



DRCOG FY2022-2025 Transportation Improvement Program (TIP) Regional Share Air Quality/Multimodal (AQ/MM) Application Programming Federal Fiscal Years 2023-2025

APPLICATION OVERVIEW

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

Funding Available: \$43 million (estimated as of the open date)

Applications: Air Quality & Multimodal (AQ/MM) application; each Subregional Forum may submit up to three applications from eligible project sponsors. Both CDOT and RTD may submit up to two applications each

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

Call Opens: January 24, 2022

Call Closes: March 18, 2022, 3 pm

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

1. REQUIRED: a **single PDF document** containing the below. Please **DO NOT** attach additional cover pages, embed graphics in the application, or otherwise change the format of the application form.
 - a. this application
 - b. one location map/graphic
 - c. cost estimate (your own or the CDOT [cost estimate form](#))
 - d. CDOT/RTD concurrence response (if applicable)
 - e. any required documentation based on the application text (i.e., FHWA emissions calculators)
 - f. project support letters and/or [Request for Peer Agency Support](#)
2. OPTIONAL: Submit **one additional** PDF document containing any supplemental materials, if applicable
3. REQUIRED: Submit a zipped GIS shapefile of your project. Requests for assistance with creating a shapefile should be submitted to tipapplications@drcog.org no later than February 25, 2022

Other Notable items:

- **TIP Trainings:** To be eligible to submit an application, at least one person from your agency must have attended one of the two mandatory TIP training workshops ([February 10](#) and [February 16, 2022](#)). Please click on one of the links to register
- **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 February 4, 2022, with CDOT/RTD providing a response no later than March 4, 2022. Submit requests to the following: CDOT Region 1 – JoAnn Mattson, joann.mattson@state.co.us; CDOT Region 4 – Josie Hadley, josie.hadley@state.co.us; RTD – Chris Quinn, chris.quinn@rtd-denver.com
- **Application Data:** To assist sponsors in filling out the application, DRCOG has developed a TIP Data Tool to streamline quantitative analyses requested in the application. A link to the TIP Data Tool and instructions on how to use it are available on the [TIP Data Hub](#). Additionally, sponsors may download datasets to run their own analyses from this same site. Requests for additional data or calculations from DRCOG staff should be submitted to tipapplications@drcog.org no later than February 25, 2022
- **Project Affirmation:** The application must be affirmed by either the applicant’s City or County Manager, Chief Elected Official (Mayor or County Commission Chair) for local governments, or agency director or equivalent for other applicants
- **TIP Policy:** Further details on project eligibility, evaluation criteria, and the selection process are defined in the [Policies for TIP Program Development](#) document
- **Evaluation Process:** DRCOG staff will review submittals for eligibility and provide an initial score for each eligible application to a Project Review Panel. The panel will then review, discuss, and rank the applications and provide a recommended funding list within the funding available. The panel’s recommendation will then be forwarded to the DRCOG committee process for incorporation into the adopted TIP
- If you have any questions or need assistance, reach out to us at tipapplications@drcog.org

APPLICATION FORMAT

The AQ/MM Regional 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. Regional Impact of Proposed Projects 30%

