

Regional Transportation District Emergency Operations Plan

Prepared by Department of Transit Police and Emergency Management

RTD Emergency Operations Plan

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Promulgation Statement

The Regional Transportation District's (RTD) Emergency Operations Plan (EOP), including all annexes and appendices, provides a comprehensive, flexible framework for system-wide emergency management affecting the agency and is effective as of the date signed by the General Manager and CEO.

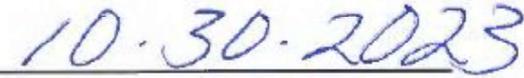
The EOP addresses the roles and responsibilities of emergency management of RTD departments, as well as partner agencies, and provides a link to federal, state, local, territorial, tribal, and private organizations and resources that may be called upon to assist and participate in response to incidents that occur throughout RTD's service area.

The EOP was developed using recognized state and federal guidance that includes: Federal Emergency Management Agency (FEMA) Target Capabilities List; FEMA Core Capabilities; FEMA's National Preparedness Frameworks; the National Incident Management System (NIMS); FEMA's Comprehensive Preparedness Guide (CPG) 101; FEMA CPG 201; the Colorado Emergency Management Program Guide; and relevant laws and authorities pertinent to emergency management in Public Transportation.

The EOP is designed to minimize the disruption of the agency's core function by establishing a system of collaboration during times of significant disruption. To meet this goal, it is imperative that RTD, partner, and stakeholder agencies, and their personnel prepare, train, exercise, equip, and execute their required roles and responsibilities in accordance with this EOP.



Debra A. Johnson, General Manager and CEO



DATE

RTD Emergency Operations Plan

Approval and Implementation

This Emergency Operations Plan (EOP) for the Regional Transportation District (RTD) serving the Denver Metro Area is effective and considered approved upon signing by the General Manager and CEO and the Chief of Transit Police and Emergency Management. This plan supersedes all previous plans for emergency management.

The General Manager and CEO authorizes certain RTD officials to make certain modifications to this plan without the express written approval of the General Manager and CEO. These authorized modifications must be recorded in the Record of Changes section of this plan and supplied to the Emergency Management Specialist to avoid version errors.

Authorized modifications include:

- Changes to contact information
- Updates to reflect lessons learned from exercises and real events as expressed in formal After Action Reviews
- Updates resulting from changing laws or regulations

The following RTD officials have the authority to make the above-named changes.

1. Chief of Transit Police and Emergency Management
2. Emergency Management Specialist



 Debra A. Johnson, General Manager and CEO

10.30.2023

 DATE

Acronyms Used

AAR	After Action Review/Report
BNSF	Burlington Northern Santa Fe
CAO	Chief Administrative Officer
CCEO	Chief Communications and Engagement Officer
CDHSEM	Colorado Department of Homeland Security and Emergency Management
CIMP	Cybersecurity Incident Response Plan
CDOT	Colorado Department of Transportation
CFO	Chief Financial Officer
COO	Chief Operations Officer
COOP	Continuity of Operations Plan
CPG	Comprehensive Preparedness Guide
CPO	Chief People Officer
CSO	Chief Safety Officer
DRCOG	Denver Region Council of Governments
DUS	Denver Union Station
EM	Emergency Management
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
FEMA	Federal Emergency Management Agency
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
HSEEP	Homeland Security Exercise Evaluation Program
HSPD	Homeland Security Presidential Directive

IAP	Incident Action Plan
IC	Incident Commander
ICP	Incident Command Post
ICS	Incident Command System
IS	Independent Study
IT	Information Technology
LEPC	Local Emergency Planning Committee
NCR/UASI	North Central Region/Urban Area Security Initiative
NIMS	National Incident Management System
NGO	Non-governmental Organization
NWS	National Weather System
OCC	Operations Control Center
OCS	Overhead Catenary System
OEM	Office of Emergency Management
PIO	Public Information Officer
PR	Purchase Requisition
RTD	Regional Transportation District
RTDC	Regional Transportation District-Commuter Rail
RTD-PD	Regional Transportation District Transit Police and Emergency Management Department
SCC	Security Control Center
SitRep	Situation Report
SOP	Standard Operating Procedure

RTD Emergency Operations Plan

Introduction

Recognizing that significantly disruptive events can occur anytime and have far-reaching impacts, RTD has developed the following Emergency Operations Plan (EOP) to guide response activities and ensure effective and efficient coordination. The EOP enhances the agency's ability to help prevent, prepare for, respond to, recover from, and mitigate against all hazards that threaten RTD and its customers, employees, resources, equipment, and surrounding environment.

RTD's service area is exposed to a number of hazards, discussed later in this document and within the hazard-specific plans in Annexes G-N. The EOP includes information for the preparation, response, recovery, and mitigation for an all-hazards approach to emergency management. In addition, the Continuity of Operations Plan (COOP, 2023) identifies systems to maintain the operations of RTD despite disruption and may be a useful reference during emergencies. Further, the Cybersecurity Incident Response Procedure (CIMP, 2022) outlines how RTD will respond to a malicious attack upon its information technology infrastructure and is included in this document as Annex K. This document also incorporates Functional Annexes (Annex A-F) supplied by each group: Bus Operations, Commuter Rail Operations, Light Rail Operations, Paratransit, Capital Programs, and Transit Police.

The EOP utilizes emergency management principles such as a whole community planning process and will incorporate partnerships with governmental entities and the private sector. Emergency management principles are designed to include individuals with access and functional needs, such as mobility challenges, Limited English Proficiency as well as any age-related need.

RTD will activate the EOP when the agency must respond to an emergency that requires coordination across transit modes and agency functions and with local, state, federal, territorial, and tribal governmental entities. In addition, RTD may activate the EOP to coordinate support for a pre-planned event.

The EOP addresses the roles and responsibilities of departments within RTD, as well as partner agencies, and provides a link to federal, state, local, territorial, tribal, and private organizations and resources that may be called upon to assist and participate in response to incidents that occur throughout the locations that may default to this EOP pursuant to Colorado Revised Statute § 24-33.5-707.

RTD Emergency Operations Plan

Purpose

The purpose of the EOP is to establish the necessary framework to support a coordinated response to all incidents across the agency and RTD's service area as it relates to RTD service including federal, state, and local governmental entities as well as private sector organizations. It assigns roles and responsibilities for all RTD departments and divisions for preparedness and response activities before, during, and after an emergency. It also provides for the systematic integration of additional emergency resources but does not replace other federal, state, or national emergency operations plans or procedures. Further, it does not remove responsibility for each functional group (bus operations, light rail, commuter rail, paratransit, transit police, and capital programs) within RTD to develop their own procedures, policies, and standard operating procedures for managing emergencies.

The EOP is comprised of a base plan and supporting annexes, appendices, policies, and procedures. The base plan establishes the structure and provides guidance for a timely and coordinated response, internal communications, information gathering, information sharing, decision-making, and roles and responsibilities for coordinating incident operations. The annexes, appendices, procedures, and policies provide the tools that support the implementation of the base plan. The EOP is drafted to be adaptable to any situation in which RTD responds to an emergency regardless of the level of severity and outlines how to prevent, prepare for, respond to, recover from, and mitigate the potential hazards identified within RTD's service area.

Further, this plan prescribes the activities to be taken by RTD's Leadership Team and public safety leadership to protect the lives of customers, employees, property and environment in the event of a natural, human-caused, or technological emergency, including acts of terrorism.

Scope

This plan applies to all agency operations within the service area and all staff and property owned by the agency.

Each department and division listed in the EOP is responsible for understanding its own emergency authority and procedures when implementing the provisions of the EOP.

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Situation

RTD was created in the General Assembly of the State of Colorado in 1969 by Chapter 231 Laws of Colorado 1969, currently codified part 1 of article 9 of title 32, Colorado Revised Statutes to provide mass transportation to the inhabitants of the region. RTD is governed by a 15-member, publicly elected Board of Directors, with each Director representing approximately 200,000 constituents within their respective district.

RTD operates in eight counties with coverage of the entirety of Denver, Broomfield, and Jefferson counties and partial coverage in Adams, Arapahoe, Boulder, Douglas, and Weld counties. These counties contain 40 municipalities. RTD's service area covers 2,342 square miles populated by more than three million people.

