



DRCOG FY2022-2025 TIP – Douglas County Subregion
Subregional Share Air Quality/Multimodal (AQ/MM)
Application Programming Federal Fiscal Years 2023-2025

APPLICATION OVERVIEW

What: The Subregional Share Call for Projects for the FY2022-2025 TIP, programming fiscal years 2023-2025

Funding Available: \$161,292,000 overall. Target of \$16,726,000 for Douglas County (estimated as of the open date)

Application: Air Quality & Multimodal (AQ/MM) eligible projects only

Major Project Eligibility Exceptions: Roadway capacity, roadway reconstruction, bridge, interchange projects

Call Opens: May 2, 2022

Call Closes: June 24, 2022, 3 pm

Application Submittals: submit the items below online through the submittal link on the [TIP Data Hub](#)

1. REQUIRED: a **single PDF document** containing the below. Please **DO NOT** attach additional cover pages, embed graphics in the application, or otherwise change the format of the application form.
 - a. this application
 - b. one location map/graphic
 - c. cost estimate (your own or the CDOT [cost estimate form](#))
 - d. CDOT/RTD concurrence response (if applicable)
 - e. any required documentation based on the application text (i.e., FHWA emissions calculators)
 - f. project support letters and/or [Request for Peer Agency Support](#)
2. OPTIONAL: Submit **one additional** PDF document containing any supplemental materials, if applicable
3. REQUIRED: Submit a zipped GIS shapefile of your project. Requests for assistance with creating a shapefile should be submitted to tipapplications@drcog.org no later than June 3, 2022

Other Notable items:

- **TIP Trainings:** To be eligible to submit an application, at least one person from your agency must have attended one of the two mandatory TIP training workshops ([February 10](#) and [February 16, 2022](#))
- **CDOT/RTD Concurrence:** If required, [CDOT and/or RTD concurrence](#) must be provided with the application submittal. The CDOT/RTD concurrence request is due to CDOT/RTD no later than May 13, 2022, with CDOT/RTD providing a response no later than June 10, 2022. Submit requests to the following: CDOT Region 1 – JoAnn Mattson, joann.mattson@state.co.us; CDOT Region 4 – Josie Hadley, josie.hadley@state.co.us; RTD – Chris Quinn, chris.quinn@rtd-denver.com
- **If a submitted application in Call #1 was not funded**, and you wish to resubmit the same application for this call, please contact DRCOG at tipapplications@drcog.org. In these cases, we can unlock the application, change the title, and save the applicant work in the resubmittal process.
- **Application Data:** To assist sponsors in filling out the application, DRCOG has developed a TIP Data Tool to streamline quantitative analyses requested in the application. A link to the TIP Data Tool and instructions on how to use it are available on the [TIP Data Hub](#). Additionally, sponsors may download datasets to run their own analyses from this same site. Requests for additional data or calculations from DRCOG staff should be submitted to tipapplications@drcog.org no later than June 3, 2022
- **Project Affirmation:** The application must be affirmed by either the applicant’s City or County Manager, Chief Elected Official (Mayor or County Commission Chair) for local governments, or agency director or equivalent for other applicants
- **TIP Policy:** Further details on project eligibility, evaluation criteria, and the selection process are defined in the [Policies for TIP Program Development](#) document (a [quick-guide](#) is also available for reference)
- **Evaluation Process:** DRCOG staff will review submittals for eligibility and post to the DRCOG website (June 27-July 1). Applications and scoring sheets will then be provided to the individual subregional forums no later than July 1. The forums will then review, score, discuss, and rank the applications and provide a recommended funding list within the funding available by August 5. The forums’ recommendations will then be forwarded to the DRCOG committee process for incorporation into the adopted TIP
- If you have any questions or need assistance, reach out to us at tipapplications@drcog.org

APPLICATION FORMAT

The AQ/MM Subregional Share application contains two parts: *project information* and *evaluation questions*.

Project Information

Applicants enter **foundational** information for the *project/program/study* (hereafter referred to as *project*), including a problem statement, project description, and concurrence documentation from CDOT and/or RTD, if applicable. This section is not scored.

Evaluation Questions

This part includes four sections (A-D) for the **applicant to provide qualitative and quantitative responses** to use for scoring projects. The checkboxes and data entry fields should guide the applicant’s responses. They are not directly scored but provide context as reviewers consider the full response to each question. Applicants may access the TIP Data Tool and additional data resources which applicants may find useful [here](#).

Scoring Methodology: Each section will be scored on a scale of 0 to 5, relative to other applications received. All questions will be factored into the final score, with any questions left blank receiving 0 points. The four sections are weighted and scored as follows:

Section A. Subregional Impact of Proposed Projects..... 30%

Projects will be evaluated on the degree to which they address a significant regional or subregional problem or benefit people throughout the subregion. Relevant quantitative data should be included within narrative responses.

5	The project benefits will substantially address a major regional or subregional problem and benefit people and businesses in multiple subregions.
4	The project benefits will significantly address a major subregional problem primarily benefiting people and businesses in one subregion.
3	The project benefits will either moderately address a major subregional problem or significantly address a moderate -level subregional problem.
2	The project benefits will moderately address a moderate -level subregional problem.
1	The project benefits will address a minor subregional problem.
0	The project does not address a subregional problem.

Section B. Metro Vision Regional Transportation Plan Priorities50%

The TIP’s investments should implement the 2050 Metro Vision Regional Transportation Plan (2050 MVRTP) regional project and program investment priorities, which contribute to addressing the Board-adopted Metro Vision objectives and the federal performance-based planning framework required by the Federal Highway Administration and Federal Transit Administration as outlined in current federal transportation legislation and regulations. Therefore, projects will be evaluated on the degree to which they address the six priorities identified in the 2050 MVRTP: safety, active transportation, air quality, multimodal mobility, freight, and regional transit. It is anticipated that projects may not be able to address all six priorities, but it’s in the applicant’s interest to address as many priority areas as possible. Relevant quantitative data is required to be included within narrative responses. The table below demonstrates how each priority area will be scored.

5	The project provides demonstrable substantial benefits in the 2050 MVRTP priority area and is determined to be in the top fifth of applications based on the magnitude of benefits in that priority area.
4	The project provides demonstrable significant benefits in the 2050 MVRTP priority area.
3	The project provides demonstrable moderate benefits in the 2050 MVRTP priority area and is determined to be in the middle fifth of applications based on the magnitude of benefits in that priority area.
2	The project provides demonstrable modest benefits in the 2050 MVRTP priority area.
1	The project provides demonstrable slight benefits in the 2050 MVRTP priority area and is determined to be in the bottom fifth of applications based on the magnitude of benefits in that priority area.
0	The project does not provide demonstrable benefits in the 2050 MVRTP priority area.

