DRCOG Transportation Improvement Program (TIP)

FY 2024-2027 TIP Subregional Share (Call #4) – Douglas County Subregion Surface Transportation Block Grant (STBG) Project Application

APPLICATION OVERVIEW

What: The Subregional Share Call for Projects for the FY 2024-2027 TIP (Call #4)
Funding Available: $11,238,000 for this subregion and this STBG Track. In the STBG Track, funding is split fairly evenly over all four years.
Major Project Eligibility Exceptions: Transit operations projects *(Note: these types of projects are only allowed to be submitted with the AQ/MM Track)*
Call Dates: November 28, 2022 until January 27, 2023, 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 1) this application (**before saving to PDF, press Ctrl-A to select all, and F9 to update all formulas**), 2) one location map/graphic, 3) cost estimate (your own or the CDOT cost estimate form), 4) CDOT/RTD concurrence response (if applicable), 5) any required documentation based on the application text (i.e., FHWA emissions calculators), and 6) project support letters and/or peer agency support. Please DO NOT attach additional cover pages, embed graphics in the application, or otherwise change the format of the application form
2. OPTIONAL: Submit **one additional** PDF document containing any supplemental materials, if applicable
3. REQUIRED: Submit a single zipped GIS shapefile of your project. The shapefile should consist of only your project limits. No particular attributes need to be included. Requests for assistance with creating a shapefile should be submitted to tipapplications@drcog.org no later than December 30, 2022

Other Notable items:

- Eligibility: Projects must align with the eligibility guidelines in Appendices B and C of the TIP Policy. Proposed work on roadways must primarily be located on the DRCOG Regional Roadway System to be eligible for TIP funding (the DRCOG RRS can also be viewed within the TIP Data Tool). Further details can be found in the *Policies for TIP Program Development* document (a quick-guide is also available for reference)
- 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 December 9, 2022, with CDOT/RTD providing a response no later than January 13, 2023. Submit requests to the following: CDOT Region 1 – JoAnn Mattson, CDOT Region 4 – Josie Thomas, RTD – Chris Quinn
- If a submitted application in Calls #1-3 was not funded, and you wish to resubmit the same application for this call, please contact DRCOG. In these cases, we can unlock the application, change the title, and save the applicant some work in the resubmittal process
- Application Data: To assist sponsors in filling out the application, DRCOG has developed a TIP Data Tool. 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 December 30, 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
- Evaluation Process: DRCOG staff will review submittals for eligibility, develop scoring sheets, and post all applications (Jan. 30-Feb. 3, 2023). On Feb. 6, a public comment period will open until Feb. 24. Also at that time, details will be provided to each subregion to begin scoring, discussing, and recommending their projects back to DRCOG by March 15. Each forums' recommendation will then be forwarded to the DRCOG committee process for incorporation into a new 24-27 TIP anticipated to be adopted in August 2023
- If you have any questions or need assistance, reach out to us at tipapplications@drcog.org

APPLICATION FORMAT

The STBG 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 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** subregional problem and benefit people and businesses in multiple communities.
4	The project benefits will **significantly** address a **major** subregional problem primarily benefiting people and businesses in one community.
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 Priorities 50%

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	30-39.9%
1	20.1-29.9%
0	20%

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	**City of Castle Pines Monarch Boulevard Bike Lane Expansion and Upgrade**
2. Project Location *Provide a map, as appropriate (see Page 1)*	Start point: **Winter** Berry Place End point: Northern City Limits OR Geographic Area: Click or tap here to enter text.
3. Project Sponsor *(entity that will be financially responsible for the project)*	City of Castle Pines, Colorado

4. Project Contact Person:

Name: Larry Nimmo	Title: Public Works Director
Phone: (303) 705 0216	Email: Larry.Nimmo@castlepinesco.gov

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?	☐ Yes ☒ No *If yes, provide applicable concurrence documentation*

6. What planning document(s) identifies this project? *Provide link to document(s) and referenced page number if possible, or provide documentation in the supplement*	If this project is listed in the DRCOG 2050 Metro Vision Regional Transportation Plan (2050 MVRTP), provide the staging period: Click or tap here to enter text.	
	Local/Regional/ Subregional plan:	Planning Document Title: Douglas County 2030 Transportation Plan Adopting agency (local agency Council, CDOT, RTD, etc.): Douglas County Board of Commissioners Provide date of adoption by council/board/commission, if applicable: 11.9.09
	Please describe public review/engagement to date:	All three phases of the planning process included a public meeting, and website postings.
	Other pertinent details:	2021 Castle Pines Comprehensive Plan Pg 68 https://www.castlepinesco.gov/wp-content/uploads/2021/07/Castle-Pines-Comprehensive-Plan-Update_web-quality.pdf 2017 Castle Pines Master Transportation Plan Pg 85 (PDF) Application Blueprint Process https://www.castlepinesco.gov/wp-content/uploads/2019/09/Master-Transportation-Plan.pdf https://legistarweb-production.s3.amazonaws.com/uploads/attachment/pdf/990247/Resolution_2021-PZ-R-02__Approving_Comprehensive_Plan_Update.pdf

		• T-3.6 Continue to implement sidewalk, crossings, trail, and bike lane improvements recommended in the Master Transportation Plan, Trails Master Plan, and Multi-Modal Enhancement Plan for Castle Pines Parkway and Monarch Boulevard Pg 6 * Multi-modal Enhancement Plan for Castle Pines https://www.castlepinesco.gov/wp-content/uploads/2019/09/Castle-Pines-Multi-Modal-Report-121911-LR.pdf Pg 27 June 11, 2011 The most significant public engagement to-date for Monarch Blvd. occurred during the Multi-modal Enhancement Plan for Castle Pines Parkway. In recent years, City Council and public have received notice of this project through the Road Solutions plan and related HOA outreach. Updates to the Comprehensive Plan and Parks and Recreation Comprehensive plan have also utilized public engagement to determine the necessary emphasis on multi-modal enhancement and outdoor activity development. Monarch Blvd. Rehabilitation Project is included on current 2023 City of Castle Pines CIP

7. Identify the project's **key phases and the anticipated schedule of phase milestones**.
(phases and dates should correspond with the "Phase to be Initiated" in the Funding Breakdown table below)

Phases to be included:	**Major phase milestones**:	**Anticipated completion date (based on 8/16/2023 DRCOG approval date)**: (MM/YYYY)
	☐ Preconstruction (including studies) ☐ Construction ☒ Both	
REQUIRED FOR ALL PHASES	Intergovernmental Agreement (IGA) executed with CDOT/RTD (Assumed process is 4-9 months; any work performed before execution is NOT reimbursable)	02/2024
☒Design	Design contract Notice to Proceed (NTP) issued (if using a consultant):	04/2024
	Design scoping meeting held with CDOT (if no consultant):	Enter Date
	FIR (Field Inspection Review):	06/2024
	FOR (Final Office Review):	Enter Date
☒Environmental	Environmental contract Notice to Proceed (NTP) issued (if using a consultant):	04/2024
	Environmental scoping meeting held with CDOT (if no consultant):	Enter Date
☐Right-of-Way	Initial set of ROW plans submitted to CDOT: Estimated number of parcels to acquire: Enter Number	Enter Date
	ROW acquisition completed:	Enter Date
☒Construction	Required clearances:	12/2024
	Project publicly advertised:	01/2025

