

Part 1

Base Information

1. Project Title	C470 Grade Separated Trail Crossing over Acres Green Drive
2. Project <i>Start/End</i> points or Geographic Area <i>Provide a map with submittal, as appropriate</i>	Intersection of Acres Green Drive and Parkway Drive (C470 Overpass), north side of C-470 Overpass and south of Acres Green Drive along the C-470 regional trail
3. Project Sponsor (<i>entity that will construct/ complete and be financially responsible for the project</i>)	City of Lone Tree
4. Project Contact Person, Title, Phone Number, and Email	Justin Schmitz, Director of Public Works and Mobility, 720-509-1244, Justin.Schmitz@cityoflonetree.com

5. Does this project touch CDOT Right-of-Way, involve a CDOT roadway, access RTD property, or request RTD involvement to operate service? Yes No
If yes, provide applicable concurrence documentation with submittal

6. What planning document(s) identifies this project?	<input type="checkbox"/> DRCOG 2040 Fiscally Constrained Regional Transportation Plan (2040 FC RTP)
	<input type="checkbox"/> Local plan:
	<input checked="" type="checkbox"/> Other(s): Identified as a needed improvement as part of recent C-470 Managed Lanes project based on new users, other grade separations of the trail and the location of the bridge piers on Acres Green Drive

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

7. Identify the project's **key elements**.
- | | |
|--|--|
| <input type="checkbox"/> Rapid Transit Capacity (2040 FC RTP)
<input type="checkbox"/> Transit Other:
<input checked="" type="checkbox"/> Bicycle Facility
<input checked="" type="checkbox"/> Pedestrian Facility
<input checked="" type="checkbox"/> Safety Improvements
<input type="checkbox"/> Roadway Capacity or Managed Lanes (2040 FC RTP)
<input type="checkbox"/> Roadway Operational | <p>Grade Separation</p> <input checked="" type="checkbox"/> Roadway
<input type="checkbox"/> Railway
<input checked="" type="checkbox"/> Bicycle
<input checked="" type="checkbox"/> Pedestrian
<input type="checkbox"/> Roadway Pavement Reconstruction/Rehab
<input type="checkbox"/> Bridge Replace/Reconstruct/Rehab
<input type="checkbox"/> Study
<input type="checkbox"/> Design
<input type="checkbox"/> Transportation Technology Components
<input type="checkbox"/> Other: |
|--|--|

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

The C-470 Regional Trail currently crosses Acres Green Drive at an uncontrolled crossing with a multi-lane collector roadway. In addition, the four bridge piers reduce visibility of the trail crossing for NB vehicles on Acres Green Drive. This project will provide a grade separated crossing of Acres Green Drive for the very highly used C-470 Regional Trail along the north side of C-470.

This trail provides access to numerous employment, recreation, entertainment and residential properties and serves as the main east-west connection for bicycles and other modes traveling east-west along this corridor and between the subregions.

The majority of the entire regional trail is separated from vehicular traffic and grade separated from major roadway crossings to provide a connected, safe, and convenient regional route for all modes. Therefore the at grade crossing at Acres Green Drive is unexpected for trail users, and cross traffic and is inconsistent with the use of this type of trail.

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

The project will consist of the construction of a pedestrian/bicycle bridge overpass over Acres Green Drive to provide a seamless connection for the C-470 Regional trail along this corridor. The proposed bridge will connect to the existing trail crossing along C470 and provide a safe means of crossing Acres Green Drive. Additional intersection improvements at Parkway Drive and Acres Green Drive will be constructed to coordinate with the new pedestrian and bicycle bridge.

10. What is the status of the proposed project?

Conceptual

11. Would a smaller DRCOG-allocated funding amount than requested be acceptable, while maintaining the original intent of the project?