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

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

Section B. Metro Vision Regional Transportation Plan Priorities50%

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

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

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

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

Section D. Project Readiness 10%

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

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

Project Information

1. Project Title	Integrated Mobility as a Service (MaaS): trip planning, booking, and payment of transportation options in the Denver Region		
2. Project Location <i>Provide a map, as appropriate (see Page 1)</i>	Start point:		
	End point:		
	OR Geographic Area: RTD boundaries		
3. Project Sponsor <i>(entity that will be financially responsible for the project)</i>	RTD		
4. Project Contact Person:			
Name	Tonya Anderson	Title	Senior Product Manager
Phone	303-299-6329	Email	tonya.anderson@rtd-denver.com
5. Required CDOT and/or RTD Concurrence: Does this project touch CDOT Right-of-Way, involve a CDOT roadway, access RTD property, or request RTD involvement to operate service?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, provide applicable concurrence documentation</i>	
6. What planning document(s) identifies this project? <i>Provide link to document/s and referenced page number if possible, or provide documentation in the supplement</i>	<input type="checkbox"/> DRCOG 2050 Metro Vision Regional Transportation Plan (2050 MVRTP) Provide MVRTP staging period, if applicable capital project:		
	<input checked="" type="checkbox"/> Local/Regional plan:	Planning Document Title: Mobility Choice Blueprint, Reimagine RTD Adopting agency (local agency Council, CDOT, RTD, etc.): RTD/CDOT/DRCOG, RTD Provide date of adoption by council/board/commission, if applicable: n/a	
	Please describe public review/engagement to date:	Both the Mobility Choice Blueprint and Reimagine RTD had public review and engagement components, including visioning surveys and surveys related to recommendations.	
	Other pertinent details:		
7. Identify the project's key phases and the anticipated schedule of phase milestones. (phases and dates should correspond with the Funding Breakdown table below)			
Phases to be included:	Major phase milestones:	Anticipated completion date (based on 9/21/2022 DRCOG approval date): (MM/YYYY)	
<u>FOR ALL PHASES</u>	Intergovernmental Agreement (IGA) executed (with CDOT/ RTD; assumed process is 4-9 months)	[]	
<input type="checkbox"/> Design	Design contract Notice to Proceed (NTP) issued (if using a consultant):	[]	
	Design scoping meeting held with CDOT (if no consultant):	[]	
<input type="checkbox"/> Environmental	Environmental contract Notice to Proceed (NTP) issued (if using a consultant):	[]	
	Design scoping meeting held with CDOT (if no consultant):	[]	
<input type="checkbox"/> Right-of-Way	Initial set of ROW plans submitted to CDOT:	[]	

	ROW acquisition completed: Estimated number of parcels to acquire:	
<input type="checkbox"/> Construction	FIR (Field Inspection Review):	
	FOR (Final Office Review):	
	Required clearances:	
	Project publicly advertised:	
<input type="checkbox"/> Study	Kick-off meeting held after consultant NTP (or internal if no consultant):	
<input type="checkbox"/> Bus Service	Service begins:	
<input type="checkbox"/> Equipment Purchase (Procurement)	RFP/RFQ/RFB (bids) issued:	
<input checked="" type="checkbox"/> Other: Software Development	First invoice submitted to CDOT/RTD:	12/31/2025

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

Public transit riders across the country are keen users of mobile apps with intuitive interfaces and seamless integrations. The onus is now on public agencies to offer tools that are polished and powerful. This is difficult for agencies with more regulatory asks and fewer IT resources than private players. RTD is constantly working to streamline its customer-facing technology with limited resources. Currently, RTD has multiple applications for trip planning, booking, and fare payment including the following:

-Mobile Ticketing: this application is where customers can purchase tickets for use on RTD fixed-route services

-NextRide: this web-based application is where customers can plan trips and view arrival predictions

-FlexRide: this application is where customers can book FlexRide trips

-Paratransit: this web-based application is where customers can view and book trips and track their bus

Juggling each of these applications is confusing and cumbersome for the end-user, and introduces friction in customers' trips. Additionally, visitors and infrequent users of RTD services need either cash, an RTD mobile ticket, or a paper ticket from a ticket vending machine to ride public transit. This adds additional friction and complication, reducing the likelihood that someone would try transit.

Adding to complications, Denver-area residents who use other transportation providers such as ride-hailing companies, e-scooters/e-bikes, Bustang, Greyhound, etc., need additional apps to plan trips and purchase tickets.

This project will improve the customer experience for transit users, build onto RTD's existing efforts to improve its trip planning, booking, and fare payment systems, and develop a way to integrate third-party transportation providers with RTD's suite of services.

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

Roadway

Operational Improvements

Grade Separation

Roadway

Railway

Bicycle

Pedestrian

Regional Transit¹

Rapid Transit Capacity (2050 MVRTP)

Mobility Hub(s)

Transit Planning Corridors

Transit Facilities/Service (Expansion/New)

Safety Improvements

Active Transportation Improvements

Bicycle Facility

Pedestrian Facility

Air Quality Improvements

Improvements Impacting Freight

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

Complete Streets Improvements

Study

Other, briefly describe: **Trip planning, booking, and fare payment integration**

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

10. Define the scope and specific elements of the project (including any elements checked in #9 above).

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

This scope of this project will include three specific elements:

-Development of a Mobility as a Service (MaaS) application which would integrate trip planning, booking, and fare payment of all RTD services, including paratransit and FlexRide. This would bring all RTD applications under one "roof," simplifying fare payment and trip planning for customers. Additionally, RTD would create a "toolkit," providing third party transportation providers with the ability to integrate trip planning, booking, and fare payment within RTD's MaaS application. Additionally, RTD has budgeted to include up to five third-party mobility providers (such as Bustang, e-scooters, or local transit operators) into this MaaS application. The actual number of integrations may vary depending on actual costs.

