

# Part 1

# Base Information

1. Project Title	High Plains Trail/Cherry Creek Regional Trail Connection Project
2. Project <i>Start/End</i> points or Geographic Area <i>Provide a map with submittal, as appropriate</i>	E-470 and S. Ireland Way traveling west to the Cherry Creek Trail at the 17 Mile House  See Attachment A (Area Map) and Attachment B (Project Map)
3. Project Sponsor ( <i>entity that will construct/ complete and be financially responsible for the project</i> )	Arapahoe County in partnership with Douglas County, City of Aurora, Town of Parker, and E-470 Public Highway Authority
4. Project Contact Person, Title, Phone Number, and Email	Bryan Weimer, Transportation Division Manager, 720-874-6550, BWeimer@arapahoegov.com

5. Does this project touch CDOT Right-of-Way, involve a CDOT roadway, access RTD property, or request RTD involvement to operate service?  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 \(2040 FC RTP\)](#)

Local plan: Arapahoe County Bicycle and Pedestrian Master Plan

Other(s):

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

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

<input type="checkbox"/> Rapid Transit Capacity (2040 FC RTP) <input type="checkbox"/> Transit Other: <input checked="" type="checkbox"/> Bicycle Facility <input checked="" type="checkbox"/> Pedestrian Facility <input checked="" type="checkbox"/> Safety Improvements <input type="checkbox"/> Roadway Capacity or Managed Lanes (2040 FC RTP) <input type="checkbox"/> Roadway Operational	<b>Grade Separation</b> <input type="checkbox"/> Roadway <input type="checkbox"/> Railway <input checked="" type="checkbox"/> Bicycle <input checked="" type="checkbox"/> Pedestrian <input type="checkbox"/> Roadway Pavement Reconstruction/Rehab <input type="checkbox"/> Bridge Replace/Reconstruct/Rehab <input type="checkbox"/> Study <input type="checkbox"/> Design <input type="checkbox"/> Other:
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8. **Problem Statement** What specific Metro Vision-related regional problem/issue will the transportation project address?

The easternmost portion of the Denver Metro Area - especially the area surrounding E-470 within Arapahoe and Douglas Counties - is largely isolated from the rest of the Denver Metro Area's bicycle and pedestrian network. Many bicyclists and pedestrians have to travel on or along busy roadways and make numerous at-grade crossings to access the regional trail network to the west (including trails like the Centennial Trail, Cherry Creek Regional Trail, High Line Canal Trail, and South Platte/Mary Carter Greenway Trail). Furthermore, E-470, Parker Road, and many other roadways act as significant barriers to east-west connectivity altogether. Compounding this issue is the rapidly expanding population of the area. The City of Aurora, Town of Parker, City of Centennial, and surrounding portions of unincorporated Arapahoe County are all experiencing significant population growth.

A new regional trail, the High Plains Trail, is being developed along the E-470 corridor. The trail is part of the recent E-470 Widening Project. The E-470 Public Highway Authority designed, funded, and constructed the regional trail from Quincy Avenue to approximately the county line between Arapahoe and Douglas Counties during the road widening project. This trail will ultimately continue to the Adams County line to the north adjacent to E-470 (construction planned for 2020/21) and will hopefully connect to the Cherry Creek Regional Trail on the south via the proposed project. However, the recently developed segment of the High Plains Trail is isolated from the rest of the Denver regional trail network - and so are area residents - which is why this project is so important.

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

At the southern end of what is currently an isolated/disconnected High Plains Trail, the plan is to continue the trail to the west, by separating it from the E-470 corridor and crossing through the future Kings Point development in Aurora along the Arapahoe/Douglas County line. The trail will include a grade-separated pedestrian overpass of Parker Road (Parker Road experiences 40,000-50,000 vehicle counts per day, which is why a grade-separated crossing is so critical). Once the trail crosses over Parker Road, it will connect with the existing Cherry Creek Regional Trail at the Arapahoe County Open Space 17 Mile House Farm Park. From there, trail users can head north on the Cherry Creek Regional Trail or head south and connect with the existing Centennial Trail (aka C-470 Trail) within Parker to continue east or west. The project will complete one of the largest missing regional trail connections in the Denver Metro Area, and it will directly connect tens of thousands of residents to the the larger regional trail network. Attachment B shows the project limits. We are requesting DRCOG support to construct Segments I, II, and IV. Segment III will be constructed by a private party as part of their development obligations.

The project partners have agreed to pay for 100% of the design work and are not requesting funding for that project element.

All of the local agencies are currently budgeting to construct the project (requests are currently being made of councils and boards for 2019 & 2020), and we now request DRCOG TIP funding to help construct the project.

**10. What is the status of the proposed project?**

The project is currently funded to complete 30% design. The project partners are committed to funding 100% of the design and are aiming to develop 100% construction documents by the end of 2019 with the intention to construct the project in 2020/21.

**11. Would a smaller federal 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.*

Our intent is to use State SB 18-001 Multi-modal Funds. The funding partners would consider a lesser allocation, but that would be determined at the time of discussions of such reductions.

**A. Project Financial Information and Funding Request**

<b>1. Total Project Cost</b>	<b>\$7,000,000</b>	
<b>2. Total amount of DRCOG Regional Share Funding Request</b> <i>(no greater than \$20 million and not to exceed 50% of the total project cost)</i>	<b>\$2,000,000</b>	<b>29%</b> of total project cost

3. <b>Outside Funding Partners (other than DRCOG Regional Share funds)</b> List each funding partner and contribution amount.	<b>\$\$ Contribution Amount</b>	<b>% of Contribution to Overall Total Project Cost</b>
City of Aurora	\$500,000	7%
Douglas County	\$750,000	11%
Town of Parker	\$750,000	11%
E-470 Highway Authority	\$438,000	6%
Arapahoe County	\$562,000	8%
Great Outdoors Colorado	\$2,000,000	29%
<b>Total amount of funding provided by other funding partners</b> <i>(private, local, state, Subregion, or federal)</i>	<b>\$5,000,000</b>	

<b>Funding Breakdown (year by year)*</b> <p style="text-align: right; font-size: small;"><i>*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 2018.</i></p>					
	FY 2020	FY 2021	FY 2022	FY 2023	Total
<b>Federal Funds</b>	\$	\$	\$	\$	<b>\$0</b>
<b>State Funds</b>	\$	\$2,000,000	\$	\$	<b>\$2,000,000</b>
<b>Local Funds</b>	\$	\$5,000,000	\$	\$	<b>\$5,000,000</b>
<b>Total Funding</b>	\$0	\$7,000,000	\$0	\$0	<b>\$7,000,000</b>
<b>4. Phase to be Initiated</b> <i>Choose from Design, ENV, ROW, CON, Study, Service, Equip. Purchase, Other</i>	Choose an item	CON	Choose an item	Choose an item	
<b>5. By checking this box,</b> 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.					<input type="checkbox"/>

## Part 2 Evaluation Criteria, Questions, and Scoring

### A. Regional significance of proposed project

WEIGHT **40%**

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

1. Why is this project regionally important?

The easternmost portion of the Denver Metro Area - especially the area surrounding E-470 within Arapahoe and Douglas Counties - is largely isolated from the rest of the Denver Metro Area's bicycle and pedestrian network. (see the Denver Regional Bicycle Map via the DRCOG web viewer) The High Plains Trail Connection project will complete a major missing link and provide invaluable off-street access to many regional trails, including the Cherry Creek, Piney Creek, C-470 (aka Centennial Trail), and Triple Creek Trails. It will also link up to many local/neighborhood trails.

Because this trail segment will be new, we do not have perfect quantitative data for how many users will use the connection. However, Arapahoe County Open Spaces has multiple trail counters on existing trails in the immediate vicinity of the proposed project. Over 100,000 pedestrians and bicylists use the Cherry Creek Regional Trail each year in the exact area that the proposed project will intersect the Cherry Creek Trail. Additionally, over 25,000 vehicles park in the 17 Mile House Farm Park's parking lot each year. (See Attachment C - Trail Count Data) The 17 Mile House Farm Park will serve as a major regional trailhead for the new trail. Based on these numbers, we conservatively estimate that the High Plains Trail will see approximately half of the use that the Cherry Creek Regional Trail experiences (i.e. about 50,000 users per year).

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

The proposed project directly benefits the City of Aurora, City of Centennial, and Town of Parker. Nearly 25,000 people live within a mile of the project, and estimates show that the area's population will grow by over 12,000 more people in the next 20 years. (See Part 3.B.) Many of these residents have limited access to trails. Currently, no trail connection exists between the Town of Parker and the communities of Aurora, Centennial, and unincorporated Arapahoe County located to the northeast. This project will also directly connect Aurora residents - especially those living in the future Kings Point development - to the historic 17 Mile House Farm Park.

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

The proposed project crosses and benefits two subregions, Arapahoe and Douglas Counties, by improving the overall regional trail network across the two counties. This connection will open up a host of transportation and recreation opportunities for cyclists and pedestrians. One of the largest benefits is that the project will help complete a 100-mile hard-surfaced loop around the entire Denver Metro Area. This one relatively small regional trail segment/connection will benefit hundreds of thousands of people.

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

The project will complete one of the largest missing regional trail connections in the Denver Metro Area, and it will directly connect tens of thousands of residents (who currently lack off-street access) to the larger Denver regional trail network. The proposed grade-separated crossing of Parker Road is a much safer alternative to any at-grade trail crossing of Parker Road.

[The only other alternative to the proposed project would be to connect the High Plains Trail to the Cherry Creek Regional Trail further to the south of the proposed project near where E-470 intersects Parker Road. However there are cloverleaf on and off ramps in the area and, as mentioned above, the trail would likely have to be at-grade. An at-grade crossing of Parker Road is not a desirable outcome due to significant safety concerns.]

Arapahoe County, through the recently completed Arapahoe County Bicycle & Pedestrian Master Plan (2017), asked residents to prioritize what they want out of the bicycle network. An overwhelming number of respondents said that they desire new, low-stress, off-street bicycle facilities.

The proposed segment of the High Plains Trail will not only provide a direct connection to the regional trail system for area residents who are currently disconnected, but it will also meet larger demands expressed by the public during the Arapahoe County Bicycle & Pedestrian Master Plan process.

**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?**

Investment in bicycle and pedestrian infrastructure has been linked to various community-wide benefits. Spanning from increased safety for all transportation modes to heightened property values, these benefits can have a positive impact on everyone, not just regular users of the local bicycle and pedestrian network.

This project will provide a number of direct benefits to area residents and businesses. Based on extremely conservative estimates from Part 3 of this application, the new trail segment will reduce VMT by nearly 100 miles per day, which is approximately 36,500 miles per year. The project will save people auto fuel and maintenance costs, reduce air pollution, and create positive health impacts by encouraging people to use alternative transportation. Area residents are currently forced to drive to work because of the lack of trails and off-street facilities. The proposed connection will open up a direct way for people to ride to work between the City of Aurora, parts of the City of Centennial, densely populated areas of unincorporated Arapahoe County, and the Town of Parker. Over 100,000 people use the Cherry Creek Regional Trail annually in the exact location that the High Plains Trail Connection (the subject of this application) will intersect it. Over 25,000 cars park at the 17 Mile House Farm Park each year. It is fair to say that many of these users will want to connect to and use the High Plains Trail.

The trail connection will also benefit the local economy. A study commissioned by the Colorado Department of Transportation in 2000 determined that bicycling contributed \$1 billion to the economy from manufacturing, retail, tourism and bike races. Retail and manufacturing employ 1,213 people with an annual payroll of \$34.1 million. Just in the last two years, we have seen a couple bicycle stores open up near the newly constructed portion of the High Plains Trail. These businesses rely on local trail opportunities.

Furthermore, small businesses employ about half of all private-sector employees. (U.S. Small Business Administration, "FAQs: Frequently Asked Questions: Advocacy Small Business Statistics and Research") In a 1997 study, researchers interviewed 174 small businesses that recently relocated to, expanded in, or launched in Colorado during the previous five years. Respondents said that quality of life was the primary reason for choosing the area. They specifically ranked parks, recreation, trails, and open space amenities as the most important quality-of-life factors. (Crompton, Love, and More, "An Empirical Study of the Role of Recreation, Parks, and Open Space in Companies' (Re)Location Decisions," Journal of Park and Recreation Administration (1997): p. 37.) This new segment of the High Plains Trail will increase quality of life in the immediate vicinity, and it will have positive spillover effects across the Denver Metro Area.