Yes No

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

A. Project Financial Information and Funding Request

1. Total Project Cost	\$4,000,000	
2. Total amount of DRCOG Subregional Share Funding Request	\$2,000,000	50% of total project cost
3. Outside Funding Partners (other than DRCOG Subregional Share funds) List each funding partner and contribution amount.	\$\$ Contribution Amount	% of Contribution to Overall Total Project Cost
City of Lone Tree and other partners	\$1,000,000	25%
Douglas County	\$1,000,000	25%
	\$	0%
	\$	0%
	\$	0%
	\$	0%
Total amount of funding provided by other funding partners <i>(private, local, state, Regional, or federal)</i>	\$2,000,000	

Funding Breakdown (year by year)*

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

	FY 2020	FY 2021	FY 2022	FY 2023	Total
Federal Funds	\$	\$	\$2,000,000	\$	\$2,000,000
State Funds	\$	\$	\$	\$	\$0
Local Funds	\$	\$	\$2,000,000	\$	\$2,000,000
Total Funding	\$0	\$0	\$4,000,000	\$0	\$4,000,000
4. Phase to be Initiated <i>Choose from Design, ENV, ROW, CON, Study, Service, Equip. Purchase, Other</i>	Choose an item	Choose an item	CON	Choose an item	

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



Part 2 Evaluation Criteria, Questions, and Scoring

A. Subregional significance of proposed project

WEIGHT **40%**

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

1. Why is this project important to your subregion?

This project would improve the safety and comfort of all users on the C-470 Regional Trail. This trail is used by residents of the Douglas County subregion and numerous municipalities along the route. This trail serves as the main east-west trail that is completely separated from traffic for the majority of the route with very few conflict points.

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

The Project is within the City of Lone Tree but would serve the Regional Trail which connects with and benefits multiple municipalities and Douglas County and Arapahoe County as well. This includes connections to Highlands Ranch, Littleton, Centennial, Meridan, and Parker.

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

The C-470 Trail users travel to and from numerous subregions and this project will enhance the connectivity and safety of travel for all subregions in the south Metro area. This includes connections to the west to the Jefferson County subregion and the east and north to the Arapahoe County subregion.

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

The grade separation of the trail would eliminate the current conflicts between trail users and the traffic at the intersection of Acres Green Drive and Parkway Drive.

In addition, it will provide a more consistent type of trail crossing for the C-470 regional trail which will increase expectancy for all users, increase safety for trail users and cross traffic on Acres Green Drive and provide a seamless connection to the rest of the regional trail facility.

It will also allow non-motorized traffic to continue freely on the trail without stopping for cross traffic on Acres Green Drive.

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

This completed project will allow people better access to local businesses and encourage health and wellness communiting options for local businesses.

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

The connectivity for all bicycle users and pedestrians along the Regional trail will be improved as the current path must cross at grade. Vehicle connectivity will remain in place but will be improved by the reduction in conflicts with the trail crossing.

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

This project would require project partnership with Douglas County, and the Colorado Dept of Transportation on construction and maintenance. The C-470 Regional trail is a Colorado Dept of Transportation facility. Additional partnerships with Metro Districts or Improvement Districts would be pursued to support the project construction.

B. DRCOG Board-approved Metro Vision TIP Focus Areas

WEIGHT **30%**

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

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

This project will reduce one of the only at grade crossings along the C-470 Centennial Regional trail as shown in the Denver Regional Bicycle Map. This connection provide enhanced access to the Willow Creek trail as well which has access to two elementary schools, parks, and connection to large employment centers in Ridgeway and Park Meadows Retail resort

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

This project will reduce one of the only at grade crossings along the C-470 Centennial Regional trail as shown in the Denver Regional Bicycle Map.

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

This project will eliminates the at grade trail crossing with Acres Green Drive, reducing conflicts between trail users and vehicles as well as eliminates sight distance limitations for both trail users and vehicles at this intersection.

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

WEIGHT **15%**

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

[MV objective 2](#)

Contain urban development in locations designated for urban growth and services.

1. Will this project help focus and facilitate future growth in locations where urban-level infrastructure already exists or areas where plans for infrastructure and service expansion are in place?

Yes No

Describe, including supporting quantitative analysis

This location is included within the High Employment Concentration maps for Douglas County and serves regional commuter users along the trail to access Other High Employment areas as well as recreational uses.

[MV objective 3](#)

Increase housing and employment in urban centers.

2. Will this project help establish a network of clear and direct multimodal connections within and between urban centers, or other key destinations?

Yes No

Describe, including supporting quantitative analysis

This project will reduce one of the only at grade crossings along the C-470 Centennial Regional trail as shown in the Denver Regional Bicycle Map. This connection provide enhanced access to the Willow Creek trail as well which has access to two elementary schools, parks, and connection to large employment centers in Ridgeway and Park Meadows Retail resort

[MV objective 4](#)

Improve or expand the region’s multimodal transportation system, services, and connections.