-The purchase and installation of new ticket validators for paratransit and FlexRide vehicles. Later in 2022, RTD will initiate implementation of its account-based ticketing system, and new validators will be installed on all fixed-route buses and at all rail stations. Installing validators on RTD's smaller vehicles (paratransit and FlexRide) will mean that every revenue vehicle and/or train platform will have a state-of-the-art account-based ticketing validator.

-Implementation of open ticketing through upgrades to the account-based ticketing system, which will go live later this year. The development and implementation of open-ticketing would enable all RTD ticket validators to accept credit cards.

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.*

RTD will be initiating implementation of account-based ticketing later in 2022. This means that RTD will be transitioning away from a card-based system, where customer's tickets are stored on a specific card to one that is account-based, where customer's tickets are stored in the cloud. This type of system is an industry best practice, and the direction that a majority of US transit agencies are headed. Once the account-based ticketing system is live later this year, the elements in this application can be implemented. RTD has requested funding in FY24 and FY25, with the intent of developing the application and purchasing the validators in this time period.

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: \$8.5 million

Outline the differences between the scope outlined above and the reduced scope: RTD could reduce the scope of this application and accept \$8.5 million in funding. If RTD were awarded less funding, open ticketing would be removed from the application. This would mean that credit cards would not be accepted by the ticketing validators.

Project Financial Information and Funding Request

(All funding amounts in \$1,000s)

Total amount of Regional Share Funding Request <i>(No greater than \$20 million and not to exceed 90% of the total project cost)</i> <input type="checkbox"/> Check box if requesting only state MMOF funds (requires minimum 50% local funds)¹		\$11,379	80.00 of total project cost
Match Funds List each funding source and contribution amount.		Contribution Amount	% Contribution to Overall Project Total
RTD Sales and Use Tax		\$2,845	20%
		\$	0%
		\$	0%
		\$	0%
		\$	0%
		\$	0%
Total Match <i>(private, local, state, subregional, or federal)</i>		\$2,845	20.00%
Project Total		\$14,224	

Notes:

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

Funding Breakdown in \$1,000s (by program year)¹				
	FY 2023	FY 2024	FY 2025	Total
DRCOG Requested Funds	\$280,000	\$5,419,200	\$5,680,000	\$11,379,200
CDOT or RTD Supplied Funds²	\$70,000	\$1,354,800	\$1,420,000	\$2,844,800
Local Funds (Funding from sources other than DRCOG, CDOT, or RTD)	\$0	\$0	\$0	\$0
Total Funding	\$350,000	\$6,774,000	\$7,100,000	\$14,224,000
Phase to be Initiated	Other	Other	Other	
Notes:	<ol style="list-style-type: none"> 1. Fiscal years are October 1 through September 30 (e.g., FY 2023 is October 1, 2022 through September 30, 2023). The proposed funding plan is not guaranteed if the project is selected for funding. While DRCOG will do everything it can to accommodate the applicants' request, final funding will be assigned at DRCOG's discretion within fiscal constraint. Funding amounts must be provided in year of expenditure dollars using an 3% inflation factor. 2. Only enter funding in this line if CDOT and/or RTD specifically give permission via concurrence letters or other written source. 			
Affirmation:	By checking this box, the applicant's Chief Elected Official (Mayor/County Commission Chair/City-County Manager/Agency Director) has certified it allows this application to be submitted for potential DRCOG-allocated funding and will follow all local, DRCOG, state, and federal policies and regulations if funding is awarded. <input checked="" type="checkbox"/>			

Evaluation Questions

A. Regional Impact of Proposed Project

WEIGHT

30%

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

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

This project is regionally important because it will impact the entire Regional Transportation District. This project will improve the customer experience in using RTD for all 3.1 million people living within RTD's boundaries. Additionally, implementation of this project would make it easier for infrequent users of RTD's services, such as tourists and other visitors, to more easily access transit. Additionally, this project has the future potential to integrate with other mobility providers in the region such as CDOT's Bustang and other third-party providers, setting up the possibility of a fully integrated regional transportation system.

Based on the public and stakeholder outreach completed as part of the Mobility Choice Blueprint and Reimagine RTD, RTD is blazing a path to becoming the region's "mobility integrator." Providing public transportation services is RTD's core mission, and being able to integrate with other transportation modes and providers is key in helping the region achieve its transportation goals. Completion of this project will be another step forward in RTD assuming the role of mobility integrator.

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.

