excellent, Good, Fair, or Poor

Roadway Pavement	
1. Current roadway pavement condition	Choose an item
2. Describe current pavement issues and how the project will address them.	
3. Average Daily User Volume	0
Bicycle/Pedestrian/Other Facility	
4. Current bicycle/pedestrian/other facility condition	Choose an item
5. Describe current condition issues and how the project will address them.	
6. Average Daily User Volume	0

H. Bridge Improvements

1. Current bridge structural condition from CDOT	
2. Describe current condition issues and how the project will address them.	
3. Other functional obsolescence issues to be addressed by project	
4. Average Daily User Volume over bridge	0

I. Other Beneficial Variables *(identified and calculated by the sponsor)*	
1.	
2.	
3.	

J. Disbenefits or Negative Impacts *(identified and calculated by the sponsor)*	
1. Increase in VMT? *If yes, describe scale of expected increase*	☐ Yes ☒ No
2. Negative impact on vulnerable populations No	
3. Other:	

Interim Downtown Boulder Station Improvements

Proposed Downtown Boulder Station Improvements

From: Quinn, Chris <Chris.Quinn@RTD-Denver.com>
Sent: Friday, February 8, 2019 4:19 PM
To: Slatter, Gerrit <SlatterG@bouldercolorado.gov>
Cc: Stiffler, Natalie <StifflerN@bouldercolorado.gov>; Van Meter, Bill <Bill.VanMeter@RTD-Denver.com>; Sirois, William <William.Sirois@RTD-Denver.com>
Subject: RE: City of Boulder Request for CDOT Support - DRCOG TIP support

Gerrit,
This email is to provide RTD's concurrence with the City of Boulder's TIP application requests. If funding is awarded for the Table Mesa or Downtown Boulder Transit Center projects, we will want to work closely with the City on the design details of these projects.
Please contact me if you would like to discuss further.
Thanks
Chris

Chris Quinn
Project Manager
Regional Transportation District
Suite 700
1560 Broadway
Denver, CO 80202
(303) 299-2439
chris.quinn@rtd-denver.com

From: Slatter, Gerrit <SlatterG@bouldercolorado.gov>
Sent: Monday, January 07, 2019 3:24 PM
To: Quinn, Chris <Chris.Quinn@RTD-Denver.com>
Cc: Stiffler, Natalie <StifflerN@bouldercolorado.gov>
Subject: City of Boulder Request for CDOT Support - DRCOG TIP support

Chris,

Please see attached the request for support documents for the City of Boulder for the DRCOG TIP process. Please let me know if you have any questions.

Thanks,

Gerrit Slatter, PE, PTOE
Principal Engineer – Transportation Capital Projects

City of Boulder
Transportation

Ph: (303) 441-1978
slatterg@BoulderColorado.gov
Public Works Department
1101 Arapahoe Ave, 3rd Floor
Boulder, CO 80306

COLORADO
Department of Transportation
Region 4

Regional Director's Office
10601 W. 10th Street
Greeley, CO 80634-9000

February 7, 2019

Natalie Stiffler
City of Boulder
1101 Arapahoe Avenue - 2F
Boulder, CO 80302

Downtown Boulder Station and Canyon/SH 119 Transit Improvements

Dear Ms. Stiffler,

RE: CDOT Region 4 Support Request for DRCOG TIP Sub-Regional Call FY20-23

This letter is to inform you that the Colorado Department of Transportation (CDOT) Region 4 staff concurs with the following City of Boulder application for the DRCOG Sub-Regional FY20-23 TIP Call. This applies only to the Downtown Boulder Station and Canyon/SH 119 Transit Improvements project, in the event it is selected by DRCOG as a sub-regional project around Summer 2019. If this project is awarded DRCOG funds at a later date, the Local Agency (LA) will need to re-affirm CDOT's concurrence at that time.

This concurrence is conditionally granted, based on the scope as described. CDOT does, however, retain final decision-making authority for all improvements and changes within CDOT's right of way. As the project progresses, the LA will need to work closely with CDOT Region staff to ensure CDOT's continued concurrence.

This project must comply with all CDOT and/or FHWA requirements, including those associated with clearance for right of way, utilities and environmental. All costs associated with clearances, including right of way acquisition, utilities relocation and environmental mitigation measures, such as wetland creation, must be included in the project costs. CDOT staff will assist in determining which clearances are required for your project. The *CDOT Local Agency Manual* includes project requirements to assist with contracting, design and construction, *accessed* at: **http://www.coloradodot.info/business/designsupport/bulletins_manuals.**

Should you have any questions regarding this concurrence, or if your agency would like to schedule time to meet with a member of the CDOT Specialty Unit, please contact Karen Schneiders at (970) 350-2172.