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

Describe, including supporting quantitative analysis

This project will reduce one of the only at grade crossings along the C-470 Centennial Regional trail as shown in the Denver Regional Bicycle Map. This connection provides enhanced access to the Willow Creek trail as well which has access to two elementary schools, parks, and connection to large employment centers in Ridgeway and Park Meadows Retail resort

[MV objective 6a](#)

Improve air quality and reduce greenhouse gas emissions.

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

Describe, including supporting quantitative analysis

A minor improvement in this area could be anticipated if the improved trail crossing encourages a shift of modes from S.O.V. to a regional bicycle trip. This would not lead to a major reduction.

[MV objective 7b](#)

Connect people to natural resource or recreational areas.

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

Describe, including supporting quantitative analysis

This project will reduce one of the only at grade crossings along the C-470 Centennial Regional trail as shown in the Denver Regional Bicycle Map. This connection will also provide additional trail connections to the Willow Creek trail which accesses the prominence point open space, several local and regional parks

[MV objective 10](#)

Increase access to amenities that support healthy, active choices.

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

Describe, including supporting quantitative analysis

This project will reduce one of the only at grade crossings along the C-470 Centennial Regional trail as shown in the Denver Regional Bicycle Map. This connection provides enhanced access to the Willow Creek trail as well which has access to two elementary schools, parks, and connection to large employment centers in Ridgeway and Park Meadows Retail Resort

[MV objective 13](#)

Improve access to opportunity.

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

Describe, *including supporting quantitative analysis*

This project will reduce one of the only at grade crossings along the C-470 Centennial Regional trail as shown in the Denver Regional Bicycle Map. This connection provides enhanced access to the Willow Creek trail as well which has access to two elementary schools, parks, and connection to large employment centers in Ridgeway and Park Meadows Retail Resort

[MV objective 14](#)

Improve the region’s competitive position.

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

Yes No

Describe, *including supporting quantitative analysis*

This location is included within the High Employment Concentration maps for Douglas County and serves regional users along the trail to access Other High Employment areas as well as recreational uses.

D. Project Leveraging

WEIGHT 15%

9. What percent of outside funding sources (non-DRCOG-allocated Subregional Share funding) does this project have?

50%

60%+ outside funding sources High
 30-59%Medium
 29% and belowLow

Part 3

Project Data Worksheet – Calculations and Estimates

(Complete all subsections applicable to the project)

A. Transit Use

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

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

Transit Use Calculations	Year of Opening	2040 Weekday Estimate
3. Enter estimated additional daily transit boardings after project is completed. <i>(Using 50% growth above year of opening for 2040 value, unless justified)</i> <i>Provide supporting documentation as part of application submittal</i>	0	0
4. Enter number of the additional transit boardings (from #3 above) that were previously using a different transit route. <i>(Example: {#3 X 25%} or other percent, if justified)</i>	0	0
5. Enter number of the new transit boardings (from #3 above) that were previously using other non-SOV modes (walk, bicycle, HOV, etc.) <i>(Example: {#3 X 25%} or other percent, if justified)</i>	0	0
6. = Number of SOV one-way trips reduced per day (#3 – #4 – #5)	0	0
7. Enter the value of {#6 x 9 miles} . (= the VMT reduced per day) <i>(Values other than the default 9 miles must be justified by sponsor; e.g., 15 miles for regional service or 6 miles for local service)</i>	0	0
8. = Number of pounds GHG emissions reduced (#7 x 0.95 lbs.)	0	0
9. If values would be distinctly greater for weekends, describe the magnitude of difference:		
10. If different values other than the suggested are used, please explain here:		

B. Bicycle Use

1. Current weekday bicyclists	600
2. Population and Employment	

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	10,500	24,000	34,500
2040	12,000	40,000	52,000