This project will help RTD continue its advance its technological offerings through the implementation of a single application to plan trips and pay fares, accept credit cards at the validator, and install validators on its remaining revenue vehicles. These efforts will reduce friction, improving the overall customer experience of using transit. RTD hopes that this project will help retain existing customers and attract new ones.

Trip planning on mobile devices is very popular with RTD customers; Transit App had nearly 18,000 active users in January 2022 in the Denver Metro and thousands of others use RTD's NextRide app to plan their trips. A 2019 survey of RTD passengers showed that 11% of people used RTD's Mobile Ticketing app. With the onset of the pandemic, preference for zero-touch fare media, such as mobile tickets, has become more in-demand. As of 2021, RTD sold more mobile tickets than it collected in cash fares. As electronic fare payment continues to grow at RTD, bringing all of RTD's existing mobile applications to one place is critical.

In 2019 (pre-COVID), RTD provided over 100 million rides in the Denver Region. The COVID pandemic had a significant impact on RTD's ridership due to many commuters working from home. As people slowly return to the office, it is important to continue working on efforts related to customer experience. Providing an all-in-one solution for trip planning and fare payment is one project RTD sees as helping to encourage individuals to get out of their cars and back on the bus.

RTD has already taken a large step towards modernizing its fare collection system with the implementation of account-based ticketing later in 2022. A DRCOG award for this project would enable RTD to continue adopting best-practices being implemented by peers such as MTA in New York City and WMATA in Washington, DC. Adopting these best practices is important to retaining existing customers and attracting new ones.

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.

This project will benefit every municipality within the Regional Transportation District as well as all subregions. The entire local match for this project will be provided by RTD. This funding comes from a sales and use tax which is paid on all goods purchased within the District.

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

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

	DI and EJ Population Groups	Number within ½ mile	% of Total
Use 2015-2019 American Community Survey Data <i>(In the TIP Data Tool, use a 0.5 mile buffer)</i>	a. Total population	3,094,884	100%
	b. Total households	1,288,494	100%
	c. Individuals of color	1,095,977	35.00%
	d. Low-Income households	107,761	8.00%
	e. Individuals with limited English proficiency	106,810	3.00%
	f. Adults age 65 and over	390,726	13.00%
	g. Children age 5-17	510,336	16.00%
	h. Individuals with a disability	140,748	5.00%
	i. Households without a motor vehicle	67,762	5.00%
	j. Households that are housing cost-burdened	362,221	28.00%

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)(l): “cost-burdened” means a household that spends more than thirty percent of its income on housing.”

Describe, including the required quantitative analysis:

This project would impact 3.1 million people, 1.3 million households, 1.1 million people of color, 108,000 low-income households, 107,000 individuals with limited English proficiency, 391,000 seniors, 510,000 children, 141,000 people with a disability, 68,000 households without a motor vehicle, and 362,000 households that are cost-burdened.

Previous RTD research has shown that a majority of RTD customers own a smart phone. However, as part of the project, RTD anticipates completing an equity analysis to identify how marginalized groups, such as minorities, low-income populations, and others identified above, would be affected by this project, with the goal of identifying ways that this project could improve access to trip planning and fare payment products for these groups and those who do not have access to a smart phone.

Additionally, while outside the scope of this specific request, RTD already makes accommodations for individuals who are unbanked or underbanked. RTD partners with retail outlets around the region to provide a way for customers to use cash and have it loaded onto their ticketing account. RTD will always accept cash actively works to expand where and how cash can be used to access the system. Fare capping will also be possible starting later in 2022 with the implementation of account-based ticketing. Fare capping is a process that ensures lower-income customers do not spend more in daily tickets than a monthly pass would cost and is seen as an equitable best-practice.

5. How will this project move the region toward achieving the shared regional transportation outcomes established in Metro Vision?

This project will move the region towards many of the transportation-related objectives established in the Metro Vision. Some of these objectives include improving the diversity and livability of communities, improving the region's multimodal transportation system, improving transportation connections to healthcare facilities, improving access to opportunity, and improving the region's competitive position. This project will reduce friction introduced from booking and paying for an RTD trip through multiple apps and with various fare media. Streamlining trip planning and fare payment and integrating all RTD apps into one as well as adding third-party providers into the app will help RTD retain riders as well as attract new ones.