RTD's operates bus, light rail, commuter rail, and paratransit services. Rail operates on fixed alignments with RTD owning or leasing rights of way. Three of the four commuter rail alignments are operated by Denver Transit Operators/Partners. All light rail, and the N Line of commuter rail are entirely operated by RTD. Bus service is provided through fixed route and on-demand service, accomplished with roughly 50 percent of buses operated by contractors. Fixed routes are reviewed three times annually to make adjustments for changing landscape and efficiency. Paratransit is entirely on-demand with all service delivery provided by contractors. There are 9,750 bus stops along 140 bus routes, 113 miles of rail service including 78 stations along 10 rail lines, and 96 Park-n-Ride facilities. Denver Union Station (DUS) is the central hub of the system, with A, B, G, and N commuter rail and E and W light rail lines terminating there. Amtrak trains are also dispatched into DUS.

The agency includes the Transit Police and Emergency Management Department, which enforces RTD policies and procedures and protects the safety and security of RTD customers and employees. This is the only department within RTD with traditional first response responsibilities.

RTD's service area includes Denver International Airport, which is the third busiest passenger airport in the world in 2022 and a critical resource for the provision of emergency supplies. The airport is serviced by the A Line commuter rail service, which connects the airport to DUS, as well as AB1, AT/ATA, 104L, 145X, and 169L buses. In addition, the service area includes portions of interstates 70, 76, 25, and 225. Major thoroughfares also include E-470, US 6, US 36, US 285, and US 287/I-70 Business Corridor.

Burlington Northern Santa Fe (BNSF) railway and Union Pacific railroads are the main freight rail operators in the service area, at times running parallel to RTD rail.

RTD also participates in the North Central Region/Urban Area Security Initiative (NCR/UASI) to coordinate preparedness activities with the surrounding counties and municipalities.

The lands within RTD's service area were historically inhabited by indigenous people of the hinono'eino' biito'owu' (Arapaho), Tsésthó'e (Cheyenne), Očhéthi Šakówiŋ (Sioux), and Núu-agma-təvə-pə (Ute) Tribes. These tribes are still thriving with active governing bodies and cultural celebrations both within the service area and in the reservations they were forcibly removed to in surrounding states.

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Threat, Hazard, and Vulnerability Analysis

RTD’s service area is vulnerable to a number of natural, technological, and human-caused threats and hazards. A high-level threat and hazard identification and risk assessment was conducted utilizing available information about past events, future trends due to changing climate, and assessment about predicted impacts from various staff across the agency representing all departments. The assessment was derived from a survey asking representatives from across the agency as selected by the Leadership Team to rank hazards by likelihood, impact, and resilience. Responses from all sources were aggregated and a matrix created to rank hazards into high, moderate, and low significance to RTD. Those of interest are presented below:

Hazard	Likelihood	Impact	Resilience	Significance to RTD
Natural				
Winter Weather	High	Moderate	High	High
Ice Storm	High	High	Moderate	High
Wildfire	Moderate	Moderate	Moderate	Moderate
Flood	Low	Moderate	Moderate	Moderate
Tornado	Low	Moderate	Moderate	Low
Extreme Heat/Cold	High	Low	High	Low
Technological				
HazMat Incident	Low	Moderate	Moderate	Moderate
Transportation Accident	Moderate	High	Moderate	Moderate
Utility Disruption	Moderate	Moderate	Moderate	Moderate
Human-Caused				
Active Shooter	Moderate	High	Moderate	High
Civil Unrest	Moderate	Moderate	Moderate	Moderate
Cyber Incident	Moderate	Moderate	Moderate	Moderate
Terrorism/Mass Violence	Low	High	Low	Moderate

Critical Facilities and Infrastructure Summary

The sole energy provider for RTD’s service area is Xcel Energy. Power is provided for facilities both public and private and for the provision of power for rail service and the agency’s subfleet of battery electric buses.

Light rail alignments are served by 64 substations along the alignments that convert power from 13,200 V AC to 850 V DC, which is provided through the Overhead Catenary System (OCS). Where possible these substations are fed by diverse energy grids and there is resiliency of the system in such that the loss of one to two substations would not adversely impact service delivery.

Commuter rail alignments are served by two substations, Sundown and Argo. These substations supply power at 25 kV AC through the OCS. The entire commuter rail system is able to function drawing power from a single substation.

Water in the service area is provided by Denver Water District, Aurora Water, Bear Creek Water, Boulder Water, Broomfield Water, Golden Water, Consolidated Water, Daniels Sanitation

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District, Douglas County Water, East Cherry Creek Valley Water, Englewood Water, Fruitdale Water, Green Mountain Water, Ken-Caryl Water, Lafayette Water, Lakewood Water, Left Hand Water, Littleton Water, Longmont Water, Nederland Water, North Metro Water, Northglenn Water, Parker Water, South Adams City Water, Stonegate Village Metro District, Superior Water, Thornton Water, Valley Water, and Westminster Water.

Planning Assumptions

- RTD is not the primary public safety agency with jurisdiction at its locations throughout the service area and will collaborate with local police, fire, and emergency medical personnel to conduct critical life-safety response operations to save lives, reduce or treat injuries, and to protect property and the environment
- RTD, the communities within the service area, and state governmental agencies have effective prediction and warning systems in place allowing RTD to anticipate certain emergency situations that may impact the agency
- When anticipating or in response to an emergency situation, the General Manager and CEO (GM/CEO) and Chief of Transit Police and Emergency Management are responsible for taking action, including the activation of this plan, to mitigate impacts, save lives, protect property and the environment, assist survivors, and restore services and facilities
- RTD board members, GM/CEO, the Leadership Team, which consists of the agency's chiefs and assistant general managers, supervisors, represented and non-represented employees, and partners are familiar with the EOP, understand their roles and responsibilities under the EOP, maintain appropriate plans, policies, and procedures to carry out those responsibilities; and maintain a state of readiness. Day-to-day functions that do not contribute directly to emergency operations may be suspended for the duration of an emergency/disaster. Resources that would normally be required for those daily functions may be redirected to tasks in support of the emergency response
- RTD will use its own resources in response to an emergency or disaster. Once agency resources are exhausted (or near exhausted), requests for assistance will be made
- A large-scale emergency or disaster may overwhelm available agency resources, leading to the need for support from local/mutual aid jurisdictions, private sector partners, state agencies, and the federal government
- When resources of RTD are fully committed and mutual aid from communities within the service area is exhausted, the Colorado Department of Homeland Security and Emergency Management (CDHSEM) may coordinate the provision of additional assistance to address unmet needs
- Disaster support from federal agencies may take at least 72 hours to arrive
- Facilities required to file Tier II hazardous materials reports develop, coordinate, and provide copies of emergency plans annually to the relevant jurisdiction's LEPC, fire department and/or other state departments and agencies as applicable and required by codes, laws, regulations or requirements

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- In the event that an evacuation of a community within RTD's service area, or any part thereof, is ordered, the majority of the evacuees will utilize their own transportation resources to evacuate. However, a percentage of the population does not have access to transportation and will require transportation assistance
- Individuals with pets will bring their pets with them when they evacuate. Those with livestock or other farm animals will take appropriate measures to safeguard their animals via sheltering or evacuation as appropriate
- RTD and its response partners will need to provide additional/enhanced assistance to individuals with access and functional needs, including but not limited to children, elderly, those with limited English proficiency, and individuals with disabilities and/or chronic conditions

Concept of Operations

The concept of operations describes the sequence and scope of emergency response. The Transit Police and Emergency Management Department has the primary responsibility for coordinating emergency management activities under the auspices of RTD. These activities support the following priorities:

- Minimize injury and loss of life
- Minimize property damage
- Minimize adverse environmental and economic impact
- Maintain the highest level of service possible to maintain consistency throughout emergency conditions
- Provide for the needs of survivors

Plan Activation

The EOP and its associated Annexes will be executed in whole or in part as directed by the GM/CEO, the Chief of Transit Police and Emergency Management, or their designees in response to an existing or an impending emergency. This plan may also be activated under the following circumstances:

- At the time of an actual disaster or emergency
- When a community that RTD serves has declared a local state of emergency
- When the Governor of Colorado has declared an emergency for areas within RTD's service area
- When a Presidential Declaration of an Emergency or Disaster is issued for areas within RTD's service area

Phases of Emergency Management

RTD's Emergency Management Program addresses all phases of emergency management for all types of incidents, including mitigation, preparedness, response, and recovery.

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Prevention

From the National Preparedness Goal 2nd Edition published by FEMA (2015):

Prevention includes those capabilities necessary to avoid, prevent, or stop a threatened or actual act of terrorism. Unlike other mission areas, which are all-hazards by design, Prevention core capabilities are focused specifically on imminent terrorist threats, including on-going attacks or stopping imminent follow-on attacks.

RTD Transit Police and Emergency Management Department has primary responsibility for the prevention of terrorist or other criminal activities as it relates to the agency and its operations. This is accomplished by close coordination with federal, state, and local law enforcement agencies to share information about potential threats to the agency and communities within its service area as well as conducting active video surveillance. Each individual within RTD supports this effort by reporting indicators of terrorism, violent extremism, or other malicious actors to RTD Transit Police and Emergency Management Department.

Protection

The protection mission relates to the ability to secure and protect people, critical infrastructure, and vital interests against human-caused and natural events. This can include activities such as the securing of facilities, the IT network, or hardening of the supply chain.

Mitigation

The goal of mitigation is to prevent future loss by reducing or eliminating risk. Mitigation activities like the recovery and preparedness phases of emergency management can occur before or after an emergency. The goals of pre-emergency mitigation activities are to reduce the chances of an emergency happening or reducing the damage suffered from unavoidable emergencies. The goal of post-emergency mitigation is to reduce the impact of future hazards and is a part of the recovery process.

Response

Response is the actual provision of emergency services during a crisis including the coordination and management of resources to support emergency response operations. These activities help to reduce casualties and damage and to speed recovery. Response activities include resource and logistical coordination, addressing immediate life safety issues, stabilization of the incident, and public information.

RTD responds to emergencies by activating the EOP; activating the EOC; coordinating with public, private, and NGO partners as needed; coordinating and managing resources in support of emergency response, and preparing for recovery activities.

Recovery

Recovery activities may be both short-term and long-term, ranging from conducting damage assessments, removing debris, restoring essential utilities such as water and power, restoring IT infrastructure and services, and restoring revenue service through repairing or replacing damaged vehicles, facilities, or rail. Recovery may also incorporate mitigation measures

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designed to prevent future occurrences of a given hazard. Recovery begins as soon as possible after an incident occurs and may commence during the response phase.

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Organization and Assignment of Roles and Responsibilities

Agency Roles and Responsibilities

RTD will participate in planning, training, and exercise activities with federal, state, and local partners to familiarize first responders with the systems, vehicles, and infrastructure they may encounter while performing their duties. This includes participation on the NCR/UASI Emergency Management Coordination Group.

When state or local EOCs are activated, RTD will provide a representative to liaise between the agency and the jurisdiction for resource needs related to the emergency activation. RTD will also notify partner agencies of RTD EOC activations and request representation as needed from local communities.

RTD will also respond to emergencies that have direct impact to the system and the delivery of transportation services within the service area. This includes on-scene coordination with first responders and emergency management professionals to maintain a common operating picture.

Department/Division Responsibilities

Administration

Purpose

Provide administrative support to the agency and ensure regulatory compliance. The department is comprised of Civil Rights, Contracting and Procurement, Cybersecurity, Information Technology, and Safety and Environmental Compliance divisions.

Roles and Responsibilities

Civil Rights

- Collaborate with relevant agency partners to identify and mitigate risks
- Consult with EOC Manager and Incident Commander to ensure response actions are equitable and inclusive of all of RTD's customers and workforce, using the CMIST framework to identify those who have access and functional needs during an emergency: (C)ommunication, (M)aintaining health, (I)ndependence, (S)upport, and (T)ransportation
- Ensure EOC representatives attend trainings provided by Emergency Management and are qualified to fill the role

Contracting and Procurement

- Collaborate with relevant agency partners to identify and mitigate risks
- Develop contracts for emergency services that may be required to respond to an event before an emergency takes place
- Facilitate such contracts
- Supply materials for the repair and maintaining of good condition for all property and vehicles that have been impacted by an emergency, where these repairs are being made by RTD staff

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- Maintain an adequate supply of response materials such as personal protective equipment
- Ensure EOC representatives attend trainings provided by Emergency Management and are qualified to fill the role

Cybersecurity

- Identify and communicate risks and hazards in the evolving cybersecurity landscape
- Identify proper safeguards and detection measures to be implemented to protect the IT network to include
 - Training for cybersecurity and general RTD workforce
 - Development, execution, and maintenance of detection measures
- Support IT to maintain the integrity of the IT network and data recovery efforts
- Respond to cybersecurity incidents taking necessary actions to address the incident such as containment and eradication
- Report in a timely manner to relevant regulatory authorities of any incidents that require notification
- Support the recovery of any lost data or systems after a cybersecurity incident has taken place
- Ensure EOC representatives attend trainings provided by Emergency Management and are qualified to fill the role

Information Technology (IT)

- Maintain RTD's IT network and infrastructure
- Maintain all IT hardware and software on bus and rail fleet, including radios
- Collaborate with relevant agency partners to identify and mitigate risks
- Develop IT SOPs and tools required for the provision of emergency services and operations during a continuity event
- Preserve the integrity of the IT network and data recovery efforts
- Development, execution, and maintenance of security measures (firewall, anti-virus protection, access control, etc.)
- Ensure radio, telephone, computing resources and network communications capability essential to emergency operations are maintained
- Ensure emergency backup and contingency communications capability in the event normal communications are disrupted
- Provide authority and governance protocols for access to IT resources, systems, data, and facilities that house IT assets (both on-premises and in the cloud)
- Address IT needs of response, both on-scene and in the EOC
- Execute the recovery of any lost data or systems after an incident has taken place
- Conduct damage assessment on any affected IT infrastructure impacted by the emergency/event

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- Ensure EOC representatives attend trainings provided by Emergency Management and are qualified to fill the role

Safety and Environmental Compliance

- Support workforce and contractor safety to prevent incidents through the proper application of procedures, personal protective equipment, and awareness training
- Collaborate with relevant agency partners to identify and mitigate risks
- Provide accurate Tier II hazardous materials reporting per the Emergency Planning and Community Right-to-Know Act
- Report in a timely manner to relevant regulatory authorities, including the PUC, of any incidents that require notification
- Provide trained safety officers to support on-scene response operations
- Ensure adequate training for EOC representatives
- Ensure EOC representatives attend trainings provided by Emergency Management and are qualified to fill the role
- Investigate the cause of accidents for commuter rail, light rail, and bus operations according to PRO-4001
- Develop corrective action plans in partnership with affected departments/divisions to safeguard against future occurrences of hazards/risks

Capital Programs

Purpose

Maintain all RTD operated facilities, public and private, in a state of good repair as well as lead projects to build new infrastructure to support the growth of the agency. A, B, and G commuter rail lines and Commuter Rail Maintenance Facility are maintained by DTO, under a concession agreement with RTD. The Capital Programs Department is comprised of Construction and Public Facility Maintenance, Engineering, Quality Assurance, Mapping and Engineering Data, Engineering Programs, Facilities Maintenance, and Real Property divisions.

Roles and Responsibilities

- Maintain all RTD operated facilities, public and private, in a state of good repair prior to emergency events, including maintaining facilities at a level to meet or exceed fire safety and building codes, unless other conditions exempt them from current codes such as year of construction
- Provide redundancy measures, such as generators, to ensure facilities are operational despite disruption/emergency
- Maintain relationships with critical infrastructure utility partners
- Maintain awareness of details pertaining to RTD property built infrastructure and land-use agreements to accurately determine impacts of an event on RTD property
- Collaborate with relevant agency partners to identify and mitigate risks

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- Ensure EOC representatives attend trainings provided by Emergency Management and are qualified to fill the role
- Ensure removal of snow and other debris
- Repair all damages to facilities as a result of emergencies/disasters
- Assess damage to infrastructure, determine proper recovery needs are met, and plans to restore infrastructure are developed

Communications and Engagement

Purpose

Manage and develop internal and external communications that engage RTD's employees, customers, stakeholders, and the public. Communications and Engagement is comprised of Public Relations, Community Engagement, Marketing, and Customer Care divisions.

Roles and Responsibilities

Customer Care

- Collaborate with relevant agency partners to identify and mitigate risks
- Address customer questions regarding changes to service as a result of disruption or emergencies
- Ensure EOC representatives attend trainings provided by Emergency Management and are qualified to fill the role
- Monitor and respond to social media, especially as a function of rumor control
- Update the RTD website to communicate changes as a result of a disruption/emergency
- Ensure unity of messaging

Public Relations and Community Engagement

- Collaborate with relevant agency partners to identify and mitigate risks
- Develop and maintain relationships with local media partners
- Train and maintain a cadre of qualified Public Information Officers with the potential to be called on-scene during emergencies
- Ensure EOC representatives attend trainings provided by Emergency Management and are qualified to fill the role
- Develop press releases and organize press conferences to provide information to the public during emergencies
- Proactively communicate updates and changes to the RTD system both internally and externally in a manner that is accurate and timely

Marketing

- Collaborate with relevant agency partners to identify and mitigate risks

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- Ensure EOC representatives attend trainings provided by Emergency Management and are qualified to fill the role
- Develop and create assets that support the dissemination of information and timely updates

Finance

Purpose

Manage RTD's financial affairs. The Finance Department is comprised of Accounting, Treasury, Asset Management, Revenue, Budget, and Debt and Investments Divisions.

Roles and Responsibilities

- Manage the payroll processes and ensure resiliency to emergencies and disruptions
- Collaborate with relevant agency partners to identify and mitigate risks
- Maintain inventory of RTD physical assets, inclusive of current value, to assess losses from an emergency or disruption
- Ensure EOC representatives attend trainings provided by Emergency Management and are qualified to fill the role
- Execute financial agreements to procure services required during disruptions and emergencies
- Process accounts payable functions relevant to the emergency
- Maintain records of financial commitments and expenditures relevant to the emergency for potential reimbursement from FTA or FEMA

Executive Office

Purpose

Provide executive level and strategic leadership and direction to the entire organization. The Executive Office has no divisions and includes the General Manager and CEO and their support staff.

Roles and Responsibilities

- Provide direction and vision to the agency as a whole and collaborate with Chiefs/AGMs to address challenges as they emerge
- Collaborate with relevant agency partners to identify and mitigate risks
- Approve Emergency Operations Center Manager appointments
- Approve EOP, COOP, Integrated Preparedness Plan, and Mitigation Plan
- Lead the Policy Group during activations of the EOP
- Approve high-level purchases through Oracle or through the process identified through the continuity of operations plan
- Manage Board communication and liaising with Board of Directors for high value budget requirements and policy decisions
- Manage intergovernmental communication
- Manage all-agency communications

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General Counsel

Purpose

Protect the interests of the RTD by providing legal advice and representation on transaction, compliance and litigation matters; managing agency risk through administration of the agency's self-insurance fund, the purchase of additional insurance and claims resolution; and records and data management and governance for the agency. The General Counsel's Department is comprised of the Legal Services, Information Governance and Management, and Risk Management Divisions.

Roles and Responsibilities

- Provide legal advice on policies, procedures, and plans relevant to emergencies, as well as legal review of contracts to be executed on an emergency basis
- Collaborate with relevant agency partners to identify and mitigate risks
- Ensure EOC representatives attend trainings provided by Emergency Management and are qualified to fill the role
- Coordinate with the agency's commercial insurance carriers regarding potential claims
- Manage the workers' compensation claim process to ensure employees receive appropriate medical care and lost wage benefits related to on-the-job injuries
- Manage Colorado's Open Records Act requests and coordinate with Communications and EOC Manager to ensure the consistent and accurate release of information and records

Human Resources

Purpose

Manage workforce related matters pertaining to hiring, benefits, and workforce development. Human Resources is comprised of Total Rewards, Staffing and Recruiting, Substance Abuse/Office Services, Labor Relations, and Development and Training divisions.

Roles and Responsibilities

- Collaborate with relevant agency partners to identify and mitigate risks
- Ensure EOC representatives attend trainings provided by Emergency Management and are qualified to fill the role
- Review emergency policies, procedures, and plans to ensure consistency with steady state procedures where relevant and appropriate considerations are made for represented labor
- Maintain up to date information in Workday to reflect work location, chain of command, and title for each individual
- Labor Relations will communicate and coordinate any changes to the collective bargaining agreement (CBA) to the Amalgamated Transit Union 1001 during

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emergency coordination and/or required functions needed, especially as it relates to reassignment of represented labor

- Provide support for the emergency workforce during an activation of this plan
- Provide contact information or emergency contact for workforce to support the execution of the COOP or EOP

Operations

Purpose

Operate and maintain revenue service vehicles as well as non-revenue vehicles, maintain support fleet, to oversee contractors operating revenue service vehicles, and to develop schedules for fixed-route service. The Operations Department is comprised of the Bus Operations, Rail Operations, Paratransit, and Service Development divisions.

Roles and Responsibilities

Bus Operations

Bus Operations is comprised of Transportation, Maintenance, Contracted Services and Street Operations.

- Collaborate with relevant agency partners to identify and mitigate risks
- Maintain bus fleet in state of good repair to prevent accidents or other mechanical issues
- Pre-plan route changes for special events and other known disruptions to fixed route service and manage route changes caused by unforeseen events/emergencies
- Provide oversight of contractors operating bus contracted services to ensure best practices are being followed as it relates to safety and emergency management
- Ensure EOC representatives attend trainings provided by Emergency Management and are qualified to fill the role
- Participate in training and exercises with RTD and local jurisdiction first responders to ensure familiarity with RTD fleet and hazards
- Effectively communicate risks and hazards with operators and agency partners to protect the RTD workforce and customers
- Conduct damage assessment for rolling stock, bus stops, and bus stations to be compiled into a claim for reimbursement under FTA or FEMA
- Provide support to operators facing unexpected or emergency situations, both through Bus Dispatch and Street Supervision
- Provide incident command for bus incidents through the Street Supervision or Street Operations cadre
- When resources are available, support local partners with support bus services

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Rail Operations

Rail Operations is comprised of two subdivisions: Light Rail and Commuter Rail. Light Rail consists of Rail Transportation, Light Rail Vehicle Maintenance, and Infrastructure and Maintenance of Way. Commuter Rail consists of Transportation, Infrastructure and Maintenance of Way, and Commuter Rail Contract Services.

- Collaborate with relevant agency partners to identify and mitigate risks
- Maintain light rail and commuter rail fleet in state of good repair to prevent accidents or other mechanical issues
- Maintain light and commuter rail alignments in a state of good repair to prevent accidents or other mechanical issues
- Pre-plan service changes for special events and other known disruptions
- Provide oversight of rail contractor to ensure best practices are being followed as it relates to safety and emergency management
- Ensure EOC representatives attend trainings provided by Emergency Management and are qualified to fill the role
- Effectively communicate risks and hazards with operators and agency partners to protect the RTD workforce and customers
- Conduct damage assessment for rolling stock, infrastructure, and stations to be compiled into a claim for reimbursement under FTA or FEMA and reported to FRA as appropriate
- Provide support to operators facing unexpected or emergency situations, both through operational control centers and field supervision
- Provide incident command for rail incidents through the field supervisors cadre

Paratransit

Purpose

Oversee the contractors providing Access-a-Ride and Access-on-Demand services on behalf of RTD.

Roles and Responsibilities

- Collaborate with relevant agency partners to identify and mitigate risks
- Ensure EOC representatives attend trainings provided by Emergency Management and are qualified to fill the role
- Provide oversight of paratransit contractors to ensure best practices are being followed as it relates to safety and emergency management

Service Development

Purpose

Create route alignments, service pattern, and schedules that balance customer needs with operator welfare and available resources.

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Roles and Responsibilities

- Collaborate with relevant agency partners to identify and mitigate risks
- Ensure EOC representatives attend trainings provided by Emergency Management and are qualified to fill the role
- Provide trained Emergency Planning Section personnel, as defined by ICS and NIMS

Planning

Purpose

Supports the future public transit needs of the District, collaborating with local jurisdictions, DRCOG, and CDOT.

Roles and Responsibilities

- Collaborate with relevant agency partners to identify and mitigate risks
- Include hazard mitigation considerations when planning the system
- Ensure EOC representatives attend trainings provided by Emergency Management and are qualified to fill the role
- Provide trained Emergency Planning Section personnel, as defined by ICS and NIMS

Transit Police and Emergency Management

Purpose

Ensure public safety and security for RTD employees, contractors, and customers by enforcing laws and the RTD Code of Conduct, maintaining awareness and planning for threats to the system, and planning and execution of emergency management systems. The Transit Police and Emergency Management Department is comprised of the Patrol, Real-Time Video Investigations, Transit Police Communications, Integrated Security Technology, and Emergency Management Divisions.

Roles and Responsibilities

- Develop and maintain relationships with local, state, and federal law enforcement and emergency response agencies
- Coordinate the development and implementation of emergency plans such as EOP, COOP, Integrated Preparedness Plan, and Mitigation Plan
- Collaborate with relevant agency partners to identify and mitigate risks
- Ensure EOC representatives attend trainings provided by Emergency Management and are qualified to fill the role
- Ensure the readiness of the EOC and backup EOC, including developing training, SOPs, and checklists
- Coordinate and/or provides training, drills, and exercises necessary to prepare the agency and local emergency response partners to perform identified roles and responsibilities

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- Provide communications, notifications, and video surveillance in service of law enforcement, security personnel, and the public to address emergency events taking place on the RTD system or within its facilities through Transit Police Communications Centers
- Assist with the development of mutual aid agreements or memoranda of understanding with public and private agencies
- Act as first responder and liaison with first response partners on the scene of an incident
- Secure the scene for evidentiary and investigative purposes
- Activate/demobilize the EOC
- Coordinate all EOC activities
- Manage resources including requests for support from local, state, and federal partners
- Provide security for the EOC
- As needed, provide resources for crowd control and restricted area control
- As needed, provide warning and notification support to include the use of public address systems in stations, where available
- Issue restricted area passes to appropriate personnel
- Conduct after action review of exercises and disasters, including maintaining database to identify lessons learned and corrective actions taken
- Direct disaster reimbursement claims from FTA and FEMA

Direction, Control, and Coordination

National Incident Management System (NIMS)

RTD's emergency management organization is structured in accordance with NIMS and ICS. NIMS integrates existing processes and methods into a unified national framework for incident management. This framework forms the basis for interoperability and compatibility that enable a diverse set of public and private organizations to conduct effective incident management operations.

It does this through a core set of concepts, principles, procedures, organizational structures (ICS, multi-agency coordination, and joint information systems), terminology, and standards requirements applicable to a broad community of NIMS users. To ensure interoperability and compatibility, NIMS is based on an appropriate balance of flexibility and standardization. It provides a consistent and flexible national framework within which government and private entities at all levels can work together to manage domestic incidents, regardless of their cause, size, location, or complexity.

Incident Command System (ICS)

Emergency management and incident response in RTD is coordinated using the ICS. ICS enables effective incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure. ICS is used to organize both near-term and long-term operations for a broad spectrum of emergencies, from small to complex incidents, both natural and manmade. ICS is

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used by all levels of government – federal, state, regional, and local – as well as by many private-sector and NGOs.

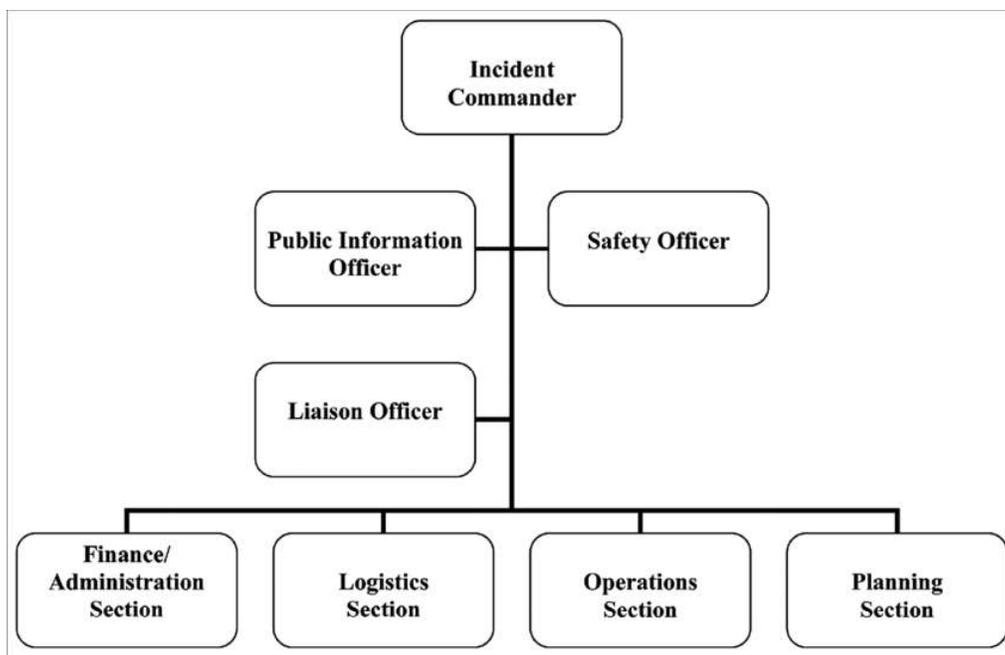
In ICS, the IC is able to appoint individuals into leadership positions to support specific areas of the response:

Command staff:

- Public Information Officer
- Liaison Officer
- Safety Officer

General staff:

- Operations Section Chief
- Logistics Section Chief
- Planning Section Chief
- Finance and Administration Section Chief



For RTD, planning and finance and administration functions will most likely be conducted in the EOC, however if there is a need for on-scene coordination of these functions, they will be made available to the IC.

All activity undertaken under the EOP shall be coordinated using ICS and NIMS in accordance with Homeland Security Presidential Directive (HSPD) 5.

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Incident Command

Single Incident Commander - Most incidents involve a single incident commander. In these incidents, a single person commands the incident response and is the decision-making authority. The on-scene IC has tactical control of and authority over all resources at the scene.

First responders will establish Incident Command when they are on scene. RTD will always defer authority to first responders while they are on-scene but will establish consistent communication in a liaison function to provide information about RTD vehicles, facilities, and response procedures. Information is to be shared freely with first responders as it becomes available. When possible, the individual who would assume Incident Command after first responders leave should be the liaison with First Response Incident Command.

In the event of an emergency/disaster occurring on an RTD revenue vehicle, the operator or conductor will begin the event as the IC. They will notify their appropriate dispatch or control center and their street/field supervisor of the event. When the supervisor arrives on-scene, the supervisor will take over as Incident Command. An appropriate transfer of command must always take place when a new incident commander assumes command.

In the event of an emergency/disaster occurring at an RTD-owned facility, the highest ranking or most qualified facilities maintenance staff present will begin the event as the IC. They will notify their appropriate dispatch or control center and their facilities maintenance manager of the event. When the Facilities Maintenance Manager arrives on-scene they may choose to assume Incident Command, or to leave the current IC in charge. An appropriate transfer of command must always take place when a new incident commander assumes command.

The IC has the authority to request resources to facilitate response, including (but not limited to):

- On-scene presence of Emergency Management Specialist
- Trained individuals to staff command staff and general staff roles (Public Information Officer, Liaison Officer, Safety Officer, Operations Chief, Logistics Chief, Planning Chief or Finance/Administration Chief)
- Activation of the Mobile Command Post
- Trained staff to fill any necessary operations, logistics, planning, or communication roles
- Activation of the Emergency Operations Center
- Vehicles, parts, and other materials to maintain or restore safe conditions or safe operation

All Street Supervisors for bus service, all Field Supervisors for rail, and all sworn Police Officers will be expected to maintain the following trainings from FEMA or an appropriate local training agency:

- IS 100-Introduction to Incident Command System
- IS 200-Basic Incident Command System for Initial Response
- IS 700-An Introduction to the National Incident Management System
- IS 800-National Response Framework, An Introduction

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- ICS 300-Intermediate ICS for Expanding Incidents

These trainings will give the supervisors and sworn police officers the competency to work within ICS and integrate with other local response agencies to preserve life safety, reduce damage to property and reduce impact to the environment. From the time of this policy being adopted or from promotion to a relevant supervisor position, individuals will have six months to complete all trainings.

Unified Command

A Unified Command involves two or more individuals sharing the authority normally held by a single IC. A Unified Command acts as a single entity. It is important to note that in Unified Command the command representatives will appoint a single Operations Section Chief.

An example when Unified Command may be used would be an intentional, malicious derailment of a train, where Transit Police and Rail Supervisors will work together to make decisions regarding the response.

Transfer of Command

Responsibility can be transferred during an incident for several reasons. As the incident grows a more qualified person may be required to take over as IC to handle the ever-growing needs of the incident. Or this may occur in reverse; when an incident reduces in size, the command can be passed down to a person with less experience, but who is still qualified to run the now-smaller incident. Other reasons to transfer command include jurisdictional change if the incident moves to a different location or area of responsibility, or the normal turnover of personnel due to extended incidents. The transfer of command process always includes a transfer of command briefing, IC to IC, with the objective to give a complete picture of all events and considerations that may impact the response and decision-making abilities of the new IC. This briefing may be oral, written, or a combination of both. A transfer of command is posted and announced on all radio and communication networks, especially with notification to the EOC.

Incident Coordination and/or Response Structures

Various types of operational support facilities are established in the vicinity of an incident, depending on its size and complexity, to accomplish a variety of purposes. RTD may operate one or more of the following incident coordination and/or response facilities during an emergency or disaster:

- ICP
- EOC
- Staging Area
- Evacuation Transportation Hubs

Incident Command Post (ICP)

An ICP is the field location where the IC operates, onsite response is directly coordinated, and onsite resource needs are identified and communicated. There is only one ICP for each incident or event, but it may change locations during the event. The ICP may be located in a vehicle, the Mobile Command Post, or within a building. The ICP will be positioned outside of the incident scene and the potential hazard zone but close enough to the incident to maintain a visual

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presence and command status. The on-scene IC has tactical control of and authority over all resources at the scene.

Emergency Operations Center (EOC)

The RTD EOC serves as the central point for coordination of the agency's emergency management and response activities. The EOC does not usurp the responsibility or authority of the IC but instead supports incident command while mobilizing resources, tracking costs, planning for future needs, providing decision making support and liaising with the Leadership Team/Policy Group as needed. Like Incident Command, the EOC is scalable and flexible.

RTD has designated a primary and secondary EOC, which can be activated as necessary:

Primary EOC: District Shops
 Mezzanine Training Rooms
 1900 31st St
 Denver, CO 80216

Secondary EOC: 711 Building
 Ste 10
 711 W 31st Ave
 Denver, CO 80202

The EOC may also be activated in a virtual or hybrid stance using an RTD-approved platform. Identified and trained EOC representatives will be invited to the Virtual EOC (VEOC) channel and will participate in the discussions as activated on an event by event basis.

The Emergency Management Specialist will serve as the EOC Manager and has the authority and responsibility for managing the EOC and the agency's emergency management organization during an emergency or disaster. The EOC Manager has the authority to make all routine decisions and is charged with advising the Leadership Team and the General Manager and CEO when major decisions need to be made. The EOC Manager serves as a liaison with the local jurisdictions' emergency management agencies as well as state and federal agencies.

EOC Goals

The following are the general goals for the emergency operations center. These goals can be adjusted by the EOC Manager in coordination with the General Manager and CEO, Chief of Transit Police and Emergency Management, and the IC, when the EOC is activated.

- Obtain and maintain situational awareness of the incident and ensure responders have a common operating picture
- Establish an incident planning cycle
- Manage resources (people, places, things) including tracking the status of requests, the status and utilization of resources, and planning for the demobilization of resources
- Procurement of emergency supplies
- Establish a seamless transition from response into recovery operations
- Assess and document impacts from events for recovery process

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EOC Activation Levels

The EOC may be activated to one of the following three levels depending on emergency needs.

Activation Level Three (Watch): The EOC activates to activation level three (AL-3) when only public safety staff from Transit Police and Emergency Management are needed to closely monitor a developing incident or threat. At AL-3, the EOC will begin gathering situation awareness information, but emergency coordination is largely left to the routine processes and procedures maintained by each department or division.

Activation Level Two (Partial): The EOC is activated to activation level two (AL-2) when some, but not all, EOC positions are needed to manage an emergency. The EOC Manager is responsible for determining which positions are needed to meet the agency's needs. The following are examples of triggers for when an AL-2 activation may be appropriate:

- A request for EOC activation from an IC
- An incident resulting in 10 or more serious injuries or fatalities
- A credible threat of terrorism or mass violence as determined by RTD-PD, local jurisdiction police department or the Colorado Information Analysis Center
- A forecast from the National Weather Service of a blizzard warning or a prediction of major flooding or wildfire with significant impact
- A significant disruption in service requiring off-scene coordination of resources to provide information or resources.

Activation Level One (Full): The EOC is activated to activation level one (AL-1) when all EOC positions are needed to manage an emergency. The following are examples of triggers for when an AL-1 activation may be appropriate:

- A request for EOC activation from an IC
- An incident resulting in 30 or more serious injuries or fatalities
- Significant civil unrest
- A forecast from the National Weather Service for historic flooding or historic winter weather

EOC Equipment

The equipment to activate the EOC will be stored at both the primary and secondary locations and will include:

- Computers
- Projectors
- Phones
- IT infrastructure
- Internet hotspots
- Administrative supplies
- Easels and display equipment
- Printed copies of EOP and resources
- Printed copies of COOP

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- Printed ICS forms

EOC Staffing

The EOC will be staffed utilizing a hybrid ICS/departmental model. Representatives are expected to be knowledgeable individuals with authority to make emergency-related decisions for their department/division. Lists of EOC representatives will be maintained by the leadership of each discipline expected to maintain staff prepared to report to the EOC and be able to provide this list to the Emergency Management Specialist every six months and upon request.

Each mode of transit, bus, light rail, commuter rail, and paratransit, must maintain at least three trained EOC representatives. This allows for relief if the EOC must be activated on a 24-hour basis as well as providing coverage if one of the two primary EOC representatives are unable to report for duty for any reason.

The following lines of service must also have trained EOC representatives, with the exact number noted below:

- RTD Transit Police— Three
- Safety and Environmental Compliance— Three, to be trained to fill roles such as safety officer and safety EOC liaison
- Safety, Security and Compliance— Two
- Information Technology— Three
- Cybersecurity— Two
- Communications— At least two trained Public Information Officers
- Capital Programs and Facilities— Three
- Planning— Two trained as Planning Section Staff
- Operations Service Delivery— Two trained as Planning Section Staff
- Finance— Two
- Human Resources— Two
- General Counsel— Two

Depending upon the event triggering the activation, additional roles may be assigned outside of a representative's normal work. This is to be expected in emergencies, especially those where an on-scene ICS structure is not in place.

EOC Activation

The EOC will be activated at the request of the General Manager and CEO, Chief Operations Officer, Chief of Police and Emergency Management, the Emergency Management Specialist, or IC or any of the above position's designees. Upon request, the Emergency Management Specialist/EOC Manager will determine the appropriate level of activation and required representatives.

Notification of EOC activation will be sent to trained representatives and Leadership Team using ReadyOp over text and call. Only one representative will be asked to go to the EOC unless otherwise noted.

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Policy Group

The Policy Group is made up of the General Manager and CEO and their selected designees. The General Manager and CEO may choose to consult with the Chair of the Board regarding decisions made by the Policy Group. Should the General Manager and CEO be unable to form the Policy Group, the COO holds the authority in their absence.

The objective of the Policy Group is to provide high level decision-making where the EOC Manager does not have sufficient authority to make a necessary decision. Examples of Policy Group level decisions may be:

- Whole system service suspension
- Office closures
- Shutdown of the entire RTD IT network
- Reappropriation of staff
- Financial expenditure above \$25,000
- Collaboration with labor representation
- Long-term relocation of RTD facilities or staff

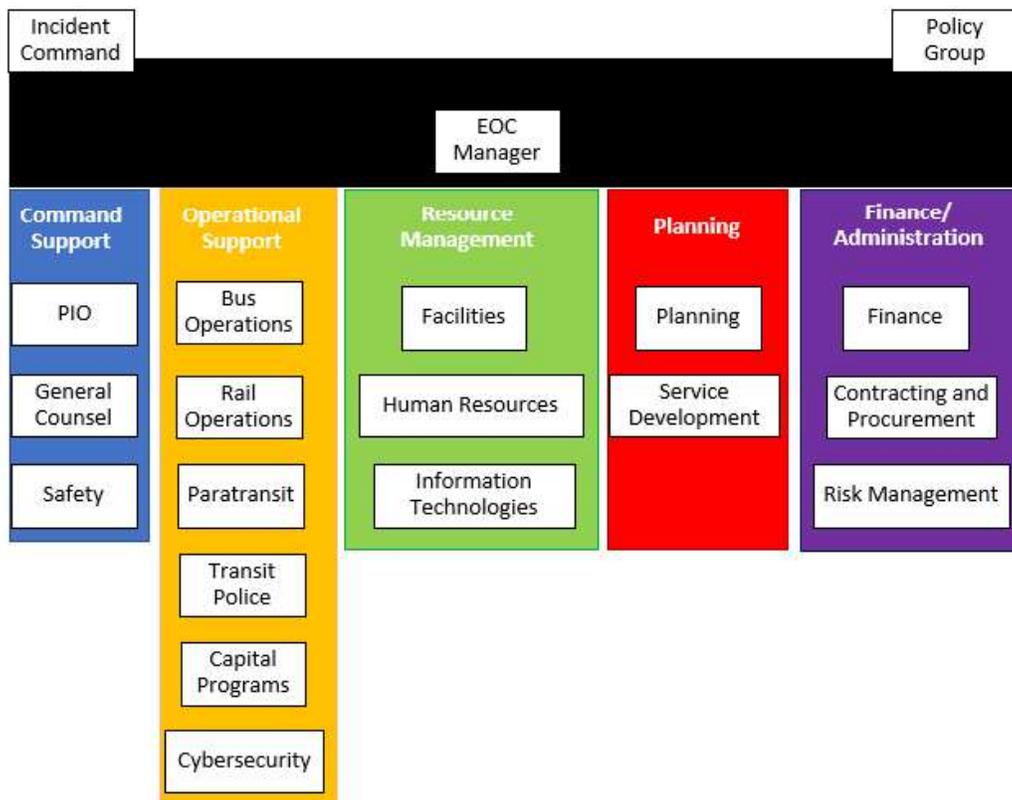
Members of the Policy Group are not required to staff the EOC and will be requested to appoint another representative to the EOC in the event they are present, to allow proper delegation and accomplishment of EOC objectives.

EOC Table of Organization

Following is a sample of what role each department's representatives may be asked to fill in an emergency. This is not prescriptive and may be adjusted depending upon the event triggering the activation. Leadership of each section may or may not be assigned based upon complexity of staffing or the event.

Representatives working in the EOC will be asked to liaise between their departments and the EOC and while staffing the EOC are acting outside of their steady-state role and hierarchy.

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Information Collection, Analysis and Dissemination

Situational Awareness

There are five elements that are the backbone of good situational awareness:

- Define the information requirements
- Determine how to gather information
- Decide who will analyze that information
- Determine how that information will be shared
- Choose the technology that will help communicate and manage the information

During the initial period of an emergency, efforts should be focused on gaining an understanding of the situation and establishing incident priorities. A well-defined, operational information collection capability is essential. Information collection provides situational awareness to leadership and promotes informed decision-making. The agency has designated a process to collect, analyze and disseminate information during an emergency to both internal and external response partners as well as the public.

Information Collection

Information will be collected from a variety of sources. EOC Manager or their designee at the EOC will be charged with collecting information. The following list contains examples of potential sources of operational information:

- Revenue Vehicle Operators, Via Communications Centers
- On-scene responders (street/field supervision, facilities staff, etc.)

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- RTD departments
- City, county, and state situational awareness reports
- City, county, and state virtual EOC's
- Special districts and non-governmental partners
- Television, radio, and print media
- Social media
- Survivors of the emergency and the general public
- Subject-matter experts

Information Analysis

After information has been collected, it must be analyzed to determine its credibility and operational relevance. The EOC Manager or their designee will analyze information that is received and prepare intelligence reports for leadership.

Dissemination

Message dissemination is categorized into internal messaging and public messaging. Internal messaging refers to messages crafted for responders, employees, contractors, and partners, while public messaging refers to messages crafted for public dissemination.

Internal Messaging

EOC Manager or his/her designee in the EOC will assist in conveying information as necessary to responders, RTD departments and other partners. Additionally, EOC Manager or their designee will maintain and update the Incident Action Plan (IAP), which will contain critical information and intelligence updates.

Within two hours of an emergency event, the EOC Manager will brief the Policy Group/Leadership Team with details for the event and response.

Public Messaging

Various methods of public information dissemination are available. The decision to use a particular medium will be based on the urgency and the intended audience. Some methods of distribution include:

- Service alerts
- News releases
- News conferences
- Website updates
- Social media updates

To ensure one consistent and accurate voice, all public information releases will be coordinated through EOC Manager or their designee.

Communications

Communications are an important component of response and recovery operations. The ability of emergency management/response personnel from different disciplines, jurisdictions,

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organizations, and agencies to work together depends greatly on their ability to communicate with each other. To effectively transmit and receive information, emergency response partners supporting the community must have access to all available forms of communication. This section outlines the types of equipment/systems available for internal, external and public communication. Operational communications systems and capabilities, and effective communications, are essential to the success of any emergency operation. The community maintains and operates the below communications systems to ensure effective and operation communications between municipal personnel and with other jurisdictions.

Communications between community agencies occur through the use of several types of communications equipment including radios, cellular and landline phones, email, and satellite phones. In addition, the State of Colorado uses WebEOC to provide situational awareness.

The radio system RTD uses is supported by the State and is utilized by first responders across the region and State. This is an 800 MHz system and has redundant towers in the Denver Metro Area. All radio talk groups have access to MetroNET, which is the mutual aid channel in the Denver Metro Area. RTD's system is segregated into bus operations, rail operations, transit police, and some single channels available for support services such as treasury maintenance. There is only one encrypted channel available and it is on the police talk group. Bus operations is set up to facilitate on-demand communication, where all other channels are push-to-talk. The radio system is maintained by IT's Mobile Technologies group.

In addition, RTD's Emergency Management Specialist sends situational awareness updates for events that may require emergency coordination.

Alert and Notification

RTD utilizes service alerts to inform customers and the public about disruptions to the system. This is predominantly sent via app alerts and emails for registered users on selected routes of importance to the individual. The organization also communicates with the public via news releases and media advisories.

Customer Care is also a point of contact for the public to make requests via phone or online communications. These are on-demand communications available 6 a.m. – 8 p.m. Monday through Friday and 9 a.m. – 6 p.m. on Saturday and Sunday.

Notification of Key Leaders

When an emergency requires the notification of key community officials, Emergency Notification will be done using the Emergency Notification Procedure (RTD-EM-PRC-0001).

Further updates will be made using:

- Approved virtual meeting platforms
- Updates to Virtual EOC Microsoft Teams channel
- Email

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- Telephone calls and texts
- Two-way radio systems (during normal business hours)
- Dispatch a vehicle for in-person notification
- Face-to-face communication

EOC Communications

RTD's EOC is equipped with, maintains and is capable of operating, the following communication systems: Computers with Microsoft Teams, cameras, microphones, Outlook, telephones, and radio.

RTD conducts periodic communications tests to ensure that its systems are operational, and its personnel are capable of operating the systems. More particularly, Emergency Management Specialist conducts an emergency communication test on a semiannual basis.

Public Warning

Public warning is accomplished using the following methods as appropriate:

- Service alerts
- RTD website notifications
- Public information displays
- Public announcement systems

Public Information Officer (PIO)

The PIO has roles and responsibilities as identified in the Crisis Communications Plan which includes:

- Determine or create proper message content
- Select appropriate communication method
- Disseminate public warnings after receiving written approval from the EOC Manager or their designee

During non-emergency times, information regarding emergency plans and actions to be taken by the public, in the form of public information and education materials, will be provided to the public via newsletters, brochures, and RTD's website and social media platforms.

During an emergency, the potential for dissemination of false or misleading information is high. This can lead to operational difficulties for responders and confusion among the public. Misleading information can be produced from several sources. RTD will establish a media monitoring and rumor control section in the EOC and staffed by Communications and Engagement staff.

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Finance and Administration Matters

Employee Reassignment

During an emergency, certain employees may be reassigned to complete alternate duties that differ from their regular day-to-day responsibilities. Department administration will coordinate with Human Resources to manage incidents and ensure staffing levels are appropriate. In general, RTD job descriptions for non-represented employees include an 'other duties as assigned' or 'other duties as required' clause that can be activated for emergencies. This may require approval of the Policy Group when not previously identified in this document.

Worker's Compensation

Worker's compensation claims are administered by the Risk Management Division according to Colorado Revised Statutes C.R.S. 8-40-101, *et seq.* Even in an emergency employees should be encouraged to file a workers' compensation claim to ensure they receive appropriate medical care and lost wage benefits related to on-the-job injuries.