☐Study	Kick-off meeting held after consultant NTP (or internal if no consultant):	Enter Date
☐Equipment Purchase (Procurement)	RFP/RFQ/RFB (bids) issued:	Enter Date
☐Other Phase not Listed Describe: Describe	First invoice submitted to CDOT/RTD:	Enter Date

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

Monarch Boulevard connects the city from north to south and is an important arterial for the region. The Monarch Boulevard project corridor carries significant >10,000 vpd traffic. Currently Monarch Boulevard is listed as a bicycle route and is listed in many plans including: Castle Pines Bicycle Vision Plan, 2017 Castle Pines Transportation Plan, Castle Pines 2021 Comprehensive Plan, and others. A multi-use trail runs parallel to Monarch Boulevard and is appropriate for recreational bicycle traffic.

The current multi-use trail is 8 feet wide. Monarch Boulevard currently has limited width paved shoulders, with differing widths (NB 6ft, SB 4ft). The City of Castle Pines will be upgrading Monarch Boulevard from Winterberry to the North City Limits by restriping each lane to include a 6' bike lane plus a 2' buffer in the Summer of 2023. However, all intersections are only capable of having a single shared bike lane. This project completes a needed upgrade of bike lanes on Monarch Boulevard through all intersections, to provide upgraded bike facilities that extend in both directions of travel through all intersections (8' including a 6' bike lane plus a 2' buffer, rather than just one 6' lane).

The project also installs new and improved markings. The project will also extend/expand turn lanes along Monarch Boulevard from Winter Berry Place north to the city limit. Additionally, the project upgrades and extends all marked crossings of the Monarch Boulevard project segment with shark's teeth-type yield markings providing an on-street indication for motorists to yield to pedestrians in the crosswalk. Common themes/issues that this transportation project will address are:

- Social inclusion and access to services: This project will provide an alternative mode of transportation for elderly, young people, diverse communities, people without a car/license or who chose not to drive and connecting isolated growth areas with little to no public transit.
- Access to activity and recreation centers: This project will provide access to key activity and recreation areas in the region using alternative modes of transportation.
- Managing the impacts of growth: This project will lessen the car dependence on roads and reduce car-centric development due to the impacts of rapid growth around Monarch Boulevard.
- Supporting local living, place, sense of community and healthy living: The improvements on Monarch Boulevard will enable people to have greater choice in the way they travel, including younger people, older people, and people without access to car or chose not to drive and improve health and livability.
- Improving safety and security: This project will also address common bicycle safety and walkability issues such as sidewalk conflicts, right-turning vehicles, and left-turning conflicts by providing caution and yield signs, RRFBs, increasing overall signage and lane width, and installing new and improved pavement markings. The project will increase both road and personal safety and security.

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

Roadway

☒Operational Improvements

☐General Purpose Capacity (2050 MVRTP)

☐Managed Lanes (2050 MVRTP)

☒Pavement Reconstruction/Rehab

☐Bridge Replace/Reconstruct/Rehab

Grade Separation

☐Roadway

☐Railway

☐Bicycle

☐Pedestrian

Regional Transit[1]

☐Rapid Transit Capacity (2050 MVRTP)

☐Mobility Hub(s)

☐Transit Planning Corridors

☐Transit Facilities (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: Environmental Analysis

[1]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.

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.

Project scope includes environmental analysis for historic, archeo, and paleo clearances, and bike lane reconstruction activities, including:
Construction of turn lane extension/expansion to accommodate widened bike lanes at intersections in both directions and restriping from Winter Berry Place north to the northern city limits. Concrete widening of designated intersection sections to include 6' buffered bike lanes set 1'6" from the back of curb, including a 2' painted buffer between the bike lane and the 11' driving lane. (Refer to Attachment 1 for indicated dark gray areas in roadway plans). Project also upgrades all marked crossings of Monarch Boulevard with shark's teeth-type yield markings providing an on-street indication for motorists to yield to pedestrians in crosswalk.

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.*

The City of Castle Pines is currently designing the Monarch Blvd. Bike Lanes reconstruction and improvement project.

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: If DRCOG can fund a reduced percentage of the project, then the City of Castle Pines would increase the additional local percentage of match funds. The project costs being requested already reflect the minimum scope of work necessary to complete this project and currently exclude additional intersection construction scope items at side streets.

Outline the differences between the scope outlined above and the reduced scope: Click or tap here to enter text.

Project Financial Information and Funding Request (All funding amounts in $1,000s)

To update the formulas below, enter your information, highlight the formulas, and press F9 or right-click and select Update Field.

Total amount of Subregional Share Funding Request (in $1,000's) *(Not to exceed **80% of the total project cost**)*	**$2,100**	**70.00% of total project cost**
Match Funds (in $1,000's) List each funding source and contribution amount.	**Contribution Amount**	**% Contribution to Overall Project Total**
City of Castle Pines	$900	30.0%
Click or tap here to enter text.	$Match Amount	0.0%
Click or tap here to enter text.	$Match Amount	0.0%
Click or tap here to enter text.	$Match Amount	0.0%
Click or tap here to enter text.	$Match Amount	0.0%
Click or tap here to enter text.	$Match Amount	0.0%
Total Match *(private, local, state, regional, or federal)*	**$ 900**	**30.0%**
Project Total	**$3,000**	

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

To update the formulas below, enter your information, highlight the formulas (or Ctrl-A), and press F9. OR close and reopen the file.

	FY 2024	FY 2025	FY 2026	FY 2027	Total
DRCOG Requested Funds[2]	$1000	$1100	$Enter Amount	$Enter Amount	**$2,100**
CDOT or RTD Supplied Funds[3]	$Enter Amount	$Enter Amount	$Enter Amount	$Enter Amount	**$ 0**
Local Funds (Funding from sources other than DRCOG, CDOT, or RTD)	$300	$600	$Enter Amount	$Enter Amount	**$ 900**
Total Funding	$1,300	$1,700	$ 0	$ 0	**$3,000**
Phase to be Initiated	Design	Construction	Select Phase	Select Phase	

Notes:

1. Fiscal years are October 1 through September 30 (e.g., FY 2024 is October 1, 2023 through September 30, 2024). 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. For the 2024-2027 Subregional Share STBG Call, 23% of DRCOG funding is available in FY 2024, 25% in FY 2025, 26% in FY 2026, and 27% in FY 2027
3. 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. ☒

Evaluation Questions

A. Subregional Impact of Proposed Project

WEIGHT **30%**

*Provide **qualitative and quantitative** responses to the following questions on the subregional 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.*

Project advances a key .73 mile connection between two regionlly important DRCOG Active Transportation Corridors, Castle Pines Parkway, and S Quebec Street. Project completes a link in a regional connection from the Denver Tech Center to Castle Pines, utilizing Quebec Street, Monarch Boulevard, Castle Pines Parkway, and North Daniels Park Road. An alternative route exists to use Lagae Road to East Happy Canyon Road to access Castle Rock without having to ride on Castle Pines Parkway. Refer to Attachment 2 for a map highlighting project area key features. According to Strava data the Monarch Boulevard corridor is comparatively an important subregional connection. Advances in electric bike technology make longer trips such as this one far more achieveable and realistic at ~20 miles a trip of this magnitute is well within the range of many popular e-bikes, and within reason for a motivated bicyclist. See Figure 1 of Attachment 3, Strava bicycle intensity map.