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

- Is there a DRCOG designated urban center within ½ mile of the project limits?*
 Yes No If yes, please provide the name: [All urban centers with the RTD boundaries](#)
- Does the project connect two or more urban centers?*
 Yes No If yes, please provide the names: [All urban centers with the RTD boundaries](#)
- Is there a transit stop or station within ½ mile of the project limits?*
 Yes No
- Is the project in a locally-defined priority growth and development area?
 Yes No
 If yes, provide a link to the relevant planning document:
 If yes, provide how the area is defined in the relevant planning document:
- Is the project in an area with zoning that supports compact, mixed-use development patterns and a variety of housing options?
 Yes No If yes, please provide the zoning district designation(s): [This project covers the entire](#)

[Regional Transportation District](#)

Provide households and employment data*	2020	2050
Households within ½ mile	1,288,494	1,731,059
Jobs within ½ mile	2,103,691	2,867,844
Household density (per acre) within ½ mile	3.40	4.70
Job density (per acre) within ½ mile	17.94	22.2

Describe, *including the required quantitative analysis*: Given this project would impact the entire District, all households and employees located within the boundaries would be affected by the project.

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

[This project will build upon RTD's fare collection modernization by improving the trip planning and booking experience. Because the project will cover the entire District, access and connections will be improved to all employment centers and regional destinations within the RTD boundary. In addition to bringing trip planning and fare payment for all RTD services into one app, this project will develop a toolkit for other transportation providers to be included in the app as well. RTD provides great coverage of services throughout the District, but the agency understands there are other mobility providers in different areas of the District. By providing a way for other providers to be incorporated into the RTD app, access and connectivity to these critical destinations will be enhanced.](#)

B. MVRTP Priorities

WEIGHT

50%

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

Multimodal Mobility

Provide improved travel options for all modes.

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

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

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

- What modes will project improvements directly address?
 Walking Bicycling Transit Roadway Operations Other: [Any non-RTD mode that chose to integrate](#)
- List the elements of this project which will address the above modes (i.e., sidewalk, shared use path, bus stop improvements, signal interconnection, etc.): [The application being developed by this project will have the ability to integrate with other transportation modes.](#)
- Will the completed project be a complete street as described in the [Regional Complete Streets Toolkit](#)? [This data is available in the TIP Data Tool.](#)
 Yes No If yes, describe how it implements the Toolkit's strategies in your response.
- Does this project improve travel time reliability?
 Yes No
- Does this project improve asset management of active transportation facilities and/or transit vehicle fleets?
 Yes No
- Does this project implement resilient infrastructure that helps the region mitigate natural and/or human-made hazards?
 Yes No

Describe, include quantitative information, including any items referenced above, in your response:

[This project will increase mobility choices for all people within the District by improving the user experience in booking and paying for public transportation and allowing third-party mobility providers the ability to integrate their services into one application. This will improve travel time reliability for those who use it.](#)

Air Quality

Improve air quality and reduce greenhouse gas emissions.

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

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

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

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

Emissions Reduced (kg/day)	CO	NOx	VOCs	PM 10
	0.00	0.00	0.00	0.00

Use [FHWA CMAQ Calculators](#) to determine emissions reduced. Please attach a screenshot of the calculator showing the inputs and outputs as part of your submittal packet.

Note: for project types not covered by the FHWA Calculators, such as education and outreach, please note your methodology in your narrative below.

Describe, include quantitative information, including any items referenced above, in your response:

While RTD anticipates this project will create modest reductions to congestion, VMT, and SOV travel, there is limited research on the exact impact such a project will have on ridership. For this reason, we are unable to quantify the reduction in emissions. Although RTD expects the impacts of this specific project to be modest, the agency expects this project to improve the customer experience, encouraging new riders to try out services and helping to retain existing ones. The long-term impacts this might have on congestion, VMT, and SOV travel are unknown, but likely positive.

**Regional
Transit**

Expand and improve the region’s transit network.

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

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

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

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

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

Describe, include quantitative information, including any items referenced above, in your response:

This project will improve connections between transit and other modes by providing a blueprint for third-party mobility providers to integrate into RTD's MaaS application. Letting third-party providers leverage RTD's core public transit network will help create a more robust transportation network and improve first and last mile connectivity. One possible future application is the integration of third-party scooter companies, where a person might use RTD for a majority of their trip, and then take a scooter to complete the last mile of their trip. RTD's MaaS application would make it possible to plan and pay for these types of combined trips, given there was active participation by the third-party mobility provider and available budget from the provider to fund the integration. This idea was a recommendation of RTD's First and Last Mile Strategic Plan (2019).