Bicycle Use Calculations	Year of Opening	2040 Weekday Estimate
3. Enter estimated additional weekday one-way bicycle trips on the facility after project is completed.	200	400
4. Enter number of the bicycle trips (in #3 above) that will be diverting from a different bicycling route. (Example: {#3 X 50%} or other percent, if justified)	75	150
5. = Initial number of new bicycle trips from project (#3 – #4)	125	250
6. Enter number of the new trips produced (from #5 above) that are replacing an SOV trip. (Example: {#5 X 30%} or other percent, if justified)	35	70
7. = Number of SOV trips reduced per day (#5 - #6)	90	180
8. Enter the value of {#7 x 2 miles} . (= the VMT reduced per day) (Values other than 2 miles must be justified by sponsor)	180	360
9. = Number of pounds GHG emissions reduced (#8 x 0.95 lbs.)	171	342
10. If values would be distinctly greater for weekends, describe the magnitude of difference: Due to Regional Nature of the C-470 Trail and the amount of users who ride the trail for recreation purposes, the weekend traffic is expected to be roughly twice a weekday volume.		
11. If different values other than the suggested are used, please explain here:		

C. Pedestrian Use

1. Current weekday pedestrians (include users of all non-pedaled devices)	200
2. Population and Employment	

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	10,500	24,000	34,500
2040	12,000	40,000	52,000

Pedestrian Use Calculations	Year of Opening	2040 Weekday Estimate
3. Enter estimated additional weekday pedestrian one-way trips on the facility after project is completed	50	100
4. Enter number of the new pedestrian trips (in #3 above) that will be diverting from a different walking route (Example: {#3 X 50%} or other percent, if justified)	20	40
5. = Number of new trips from project (#3 – #4)	30	60
6. Enter number of the new trips produced (from #5 above) that are replacing an SOV trip. (Example: {#5 X 30%} or other percent, if justified)	15	30
7. = Number of SOV trips reduced per day (#5 - #6)	15	30

12. Enter the value of {#7 x .4 miles} . (= the VMT reduced per day) <i>(Values other than .4 miles must be justified by sponsor)</i>	0	0
8. = Number of pounds GHG emissions reduced (#8 x 0.95 lbs.)	0	0
9. If values would be distinctly greater for weekends, describe the magnitude of difference:		
10. If different values other than the suggested are used, please explain here:		

D. Vulnerable Populations

Use Current Census Data	Vulnerable Populations	Population within 1 mile
	1. Persons over age 65	
2. Minority persons		658
3. Low-Income households		94
4. Linguistically-challenged persons		34
5. Individuals with disabilities		211
6. Households without a motor vehicle		0
7. Children ages 6-17		554
8. Health service facilities served by project		0

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

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

1. Current ADT (average daily traffic volume) on applicable segments	10,000
2. 2040 ADT estimate	13,000
3. Current weekday vehicle hours of delay (VHD) (before project)	0

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

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

F. Traffic Crash Reduction

1. Provide the current number of crashes involving motor vehicles, bicyclists, and pedestrians (<i>most recent 5-year period of data</i>)		Sponsor must use industry accepted crash reduction factors (CRF) or accident modification factor (AMF) practices (<i>e.g., NCHRP Project 17-25, NCHRP Report 617, or DiExSys methodology</i>).
Fatal crashes	0	
Serious Injury crashes	1	
Other Injury crashes	0	
Property Damage Only crashes	24	
2. Estimated reduction in crashes <u>applicable to the project scope</u> (<i>per the five-year period used above</i>)		
Fatal crashes reduced	0	
Serious Injury crashes reduced	1	
Other Injury crashes reduced	0	
Property Damage Only crashes reduced	5	

G. Facility Condition

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

Roadway Pavement

1. Current roadway pavement condition	Fair
2. Describe current pavement issues and how the project will address them.	
3. Average Daily User Volume	0

Bicycle/Pedestrian/Other Facility

4. Current bicycle/pedestrian/other facility condition	Poor
5. Describe current condition issues and how the project will address them. Current C-470 Regional Trail with up to 50,000 riders per year crosses at an at grade, uncontrolled crossing with Acres Green Drive.	
6. Average Daily User Volume	700

H. Bridge Improvements

1. Current bridge structural condition from CDOT

2. Describe current condition issues and how the project will address them.

3. Other functional obsolescence issues to be addressed by project

4. Average Daily User Volume over bridge	0
--	---

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

1.

2.

3.

J. Disbenefits or Negative Impacts *(identified and calculated by the sponsor)*

1. Increase in VMT? <i>If yes, describe scale of expected increase</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
--	--

2. Negative impact on vulnerable populations

3. Other: