

PROCESS TO ACCESS RTD INFRASTRUCTURE, BRIDGES, AND FACILITIES TO MAKE CHANGES – **Version B – 02/11/2022**

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1. PURPOSE & NEED

The Regional Transportation District receives numerous requests each year seeking to repair and construct near, under, or over the rail lines, bridges, stations, and park-n-Rides. This document is put together to clarify the process that **all external entities and RTD consultants and contractors** need to go through to obtain clearance to access RTD Infrastructure, bridges, and Facilities to make **ANY** change, whether temporary or permanent. The term **"Facilities"**, as used in this document, represents stations, park-n-rides, transfer centers, and maintenance and operational facilities.

2. TECHNICAL STANDARDS RELATED TO WORK

- All applicable federal, state, and local regulations.
- Applicable Building, Fire Life Safety, and Electric Codes.
- Light Rail Criteria <https://www.rtd-denver.com/sites/default/files/files/2018-08/RTD-Light-Rail-Design-Criteria-12-2014.pdf>
- Commuter Rail Criteria <https://www.rtd-denver.com/sites/default/files/files/2018-08/RTD-Commuter-Rail-Design-Criteria-Revised-040109.pdf>
- Bus Infrastructure Design Guidelines and Criteria: <https://www.rtd-denver.com/sites/default/files/files/2018-08/Bus-Infrastructure-Design-Guidelines-and-Criteria-2016.pdf>
- Public Utility Company Technical Standards (Xcel Energy, Denver Water, etc.)
- RTD IT Standards: <https://www.rtd-denver.com/sites/default/files/files/2021-08/RTD-IT-STANDARDS-Division-27%20specifications-%28VER.%2002.12.30%29.pdf>
- Handbook of Transit Safety and Security Certification: <https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/SSC.pdf>
- Requirements contained in project drawings, specifications, and associated contract

3. PLANNING AND DESIGN PHASE

a. Early Coordination

RTD encourages early coordination for projects. Please contact engineering@RTD-Denver.com for technical coordination. Consultants working for RTD, please contact your Project Manager. Please contact RealProperty@RTD-Denver.com for property related matters and licensing agreements. The license will cover business terms, insurance, technical and other matters. RTD's Legal Department participates in the real property licensing process.





b. Alternatives Analysis

Accessing the RTD system for design development and actual construction presents a disruption to normal transit operations. RTD will ask the requesting party to explain why they need to access the RTD system for meeting their objectives and may ask them to explore less disruptive options.

c. RTD Record Information

RTD will make its record information available. The external party needs to review and verify the information provided to ensure it represents the ground conditions and meets their needs. Contact engineering@RTD-Denver.com

d. Submission of CAD files and Any Pothole Information

RTD continues to update the quality of its mapping and verifying its existing information. This effort will benefit both RTD and other consultants and contractors working around the system as the quality of the information improves. This is also an important step in minimizing the disruption to utilities during construction and reducing the potential for harm. For that reason, RTD will require the submission of design CAD files, and survey point files for any pothole information in an established coordinate system, prior to allowing construction.

e. Naming Conventions

Documents need to have an annotation showing what RTD facility they pertain to. This information will be provided by RTD.

4. UTILITY LOCATES REQUIRED

All areas that have ground disturbance proposed 12-inches in depth or greater require utilities to be located, prior to ground disturbance. This also applies to geo-tech borings, and planned pot holing. RTD is a member of the Utility Notification Center for Colorado (811 system). However, only part of the RTD system is covered by the 811 notification system. RTD staff will provide the initial record information of what utilities may exist and will provide utility locates. Due to technical limitations, it is not possible to locate utilities close to the rail system. Available records, including conflicting evidence, will be made available to the contractor.

5. SCHEDULES

Schedules for RTD rail operations can be found at <https://www.rtd-denver.com/app/schedules>. The General Transit Feed Specification can be found at <https://www.rtd-denver.com/business-center/open-data/gtfs>

The RTD rail system operates about 20-plus hours a day. The “shutdown” windows are used by RTD to perform maintenance work on the tracks and to prepare for the next service day.

RTD has a policy of providing bus bridges when rail service is disrupted. Bus bridges need senior management approval and are complex to arrange. Cost of bus bridges will be borne by the requesting party. Due to the above constraints, any work needs to be scheduled to minimize the impact to transit service, and how passengers access the service. This may involve working at night, weekends, or off-peak hours.



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RTD Rail uses a couple of different technologies. Please see map in Attachment A. Light Rail and Commuter Rail have different design requirements and regulatory frameworks. Station platforms and electric systems are significantly different.

6. OVERHEAD CATENARY SYSTEMS

RTD uses Overhead Catenary Systems (OCS) to power rail vehicles. These are high voltage overhead wires that could potentially electrocute anyone who comes in contact with them and have major impacts on train service. Any activity within 10 feet, or the potential to come within 10 feet of the line, may require that the power be shut off prior to beginning the work.

- Light Rail OCS: 750 Volts DC
- Commuter Rail OCS: 25,000 Volts AC

7. CAN MY PROJECT AFFECT RAIL OPERATIONS?

Some scenarios with the potential to affect rail operations are:

1. Constructing vehicular or pedestrian crossings above and under the track
2. At-grade crossing modifications
3. Installing utilities under or over the tracks
4. Maintenance work adjacent to and/or above the tracks
5. Construction cranes that may swing the load near or above the tracks. RTD licenses the air space over RTD tracks
6. Excavation close to the tracks, such as basements, boring pits, silva cells for landscaping, etc.
7. Building Construction
8. Installing Scaffolding
9. Curb & Gutter work
10. Landscaping installation and/or maintenance
11. Altering how storm water flows near the tracks
12. Constructing or altering fences
13. Changing access points to the tracks

8. ENTITIES CONTROLLING DIFFERENT RAIL LINES AND FACILITIES

Several different entities control the operations of RTD Rail Lines and its adjacent stations. Each of these entities have their own rules, and require different on-track safety training, before allowing access. Operating entities need to know when activities are planned that are a deviation from normal operations. These operating entities also control the access to the electric and communication systems at a location.

Any activity that interferes with people accessing RTD Services and ground disturbance and construction activities within 25-feet of a Light Rail line requires a Light Rail Access Permit. Similarly, within 25-feet of the commuter rail lines, a Commuter Rail Access Permit is required. Please allow for at least two weeks processing time by RTD.



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Rail Service	Technology	Entity Granting Access	Primary Contact	Phone Number
C,D,E,F,H,R, W & Light Rail Terminal at Denver Union Station	Light Rail	RTD Light Rail	railopspermits@rtd-denver.com	
N	Commuter Rail	RTD Commuter Rail	Fabian Testa, Manager, Infrastructure, Systems and Maintenance of Way	303-299-2964
A,B, G and Denver Union Station	Commuter Rail	RTD Oversight	Fabian Testa, Manager, Infrastructure, Systems and Maintenance of Way	303-299-2964
A,B, G	Commuter Rail	Denver Transit Operators (DTO)	TrackUsage@rtdcrail.com	720-460-5803
Denver Union Station	Commuter Rail	Denver Transit Operators in coordination with AMTRAK	TrackUsage@rtdcrail.com	720-460-5803
<p>Activities 25-feet away from the rail lines require a Building Grounds and Access Permit. http://www.rtd-denver.com/sites/default/files/files/2019-09/BGAP-form-and-requester-instructions%20-%202018.pdf Please allow for at least two weeks processing time.</p>				

9. SAFETY TRAINING PROGRAMS TO BE COMPLETED PRIOR TO OBTAINING ACCESS

Rail Service	Primary Contact	Email	Phone
C,D,E,F,H,R,W & Light Rail Terminal at Denver Union Station	Matthew Cross	mathew.cross@rtd-denver.com	303-299-3823
N	Lew Wood	lew.wood@rtd-denver.com	747-267-4569
A,B, G and Denver Union Station	Clinton Verseman	Clinton.Verseman@rtdcrail.com	720.460.5817



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10. RESPONSIBILITY OF THE REQUESTOR AND THEIR ENGINEER-OF-RECORD

It is the responsibility of the requestor and their Engineer-of-Record to ensure all work proposed meets all applicable requirements. RTD will require certifications by the requestor, as shown on subsequent pages.

11. FEE POLICY AND PROCEDURE

RTD has a fee policy and procedure related to reimbursement of costs incurred by RTD. Please see RTD-CAP-PLY-0001 and RTD-CAP-PRC-0001.

12. ASSOCIATED WEBSITE, FORMS AND CHECKLISTS

RTD publishes associated documents on its website at <https://www.rtd-denver.com/business-center/construction-engineering>

The following pages show various forms and checklists used in different stages of the process.



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RTD Location	
Requestor's Project Name:	

**CERTIFICATION BY PROJECT DESIGNER FOR EACH LOCATION
PRIOR TO CONSTRUCTION**

I, _____ certify the following to the Regional Transportation District:

1. I am authorized to sign this certification on behalf of _____.
2. I have a combination of education and work experience to have the expertise to design the infrastructure or system that will be located on, over, within or under an RTD Facility.
3. Components of work that are required to be designed, sealed and signed by a professional engineer are attached.
4. The proposed work complies with all applicable federal, state, and local government laws, including the latest revisions of applicable codes and standards.
5. The proposed plans comply with all applicable requirements of the Americans with Disabilities Act.
6. I have performed investigations of concealed utilities that may conflict with the proposed work and resolved known utility conflicts.
7. I have made provision for being able to physically locate concealed utilities later.
8. I have made provision for replacing parts that are likely to fail.
9. I have made provisions for eliminating or minimizing disruption to RTD service and any utility outages.
10. I have considered constructability and made provisions for ensuring safety during construction.
11. All the required permits for this work have been obtained.
12. I have made provision for testing that the system works and preparing as-builts for documentation.

(Signature)

(Date)

(Print Name)



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RTD Location	
Requestor's Project Name:	

**CERTIFICATION BY PROJECT DESIGNER
FOLLOWING CONSTRUCTION**

I, _____ certify the following to the Regional Transportation District:

1. I am authorized to sign this certification on behalf of _____.
2. The _____ Project as constructed, is in conformance with the plans designed by me, and any approved changes. The Project, as constructed, complies with applicable federal, state, and local government laws, and the latest revisions of applicable codes and standards.
3. The Project as constructed complies with all applicable requirements of the Americans with Disabilities Act.
4. Required submittals are attached and include but not limited to:
 - Copies of all permits
 - As-builts
 - Safety Certification test results, reports, and documents

(Signature) (Date)

(Print Name)



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STEPS IN THE PROCESS

RTD Location	
Requestor's Project Name:	

Access to RTD's Facilities for construction will only be allowed after the following factors have been evaluated, and requirements have been met.

Applicability (Y/N)	Stage	Accepted	Date
	Initial Design Plans reviewed by Capital Programs		
	Alternatives Analysis		
	Record information researched and shared by Capital Programs		
	Design Utility locates and investigations		
	Identify the number of elements, and systems impacted		
	Identify all disturbances and area needed for construction		
	Initial installation plans reviewed by Capital Programs Infrastructure Change Review Committee; maintenance impacts also reviewed, amongst other considerations		
	Where RTD service operates on another entity's property, the landowner's approval will be required		
	Third party coordination has occurred (CDOT, Local Jurisdiction, etc.) and all permits obtained		



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Applicability (Y/N)	Stage	Accepted	Date
	For Facilities run by Denver Transit Operators, their approval is required		
	RTD to agree to any impact to service, passenger or vehicle access or utility outage prior to it being implemented		
	Level of Effort to enable the project estimated. Check availability of RTD staff to support the request		
	Fee reimbursement agreement signed, if applicable		
	Final Design Plans and Specifications prepared by a Professional Engineer / Registered Architect accepted or exception granted		
	Detailed construction work plan reviewed and accepted by safety/operations/CP construction. Existing Facility protection measures have been identified and scheduled. Traffic Control Plans on RTD Property accepted (Vehicles & Pedestrians)		
	Consultant to provide pre-construction certification		
	Executed License Agreement and/or Executed Right-of-Entry		
	Certificates of Insurance received RTD as additional insured, if applicable		
	Apply for access permits from the entity with operational control		
	Pre-construction meeting		
	Utility locates provided / confirmed / UNCC tickets cleared		



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Applicability (Y/N)	Stage	Accepted	Date
	Conduct Job Hazard Safety Analysis and Briefing		
	Contractor to install and perform integration testing. RTD staff to witness testing of all installations		
	Consultant to provide after construction certification and final documentation. <ul style="list-style-type: none"> Copies of all permits Accepted submittals, shop drawings and As-builts Test Results 		
	Update Laserfiche records, if applicable		
	Update base mapping in CAD, if applicable		
	Update GIS system, if applicable		

13. CONFIGURATION MANAGEMENT

Any changes to the main procedure need to be approved by the Assistant General Manager, Capital Programs.

14. PROCEDURE HISTORY

REV	DATE	Change Originator	Signature of Assistant General Manager, Capital Programs	Description of Change
				Combine process for rail and facilities, add additional requirements including utility locates.
B	2021-11-08	Jyotsna Vishwakarma, Chief Engineer	Henry J. Stoppelcamp, Assistant General Manager, Capital Programs	

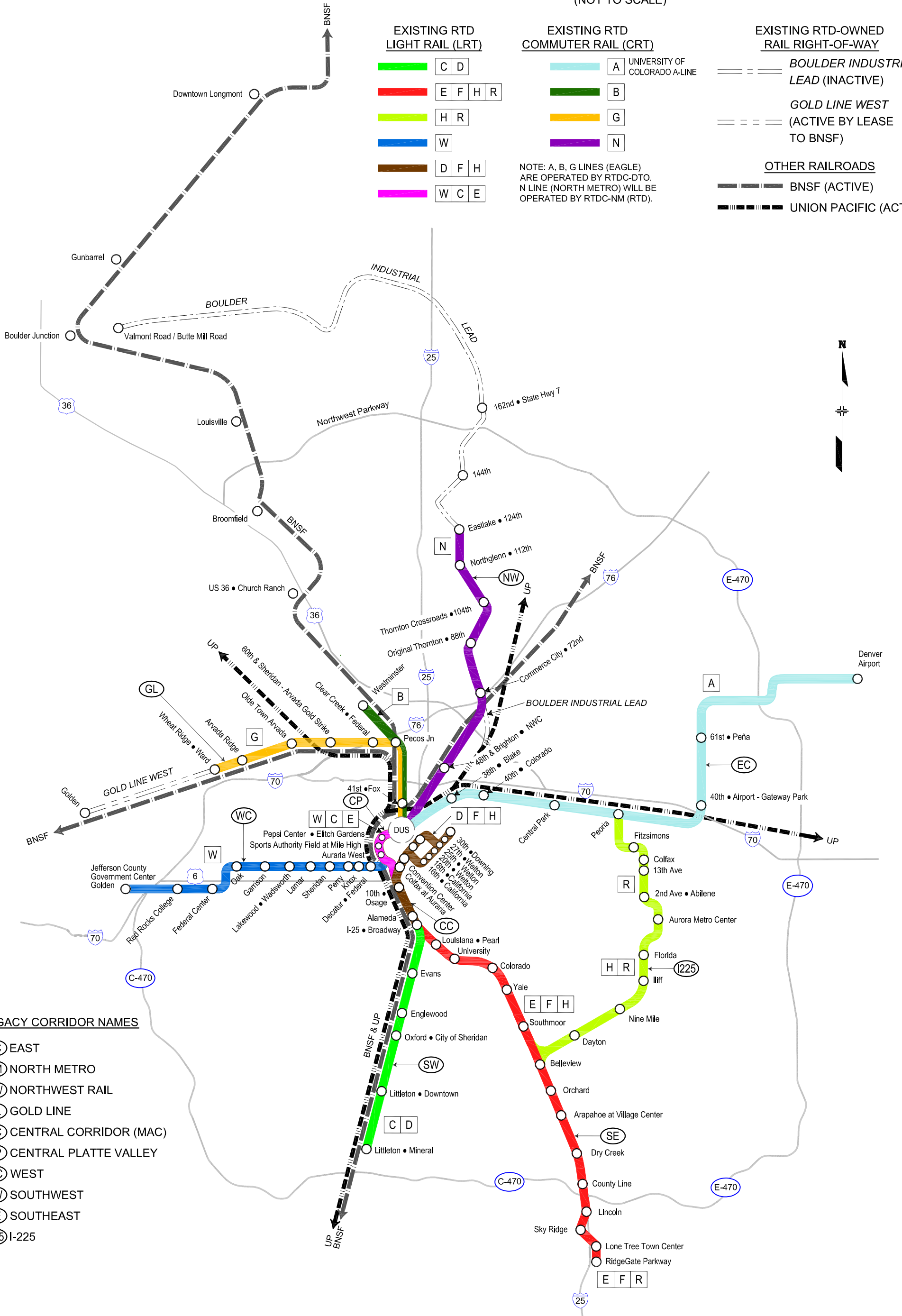


RAIL MAP

RTD AND OTHER RAIL CORRIDORS

(NOT TO SCALE)

EXISTING RTD LIGHT RAIL (LRT)		EXISTING RTD COMMUTER RAIL (CRT)		EXISTING RTD-OWNED RAIL RIGHT-OF-WAY	
	C D		A UNIVERSITY OF COLORADO A-LINE		BOULDER INDUSTRIAL LEAD (INACTIVE)
	E F H R		B		GOLD LINE WEST (ACTIVE BY LEASE TO BNSF)
	H R		G		
	W		N		
	D F H	NOTE: A, B, G LINES (EAGLE) ARE OPERATED BY RTDC-DTO. N LINE (NORTH METRO) WILL BE OPERATED BY RTDC-NM (RTD).			
	W C E	OTHER RAILROADS			
			BNSF (ACTIVE)		
			UNION PACIFIC (ACTIVE)		



LEGACY CORRIDOR NAMES

- EAST
- NORTH METRO
- NORTHWEST RAIL
- GOLD LINE
- CENTRAL CORRIDOR (MAC)
- CENTRAL PLATTE VALLEY
- WEST
- SOUTHWEST
- SOUTHEAST
- I-225