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

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

- Does this project address a location on the [High-Injury Network or Critical Corridors](#)?*
 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)		Sponsor must use industry accepted crash reduction factors (CRF) or accident modification factor (AMF) practices (e.g., NCHRP Project 17-25, NCHRP Report 617, or DiExSys methodology).
Fatal crashes	1,013	
Serious Injury crashes	6,821	
Other Injury crashes	71,739	
Property Damage Only crashes	257,103	
Estimated reduction in crashes <u>applicable to the project scope</u> (per the five-year period used above)		Provide the methodology below:
Fatal crashes reduced	0.00	n/a
Serious Injury crashes reduced	0.00	
Other Injury crashes reduced	0.00	
Property Damage Only crashes reduced	0.00	

Describe, include quantitative information, including any items referenced above, in your response:

RTD expects this project will reduce VMT, and therefore reduce crashes, however, because there is limited research on how this type of project would impact ridership, we are unable to quantify reductions in crashes. While we are unable to quantify it, RTD would expect a slight reduction in crashes from the modest increase in ridership this project is expected to produce.

Freight

Maintain efficient movement of goods within and beyond the region.

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

Examples of Project Elements: roadway operational improvements, etc.

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

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

Describe, *include quantitative information, including any items referenced above, in your response:*

n/a

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

- Does this project close a gap or extend a facility on a [Regional Active Transportation Corridor](#)?*
 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

1. Current Weekday Bicyclists:		0
Bicycle Use Calculations	Year of Opening	2050 Weekday Estimate
2. Enter estimated additional weekday one-way bicycle trips on the facility after project is completed.	0	0
3. Enter number of the bicycle trips (in #2 above) that will be diverting from a different bicycling route. <i>(Example: {#2 X 50%} or other percent, if justified on line 10 below)</i>	0	0
4. = Initial number of new bicycle trips from project (#2 – #3)	0	0
5. Enter number of the new trips produced (from #4 above) that are replacing an SOV trip. <i>(Example: {#4 X 30%} or other percent, if justified on line 10 below)</i>	0.00	0.00
6. = Number of SOV trips reduced per day (#4 - #5)	0.00	0.00
7. Enter the value of {#6 x 2 miles}. (= the VMT reduced per day) <i>(Values other than 2 miles must be justified by sponsor on line 10 below)</i>	0.00	0.00
8. = Number of pounds GHG emissions reduced (#7 x 0.95 lbs.)	0.00	0.00
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:		

Pedestrian Use

1. Current Weekday Pedestrians (including users of non-pedaled devices such as scooters and wheelchairs):		0
Pedestrian Use Calculations	Year of Opening	2050 Weekday Estimate
2. Enter estimated additional weekday pedestrian one-way trips on the facility after project is completed	0	0
3. Enter number of the new pedestrian trips (in #2 above) that will be diverting from a different walking route <i>(Example: {#2 X 50%} or other percent, if justified on line 10 below)</i>	0	0
4. = Number of new trips from project (#2 – #3)	0	0
5. Enter number of the new trips produced (from #4 above) that are replacing an SOV trip. <i>(Example: {#4 X 30%} or other percent, if justified on line 10 below)</i>	0.00	0.00
6. = Number of SOV trips reduced per day (#4 - #5)	0.00	0.00
7. Enter the value of {#6 x .4 miles}. (= the VMT reduced per day) <i>(Values other than .4 miles must be justified by sponsor on line 10 below)</i>	0.00	0.00
8. = Number of pounds GHG emissions reduced (#7 x 0.95 lbs.)	0.00	0.00

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

n/a

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

n/a

Describe, *include quantitative information, including any items referenced above, in your response:*

n/a

C. Project Leveraging	WEIGHT	10%
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What percent of outside funding sources (non-Regional Share funding) does this project have?	20.00%	<table style="width: 100%; border-collapse: collapse;"> <tr><td style="padding: 2px;">60%+ outside funding sources</td><td style="text-align: right; padding: 2px;">5 pts</td></tr> <tr><td style="padding: 2px;">50-59.9%</td><td style="text-align: right; padding: 2px;">4 pts</td></tr> <tr><td style="padding: 2px;">40-49.9%</td><td style="text-align: right; padding: 2px;">3 pts</td></tr> <tr><td style="padding: 2px;">20-39.9%</td><td style="text-align: right; padding: 2px;">2 pts</td></tr> <tr><td style="padding: 2px;">10.1-19.9%</td><td style="text-align: right; padding: 2px;">1 pt</td></tr> <tr><td style="padding: 2px;">10%.....</td><td style="text-align: right; padding: 2px;">0 pts</td></tr> </table>	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
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%
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Provide responses to the following items to demonstrate the readiness of the project. DRCOG is prioritizing those projects that have a higher likelihood to move forward in a timely manner and are less likely to experience a delay.