Using the People for Bikes city ratings, we found that people can reach services, employment, recreation, retail, and other destinations more easily in Castle Pines when compared to other surrounding areas. We found Bike Network Analysis scores in Castle Pines as 26, compared to 24 in Castle Rock, 9 in Parker, and 19 in Lone Tree, the fact that this project connects to the edge of the Castle Pines city limit is beneficial for:

- Safety - Widened bike lanes, pavement markings, dedicated bike lanes through intersections, RRFBs,
- Connectivity – Connection to at least 11 schools, 9 healthcare facilities, 7 parks, and 2 major recreation areas,
- Mobility – Increase bicycle/pedestrian level of service,
- Equity for vulnerable populations (38%) and households (32%)
    1. Vulnerable Populations: Adults age 65 & over (13%), children age 5-17 (24%), individuals with disability (1%)
    2. Vulnerable Households: Low-income households (4%), households without a motor vehicle (2%), households that are cost-burdened (26%).

The Bike Network Score Comparison Spreadsheet is available in Table 1 of Attachment 3.

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.*

Project completes a needed upgrade of bike lanes on Monarch Boulevard, and enhanced bike facilities that are wider, lower stress, and better marked. Monarch Boulevard connects the city from north to south and is an essential arterial for the region. During our research we found that a majority of weekend bicycle trips originate in Castle Pines and head south, and vice versa. However, we found that the northern area of Castle Pines served by Monarch Blvd. is also a top destination in the region and carries a moderate share of regional bike flow from Castle Pines, we are estimating ~40 daily trips in both directions according to Replica data. See Figure 2 of the Attachment 3 for a map of Bike Flows and Destination Trips using Replica Data. An enhanced facility on Monarch helps ease bicycle (bicyclists) levels of stress and increase safety for all road users by connecting to important employment, and activity centers.

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.

Project provides active transportation connectivity along a DRCOG Complete Streets corridor, between Highlands Ranch, Lone Tree, Castle Pines, and Castle Rock. Project is centrally located within Douglas County.

Castle Rock, Highlands Ranch and Lone Tree have more dedicated bike lanes compared to the City of Castle Pines. Even though Daniels Park Road provides a connection between north and south of the city to surrounding cities, Monarch Boulevard will provide a more direct route between Highlands Ranch, Lone Tree and Castle Rock. DRCOG TIP data hub shows Monarch Boulevard, connecting to S Quebec St in the north, as a "Regional Connector Street". Cyclists can use Monarch Boulevard to reach to Castle Pines Parkway (Active Transportation Corridor) with a dedicated bike lane which becomes Daniels Park Road downstream. Schools and recreation areas nearby the study location in the region within 30 minute bike-ride are identified and listed below.

Schools

- Rock Canyon High School (Littleton) – 3.0 miles / 15 minutes
- Wildcat Mountain Elementary (Littleton) – 3.5 miles / 17 minutes
- Arrowwood Elementary School (Littleton) – 4.4 miles / 24 minutes
- Rocky Heights Middle School (Lone Tree) – 2.9 miles / 17 minutes
- St. Katharine Drexel Catholic School (Lone Tree) – 3.7 miles / 21 minutes
- Redstone Elementary School (Highlands Ranch) – 3.9 miles / 17 minutes
- Copper Mesa Elementary School (Highlands Ranch) - 5.1 miles / 30 minutes
- Heritage Elementary School (Highlands Ranch) – 5.4 miles / 30 minutes
- Mountain Vista High School (Highlands Ranch) – 5.7 miles / 32 minutes
- Timber Trail Elementary School (Castle Pines) – 1.9 miles / 12 minutes
- DCS Montessori Charter School (Castle Pines) – 2.6 miles / 18 minutes

Recreation

- Wildcat Ridge Community Park (Lone Tree) – 3.2 miles / 16 minutes
- South Ridge Recreation Center (Highlands Ranch) – 3.9 miles / 20 minutes
- The Retreat Park (Castle Pines) –2.5 miles / 19 minutes
- Daniels Gate Park (Castle Pines) – 1.1 miles / 8 minutes
- Coyote Ridge Park (Castle Pines) – 1.2 miles / 7 minutes
- Elk Ridge Park (Castle Pines) - 3.3 miles / 23 minutes
- Backcountry Wilderness Area (Lone Tree) – 1.0 mile / 6 minutes
- Grigs Rd Pavilion (Littleton) – 2.7 miles / 15 minutes
- Bluffs Regional Park (Lone Tree) - 4.2 miles / 21 minutes

Funding partnerships include the Douglas County Subregional Forum, and a 30% local match from the City of Castle Pines.

4. Disproportionately Impacted and Environmental Justice Communities

This data is available in the TIP Data Tool. *Completing the below table and referencing relevant quantitative data in your response is required.*

To update the formulas below, enter your information, highlight the formulas (or Ctrl-A), and press F9. OR close and reopen the file.

	DI & 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	9,764	-	-
	b. Total households	2,832	-	-
	c. Individuals of color	1,706	17%	33%
	d. Low-income households	115	4%	9%
	e. Individuals with limited English proficiency	14	0%	3%
	f. Adults age 65 and over	1,243	13%	13%
	g. Children age 5-17	2,370	24%	16%
	h. Individuals with a disability	136	1%	9%
	i. Households without a motor vehicle	69	2%	5%
	j. Households that are housing cost-burdened	740	26%	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 disproportionately impacted and environmental justice population groups identified in the table above, *including the required quantitative analysis:*

Project will improve access, safety, and modal options for everyone in Castle Pines and the surrounding region through the implementation of widened 6' bike lanes with a 2' painted buffer, however the following groups stand to benefit from Monarch Boulevard Bike Lanes the most: Individuals of color, Low-income households, Individuals with limited English proficiency, Adults age 65 and over, Children age 5-17, Households without a motor vehicle, and Households that are housing cost-burdened. In many areas, neighborhood socioeconomic disadvantages are positively associated with bike use. The burdens of housing costs are linked to transportation access and costs. Project provides an alternative mode of transportation for low-income households (4%), households without a motor vehicle (2%), households that are cost-burdened (26%), promotes healthy community for adults age 65 & over (13%) and additional safe route to local schools for children age 5-17 (24%). In summary, 37% of the population and 32% of the households in the study area are in applicable groups that the project can improve access for.

5. How will this project move the subregion toward achieving the shared regional transportation outcomes established in Metro Vision in terms of…
   - Land Use, community, urban development, housing, employment? *(Improve the diversity and livability of communities. Contain urban development in locations designated for urban growth and services. Increase housing and employment in urban centers. Diversify the region's housing stock. Improve the region's competitive position.)*

     Project adds to the livability of the City of Castle Pines by creating lower stress multi-modal travel options through enhanced roadway and corridor design oriented towards bicycle commuting and improves access to employment. Project improves regional competitiveness by providing active transportation connectivity along the Monarch Blvd. DRCOG Complete Streets corridor. There is increasing evidence that encouraging people to walk and ride bikes is an effective way to boost both the economy and public health of a neighborhood. The majority of individuals prefer walking over other forms of exercise, and cycling is an increasingly essential mobility alternative and efficient exercise type.

     Realistically, significant amount of mode shift should not be anticipated due to the current state of transportation and existing personal travel habits in the area. However, it is possible to make small, gradual improvements in the City of Castle Pines that aid in evolving the City back to human-scaled neighborhood. While significant improvements are not necessarily needed everywhere, they should be made in the urban infill regions, connectors, and main streets. People who are more interested in connected, compact communities and less car-dependent lifestyles will be aware of changes when they are implemented. This project is crucial to build momentum and enhance awareness and acceptance in other areas. Building a more connected community and creating less dependence on auto travel will lead to a change in travel choices in the region in long term. Compact, connected and infill development and an emphasis on walking or cycling can contribute to major savings in infrastructure costs, as well as personal transportation.

   - Multimodal transportation, safety, reliability, air quality? *(Improve and expand the region's multimodal transportation system, services, and connections. Operate, manage, and maintain a safe and reliable transportation system. Improve air quality and reduce greenhouse gas emissions. Reduce the risk of hazards and their impact.)*

     Project provides Active Transportation connectivity along a DRCOG Complete Streets corridor, between Highlands Ranch, Lone Tree, Castle Pines, and Castle Rock. Project is centrally located within Douglas County. Project improves air quality and reduces GHG emissions through the encouragement of bicycling for transportation and recreation. Project allows for a buffer from high fuel prices, and provides residents and visitors with greater modal choice on a lower-stress bicycle network.

     Safer Facilities: There is significant evidence that cycling on a designated bikeway on a high-volume roadway with greater speeds provides a low-stress experience.

     Safety in Numbers: More people will be aware of and look for cyclists, pedestrians, and joggers on local streets and trails as their numbers increase. In addition, more drivers in the City of Castle Pines will be aware of them since more people will be using the newly built trails, bike lanes, and crossings.

     Personal Safety: People who are out cycling, walking, or skating may enhance personal safety by keeping "eyes on the street."

     Improved Air Quality: The number of people driving to work, school, shopping, or other destinations will decline as more people choose to walk or cycle instead. Even very short trips can result in significant advantages.

- Connection/accessibility to particular locations supporting healthy and active choices? *(Connect people to natural resource and recreational areas. Increase access to amenities that support healthy, active choices. Improve transportation connections to health care facilities and service providers. Improve access to opportunity.)*

  The Monarch Boulevard Bike Lanes expansion project provides active transportation access and options to residents and visitors of Castle Pines, Colorado. Project connects to parks, hiking trails, biking trails, and other DRCOG TIP Active Transportation Corridors. Project provides multi-modal access to the following facilities from the north: Castle Pines Pediatrics, Castle Pines Family Practice and Sports Medicine, Castle Pines Physical Therapy and Spa, Castle Pines Urgent Care and Family Practice, and Ridgeline Family Medicine-Castle Pines. The Monarch Boulevard Bike Lanes expansion project also provides active transportation access to jobs, schools, retail, and the Castle Pines Public Library.

6. 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: Click or tap here to enter text.
- Does the project connect two or more urban centers?*
  ☐ Yes ☒ No If yes, please provide the names: Click or tap here to enter text.
- Is there a transit stop or station within ½ mile of the project limits?*
  Bus stop: ☐ Yes ☒ No If yes, how many:Click or tap here to enter text.
  Rail station: ☐ Yes ☒ No If yes, how many: Click or tap here to enter text.
- Is the project in a locally-defined priority growth and development area and/or an area with zoning that supports compact, mixed-use development patterns and a variety of housing options?
  ☐ 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:

Provide households and employment data*	2020	2050
Households within ½ mile	2,832	2,920
Jobs within ½ mile	1,071	2,592
Household density (per acre) within ½ mile	2.20	2.27
Job density (per acre) within ½ mile	0.86	2.25

Describe how this project will improve transportation options in and between key geographic areas including DRCOG-defined urban centers, multimodal corridors, mixed-use areas, Transit Oriented Development (transit near high-density development), or locally defined priority growth areas, *including the required quantitative analysis*:

Project provides active transportation connectivity along a DRCOG Complete Streets corridor, between Highlands Ranch, Lone Tree, Castle Pines, and Castle Rock. Project is centrally located within Douglas County and between the I-25 Corridor Urban Center, RidgeGate West Village Urban Center, Ridge Gate City Center Urban Center, Castle Pines Village, and the Downtown Castle Rock Urban Center.

Riding a bicycle or other micromobility devices is convenient, affordable, has health benefits, and helps ease congestion. Bikeway networks should be built within a quarter mile or two-minute of residential units to be used more effectively. Having access to safe and comfortable bike rides to reach urban centers in the City of Castle Pines and nearby locations listed above will improve the number of people walking and cycling.

7. Describe how this project will improve **access** and **connections** to key employment centers or subregional destinations. In your answer, define the key destination(s) and clearly explain how the project improves **access** and/or **connectivity**.

Monarch Boulevard provides access to the Castle Pines Town Center on the south side, and connects into S Qubec St. and Highlands Ranch on the north side. This project improves on-street bicycle connectivity between these two destinations with upgraded 6' bikes lanes, new crosswalk markings and a 2' painted buffer. Key destinations also include the I-25 Corridor Urban Center, RidgeGate West Village Urban Center, Ridge Gate City Center Urban Center, Castle Pines Village, and the Downtown Castle Rock Urban Center. Local destinations include schools, parks, libraries, and health care facilities. Project connects to two DRCOG Active Transportation Corridors to the north (Douglas County East/West Trail, Backcountry Wilderness Trailhead) and one to the south (Castle Pines Parkway Active Corridor).

The project improvess access and connectivity by providing safer and more comfortable bike lanes and reducing the dependancy on car travel. Project will implement a combination of traffic signs, pavement markings, and traffic-calming measures such as yield markings and RRFBs that remind drivers constantly to watch for cyclists and pedestrians. Thus, it will encourage non-motorized modes to use the roadway freely. These improvements will allow the switch to non-motorized modes of traffic as a viable mobility option. It will enable nearby residents and cities to enjoy the benefits for the environment, health, and air quality, as well as liveability, economy, and overall accessibility of the improved bike-lane.

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 an interchange project that incorporates transit and freight improvements, etc.

- What modes will project improvements directly address?
  ☒Walking ☒ Bicycling ☐ Transit ☒ SOV ☐ Freight ☒ Other: Roadway Operations
- List the elements of this project which will address the above modes (i.e., sidewalk, shared use path, bus stop improvements, new general purpose or managed lanes, etc.): Widened buffered bike lanes, upgraded pavement markings, and two new RRFBs at Bergonat and Serena crossings .
- 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 roadway infrastructure, active transportation facilities, and/or transit facilities or vehicle fleets?
  ☒ Yes ☐ No
- Does this project implement resilient infrastructure that helps the subregion mitigate natural and/or human-made hazards?
  ☒ Yes ☐ No

Question: Describe how this project will help increase mobility choices for people, goods, and/or services. Please include quantitative information, including any items referenced above, in your response. *Note that a majority of the proposed roadway operational improvements must be on the DRCOG Regional Roadway System and/or Regional Managed Lanes System.*

Project increases mobility options for all roadway users by expanding bike lane widths to 6' plus a 2' painted buffer in each direction. The Monarch Boulevard project also upgrades striping, and is classified as a Principal Arterial on the DRCOG Regional Roadway System.

Many transportation agencies started looking at a metric known as vehicle miles traveled (VMT) instead of level of service (LOS) to analyze the transportation impacts of new projects. VMT measures how much actual vehicle travel a proposed project would create on roads, and it is strongly correlated with emissions and congestion. Evaluating projects by analyzing VMT encourages more investments in biking, walking, and transit. This project will reduce VMT on roadways while improving travel time reliability by providing active mobility alternatives to road users. The project also supports building out of the City's active transportation network. The City of Castle Pines population is approximately 14,728. If citizens of Castle Pines were to convert 1 mile of motorized trips to non-motorized trips every day, it would result in approximately 3.6 million fewer miles driven per year. This represents the equivalent of 300 fewer cars on the road. The assumptions are that 68.5% of residents are drivers, and they drive 12,000 miles/year.

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.

- 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	NOx	VOCs	PM 10	CO_2e
	0.63	0.08	0.008	0.006	140.2

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.

Question: Describe how this project helps reduce congestion and air pollutants, including but not limited to carbon monoxide, ground-level ozone precursors, particulate matter, and greenhouse gas emissions. Please include quantitative information, including any items referenced above, in your response.

Project improves air quality and reduces GHG emissions through encouragement of bicycling for transportation and recreation. The FHWA CMAQ calculator for bike/ped emission reduction is used to compute the values in the table. Our assumption is that there will be a shift of ~50 vehicle trips in daily motorized passenger vehicle trips to non-motorized travel due to the bicycle and pedestrian improvements. The truck percentage in the study area is ~1%. The typical trip distance used for calculations is assumed to be 2 miles one way. The final results show the combination of traffic flow and bicycle/pedestrian improvements. More information about emission reduction calculations can be found in Figures 3 and 4 of Attachment 3.

The presence of a bicycle generally reduced passenger car travel speeds by 1 mph or less. A study from Arizona Department of Transportation shows that active travel improvements reduce congestion more in older, higher density areas and lower density suburban areas due to more mixed land use and more connected streets. Another study shows that drivers on roads with bicycle lanes tend to encroach into adjacent lanes less, and not attempt to pass or queue. Therefore, bike lanes may increase roadway capacity if they do not substitute for general traffic lanes.

It is significant to note that walking and bicycle trips are, by nature, shorter than vehicle trips and do not require "cold starts". One of the most polluting part of short journeys is the attempt to start a vehicle's engine while it is cold. The actual reductions would probably be much higher because the calculations above employed trip averages.

Regional Transit	**Expand and improve the subregion'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, 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.

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 (as defined in the 2050 MVRTP)?*
  ☐ Yes ☒ No If yes, which specific corridor will this project focus on: Click or tap here to enter text.
- Does this project involve a regional transit planning corridor (as defined in the 2050 MVRTP)?*
  ☐ Yes ☒ No If yes, which specific corridor will this project focus on: Click or tap here to enter text.
- 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.
- Does this project add and/or improve transit access to or within a DRCOG-defined urban center?*
  ☐ Yes ☒ No

Question: Describe how this project improves connections to or expands the subregion's transit system, as outlined in the 2050 MVRTP. Please include quantitative information, including any items referenced above, in your response. *Note that rapid transit improvements must be on the Regional Rapid Transit System.*

The expanded bike lanes on Monarch Boulevard provide an improved lower-stress active transportation corridor connection to RTD transit lines such as: 402L at S Quebec St. and S University Boulevard, which is only a 3.8 mile bike ride form the north end of the Monarch Boulevard project. A trail connection to the Ridgegate Parkway Light Rail Station exists approximatealy 2.25 miles north of the Monarch Bloulevard northern project limit utilizing the East/West Regional Trail. The DRCOG 2050 MVRTP also includes a future fiscally constrained transit line heading south along the I-25 corridor from RidgeGate Parkway Station and serving Castle Pines Parkway.

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.

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* *(using the 2015-2019 period – **in the TIP Data Tool, use a 0.02 mile buffer of your project**)* *NOTE: if constructing a new facility, report crashes along closest existing alternative route*		Sponsor must use industry accepted crash modification factors (CMF) or crash reduction factor (CRF) practices *(e.g., CMF Clearinghouse, NCHRP Report 617, or DiExSys methodology).*
Fatal crashes	0	
Serious Injury crashes	0	
Other Injury crashes	2	
Property Damage Only crashes	32	
Estimated reduction in crashes applicable to the project scope *(per the five-year period used above)*		Provide the methodology below:
Fatal crashes reduced	0	Increased bike lane width, installation of Advance Stop Bars, install advanced yield/stop markings & signs, and upgraded marked crossings.
Serious Injury crashes reduced	0	
Other Injury crashes reduced	1	
Property Damage Only crashes reduced	4	

Question: Describe how this project will implement safety improvements (roadway, active transportation facility, etc.), particularly improvements in line with the recommendations in Taking Action on Regional Vision Zero. Please include quantitative information, including any items referenced above, in your response. *Note that any improvements on roadways must be on the DRCOG Regional Roadway System.*

Project provides safety improvements with an upgrade of bike lanes on Monarch Boulevard to a wider 8' width including a 6' bike lane plus a 2' buffer, rather than just a 4' lane. Current paved bike lanes on Monarch Boulevard are narrow and hold gravel and debris in the gutter that further narrows the bicycle travel path. A multi-use trail runs parallel to Monarch Boulevard and is appropriate for recreational bicycle and pedestrian traffic. Monarch Boulevard currently has limited width bike lanes, with differing widths (NB 6ft, SB 4ft). The Monarch Boulevard project will also widen intersection turn lanes along Monarch Boulevard from Winter Berry Place north to the city limit. Project upgrades all marked crossings of Monarch Boulevard project segment with shark's teeth-yield type markings providing an on-street indication for motorized traffic to yield to pedestrians in crosswalk. The project provides wider bike lanes for the study area. Wider bike lanes provide additional operating space and lateral seperation from moving vehicles, thus, increasing cyclists' sense of comfort and perceived safety. Abdel-Aty and Park (2015) conducted a research study to quantify that increasing bike lane is safer and it reduces crash frequency for both vehicles and bicycles. This project will also provide through bike lanes that will reduce conflicst between turning motorists and cyclists. It will lead to more predictable travel movements and signifies the appropriate location for motorists to safely merge across the bike lane. The research from Portland State University showed that restricted through bike lanes provide high correct lane use by turning vehicles (approximately 87%) and through bicyclist (approximastely 91%). When the zone is mixed with yield entry markings, correct lanes usage for vehicles was aproximately 93% while 65% for through bicyclists. The same research reported survey results to illustrate the cyclists' understanding of the design of the mixing zone with yield entry markings. 91% (64% storngly agree, 28% somewhat agree) understood where they were supposed to ride and position themselves when approaching these intersections. The average cost for each evident injury in 2020 was around $29,200 compared with a "property damage only" crash at $4,700 for each occurrence (National Safety Council, 2020). Reducing 1 other injury crash and 4 property damage crashes every year will result in $240,000 in 5 years.

Freight	**Maintain efficient movement of goods within and beyond the subregion.** (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: bridge improvements, improved turning radii, increased roadway capacity, etc.

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: Project impacts access to the I-25 South and Centennial Airport freight focus area, and US85 South Corridor freight focus area. This segment connects these two areas.
- 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.
- Is the project located on the Tier 1 or Tier 2 Regional Highway Freight Vision Network?*
  ☐ Yes ☒ No
- 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 ☐ Highway Bottleneck
  ☐ Low-Clearance or Weight-Restricted Bridge
  Please provide the location(s) being addressed: Click or tap here to enter text.
- 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.

Question: Describe how this project will improve the efficient movement of goods. In your response, identify those improvements identified in the Regional Multimodal Freight Plan, include quantitative information, and include any items referenced above. *Note that any improvements on roadways must be on the DRCOG Regional Roadway System*.

The upgraded Monarch Boulevard corridor will include widened bike lanes, and geometric improvements to intersections that support:

1. Truck mobility, reliability and delay

Bike lanes reduce congestion and improve travel time reliability. Less congestion will improve truck mobility, reliability and reduce delay.

2. Truck and other roadway user safety

Due to widened intersections, trucks will have a bigger turning radius. This will improve the safety for all road users.

3. Local freight access and connectivity

Widened intersections will provide a safer and more convenient access to local neighborhoods around Monarch Blvd.

4. Future economic development and land use coordination

Land is more valueable if more people can get to it conveniently. Low-stress bike networks reduce congestion. Making bike lanes safer brings more residents, employees, and customers to neighborhoods. In 2007, 8th and 9th Avenue in Manhattan, two historically car-centric one-way arterials, received bike lanes from NYC. Between 2006 and 2010, sales increased by as much as 50% during recession in the area.

5. Growing population and consumer base

Many consumers who drive to stores and restaurants must search for limited parking and go throught traffic in order to visit a store. Safe and comfortable bike lanes bring customers who become the perfect clients for businesses and retailers, easy to draw in, inexpensive to serve, and more likely to make regular visits. Cities today are actively fostering a lively urban environment to entice top personnel and drive economic growth.

6. Non-traditional freight methods such as cargo bikes

In the future, cities can incentivise the use of e-bikes and cargo bikes as an affordable, clean and efficient solution for urban logistics and freight

Active Transportation	**Expand and enhance active transportation travel options.** (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.

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

To update the formulas below, enter your information, highlight the formulas (or Ctrl-A), and press F9. OR close and reopen the file.

1.	Current Average Single Weekday Bicyclists:		16
	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.	12	50
3.	Enter number of the bicycle trips (in #2 above) that will be diverting from a different bicycling route. (Example: **{#2 X 50%}** *or other percent, if justified on line 10 below)*	6	25
4.	= Initial number of new bicycle trips from project (#2 – #3)	6	25
5.	Enter number of the new trips produced (from #4 above) that are replacing a trip made by another non-SOV mode (bus, carpool, vanpool, walking, etc.). (Example: **{#4 X 30%}** *(or other percent, if justified on line 10 below)*	1.80	7.50
6.	= Number of SOV trips reduced per day (#4 - #5)	4.20	17.50
7.	Enter the value of **{#6 x 2 miles}**. (= the VMT reduced per day) *(Values other than 2 miles must be justified by sponsor on line 10 below)*	14	34
8.	= Number of pounds GHG emissions reduced (#7 x 0.95 lbs.)	13.30	32.30
9.	If values would be distinctly greater for weekends, describe the magnitude of difference: 5		
10.	If different values other than the suggested are used, please explain here: Click or tap here to enter text.		

Pedestrian Use

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

To update the formulas below, enter your information, highlight the formulas (or Ctrl-A), and press F9. OR close and reopen the file.

1.	Current Average Single Weekday Pedestrians (including users of non-pedaled devices such as scooters and wheelchairs):		125
	Pedestrian Use Calculations	**Year of Opening**	**2050 Weekday Estimate**
2.	Enter estimated additional average weekday pedestrian one-way trips on the facility after project is completed	25	110
3.	Enter number of the new pedestrian trips (in #2 above) that will be diverting from a different walking route (Example: **{#2 X 50%}** *or other percent, if justified on line 10 below)*	13	55
4.	= Number of new trips from project (#2 – #3)	12	55
5.	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.). (Example: **{#4 X 30%}** *or other percent, if justified on line 10 below)*	3.60	16.50
6.	= Number of SOV trips reduced per day (#4 - #5)	8.40	38.50
7.	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)*	3.20	15.40

8.	= Number of pounds GHG emissions reduced (#7 x 0.95 lbs.)	3.04	14.63
9.	If values would be distinctly greater for weekends, describe the magnitude of difference: Click or tap here to enter text.		
10.	If different values other than the suggested are used, please explain here: Click or tap here to enter text.		

Question: Describe how this project helps expand the active transportation network, closes gaps, improves comfort, and/or improves connections to key destinations, particularly improvements in line with the recommendations in the Denver Regional Active Transportation Plan. Please include quantitative information, including any items referenced above, in your response.

1 - Reduce the number and severity of crashes: The approach to an intersection with vehicle turn lanes can be extremely difficult for cyclists riding in a traditional bike lane. This project will build designated bike lanes going through intersections. These bike lanes will reduce conflicts, leads to more predictable bicyclist and motorist travel movements, and signifies an appropriate location for motorists to safely merge across the bike lane into the turn lane.

2 – Increase bicycling and pedestrian activity: Proposed improvements will enhance cyclists' safety and comfort by increasing bike lane width and adding designated bike lanes through intersections. With increased safety and comfort and reduced conflict points, it is possible to observe an increase in cycling and pedestrian activity.

3 – Expand and connect the regional and bicycle networks: Project provides improved active transportation connectivity along a DRCOG Complete Streets corridor, between Highlands Ranch, Lone Tree, Castle Pines, and Castle Rock. Project is centrally located within Douglas County and between the I-25 Corridor Urban Center, RidgeGate West Village Urban Center, Ridge Gate City Center Urban Center, Castle Pines Village, and the Downtown Castle Rock Urban Center.

4 - Expand and connect comfortable transportation facilities: This project will help connect Castle Pines Parkway (with a designated bike lane) to the northern city limits. The shoulder on Monarch Boulevard to the north of the city limit is also 8 ft. This project will create a continuous designated 8-ft bike-lane throughout the whole section of Monarch Boulevard. It will eventually connect to South Quebec Street in Lone Tree on the northern side, which also has a designated bike lane going all the way to Lincoln Avenue in Highlands Ranch. Between Lincoln Avenue and Castle Pines Parkway, the project will connect a 6-mile long continuous designated bike lane.

5 – Improve bicycle and pedestrian access to and from transit: The additional bike lanes on Monarch Boulevard offer a better, lower-stress connectivity for active transportation to RTD transit lines like the 402L at S Quebec St. and S University Boulevard, which is only 3.8 miles away by bike from the project's northern end. Nearly 2.25 miles north of the Monarch Bloulevard northern project limit, there is a trail link to the Ridgegate Parkway Light Rail Station that uses the East/West Regional Trail. A planned transit route serving Castle Pines Parkway that travels south along the I-25 corridor from RidgeGate Parkway Station is also included in the DRCOG 2050 MVRTP.

6 – Improve the region's multimodal transportation system: Project also serves several high volume trail corridors listed in the Douglas County portion of the Denver Regional Active Transportation Plan with large numbers of bicylists and pedestrians.

7 – Improve and expand equitable access to regional active transportation corridors: The project location is surrounded by 4 different active transportation corridors including Daniel Park Rd in the north and west, Castle Pines Parkway in the south and a future corridor in the east. CDPHE Community Health Equity Map data (Census Tract 08035014127) shows that the unemployment percentage (percent of civilian labor force, age +16) is 4.9%, 2.9% of all persons has an income below poverty level, non-white or Hispanic population percentage is 12.4%, and the census tract has a slightly higher rate of suicide mortality rate (25.3 per 100k persons) compared to the state (20.7 per 100k persons).

C. Project Leveraging		WEIGHT	10%
What percent of outside funding sources (non-Subregional Share funding) does this project have? *(number will automatically calculate based on values entered in the Funding Request table. If this has not updated, select the box to the right and click F9)*		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	

D. Project Readiness	WEIGHT	10%

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:

David Wieder, PE

Please describe the status to date on each, including 1) anticipated/known pitfalls/roadblocks, and 2) mitigation activities taken to date:

- Utilities: Survey and SUE during the preliminary design phase will mitigate utilities specific pitfalls and roadblocks
- Railroad: Railroads are well outside of the Monarch Boulevard corridor
- Right-of-Way: ROW acquisition has been considered, however existing City of Castle Pines ROW along the Monarch Boulevard corridor is adequate to accommodate project needs
- Environmental/Historic: We are not anticipating the acquisition of ROW for this project, however, if there is a need to acquire ROW, historic/acheo/paleo clearances will likely be required in the form of an environmental analysis. Petrified wood forests, and Native-american cave dwellings are present within this general area, but not adjacent to this project.
- Other: Click or tap here to enter text.

b. Is this application for a single project phase only (i.e., design, environmental, ROW acquisition, construction only, study, 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: Not started

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 ☐ N/A

e. Have other stakeholders in your project been identified and involved in project development?
☒ Yes ☐ No ☐ N/A
If yes, who are the stakeholders?
The Castle Pines North Metro District, CORE Electric, Douglas County, Xcel Energy, Comcast, Verizon, CenturyLink, CPN 2 HOA, Daniel's Ridge HOA, North Lynx Homeowners Association, Esperanza HOA, The Hamlet HOA, and AT&T.

Please provide any additional details on any of the items in Section 1, if applicable.
Click or tap here to enter text.

Section 2. Local Match Availability

a. Is all the local match identified in your application currently available and not contingent on any additional decisions, and if a partnering agency is also committing match, do you have a commitment letter?

☒ Yes ☐ No
Please describe:
The City of Castle Pines is prepared to provide a 30% cash match to this project.

b. Is all funding for this project currently identified in the sponsor agency's Capital Improvement Program (CIP)?

☒ Yes ☐ No
Please describe:
Click or tap here to enter text.

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?

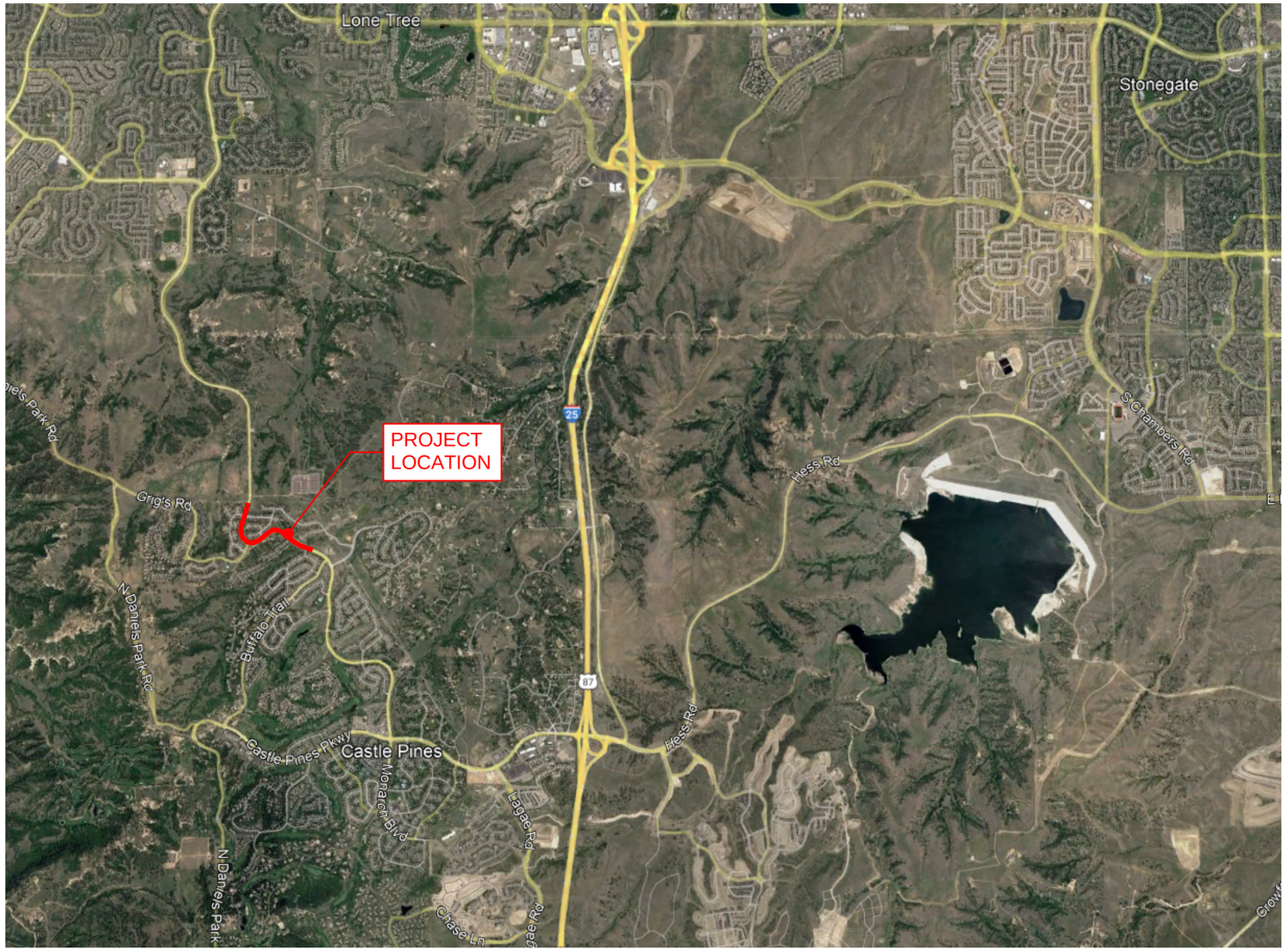
☒ Yes ☐ No
Please describe:
Project documentation and advertisements are prepared in both english and spanish.

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.
Click or tap here to enter text.

Submit completed applications through the TIP Data Hub no later than 3pm on January 27, 2023.

Prior to submitting, press Ctrl+A to select all, then press F9 to update all formulas. You can then print to PDF.

PROJECT LOCATION MAP



Print Date: 9/2/2022		Sheet Revisions			As Constructed	PROJECT LOCATION MAP	Project No./Code
File Name: 21.10519 Basis Of Estimate.dwg		Date:	Comments	Init.	No Revisions:		2023-PW-?
Horiz. Scale: Vert. Scale:					Revised:	Designer: BAN / Structure Numbers	UEI: 21.10519
Civil 3D 2022					Void:	Detailer: ERIC M	
						Sheet Subset:010 / Subset Sheet: 1 of 1	Sheet Number 001

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Greenwood Village, CO 80111
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Fax: 888.858.3440
Web: www.ulteig.com

CITY OF CASTLE PINES

811 Know what's below. Call before you dig.

G:\2021\21.10519\C3D Design\010 Basis Of Estimate Earthwork Summary\21.10519 Basis Of Estimate.dwg

Monarch Boulavard

Street Widening and Pedestrian Improvements

Castle Pines, Colorado

Preliminary Estimate

Item Number	Item No.	Item Discription	Units	Quantity	Unit Price	Item Amount
1	201-00000	Clear and Grub	LS	1	$ 10,000	$ 10,000
2	202-00200	Rem Sidewalk	SY	420	$ 35	$ 14,700
3	202-00201	Rem Curb	LF	5535	$ 20	$ 110,700
4	202-00210	Rem Conc Pavement	SY	4255	$ 48	$ 204,240
5	202-00019	Rem of Inlet	EA	2	$ 2,000	$ 4,000
6	210-00810	Reset Sign	EA	2	$ 425	$ 850
7	210-04050	Adjust Valve	EA	3	$ 620	$ 1,860
8	210-02510	Relocate Irrigation System	LS	1	$ 5,000	$ 5,000
9		Reset RRFB System	EA	3	$ 8,000	$ 24,000
10	212-01200	Relocate Landscaping	LS	1	$ 10,000	$ 10,000
11	306-01000	Reconditioning (Subgrade)	SY	5675	$ 4	$ 22,700
12	412-00800	Conc Pavement (8 in)	SY	5675	$ 90	$ 510,750
13	412-10000	Sawing Concrete Pavement	LF	6135	$ 30	$ 184,050
14	609-21023	Conc C&G Type II-B (Special)	LF	5535	$ 50	$ 276,750
15	608-00000	Concrete Sidewalk (4 in)	SY	167	$ 110	$ 18,370
16	608-00010	Concrete Curb Ramp (6 in)	SY	2165	$ 180	$ 389,700
17	608-00015	Detectable Warning	SF	220	$ 90	$ 19,800
18	304-06007	ABC Class 6	CY	1480	$ 75	$ 111,000
19	627-00001	Pvmt Mkg Paint	GAL	50	$ 440	$ 22,000
20	626-00000	Mobilization	LS	1	$ 150,000	$ 150,000
21	620-00020	Sanitary Facility	EA	2	$ 3,650	$ 7,300
22	630	Construction Traffic Control	LS	1	$ 100,000	$ 100,000

Contract Item Subtotal	$ 2,197,770
Contingency (10%)	$ 219,777
Contract Item Contingency	$ 2,417,547
Inflation (15%)	$ 362,632
Contract Item Inflation	$ 2,780,179
Design Fees	$ -
Estimated CM Costs	$ 217,579
Preliminary Project Budget	**$ 3,000,000**

360 Village Square Lane, Suite B • Castle Pines, CO 80108
303-705-0200 • castlepinesco.gov

January 18, 2023

City of Castle Pines
360 Village Square Lane
Suite B
Castle Pines, CO 80108

Re: DRCOG Submission for Castle Pines Monarch Bike Lanes

Dear DRCOG,

As the Mayor of the City of Castle Pines, I certify that the attached application relating to Castle Pines Monarch Bike Lanes is allowed to be submitted for potential DRCOG-allocated funding. If grant funding is awarded, the City will follow all local, DRCOG, state, and federal policies and regulations.

Respectfully,

Tracy Engerman (Jan 19, 2023 17:22 MST)

Tracy Engerman
Mayor of the City of Castle Pines

January 24, 2023

City of Castle Pines
360 Village Square Lane, Ste. B
Castle Pines, CO 80108

Dear Mr. Nimmo & City Staff,

As a member of the Castle Pines Cycling Club and a 16-year resident of this city, I understand the City of Castle Pines has and will continue to submit applications to the Denver Regional Council of Governments to obtain funding to expand and upgrade the Monarch Boulevard bike lanes. The Castle Pines Cycling Club fully supports the implementation of this proposed project which will improve the community's transportation safety and allow for enhanced regional multi-modal transit access between Castle Pines and other jurisdictions.

The completion of this project would allow for enhanced bike facilities that would lower the stress of riders and improve the connectivity between Highlands Ranch, Lone Tree, Castle Pines, and Castle Rock. Additionally, the installation of new and improved markings would address traffic safety issues which are of frequent concern throughout the community. Installing yield markings, RRFBs, and increasing signage would serve a large benefit to the multi-modal community in the region.

All of these benefits are crucial to local and regional bicycle commuting and are advanced by this project. We support these Monarch Boulevard improvements and would consider it a needed benefit to the regional community.

In advance, we thank you for your consideration and support in helping our city become a great place for cyclists.

Respectfully/Sincerely,

Neil Alvarado

President & Founder of Castle Pines Cycling Club

7260 Brighton Place
Castle Pines, CO 80108
720-933-4686
Armstrongn72@gmail.com