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

The top priority/objective of this project is to encourage different travel modes beyond the traditional motorized vehicle. This trail connection will take cars off of congested roadways and provide access to major public transportation hubs and other regional trails. This major connection will directly connect two existing regional trails, give users the opportunity to traverse the entire Denver Metro Area, and connect people to countless local systems utilizing low stress, off-street trails.

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

All project partners (aka the "Partners Group") are budgeting funds in 2019 & 2020 for the project (Aurora is budgeting \$500K, Parker is budgeting \$750K+, Douglas County is budgeting \$750K, and Arapahoe County Open Spaces is budgeting \$500K+). Furthermore, the E-470 Public Highway Authority has already contributed \$438k for project construction. The Partners Group also plans to apply for GOCO funding in 2019 (approximately \$1.5-2M).

## 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)**.

Providing greater access and connectivity to alternative transportation provides a significantly decreased transportation cost option for vulnerable populations. Large populations of vulnerable individuals reside within one mile of the project, and there are two Environmental Justice Analysis Zones within a mile of the project. Specific vulnerable population data for the area show that:

--> 2,910 people over the age of 65,

--> 3,962 minority person,

--> 417 low-income households,

--> 606 individuals with disabilities, and

--> 2,598 children between the age of 6-17

ALL live within a mile of the project. These population statistics will jump drastically when 1,500 new residential units are constructed within the Kings Point development, which is located in the heart of this project, in the upcoming years.

This project will also provide accessibility to many of the 16 health service facilities located within a mile of the project.

The project will encourage the growth of bicycle share stations, which might also offer greater opportunity for low-income households to access the regional trail system by bicycle.

Two nursing homes exist within a mile of the project.

Finally, according to Neighborhood Data for the 7-County Denver Metro Region database, 36% of children within a mile of this project have low access to healthy food (nearly 7% higher than the rest of the region). One critical element of this project is that it will directly connect people to the 17 Mile House Farm Park, and a community garden is planned for the property in the near future.

2. Describe how the project will **increase reliability of existing multimodal transportation network**.

This major regional connection will provide access to safe, connected, and comfortable low-stress trails, creating a more reliable transportation network because more people prefer low-stress alternative transportation options. As mentioned earlier, it will directly connect two regional trails and open up a host of different ways to commute.

As shown on the DRCOG Bicycle Facility Inventory map and the Denver Regional Bicycle Map, there is currently a dearth of trails in the vicinity of this project (no trails exist within the large triangle formed within Parker Road, Arapahoe Road, and E-470). The proposed trail connection will be a regional game changer for pedestrians and

bicyclists. Furthermore, providing a grade-separated crossing of Parker Road (which sees 40,000-50,000 vehicle counts per day) will help with the safety and reliability of the multmodal transportation network in the area and region.

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

The new, proposed segment of the High Plains Trail will connect many low-stress regional and local trail networks that are much safer and more preferred than on-street options. Furthermore, the new project will avoid an at-grade crossing of Parker Road (SH-83) by providing users with a safe overpass of SH-83. As mentioned earlier, this stretch of Parker Road sees 40,000-50,000 vehicle counts per day. An at-grade crossing is incompatible with this amount of vehicular traffic.

There is an increased vulnerability of cyclists and pedestrians compared to motor vehicle occupants. Safety is of paramount concern when evaluating and planning improvements for an active transportation network. Five years of bicycle and pedestrian crash data in Arapahoe County were recently collected and analyzed. Because these data only include reported crashes involving a motor vehicle, crashes that either did not get reported or only involved cyclists and pedestrians were not accounted for. Between 2011 and 2015, the total number of reported crashes between bicycles or pedestrians and vehicles increased 24 percent. Between 2012 and 2015, the increase in bicycle and pedestrian crashes outpaced the County’s population growth. An increase in biking and walking activity may offset the overall crash rate experienced by bicyclists and pedestrians. Avoiding at-grade crossings altogether, will certainly reduce the possibility of a vehicle crashing into a bicycle/pedestrian. Thus, the proposed Parker Road (SH-83) overpass is a significant safety benefit to the region.

**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

The High Plains Trail connection will connect a vast network of existing urban-level trail infrastructure, and E-470 is expanding the High Plains Trail north from Quincy Road to I-70. As is demonstrated in Part 3 of this application, the population of the area will likely grow significantly in the next 20 years (over 12,000 more people). The new Kings Point development alone will produce an additional 1,500 new residential units. Projects such as the new High Plains Trail Connection will facilitate growth where plans for infrastructure and service expansion are already in place. Furthermore, much of the area is already zoned commercial or residential.

[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

The High Plains Trail connection will provide a multimodal connecton to the majority of the Denver Metro Area's urban centers, housing areas, and employment centers. It will directly connect the currently isolated High Plains

Regional Trail to the Cherry Creek Regional Trail and the two Urban Centers of Parker and Smoky Hill. Over 33,000 people either reside in or are employed within one mile of the project. This project will directly benefit many of them. Imagine being able to ride your bike from the Town of Parker up to the Aurora Reservoir and other major economic centers to the north, such as the Buckley Air Force Base (which generates over \$1B of economic activity annually); this project will provide that exact level of regional connectivity.

[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 the region for people, goods, or services?

Yes  No

Describe, including supporting quantitative analysis

The High Plains Trail will vastly increase mobility choices for people by linking many regional and local trails. It will encourage people to leave their cars at home and access area shopping centers and destinations by bicycle and foot. It will also provide the opportunity for utilization of transit (e.g. it will directly connect residents to the Cherry Creek Trail, which connects to many RTD transit stops).

[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

By linking many regional trail systems, the High Plains Trail connection could significantly reduce greenhouse gas emissions by creating greater access to off-street regional trails, urban centers, and recreational destinations. Very conservative use estimates show that the project will reduce pounds of daily GHG emissions by 81 pounds per day on an average weekday (see Part 3.B. and Part 3.C.) - that's nearly 30,000 pounds of GHG emissions each year. Because this trail connection will be heavily used on the weekend by recreational users, the environmental benefits will be much larger.

[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 High Plains Trail Connection project will create a direct connection between two regional trails that are currently segregated: the High Plains Trail and the Cherry Creek Regional Trail. It will provide an opportunity for trail users to visit the historic 17 Mile House Farm Park, Aurora Reservoir, Cherry Creek State Park, Arapahoe County Fairgrounds & Park, and Chatfield State Park. Over 100,000 people each year ride the segment of the Cherry Creek Regional Trail that will connect to this project. Additionally, 25,000 cars currently park each year at the 17 Mile House, which will serve as the primary trailhead for this project. Many of the existing Cherry Creek Regional Trail users and 17 Mile House visitors will use the new High Plains Trail Connection to visit areas located further to the east of Parker Road.

[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

Investing in and promoting bicycling and walking within a community can produce significant benefits related to health and safety. In 2009, the World Health Organization developed the Health Economic Assessment Tool (HEAT) to assist agencies with estimating the local economic benefits of reduced mortality resulting from walking and bicycling based on area-specific empirical data. Applying this tool to the state of Colorado in 2014 resulted in an annual estimated benefit of \$3.2 billion. (Economic and Health Benefits of Bicycling and Walking, BBC Research & Consulting, October 2016) Increased levels of bicycling and walking lead to lower mortality rates because more physical activity can help to reduce the risk of many chronic diseases and obesity.

The High Plains Trail connection will create an alternative transportation opportunity for users to recreate on the trail, travel on the trail to get to work, and use the trail to connect to major recreation amenities and economic centers. One specific example of how this project will expand opportunities for residents to lead healthy lifestyles is that it will directly connect area residents - especially cyclists and pedestrians - to a planned community garden at the 17 Mile House Farm Park. People will be able to walk or bike to a place where they can grow their own fresh produce. Please note that this is just one of numerous specific examples.

[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 High Plains Trail connection will link major activity centers throughout the entire Denver Metro Area. It will connect numerous parks, trails, and state parks. It will connect vulnerable populations to the ever-growing Denver regional trail network and link them to 16 health service facilities in the area.

Children today spend less time outdoors than any other generation, devoting only four to seven minutes to unstructured outdoor play per day while spending an average of seven and a half hours in front of electronic media. As a result, child obesity has reached unprecedented levels and continues to rise. Children are carrying this sedentary lifestyle and a disconnection with nature into adulthood which creates a troubling national trend for the future of conservation, our economy, and the health and wellness of our communities. The High Plains Trail Connection project will link 2,598 children that live within a mile of the project to outdoor and historic sites they might not otherwise have access to.

[MV objective 14](#)

**Improve the region's competitive position.**

8. Will this project help support and contribute to the growth of the region's economic health and vitality?

Yes  No

Describe, including supporting quantitative analysis

The High Plains Trail will support the region's economic health and vitality by providing greater access to alternative transportation and linking areas of high job density (especially the areas around Parker and Smoky Hill). Trails and outdoor recreation are major economic drivers. They attract and retain higher paying employers and well-educated employees. According to the American Planning Association, highly educated workers are drawn to cities with easily accessible outdoor recreation. Some of the top cities for these workers are Seattle, Portland, San Francisco, Denver, and Austin – which are also among the country's top cycling cities. (City Parks Forum, "How Cities Use Parks for Economic Development," (American Planning Association, 2002): p.3)

A 2016 study found that bicycling and walking contribute approximately \$1.6 billion annually to Colorado's economy. (Economic and Health Benefits of Bicycling and Walking, BBC Research & Consulting, October 2016) This economic impact comes primarily in the form of bicycle-related tourism and spending on bicycle and walking equipment. The 2014 US Pro Cycling Challenge alone brought \$130 million in spending to Colorado from out-of-

state visitors. In addition to generating increased revenue, bicycle and pedestrian infrastructure, particularly trails, has been shown to positively correlate with increases in property values in studies from across the United States.

Infrastructure projects that include bicycle and pedestrian components create more jobs than those that do not, with a 2011 University of Massachusetts study finding that bicycle-only projects created 11.4 jobs per \$1 million spent – 47 percent higher than the 7.75 jobs created from road-only projects. (Garrett-Peltier, H., Pedestrian and Bicycle Infrastructure: A National Study of Employment Impacts, Political Research Economy Institute, University of Massachusetts, June 2011)

**D. Project Leveraging**

**WEIGHT 10%**

<p>9. What percent of outside funding sources (non-DRCOG-allocated Regional Share funding) does this project have?</p>	<p>71%</p>	<p>80%+ outside funding sources ..... High          60-79% .....Medium          59% and below .....Low</p>
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## Part 3

# Project Data Worksheet – Calculations and Estimates

(Complete all subsections applicable to the project)

## A. Transit Use

1. Current ridership weekday boardings	0
2. Population and Employment	

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	23,868	8,355	32,223
2040	29,418	15,460	44,878

Transit Use Calculations	Year of Opening	2040 Weekday Estimate
3. Enter estimated additional daily transit boardings after project is completed. <i>(Using 50% growth above year of opening for 2040 value, unless justified)</i> <i>Provide supporting documentation as part of application submittal</i>	0	0
4. Enter number of the additional transit boardings (from #3 above) that were previously using a different transit route. <i>(Example: {#3 X 25%} or other percent, if justified)</i>	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.) <i>(Example: {#3 X 25%} or other percent, if justified)</i>	0	0
6. = Number of SOV one-way trips reduced per day (#3 – #4 – #5)	0	0
7. Enter the value of <b>{#6 x 9 miles}</b> . (= the VMT reduced per day) <i>(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)</i>	0	0
8. = Number of pounds GHG emissions reduced (#7 x 0.95 lbs.)	0	0
9. If values would be distinctly greater for weekends, describe the magnitude of difference:  Please note that the population data in Part 3.A. are different than the data in Part 3.B., Part 3.C, and Part 3.D. Part 3.A. data are taken from the closest RTD bus stop to the project. Part 3.B., Part 3.C., and Part 3.D. data are calculated based on the overall project geography and are the most representative data.		
10. If different values other than the suggested are used, please explain here:		

## 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	24,227	9,278	33,505

2040	36,572	15,313	<b>51,885</b>
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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.	115	173
4. Enter number of the bicycle trips (in #3 above) that will be diverting from a different bicycling route. (Example: <b>{#3 X 50%}</b> or other percent, if justified)	56	87
5. = Initial number of new bicycle trips from project (#3 – #4)	59	86
6. Enter number of the new trips produced (from #5 above) that are replacing an SOV trip. (Example: <b>{#5 X 30%}</b> (or other percent, if justified)	18	<b>26</b>
7. = Number of SOV trips reduced per day (#5 - #6)	41	60
8. Enter the value of <b>{#7 x 2 miles}</b> . (= the VMT reduced per day) (Values other than 2 miles must be justified by sponsor)	82	120
9. = Number of pounds GHG emissions reduced (#8 x 0.95 lbs.)	77	114
10. If values would be distinctly greater for weekends, describe the magnitude of difference:  Values will be distinctly greater for weekends because this connection will open up a new, major recreational resource for cyclists. It will form the backbone of a 100-mile, hard-surfaced route that surrounds the Denver Metro Area. While we anticipate that there will be 30,000 weekday one-way bicycle trips annually, the number of weekend one-way annual trips could be an additional 15,000-20,000 one way trips. These numbers are estimated and justifiable based on trail counter information that Arapahoe County Open Spaces has collected from the 17 Mile House Farm Park and nearby Cherry Creek Regional Trail.		
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	24,227	9,278	<b>33,505</b>
2040	36,572	15,313	<b>51,885</b>

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	39	58
4. Enter number of the new pedestrian trips (in #3 above) that will be diverting from a different walking route (Example: <b>{#3 X 50%}</b> or other percent, if justified)	20	29

5. = Number of new trips from project (#3 – #4)	19	29
6. Enter number of the new trips produced (from #5 above) that are replacing an SOV trip. (Example: <b>{#5 X 30%}</b> or other percent, if justified)	6	9
7. = Number of SOV trips reduced per day (#5 - #6)	13	20
12. Enter the value of <b>{#7 x .4 miles}</b> . (= the VMT reduced per day) (Values other than .4 miles must be justified by sponsor)	5	8
8. = Number of pounds GHG emissions reduced (#8 x 0.95 lbs.)	4	7
9. If values would be distinctly greater for weekends, describe the magnitude of difference:  Values might be distinctly greater on weekends - especially when the Kings Point Development begins to sell homes (groundbreaking will occur in late 2018/early 2019) - because area residents will want to visit planned community gardens at the 17 Mile House Farm Park. The trail will also provide walkers and joggers direct recreation access to the Cherry Creek Regional Trail.		
10. If different values other than the suggested are used, please explain here:		

## D. Vulnerable Populations

Use Current Census Data	Vulnerable Populations	Population within 1 mile
	1. Persons over age 65	
2. Minority persons		3,962
3. Low-Income households		417
4. Linguistically-challenged persons		200
5. Individuals with disabilities		606
6. Households without a motor vehicle		81
7. Children ages 6-17		2,598
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 <b>{#3 - #4}</b> = Reduced VHD	0

6. Enter value of <b>{#5 X 1.4} = Reduced person hours of delay</b> (Value higher than 1.4 due to high transit ridership must be justified by sponsor)	0
7. <b>After project peak hour congested average travel time reduction</b> 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 <b>5-year</b> 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).
<b>Fatal</b> crashes	0	
<b>Serious Injury</b> crashes	0	
<b>Other Injury</b> crashes	0	
<b>Property Damage Only</b> crashes	0	
2. Estimated reduction in crashes <u>applicable to the project scope</u> (per the five-year period used above)		
<b>Fatal</b> crashes reduced	0	
<b>Serious Injury</b> crashes reduced	0	
<b>Other Injury</b> crashes reduced	0	
<b>Property Damage Only</b> 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
<b>H. Bridge Improvements</b>	
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
<b>I. Other Beneficial Variables</b> <i>(identified and calculated by the sponsor)</i>	
1.	
2.	
3.	
<b>J. Disbenefits or Negative Impacts</b> <i>(identified and calculated by the sponsor)</i>	
1. Increase in VMT? <i>If yes, describe scale of expected increase</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. Negative impact on vulnerable populations	
3. Other:	