Sincerely,

Johnny Olson, P.E.
Region 4 Transportation Director

JWO:KAS:mbc
cc: Todd Cottrell, DRCOG
Long Nguyen
Katrina Kloberdanz
Kateyn Triggs
Karen Schneiders

CITY OF BOULDER

Downtown Boulder Bus Station Capacity Enhancements

14th Street from Canyon Blvd to Arapahoe Avenue

				CITY OF BOULDER		
Item	**Description**	**Unit**	**Contract Units**	**Unit Estimate**	**Estimate Amount**	**Notes**
201	CLEARING AND GRUBBING	LSM	1.00	$ 5,000.00	$ 5,000.00	
202	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LSM	1.00	$ 5,000.00	$ 5,000.00	
202	REMOVAL OF SIDEWALK	SY	300.00	$ 24.44	$ 7,332.00	
202	REMOVAL OF CURB & GUTTER	LF	400.00	$ 8.46	$ 3,384.00	
202	REMOVAL OF ASPHALT MAT	SY	500.00	$ 11.49	$ 5,745.00	
304	AGGREGATE BASE COURSE (CLASS 6)	TON	100.00	$ 64.15	$ 6,415.00	
403	HOT MIX ASPHALT (PATCHING) (ASPHALT)	TON	100.00	$ 236.41	$ 23,641.00	
412	CONCRETE PAVEMENT (11-INCH)	SY	747.00	$ 124.42	$ 92,941.74	
608	CONCRETE SIDEWALK (6-INCH)	SY	300.00	$ 63.28	$ 18,984.00	
608	CONCRETE CURB RAMP	EACH	7.00	$ 4,058.00	$ 28,406.00	
609	CURB AND GUTTER (6-INCH) (CITY STANDARD)	LF	400.00	$ 18.94	$ 7,576.00	
627	PERMANENT PAVEMENT MARKINGS	LSM	1.00	$ 4,200.00	$ 4,200.00	
630	PERMANENT TRAFFIC CONTROL	LSM	1.00	$ 10,000.00	$ 10,000.00	
	SUBTOTAL OF ITEMS				**$ 218,624.74**	
208	EROSION CONTROL MANAGEMENT	LSM	1.00	5%	$ 10,931.24	
210	CITY UTILITY RELOCATIONS	LSM	1.00	5%	$ 10,931.24	
212	LANDSCAPING	LSM	1.00	15%	$ 32,793.71	
622	RTD BUS STOP AMENITIES	LSM	1.00	$ 122,000.00	$ 122,000.00	
625	CONSTRUCTION SURVEYING	LSM	1.00	10%	$ 21,862.47	
626	MOBILIZATION	LSM	1.00	15%	$ 32,793.71	
630	TEMPORARY TRAFFIC CONTROL	LSM	1.00	30%	$ 65,587.42	
700	TRANSIT STOP IMPROVEMENTS ON CANYON BLVD AT 14TH STREET	EACH	2.00	$ 35,000.00	$ 70,000.00	
700	FORCE ACCOUNT ITEMS	F/A		5%	$ 25,776.23	
700	CONSTRUCTION PHASE CONTINGENCIES	F/A		15%	$ 32,793.71	
	PROJECT SUBTOTAL				**$ 644,094.47**	
	LANDSCAPE ARCHITECTURE/ URBAN DESIGN	1.0%		1.0%	$ 6,440.94	
	HYDRUALICS ENGINEERING/ FLOOD PLAIN PERMITTING	1.0%		2.0%	$ 12,881.89	
	ELECTRICAL/ LIGHTING ENGINEERING	1.0%		2.0%	$ 12,881.89	
	TRAFFIC ENGINEERING	1.0%		2.0%	$ 12,881.89	
	DESIGN PHASE ENGINEERING	1.0%		5.0%	$ 32,204.72	
	DESIGN SURVEYING	1.0%		2.0%	$ 12,881.89	
	CITY SALARIES (DESIGN PHASE)	2.5%		2.5%	$ 16,102.36	
	CONSTRUCTION MANAGEMENT	2.5%		5.0%	$ 32,204.72	
	DESIGN SERVICE DURING CONSTRUCTION	1.0%		1.0%	$ 6,440.94	
	CITY SALARIES (CONSTRUCTION PHASE)	2.0%		5.0%	$ 32,204.72	
	ROADWAY/ PATH LIGHTING UPGRADES	2.0%		4.0%	$ 25,763.78	
	PROJECT TOTALS			32%	**$ 846,984.23**	

Construction Cost Escalation		
FY18	3%	$ 846,984.23
FY19	3%	$ 872,393.75
FY20	3%	$ 898,565.57
FY21	3%	$ 925,522.53
FY22	3%	$ 953,288.21
FY23	**3%**	**$ 981,886.86**

November 28, 2018

Noreen Walsh
Senior Transportation Planner
Transportation Division
City of Boulder
1777 Broadway
Boulder, CO 80302

RE: RTD Participation in Sub-regional TIP Local Match

Dear Ms. Walsh:

This letter is to express RTD's intent to participate in a share of the local match for the City's 2020-2023 TIP Sub-regional application for the Downtown Boulder Station improvements. Specifically, RTD will provide a total of $200,000 in funding support for the project's local match should it be awarded TIP funding. RTD's funding would be programmed as follows:

2021:	$50,000
2022:	$150,000
Total:	$200,000

Disbursement of these funds would be contingent upon completion of the project scope per the terms of a to-be-drafted IGA.

RTD is excited to participate in this project and we look forward to working with the City to see it through to implementation. Please let me know if I can provide any additional information.

Sincerely,

Bill Sirois
Senior Manager, Transit Oriented Communities

cc: Nataly Handlos, Senior Service Planner/Scheduler
Chris Quinn, Planning Project Manager
Bill Van Meter, Assistant General Manager, Planning

Project	Population 2020*	Jobs 2020*	Population 2040*	Jobs 2040*
Interim Downtown Boulder Station Improvements	37,463	40,860	38,410	44,763
30th St Improvements (Arapahoe Ave/SH7 - Boulder Creek)	40,432	45,355	42,627	55,859
Hop Transit Service Extension	40,195	59,777	45,241	76,375
Table Mesa Park-n-Ride Access	23,661	5,592	23,659	5,768
SH7/Arapahoe Avenue Multi-Use Path and Transit Stop Improvements	37,916	54,656	39,777	69,926
SH7/Arapahoe Avenue Bridge Replacement at Boulder Creek	30,262	48,684	31,545	61,220

* Data based on DRCOG projections model. Reported data is for all TAZ within 1 mile of project boundary. TAZ that are partially and wholly inside the 1 mile distance are included in the sum.

	30th Street Improvements	HOP Transit Service Expansion	SH7/Arapahoe Avenue Bridge Replacement at Boulder Creek	SH7/Arapahoe Avenue	Downtown Boulder Station Improvements	Table Mesa park-n-Ride Multi Use Path and Access Improvements
Total Population	46568	40398	38157	43855	41776	30900
Households	17846	15830	14282	17055	15697	12123
Person over age 65 within 1 mile	3423	3616	2817	4008	3047	3880
Minority persons within 1 mile	10591	9495	9565	11015	7344	5428
Household Poverty	5024	3173	3866	4277	4356	1601
Linguistically-challenged persons within 1 mile	835	1014	755	925	650	359
Individuals with disabilities within 1 mile	4011	2997	3415	3690	3117	3117
Households without a motor vehicle within 1 mile	2351	1710	2015	2243	1578	723
Children ages 6-17 within 1 mile	2641	3433	2531	3101	2535	3217
CDPHE Health Facilities	12	21	18	19	16	8
*Figures based on DRCOG provided census data						

City of Boulder - 2019 TIP Application Data Sources

Project	30th St Improvements (Arapahoe Ave/SH7 to Boulder Creek)
Bicycle Use	City of Boulder - Turning Movement Count Program
	30th St Corridor Study - Bicycle Data
	City of Boulder - Travel Diaries
	City of Boulder - Transportation Master Plan
Pedestrian Use	City of Boulder - Turning Movement Count Program
	30th St Corridor Study - Pedestrian Data
	City of Boulder - Travel Diaries
	City of Boulder - Transportation Master Plan
Traffic Crash Reduction	City of Boulder Police Department - Transportation Crash Database

Project	SH7/Arapahoe Ave Improvements (38th St to Cherryvale Rd)
Bicycle Use	City of Boulder - Turning Movement Count Program
	City of Boulder - Travel Diaries
	City of Boulder - Transportation Master Plan
Pedestrian Use	City of Boulder - Turning Movement Count Program
	City of Boulder - Travel Diaries
	City of Boulder - Transportation Master Plan
Traffic Crash Reduction	City of Boulder Police Department - Transportation Crash Database
	CMF ID 9250 - Install Shared Path

Project	SH7/Arapahoe Ave Boulder Creek Bridge Replacement
Bicycle Use	City of Boulder - Turning Movement Count Program
	City of Boulder - 38th/Arapahoe Av Multi-Use Path Permanent Counter
	City of Boulder - Travel Diaries
	City of Boulder - Transportation Master Plan
Pedestrian Use	City of Boulder - Turning Movement Count Program
	City of Boulder - 38th/Arapahoe Av Multi-Use Path Permanent Counter
	City of Boulder - Travel Diaries
	City of Boulder - Transportation Master Plan
Traffic Crash Reduction	City of Boulder Police Department - Transportation Crash Database
	CMF ID 9250 - Install Shared Path

Project	Table Mesa Park-n-Ride Access Improvements
Bicycle Use	City of Boulder - Turning Movement Count Program
	City of Boulder - Travel Diaries
	City of Boulder - Transportation Master Plan
Pedestrian Use	City of Boulder - Turning Movement Count Program
	City of Boulder - Travel Diaries
	City of Boulder - Transportation Master Plan
Traffic Crash Reduction	City of Boulder Police Department - Transportation Crash Database