Section 1. Avoiding Pitfalls and Roadblocks

a. Has a licensed engineer (CDOT, consultant, local agency, etc.) reviewed the impact the proposed project will have on utilities, railroads, ROW, historic and environmental resources, etc. and have those impacts and pitfalls been mitigated as much as possible within the project 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:

n/a
 Please describe the anticipated specific pitfalls/roadblocks and the mitigation activities taken to date:
 n/a

b. Is this application for a single project phase only (i.e., design, environmental, ROW acquisition, construction only, study, bus service, equipment purchase, etc.)?
 Yes No

If yes, are the other prerequisite phases complete? Yes No N/A
 If this project is for construction, please note the NEPA status: [Choose an item](#)

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 any reason why your IGA will not be executed by Oct 1 of your first year of funding, so you can begin your project on time?
 Yes No
 Does your agency have the appropriate staff available to work on this project? Yes No
 If yes, are they knowledgeable with the federal-aid process? Yes No

e. Have other stakeholders in your project been identified and involved in project development?
 Yes No N/A
 If yes, who are the stakeholders? [RTD has convened a working group of internal staff to develop the project scope and assist with implementation. This working group includes staff from Bus Operations, Rail Operations, Finance, Planning, Information Technology, Service Development, and others.](#)

Please provide any additional details on any of the items in Section 1, if applicable.

Section 2. Local Match

- a. Is all the local match identified in your application currently available, and if a partnering agency is also committing match, do you have a commitment letter?

Yes No

Please describe:

RTD will have available local funding in its budget for FY23-FY25 to match the federal and/or state funding provided by this grant.

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

Yes No

Please describe:

RTD will have available local funding in its budget for FY23-FY25 to match the federal and/or state funding provided by this grant.

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:

This project was identified in the Mobility Choice Blueprint and Reimagine RTD, as a focus area for the agency. Both of these projects had a public review process and had material translated into relevant languages.

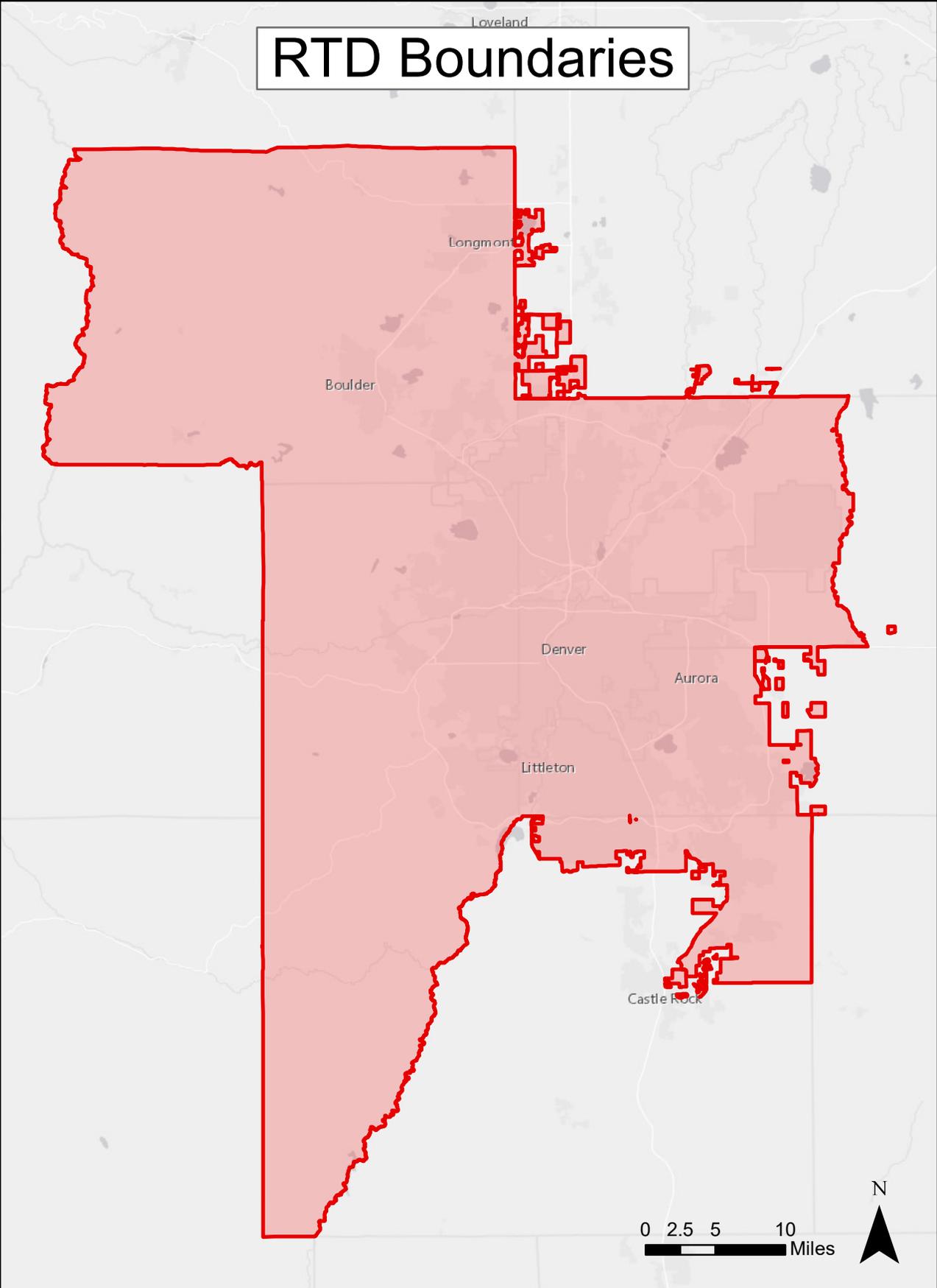
- c. Have any adjacent property owners to the proposed project been contacted and provided with the initial project concept?