Section C. Project Leveraging (“overmatch”) 10%
 Scores are assigned based on the percent of other funding sources (non-Subregional Share funds).

Score	% non-Subregional Share funds
5	60% and above
4	50-59.9%
3	40-49.9%
2	20-39.9%
1	10.1-19.9%
0	10%

Section D. Project Readiness 10%

Be sure to answer ALL questions. While “Yes” answers will generally reflect greater readiness, opportunities are given to provide additional details to assist reviewers in fully evaluating the readiness of your project.

5	Substantial readiness is demonstrated and all known obstacles that are likely to result in project delays have been mitigated.
4	Significant readiness is demonstrated and several known obstacles that are likely to result in project delays have been mitigated.
3	Moderate readiness is demonstrated and some known obstacles that are likely to result in project delays have been mitigated.
2	Slight readiness is demonstrated and some known obstacles that are likely to result in project delays have been mitigated.
1	Few mitigation or readiness activities have been demonstrated.
0	No mitigation or readiness activities have been demonstrated.

Project Information

1. Project Title		C-470 Trail over Broadway Bike/Ped Grade Separation	
2. Project Location <i>Provide a map, as appropriate (see Page 1)</i>		Start point:	
		End point:	
		OR Geographic Area:	Broadway & C-470
3. Project Sponsor <i>(entity that will be financially responsible for the project)</i>		Douglas County	
4. Project Contact Person:			
Name	Art Griffith	Title	Capital Improvements Manager
Phone	303-947-8731	Email	agriffit@douglas.co.us
5. Required CDOT and/or RTD Concurrence: Does this project touch CDOT Right-of-Way, involve a CDOT roadway, access RTD property, or request RTD involvement to operate service?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, provide applicable concurrence documentation</i>	
6. What planning document(s) identifies this project? <i>Provide link to document(s) and referenced page number if possible, or provide documentation in the supplement</i>	<input type="checkbox"/> DRCOG 2050 Metro Vision Regional Transportation Plan (2050 MVRTP)		
	Provide MVRTP staging period, if applicable capital project:		
	<input checked="" type="checkbox"/> Local/Regional plan:	Planning Document Title: 2040 DC Transportation Master Plan Adopting agency (local agency Council, CDOT, RTD, etc.): Douglas County Provide date of adoption by council/board/commission, if applicable: September 2019	
	Please describe public review/engagement to date:	Receive on-going public comment from DC constituents and received public review during development of 2040 DC Transportation Master Plan regarding bike/ped elements.	
Other pertinent details:	N/A		
7. Identify the project's key phases and the anticipated schedule of phase milestones. (phases and dates should correspond with the Funding Breakdown table below)			
Phases to be included:	Major phase milestones:	Anticipated completion date (based on 9/21/2022 DRCOG approval date): (MM/YYYY)	
FOR ALL PHASES	Intergovernmental Agreement (IGA) executed (with CDOT/RTD; assumed process is 4-9 months)	04/2023	
<input checked="" type="checkbox"/> Design	Design contract Notice to Proceed (NTP) issued (if using a consultant):	06/2023	
	Design scoping meeting held with CDOT (if no consultant):		
<input checked="" type="checkbox"/> Environmental	Environmental contract Notice to Proceed (NTP) issued (if using a consultant):	06/2023	
	Environmental scoping meeting held with CDOT (if no consultant):		
<input checked="" type="checkbox"/> Right-of-Way	Initial set of ROW plans submitted to CDOT:	04/2024	

	ROW acquisition completed: Estimated number of parcels to acquire: 1	12/2024
<input type="checkbox"/> Construction	FIR (Field Inspection Review):	03/2024
	FOR (Final Office Review):	10/2024
	Required clearances:	10/2024
	Project publicly advertised:	N/A
<input checked="" type="checkbox"/> Study	Kick-off meeting held after consultant NTP (or internal if no consultant):	06/2023
<input type="checkbox"/> Bus Service	Service begins:	
<input type="checkbox"/> Equipment Purchase (Procurement)	RFP/RFQ/RFB (bids) issued:	
<input checked="" type="checkbox"/> Other:	First invoice submitted to CDOT/RTD:	08/2023

8. Problem Statement: What specific subregional problem/issue will the transportation project address?

The project will build a bridge for bikes/peds using the C-470 trail to cross over Broadway just north of the C-470 westbound on and off ramps. This bike/ped bridge would replace the existing at grade intersection configuration that currently requires bikes/peds to make four separate roadway crossings totaling nine lanes of traffic. The proposed grade separation will improve traffic operations, especially on the weekends when the C-470 trail sees the most users, adversely impacting signal progression along Broadway and traffic entering or exiting C-470.

9. Identify the project's key elements. A single project may have multiple project elements.

Roadway

Operational Improvements

Grade Separation

- Roadway
- Railway
- Bicycle
- Pedestrian

Regional Transit¹

- Rapid Transit Capacity (2050 MVRTP)
- Mobility Hub(s)
- Transit Planning Corridors
- Transit Facilities/Service (Expansion/New)

Safety Improvements

Active Transportation Improvements

- Bicycle Facility
- Pedestrian Facility

Air Quality Improvements

Improvements Impacting Freight

Multimodal Mobility (i.e., accommodating a broad range of users)

- Complete Streets Improvements

Study

Other, briefly describe:

¹For any project with transit elements, the sponsor must coordinate with RTD to ensure RTD agrees to the scope and cost. Be sure to include RTD's concurrence in your application submittal.

10. Define the **scope and **specific elements** of the project (including any elements checked in #9 above). *DO NOT include scope elements that will not be part of the DRCOG funded project or your IGA scope of work (i.e., adjacent locally funded improvements or the project merits and benefits). Please keep the response to this question tailored to details of the scope only and no more than five sentences.***

The project would build a bike/ped bridge over Broadway which will improve safety of the crossing by grade separating the C-470 trail users from vehicular traffic on Broadway; and promote more multi-modal trail users. The proposed multi-modal improvements will encourage an active lifestyle and promote alternative modes of transportation.

11. What is the current status of the proposed scope as defined in Question 10 above? *Note that overall project readiness is addressed in more detail in Section D below.*

While no work on this project has been done to date, the project is identified in the Douglas County 2040 Transportation Master Plan as well as the County's current CIP 5-year project priorities. Conceptual design alternatives have been investigated and we are requesting TIP funds for pre-construction activities at this time.

12. Would a smaller DRCOG-allocation than requested be acceptable, while maintaining the original intent of the project?

Yes No

*If yes, smaller meaningful limits, size, service level, phases, or scopes, along with the cost, **MUST** be defined.*

Smaller DRCOG funding request:

Outline the differences between the scope outlined above and the reduced scope:

Project Financial Information and Funding Request		(All funding amounts in \$1,000s)	
Total amount of Subregional Share Funding Request (in \$1,000's) <i>(No less than \$100,000 and not to exceed 90% of the total project cost)</i> <input type="checkbox"/> Check box if requesting only state MMOF funds (requires minimum 50% local funds) ¹		\$500	83.33% of total project cost
Match Funds (in \$1,000's) List each funding source and contribution amount.		Contribution Amount	% Contribution to Overall Project Total
Douglas County		\$100	17%
		\$	0%
		\$	0%
		\$	0%
		\$	0%
		\$	0%
Total Match <i>(private, local, state, another subregion, or federal)</i>		\$100	16.67%

Project Total

\$600

Notes:

1. Per CDOT action, the following jurisdictions are only required to provide 25% match on the MMOF funds: Englewood, Jamestown, and Wheat Ridge.
The following jurisdictions are not required to provide a match on the MMOF funds: Federal Heights, Lakeside, Larkspur, Sheridan, and Ward.
All sponsors will still be required to have 20% match on any added federal funds.

Funding Breakdown (in \$1,000s) (by program year)¹ (Total funding should match the Project Total from above)

	FY 2023	FY 2024	FY 2025	Total
DRCOG Requested Funds	\$200	\$300	\$0	\$500
CDOT or RTD Supplied Funds²	\$0	\$0	\$0	\$0
Local Funds (Funding from sources other than DRCOG, CDOT, or RTD)	\$50	\$50	\$0	\$100
Total Funding	\$250	\$350	\$0	\$600
Phase to be Initiated	Design	Design	Choose an item	
Notes:	<ol style="list-style-type: none"> 1. Fiscal years are October 1 through September 30 (e.g., FY 2023 is October 1, 2022 through September 30, 2023). 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 a recommended 3% inflation factor. 2. Only enter funding in this line if CDOT and/or RTD specifically give permission via concurrence letters or other written source. 			
Affirmation:	By checking this box, the applicant's Chief Elected Official (Mayor or County Commission Chair/City or County Manager/Agency Director) has certified it allows this application to be submitted for potential DRCOG-allocated funding and will follow all local, DRCOG, state, and federal policies and regulations if funding is awarded. <input checked="" type="checkbox"/>			

Evaluation Questions

A. Subregional Impact of Proposed Project

WEIGHT

30%

Provide **qualitative and quantitative** responses to the following questions on the regional impact of the proposed project. Be sure to provide all required information for each question. Quantitative data from DRCOG is available [here](#).

1. Why is this project subregionally important? Relevant quantitative data in your response is required.

This project is important because constituents that access and use the C-470 regional trail will benefit from the safety improvement associated with grade separating the crossing of Broadway and promote morer trail users. The free right vehicluar turn lanes are very dangerous for the at-grade trail users.

2. How will the proposed project address the specific transportation problem described in the **Problem Statement** (as submitted in Project Information, #8)? Relevant quantitative data in your response is required.

The proposed project will build a bike/ped bridge to replace the existing at grade intersection configuration with a grade separation which will improve the safety for bike/ped users as well as improve traffic operations and reduce congestion on Broadway and at both of the C-470 westbound ramps.

3. Does the proposed project benefit multiple municipalities and/or subregions? If yes, which ones and how? Also describe any funding partnerships (other subregions, regional agencies, municipalities, private, etc.) established in association with this project.

Constituents that use the C-470 Trail at Broadway are from mulitple municipalities in three subregions and these multi-modal trail users will benefit greatly from the project. Users from the counties of Douglas, Jefferson, and Arapahoe will benefit from the project as well as the cities/town of Littleton, Centennial, Englewood, Lone Tree, and Parker. There are no fudning partners associated with this TIP request for pre-construction funding.

4. Describe how the project will improve access and mobility for each of the applicable disproportionately impacted and environmental justice population groups identified in the table below. This data is available in the TIP Data Tool.

Completing the below table and referencing relevant quantitative data in your response is required.

	DI and EJ Population Groups	Number within ½ mile	% of Total	Regional %
Use 2015-2019 American Community Survey Data (In the TIP Data Tool, use a 0.5 mile buffer)	a. Total population	13,137	-	-
	b. Total households	4,547	-	-
	c. Individuals of color	2,323	18%	33%
	d. Low-Income households	230	5%	9%
	e. Individuals with limited English proficiency	61	0%	3%
	f. Adults age 65 and over	1,706	13%	13%
	g. Children age 5-17	2,351	18%	16%
	h. Individuals with a disability	381	3%	9%
	i. Households without a motor vehicle	59	1%	5%
	j. Households that are housing cost-burdened	873	19%	32%

For Lines c. – i. use definitions in the [DRCOG Title VI Implementation Plan](#). For Line j., as defined in C.R.S. 24-38.5-302(3)(b)(I): “cost-burdened’ means a household that spends more than thirty percent of its income on housing.”

Describe how this project will improve access and mobility for each of the applicable groups, *including the required quantitative analysis*: The proposed project improves access and mobility for all those who choose to use the C-470 multi-modal trail but we don’t have any quantitative analysis completed at this time.

5. How will this project move the region toward achieving the shared [regional transportation outcomes](#) established in [Metro Vision](#)?
- Improve the diversity and livability of communities. The project improves access and mobility for those who choose to travel without using a motor vehicle or who don't have access to a motor vehicle.
 - Contain urban development in locations designated for urban growth and services. N/A
 - Increase housing and employment in urban centers. N/A
 - Improve and expand the region's multimodal transportation system, services, and connections. This project will improve the C-470 Trail by building a grade separation for the trail over Broadway - thus allowing trail users to bypass the at grade crossing of 4 traffic movements (C-470 ramp WB to NB right turn, and C-470 ramp SB to WB right turn and across both NB and SB thru traffic on Broadway).
 - Operate, manage, and maintain a safe and reliable transportation system. By providing a grade separation of the C-470 trail over Broadway, vehicles - bikes/peds conflicts will be eliminated and therefore traffic operations will be improved, reducing congestion, traffic delays and accidents.
 - Improve air quality and reduce greenhouse gas emissions. Air quality improvements and reduction in GHG emissions that will result by removing major obstacles (like crossing major arterials at-grade) that will encourage more trail users to utilize a more efficient and safer multi-modal trail. Also, traffic operations on Broadway and C-470 will be improved with better traffic signal progression and thus reduce congestion and vehicle hours traveled. More C-470 Trail users results in less MVT.
 - Connect people to natural resource and recreational areas. The project improvements will allow C-470 trail users to continue to use it as a recreational resource as well as improve access and mobility to communities and amenities along the regional trail, with connection to the west to the High Line Canal Trail and Chatfield State Park; and to the east to South Suburban's David Lorenz Regional Park.
 - Reduce the risk of hazards and their impact. The existing at grade crossing requires bikes/peds to cross multiple lanes of traffic. By grade separating the trail from the arterial roadway, the hazard of vehicular-bike conflicts and vehicular-ped conflicts are eliminated.
 - Increase access to amenities that support healthy, active choices. The proposed improvements increases access to amenities - not only does the C-470 Trail provides connection to natural resources and recreational areas discussed above, the C-470 multi-modal trail also serves as a recreational amenity, especially on the weekends and during other non-peak traffic periods.
 - Improve transportation connections to health care facilities and service providers. There are numerous health care facilities located along the C-470 Trail (between I-25 and US 85), including a major senior assisted living center; and the proposed improvements provide a more reliable/effective multi-modal travel mode to health care staff, patients and / or visitors that choose not to use a motor vehicle.
 - Diversify the region's housing stock. Most of area near the project has already been developed and this project improves access to the existing housing.
 - Improve access to opportunity. Project improves access to businesses and housing by providing a safer more reliable alternative transportation mode.
 - Improve the region's competitive position. The proposed improvements are important to our constituents and will help us retain and attract businesses and labor sources.

6. Describe how the project will improve access to and/or connectivity between DRCOG-defined urban centers, multimodal corridors, mixed-use areas, Transit Oriented Development (transit near high-density development), or locally defined priority growth areas. Items marked with an asterisk (*) below are available in the TIP Data Tool.

- Is there a DRCOG designated urban center within ½ mile of the project limits?*
- Yes No If yes, please provide the name:
- Does the project connect two or more urban centers?*
- Yes No If yes, please provide the names: [This project isn't located within an urban center, but the C-470 Trail connects to urban centers located both east and west of Broadway.](#)
- Is there a transit stop or station within ½ mile of the project limits?*
- Bus stop: Yes No If yes, how many?
- Rail station: Yes No If yes, how many?
- Is the project in a locally-defined priority growth and development area?
- Yes No
- If yes, provide a link to the relevant planning document:
- If yes, provide how the area is defined in the relevant planning document:
- Is the project in an area with zoning that supports compact, mixed-use development patterns and a variety of housing options?
- Yes No If yes, please provide the zoning district designation(s):

Provide households and employment data*	2020	2050
Households within ½ mile	4,547	5,023
Jobs within ½ mile	18,826	20,482
Household density (per acre) within ½ mile	1.06	1.20
Job density (per acre) within ½ mile	9.83	10.70

Describe how this project will improve access to and/or connectivity between the above identified areas, *including the required quantitative analysis:*

[Several residential units \(including multi-family\) and several businesses are located near the proposed project, and this project will improve access and mobility - especially for non motorized trips.](#)

7. Describe how this project will improve **access** and **connections** to key employment centers or regional destinations, including health services; commerce, educational, cultural, and recreational opportunities; or other important community resources. In your answer, define the key destination(s) and clearly explain how the project improves **access** and/or **connectivity**.

[The C-470 Trail over Broadway will improve safety and recreational opportunities by providing a more reliable multi-modal facility.](#)

B. MVRTP Priorities

WEIGHT

50%

- ***Qualitative and quantitative*** responses are **REQUIRED** for the following items on how the proposed project contributes to the project and program investment priorities in the adopted 2050 Metro Vision Regional Transportation Plan. To be considered for full points, you must fully answer all parts of the question, including incorporating quantitative data into your answer. (see scoring section for details). Quantitative data from DRCOG is available [here](#).
- Checkboxes and data tables help to provide context and guide responses, but do not account for the full range of potential improvements and are not directly scored, but are required to be completed.
- Not all proposed projects will necessarily be able to answer all questions, however it is in the applicant's interest to address as many priority areas as possible.

Multimodal Mobility

Provide improved travel options for all modes.

(drawn from [2050 MVRTP priorities](#); [federal travel time reliability, infrastructure condition, & transit asset management performance measures](#); & [Metro Vision objective 4](#))

Examples of Project Elements: combinations of improvements that support options for a broad range of users, such as complete streets improvements, or a bicycle/pedestrian access to transit, etc.

How does this project help increase mobility choices for people, goods, and/or services? Note that any roadway operational improvements must be on the DRCOG [Regional Roadway System](#) and/or [Regional Managed Lanes System](#).

- What modes will project improvements directly address?
 Walking Bicycling Transit Roadway Operations Other:
- List the elements of this project which will address the above modes (i.e., sidewalk, shared use path, bus stop improvements, signal interconnection, etc.): [A grade separation of the C-470 Trail crossing of Broadway will improve roadway operations and will improve safety for bikes/peds as they won't have to cross Broadway at grade anymore thus reducing the potential for vehicle-bike conflicts and vehicle-ped conflicts.](#)
- Will the completed project be a complete street as described in the [Regional Complete Streets Toolkit](#)? This data is available in the TIP Data Tool.
 Yes No If yes, describe how it implements the Toolkit's strategies in your response.
- Does this project improve travel time reliability?
 Yes No
- Does this project improve asset management of active transportation facilities and/or transit vehicle fleets?
 Yes No
- Does this project implement resilient infrastructure that helps the region mitigate natural and/or human-made hazards?
 Yes No

Describe how this project increases mobility choices for all users, *include quantitative information, including any items referenced above, in your response:*

[This project will improve mobility for the C-470 trail users by removing the at grade crossing of Broadway - by installing the proposed grade separation, it will provide the best solution to mitigate the potential for vehicular conflicts and provide a safer multi-modal facility - thus meeting complete street and vision zero objectives.](#)

Air Quality

Improve air quality and reduce greenhouse gas emissions.

(drawn from [2050 MVRTP priorities](#); [state greenhouse gas rulemaking](#); [federal congestion & emissions reduction performance measures](#); [Metro Vision objectives 2, 3, & 6a](#))

Examples of Project Elements: active transportation, transit, or TDM elements; vehicle operational improvements; electric vehicle supportive infrastructure; etc.

How does this project help reduce congestion and air pollutants, including but not limited to, carbon monoxide, ground-level ozone precursors, particulate matter, and greenhouse gas emissions?

- Does this project reduce congestion?
 Yes No
- Does this project reduce vehicle miles traveled (VMT)?
 Yes No
- Does this project reduce single-occupant vehicle (SOV) travel?
 Yes No

Emissions Reduced (kg/day)	CO	NO _x	VOCs	PM 10
	2.92	0.22	0.20	0.02

Use the [FHWA CMAQ Calculators](#) or a similar reasonable methodology to determine emissions reduced. Base your calculations on the year of opening. Please attach a screenshot of your work (such as the FHWA calculator showing the inputs and outputs) as part of your submittal packet.

Note: if not using the FHWA Calculators, please note your methodology in your narrative below.

Describe how this project reduces air pollutants, *include quantitative information, including any items referenced above, in your response:*

We utilized the FHWA CMAQ calculator tools to estimate the emission reductions shown above.

**Regional
Transit**

Expand and improve the region’s transit network.

(drawn from [2050 MVRTP priorities](#), [Coordinated Transit Plan](#), [RTD’s Regional Bus Rapid Transit Feasibility Study](#))

Examples of Project Elements: transit lanes, station improvements, new/expanded service, etc.

Note: For any project with transit elements, the sponsor must coordinate with RTD to ensure RTD agrees to the scope and cost. Be sure to include RTD’s concurrence in your application submittal.

How does this project improve connections to or expand the region’s transit system, as outlined in the [2050 MVRTP](#)? Note that rapid transit improvements must be on the [Regional Rapid Transit System](#). Items marked with an asterisk (*) below are available in the TIP Data Tool.

- Does this project implement a portion of the [regional bus rapid transit \(BRT\) network](#)?*
 Yes No If yes, which specific corridor will this project focus on?
- Does this project involve a [regional transit planning corridor](#)?*
 Yes No If yes, which specific corridor will this project focus on?
- Does this project implement a mobility hub as defined in the [2050 MVRTP](#)?
 Yes No
- Does this project improve connections between transit and other modes?
 Yes No If yes, please describe in your response.
- Is this project adding new or expanded transit service?
 Yes No If yes, who will operate the service?
- Does this project add and/or improve transit service to or within a DRCOG-defined urban center?*
 Yes No If yes, provide the name of the urban center:

Describe how this project improves connections to or expands the region’s transit system, *include quantitative information, including any items referenced above, in your response:*

The proposed safety project improves alternative transportation mode (bike/ped) connection to RTD's existing transit system that runs along Broadway between Highlands Ranch and Downtown Denver.

Safety **Increase the safety for all users of the transportation system.**
 (drawn from [2050 MVRTP priorities](#), [Taking Action on Regional Vision Zero](#), [CDOT Strategic Transportation Safety Plan](#), & [federal safety performance measures](#))
 Examples of Project Elements: bike/pedestrian crossing improvements, vehicle crash countermeasures, traffic calming, etc.

How does this project implement safety improvements (roadway, active transportation facility, etc.), particularly improvements in line with the recommendations in [Taking Action on Regional Vision Zero](#)? Note that any improvements on roadways must be on the DRCOG [Regional Roadway System](#). Items marked with an asterisk (*) below are available in the TIP Data Tool.

- Does this project address a location on the [DRCOG High-Injury Network or Critical Corridors](#) or corridors defined in a local Vision Zero or equivalent safety plan?*
 Yes No
- Does this project implement a safety countermeasure listed in the [countermeasure glossary](#)?
 Yes No

Provide the current number of crashes involving motor vehicles, bicyclists, and pedestrians* <i>(using the 2015-2019 period – in the TIP Data Tool, use a 0.02 mile buffer of your project)</i> <i>NOTE: if constructing a new facility, report crashes along closest existing alternative route</i>		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	
Estimated reduction in crashes <u>applicable to the project scope</u> <i>(per the five-year period used above)</i>		Provide the methodology below:
Fatal crashes reduced	0.00	
Serious Injury crashes reduced	0.00	
Other Injury crashes reduced	0.00	
Property Damage Only crashes reduced	0.00	

Describe how this project will improve safety, *include quantitative information, including any items referenced above, in your response:*

Broadway north of C-470 is identified as High-Injury Network. This project will provide a separated bike/ped bridge over Broadway and will decrease the need to use the at grade crossing. Many cyclists avoid the existing at-grade C-470 Trail crossing at Broadway because of the potential of motor vehicular conflicts and there are numerous stories from Trail users of "near misses" with high speed motorized vehicles.

Freight

Maintain efficient movement of goods within and beyond the region.

(drawn from [2050 MVRTP priorities](#); [Regional Multimodal Freight Plan](#); [Colorado Freight Plan](#), [federal freight reliability performance measure](#); [Metro Vision objective 14](#))

Examples of Project Elements: roadway operational improvements, etc.

How does this project improve the efficient movement of goods, specifically improvements identified in the [Regional Multimodal Freight Plan](#)? Note that any improvements on roadways must be on the DRCOG [Regional Roadway System](#). Items marked with an asterisk (*) below are available in the TIP Data Tool.

- Is this project located in or impact access to a [Freight Focus Area](#)?*
 Yes No If yes, please provide the name:
- Is the project located on the [Tier 1 or Tier 2 Regional Highway Freight Vision Network](#)?*
 Yes No
- If this project is located in a [Freight Focus Area](#) does it address the relevant Needs and Issues identified in the Plan (see text located within each Focus Area)?
 Yes No If yes, please describe in your response.
- Check any items from the [Inventory of Current Needs](#) which this project will address:
 Truck Crash Location Rail Crossing Safety ([eligible locations](#))
 Truck Delay Truck Reliability
Please provide the location(s) being addressed:
- Does this project include any innovative or non-traditional freight supportive elements (i.e., curb management strategies, cargo bike supportive infrastructure, etc.)?
 Yes No If yes, please describe in your response.

Describe how this project will improve the movement of goods, *include quantitative information, including any items referenced above, in your response:*

Broadway is located on a Tier 2 Regional Highway Freight Vision Network. This project would build a bike/ped bridge over Broadway and grade separate the bikes/peds from vehicles/trucks. Traffic operations and the movement of goods would improve at the C-470 and Broadway intersection by eliminating the at grade crossing of Broadway.

Active Transportation	Expand and enhance active transportation travel options. <small>(drawn from 2050 MVRTP priorities; Denver Regional Active Transportation Plan; & Metro Vision objectives 10 & 13) Examples of Project Elements: shared use paths, sidewalks, regional trails, grade separations, etc.</small>
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How does this project help expand the active transportation network, close gaps, improve comfort, and/or improve connections to key destinations, particularly improvements in line with the recommendations in the [Denver Regional Active Transportation Plan](#)? Items marked with an asterisk (*) below are available in the TIP Data Tool.

- Does this project close a gap or extend a facility on a [Regional Active Transportation Corridor](#) or locally-defined priority corridor?*
 Yes No
- Does this project improve pedestrian accessibility and connectivity in a [pedestrian focus area](#)?*
 Yes No
- Does this project improve active transportation choices in a [short trip opportunity zone](#)?*
 Yes No
- Does this project include a high-comfort bikeway (like a sidepath, shared-use path, separated bike lane, bicycle boulevard)?
 Yes No If yes, please describe in your response.

Bicycle Use

NOTE: if constructing a new facility, report bike usage along closest existing alternative route

1. Current Average Single Weekday Bicyclists:	50	
Bicycle Use Calculations	Year of Opening	2050 Weekday Estimate
2. Enter estimated additional average weekday one-way bicycle trips on the facility after project is completed.	100	300
3. Enter number of the bicycle trips (in #2 above) that will be diverting from a different bicycling route. <i>(Example: {#2 X 50%} or other percent, if justified on line 10 below)</i>	0	0
4. = Initial number of new bicycle trips from project (#2 – #3)	100	300
1. Enter number of the new trips produced (from #4 above) that are replacing a trip made by another non-SOV mode (bus, carpool, vanpool, bike, etc.). <i>(Example: {#4 X 30%} or other percent, if justified on line 10 below)</i>	0.00	0.00
5. = Number of SOV trips reduced per day (#4 - #5)	100.00	300.00
6. Enter the value of {#6 x 2 miles} . (= the VMT reduced per day) <i>(Values other than 2 miles must be justified by sponsor on line 10 below)</i>	200.00	600.00
7. = Number of pounds GHG emissions reduced (#7 x 0.95 lbs.)	190.00	570.00
8. If values would be distinctly greater for weekends, describe the magnitude of difference: 2 to 5 times greater on weekends		
9. If different values other than the suggested are used, please explain here:		

Pedestrian Use

NOTE: if constructing a new facility, report pedestrian usage along closest existing alternative route

2. Current Average Single Weekday Pedestrians (including users of non-pedaled devices such as scooters and wheelchairs):	0	
Pedestrian Use Calculations	Year of Opening	2050 Weekday Estimate
3. Enter estimated additional average weekday pedestrian one-way trips on the facility after project is completed	0	0
4. Enter number of the new pedestrian trips (in #2 above) that will be diverting from a different walking route <i>(Example: {#2 X 50%} or other percent, if justified on line 10 below)</i>	0	0
5. = Number of new trips from project (#2 – #3)	0	0
6. Enter number of the new trips produced (from #4 above) that are replacing a trip made by another non-SOV mode (bus, carpool, vanpool, bike, etc.). <i>(Example: {#4 X 30%} or other percent, if justified on line 10 below)</i>	0.00	0.00
7. = Number of SOV trips reduced per day (#4 - #5)	0.00	0.00

8. Enter the value of {#6 x .4 miles}. (= the VMT reduced per day) (Values other than .4 miles must be justified by sponsor on line 10 below)	0.00	0.00
9. = Number of pounds GHG emissions reduced (#7 x 0.95 lbs.)	0.00	0.00
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:		

Describe how this project will expand the active transportation network, close gaps, improve comfort, and/or improve connections to key destinations, *include quantitative information, including any items referenced above, in your response:*

The existing at grade configuration requires four separate crossings over nine total lanes of traffic. This project would improve the comfort and ease for bikes/peds using the C-470 Trail by crossing over Broadway and eliminating the at grade crossing of Broadway.

C. Project Leveraging	WEIGHT	10%
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What percent of outside funding sources (non-Subregional Share funding) does this project have? <i>(number will automatically calculate based on values entered in the Funding Request table)</i>	16.67%	60%+ outside funding sources 5 pts 50-59.9% 4 pts 40-49.9% 3 pts 20-39.9% 2 pts 10.1-19.9% 1 pt 10% 0 pts
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D. Project Readiness	WEIGHT	10%
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Provide responses to the following items to demonstrate the readiness of the project. DRCOG is prioritizing those projects that have a higher likelihood to move forward in a timely manner and are less likely to experience a delay.

Section 1. Avoiding Pitfalls and Roadblocks

- a. Has a licensed engineer (CDOT, consultant, local agency, etc.) reviewed the impact the proposed project will have on utilities, railroads, ROW, historic and environmental resources, etc. and have those impacts and pitfalls been mitigated as much as possible to date before this submittal?
 Yes No N/A (for projects which do not require engineering services)
- If yes, please type in the engineer's name below which certifies their review and that impacts have been evaluated and mitigated as much as possible before your application is submitted:
- RS&H**
 Please describe the status to date on each, including 1) anticipated/known pitfalls/roadblocks, and 2) mitigation activities taken to date:
- Utilities: No utility work or activities have been done to date
 - Railroad: N/A
 - Right-of-Way: Right-of-Way impacts have not been determined but should be minimal.
 - Environmental/Historic: No environmental or historic work has been done specifically for this project but the C-470 Managed Express Lane project EA Re-Eval was done in 2016 and covers this same area.
 - Other: N/A
- b. Is this application for a single project phase only (i.e., design, environmental, ROW acquisition, construction only, study, bus service, equipment purchase, etc.)?
 Yes No
- If yes, are the other prerequisite phases complete? Yes No N/A
- If this project is for construction, please note the NEPA status: **Needs Re-evaluation**
- c. Has all required ROW been identified? Yes No N/A
 Has all required ROW already been acquired and cleared by CDOT? Yes No N/A
- d. Based on the current status provided in Project Information, question 11, do you foresee being able to execute your IGA by October 1 of your first year of funding (or if requesting first year funding, beginning discussions on your IGA as soon as possible), so you can begin your project on time?
 Yes No
- Does your agency have the appropriate staff available to work on this project? Yes No
- If yes, are they knowledgeable with the federal-aid process? Yes No
- e. Have other stakeholders in your project been identified and involved in project development?
 Yes No N/A

If yes, who are the stakeholders? [CDOT](#)

Please provide any additional details on any of the items in Section 1, if applicable.
Regarding "project readiness" - the County is applying for pre-construction activities only in this TIP application in order to mitigate delays associated with the topics identified above; so all the items above will be resolved before we seek construction funding for this project in future TIP cycles or other grant opportunities.

Section 2. Local Match

- a. Is all the local match identified in your application currently available, and if a partnering agency is also committing match, do you have a commitment letter?
 Yes No

Please describe:

[The Douglas County match is currently available and there are no other agency funding partners.](#)

- b. Is all funding for this project currently identified in the sponsor agency's Capital Improvement Program (CIP)?
 Yes No

Please describe:

[Douglas County Commissioners approved submitting this application and if the project is selected funds are available for the local match.](#)

Section 3. Public Support

- a. Has the proposed project previously been through a public review process (public comment period, public hearing, etc.)?
 Yes No

- b. Has the public had access to translated project materials in relevant languages for the local community?
 Yes No

Please describe:

[Several comments were received previously during the C-470 Managed Toll Express Lanes Project EA/Re-Eval requesting to grade separate the C-470 Trail at major roadway crossings. We continue to receive on-going public comment from the general public and DC constituents; and we also received public review comments during development of 2040 DC Transportation Master Plan regarding bike/ped elements.](#)

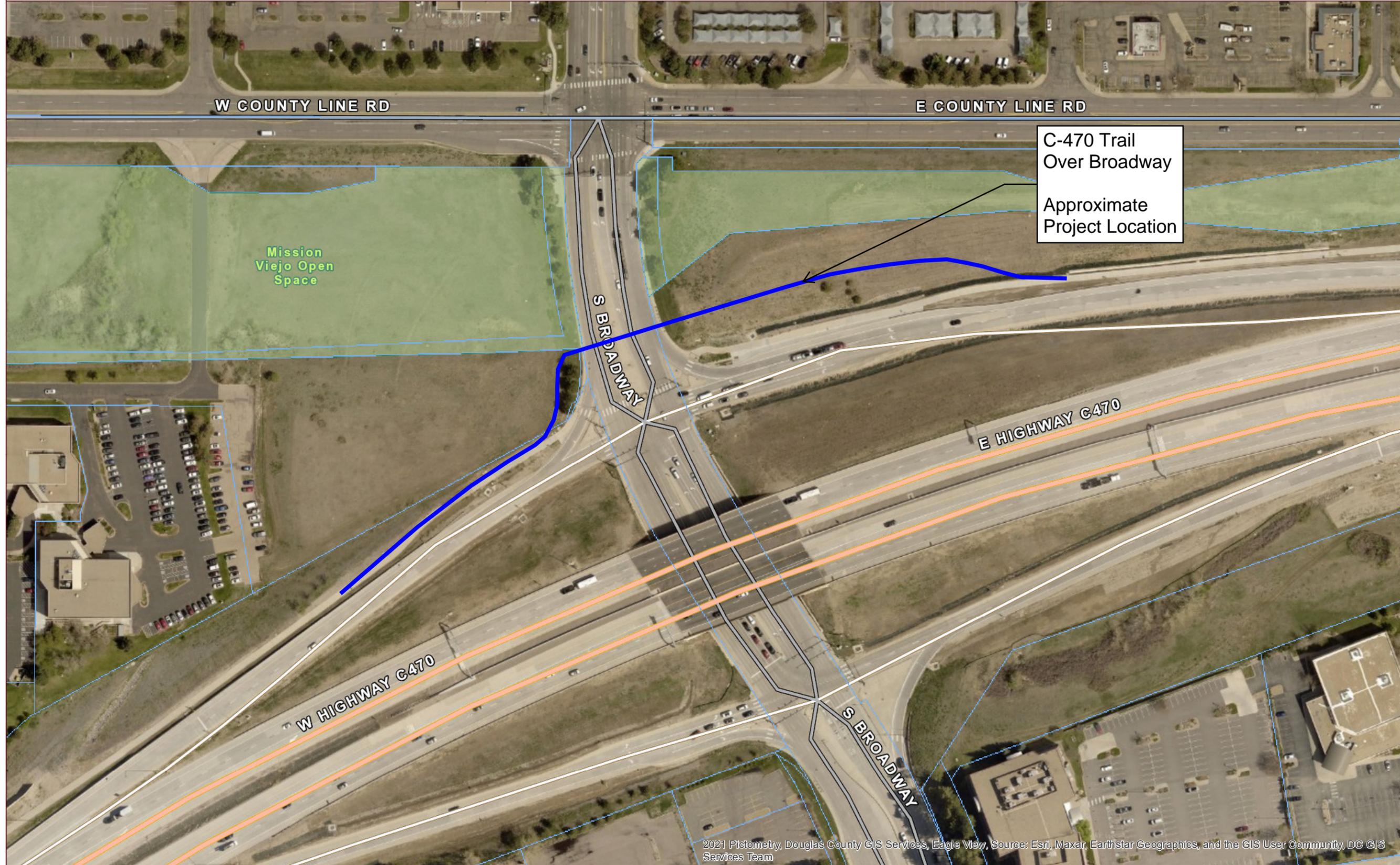
- c. Have any adjacent property owners to the proposed project been contacted and provided with the initial project concept?
 Yes No N/A

Please provide any additional details on the items in Section 3, if applicable.

[The majority of the project will be constructed within existing CDOT right-of-way and CDOT is supportive of this project. Additionally, the Highlands Ranch Metro District is supportive of this project.](#)

Submit completed applications through the [TIP Data Hub](#) no later than 3pm on June 24, 2022.

C-470 Trail over Broadway

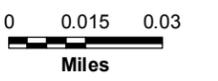


- Real Property**
- Parcel
- Public Land Survey System**
- Township
- Section
- General Features**
- School
- Private Road
- Railroad

2021 Pictometry, Douglas County GIS Services, Eagle View, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, DC GIS Services Team

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Douglas County GIS Division
 Philip S. Miller Bldg., 100 Third St.
 Castle Rock, Colorado 80104



C-470 Trail over Broadway

6/16/2022

Preliminary Summary of Quantities & Cost Estimate

BMB

Description	Unit	Quantity	Estimated Unit Cost	Item Cost
Removal of Concrete Sidewalk	SY	220	\$ 15.00	\$ 3,300
Unclassified Excavation	CY	15200	\$ 45.00	\$ 684,000
Structural Backfill (Class I)	CY	1700	\$ 50.00	\$ 85,000
Mechanical Reinforcement of Soil	CY	1700	\$ 55.00	\$ 93,500
Aggregate Base Course (Class 6)	CY	200	\$ 85.00	\$ 17,000
Geomembrane	SY	430	\$ 20.00	\$ 8,600
Drilled Caisson (30 Inch)	LF	300	\$ 410.00	\$ 123,000
Drilled Caisson (42 Inch)	LF	30	\$ 800.00	\$ 24,000
Cross Hole Sonic Logging Testing	EA	11	\$ 3,500.00	\$ 38,500
Panel Facing	SF	6420	\$ 150.00	\$ 963,000
Pedestrian Railing (54 Inch)	LF	1265	\$ 310.00	\$ 392,150
Bridge Compression Joint Sealer	LF	50	\$ 330.00	\$ 16,500
Concrete Class D (Bridge)	CY	415	\$ 1,500.00	\$ 622,500
Structural Concrete Stain	SY	1950	\$ 20.00	\$ 39,000
Reinforcing Steel (Epoxy Coated)	LB	80000	\$ 2.00	\$ 160,000
Concrete Bikeway (6 Inch)	SY	1600	\$ 100.00	\$ 160,000
Bridge Girder and Deck Unit (150 Feet)	EA	1	\$ 500,000.00	\$ 500,000
Major Construction Items Subtotal				\$ 3,930,050
Miscellaneous Items (Percentages Used to Estimate Cost)				
Clearing & Grubbing	0.5%			\$ 21,000
Erosion Control	1%			\$ 45,000
Landscaping	1%			\$ 45,000
Drainage	2%			\$ 84,500
Mobilization	10%			\$ 393,005
Construction Surveying	1.5%			\$ 60,412
Traffic Control	8%			\$ 314,404
Force Accounts	5%			\$ 196,503
Minor Contract Revisions	10%			\$ 393,005
Miscellaneous Items Subtotal				\$ 1,552,829
Construction Cost Subtotal				\$ 5,482,879
Contingency			15%	\$ 822,432
Inflation (6 years) - Construct in 2028			6%	\$ 2,294,689
Total Estimated Construction Cost in 2028				\$ 8,600,000
Preliminary and Final Design				\$ 350,000
Survey				\$ 60,000
Geotechnical				\$ 60,000
Environmental				\$ 30,000
Subsurface Engineering (SUE) & Utility Coordination				\$ 100,000
Subtotal Design Phase				\$ 600,000
Construction Engineering & Testing		10%		\$ 860,000
Utility Relocation Costs				\$ 115,000
ROW Process & Acquisition (To be paid for by Douglas County)				\$ 125,000
Subtotal of Other Project Costs				\$ 1,700,000
TOTAL PROJECT COST				\$ 10,300,000



June 10, 2022

Art Griffith
Capital Improvements Manager
Douglas County
100 Third Street
Castle Rock, CO 80104

RE: CDOT Region 1 Support Request for DRCOG TIP Subregional Call FY22-FY25

Dear Mr. Griffith,

This letter is to inform you that the Colorado Department of Transportation (CDOT) Region 1 concurs with the following Douglas County application for the Denver Regional Council of Governments (DRCOG) Subregional FY22-25 Transportation Improvement Program (TIP) Call. This concurrence applies only for the C-470 Trail & Broadway Pedestrian Grade Separation Preliminary and Final Design project, in the event this project is selected by DRCOG as a subregional project on or around August/September 2022. If this subregional project is awarded DRCOG funds at a later date, the local agency will need to submit a separate request for CDOT's concurrence at that time. The project as constructed will be maintained by the local agency, and not by CDOT.

Projects impacting state highways should assume that CDOT will manage the project and that the local agency is responsible for payment of CDOT's work, including indirect charges. An accurate project cost estimation, that accounts for cost escalation, is vital to the success of a project. Please note that per the DRCOG TIP Policy, if project costs increase on DRCOG-selected projects or the cost estimate is low, sponsors must make up any shortfalls. Regardless of CDOT's concurrence or support, sponsors should have no expectation of CDOT funding being available to help cover any funding shortfalls.

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 local agency will need to work closely with CDOT Region staff to ensure CDOT's continued concurrence.

This project must comply with all CDOT and/or Federal Highway Administration (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 must be included in the project costs. CDOT staff will assist you in determining which clearances are required for your project. The CDOT Local Agency Manual includes project requirements to assist with contracting, design, and construction, which can be accessed at:

https://www.codot.gov/business/designsupport/bulletins_manuals/2006-local-agency-manual

Should you have any questions regarding this concurrence or if your agency would like to schedule time to meet with CDOT specialty units, please contact JoAnn Mattson at (303) 757-9866.

Sincerely,

Jessica Myklebust
CDOT Region 1 Transportation Director



Bicycle and Pedestrian Improvements

This calculator will estimate the reduction in emissions resulting from improvements to bicycle and pedestrian infrastructure and associated mode shift from passenger vehicles to bicycling or walking, including but not limited to sidewalks, dedicated bicycle infrastructure, improved wayfinding, mid-block crossing installations, bike share systems, and bike parking improvements.

Navigator

Bicycle and Pedestrian Improvements

INPUT

(1) What is your project evaluation year?

(2) Estimate the shift in daily motorized passenger vehicle trips to non-motorized travel due to the bicycle and pedestrian project.

Daily Passenger Vehicle Trips		
Before	After	Change
80300	80000	300

(3a) Select the data type used for entering the typical one-way trip distance of passenger vehicles below:

Trip Distance Source

(3b) If you selected "Average" above, enter the typical one-way trip distance. If you selected "Distribution" above, enter the typical distribution of one-way trip distances.

Typical Trip Distance
 (miles one way)

Distribution of Trip Distances (daily fraction per mileage bin)					
x < 1	1 ≤ x < 2	2 ≤ x < 3	3 ≤ x < 4	4 ≤ x ≤ 5	Sum

OUTPUT

EMISSION REDUCTIONS

Pollutant	Total
Carbon Monoxide (CO)	2.925
Particulate Matter <2.5 μm (PM _{2.5})	0.007
Particulate Matter <10 μm (PM ₁₀)	0.024
Nitrogen Oxide (NO _x)	0.227
Volatile Organic Compounds (VOC)	0.204
Carbon Dioxide Equivalent (CO ₂ e)	222.404
Total Energy Consumption (MMBTU/day)	2.884

*Units in kg/day unless otherwise noted