Yes No N/A

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

Submit completed applications through the [TIP Data Hub](#) no later than 3pm on March 18, 2022.

RTD Boundaries



Budget/Schedule

Item	FY23	FY24	FY25	Total
FlexRide/ADA Validators	\$50,000	\$3,324,000	\$0	\$3,374,000
MaaS App Development	\$300,000	\$3,450,000	\$3,450,000	\$7,200,000
Open Payments Upgrades	\$0	\$0	\$3,650,000	\$3,650,000
Total	\$350,000	\$6,774,000	\$7,100,000	\$14,224,000

Scope

FlexRide/ADA Validators	<p>This item would fund the purchase and installation of new validators on all RTD cutaway vehicles, including FlexRide and paratransit vehicles.</p> <p>FY23 - Develop requirements and exercise contract amendment</p> <p>FY24 - Install validators on FlexRide and AAR vehicles</p>
MaaS App Development	<p>FY23 - Program Management and Consultant support, Equity Analysis</p> <p>FY24 - launch MaaS app with trip planning, mobile ticketing, ABT, fare capping</p> <p>FY25 - Launch FlexRide and AAR vehicle book and pay feature to the app</p>
Open Payments Upgrade	<p>Software upgrades to "open" existing ABT system</p> <p>Total fee amount could be 13% + Masabi's cut (2-3% today, will jump to 9-10% for open payments) when open payments are used</p> <p>MTA launch open ticketing in 2019, in 2021 10% of all taps were with credit card</p> <p>Fare capping will be rolled out with ABT, would also be included in open ticketing</p>

FlexRide and Access-A-Ride Vehicle Upgrade with fare payment system

Number of Vehicles	Vehicles	Spares (5%)	Total	
FlexRide Vehicles	49	2	51	\$282,975
AAR Vehicles	344	17	361	\$1,986,600
Total	393	20	413	

HW and SW for each vehicle

Validator	\$2,000	bus validator integration with Payment System/app	\$250,000
Manufacture and install stanchion	\$1,500	bus validator Integration with Vehicle Management System	\$250,000
Installation validator - labor	\$1,000	Validator Installation Cost	\$2,269,575
Firmware Development	\$1,000	Subtotal	\$2,769,575
Per vehicle installation total	\$5,500	Total (FlexRide and AAR Vehicle Install)+ 20% Contingency	\$3,323,490

MaaS App

AAR and FlexRide booking feature	\$1,500,000	
Fare payment integration	\$2,000,000	
Trip Planning App	\$1,000,000	bike, scooter locations, FlexRide zones, AAR vehicle location
Integrations with other services	\$1,250,000	5 (bikes, scooter, retail network, TNC, parking, carshare, etc.) x \$250,000
	\$5,750,000	
Total + 20% Congingency	\$6,900,000	

Program Management and Consultant \$500,000

Open Payments \$3,500,000