Insurance and Financial Liability

RTD is self-insured for tort liability up to the limits specified under the Colorado Governmental Immunity Act and has additional insurance policies in place to support the financial recovery of the organization. For this reason, it is important to coordinate with the Risk Management Division to ensure proper record-keeping and investigative processes are followed. These policies include excess workers compensation, crime, fiduciary, cybersecurity, excess liability, property and railroad liability insurance.

Timekeeping

Tracking employee time spent on emergency operations can be an important aspect of determining disaster costs and opportunities for reimbursement by the federal government through FTA or FEMA. RTD maintains the same timekeeping policies during regular operations and emergency operations, but salaried employees should use Workday to log any applicable or qualified hours worked, especially those above 40 hours/week. There may be a specific code assigned for disaster operations hours worked.

Represented employees will use Kronos or TIES for their timekeeping needs, according to their steady state timekeeping policies. If for some reason Workday, Kronos, or TIES are unavailable, employees are to track hours manually and appropriate Finance Department staff shall make necessary adjustments as the systems become available.

Records Retention

Records retention during emergencies is conducted using the same policies and procedures in place during regular operation. The Records Management Procedure and Records Retention Schedule Policy, created and maintained by the Information Management and Governance Division can be found on the agency's intranet, i.e., "The Hub." Records to be retained during and after an emergency include personnel hours, equipment costs, expenditures/procurement, costs incurred by RTD, etc. in compliance with RTD policies and procedures and C.F.R. Title 44,

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Emergency Management Assistance. Records related to Safety Management System processes and activities, including after action reports must be retained for a minimum of three years, in compliance with the Public Transportation Agency Safety Plan.

Documenting Response and Recovery Operations

RTD will use IAPs and SitReps to document response and recovery efforts. Other documentation will be used to record cost recovery information, requests for aid, budget control, legal advice, operational efficiency, and other relevant areas of response and recovery activities.

After Action Reporting (AAR)

Training exercises and any real-world activations of this plan shall be followed by a written AAR. These will be written following federal guidance, in particular the Homeland Security Exercise and Evaluation Program. AARs should contain at a minimum:

- The activities that took place
- Areas for improvement
- Successes
- An improvement plan with individual/department/division assignments

Once AARs are complete, Emergency Management will review with the Leadership Team and with the affected lines of service. The potential continuous improvement actions will be tracked by emergency management and will be annually reviewed for completion or removal. AARs should be reviewed prior to any exercise to ensure that any previous issues are recognized and corrected as successfully as possible.

Financial Authorities and Policies

Local:

- Regional Transportation District Act, C.R.S. 32-9-101, *et seq.*

Federal:

- Robert T. Stafford Disaster Relief and Emergency Assistance Act
- National Response Framework
- Presidential Decision Directive 63 (PDD-63)

Emergency Procurement and Spending

RTD uses any existing contracts first to make purchases and secure goods and services for emergency requirements. If such a contract is not available, the EOC Manager and the Emergency Management Specialist each has authority to spend up to \$25,000 by use of an RTD Purchase Card (P-Card) for emergency purchases if it is not possible or practicable to initiate a

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Planning and Coordination Responsibility

The Emergency Management Division of RTD-PD is tasked with maintaining, distributing, and updating this EOP. Revisions to this EOP will be coordinated by the Emergency Management Division that will also review and approve any proposed revisions.

EOP Updates

Plan maintenance includes updating and revising the plan to reflect all changes, testing the plan periodically, and ensuring that all personnel remain up to date on their roles and responsibilities as outlined in the plan. If any issues emerge, situations change, gaps become apparent, and/or requirements change, the plan must be updated to reflect these and remain usable, compliant and current. The EOP will be reviewed annually, after any exercises, following any changes in requirements, and/or after actual incidents, as necessary.

EOP Reviews and Updates

This EOP is continuously monitored and evaluated for its effectiveness, and will be updated after the following:

- When lessons learned from real-world incidents are reviewed
- When hazard risks or risk areas change
- When alert and warning systems change
- When applicable government planning standards are changed
- When changes to applicable laws and regulations require updates

EOP Revision

Anyone who plays a role in implementing the EOP should be appropriately trained on the plan and understand their role in supporting emergency response operations. RTD exercises its EOP annually; however, real world events that result in activations may be substituted for an exercise if deemed appropriate.

Continuity of Operations Plan (COOP)

COOP, are vital to the successful response to and recovery from an emergency or other incident. Outlined below are the lines of succession for RTD's General Manager and CEO, Chief of Transit Police and Emergency Management, and Emergency Management Specialist

General Manager and CEO

- Chief Operations Officer
- Chief Financial Officer
- Assistant General Manager of Bus Operations
- Assistant General Manager of Rail Operations

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Chief of Police and Emergency Management

- Deputy Chief of Operations
- Deputy Chief of Administration
- Commander of highest seniority

Emergency Management Specialist

- Commander of Administration
- Lieutenant of Administration

RTD's COOP also contains information regarding how it will continue performing essential functions during emergency operations. This includes line of succession, alternate facilities, communication methods, and procedures.

RTD Emergency Operations Plan

Functional Annexes

- Annex A: Bus Operations
- Annex B: Commuter Rail Operations
- Annex C: Light Rail Operations
- Annex D: Paratransit Operations
- Annex E: Capital Programs
- Annex F: Transit Police

RTD Emergency Operations Plan

Annex A: Bus Operations

Purpose

The purpose of this Annex is to define the actions and roles necessary for the Bus Operations Division to participate in a coordinated response within the framework of the EOP . This Annex provides guidance to groups within the Bus Operations department/division with a general concept of potential emergency assignments before, during, and following emergency or disaster situations.

Bus Operations Division is responsible for delivery of all RTD rubber-tired transit services, except paratransit. RTD bus operations consists of nine operational divisions, described in [Characteristics](#) and five organizational groups within RTD:

1. Contracted Services– responsible for overseeing the delivery of all RTD rubber-tired services delivered by RTD's contracted transit service providers, including fixed-route and demand responsive services.
2. Maintenance– responsible for maintaining RTD's directly operated rubber-tired fleet, including transit vehicles and support services.
3. Street Operations: responsible for the coordination and supervision of all bus services in operation.
4. Transportation– responsible for the training of RTD bus operators and the delivery of RTD directly operated bus services.
5. Administration– responsible for administrative duties and high-level decision-making for all divisions of Bus Operations.

Bus Operations oversees more than 150 Local, Regional and Skyride routes and serve 10,000 bus stops throughout the service area. The RTD bus system operates 365 days a year, 24 hours a day. Bus operations addresses the unique needs and challenges of all individuals by facilitating accessibility, mobility, and community involvement through RTD programs and services. The Bus Operations fleet consists of more than 1,000 transit vehicles, 300 non-licensed vehicles, such as lawnmowers, and 450 licensed support vehicles operating out of four RTD divisions and five private contracted divisions. Of the five contracted divisions, four are fixed-route contactors one private contractor operates RTD's FlexRide service in 24 areas throughout the District.

Scope

The Bus Operations Division will provide scheduled and demand response bus service to the public, leveraging necessary human and physical resources. Bus operations will, to the degree possible, support other operations divisions, including rail, to provide auxiliary services, such as bus bridges, during rail emergencies or outages. Bus operations will continue to maintain and support the support services fleet, which extends to all departments in the agency. This Annex applies to all staff, equipment, subdivisions, and operations of the Bus Operations department and associated divisions and primarily describes the department's emergency actions.

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Situation Overview

Characteristics

Bus operations has four RTD operated bus operating groups, four privately operated fixed-route contractor providers, and one demand response group.

Operating Divisions

- **Platte** (3333 Ringsby, Denver, CO 80216) 300 FT bus operators, 100 maintenance staff and approximately 15 administrative staff
- **East Metro** (14000 E. Colfax, Aurora, CO 80011) - 300 FT bus operators, 93 maintenance staff and approximately 15 administrative staff
- **Boulder** (1707 Exposition, Boulder, CO 80301) - 100 FT bus operators, 26 maintenance staff and approximately 10 administrative staff
- **District Shops** (1900 31st St. Denver, CO 80216) – 65 maintenance staff and approximately 100 administrative staff (bus operations only)

Fixed-Route Private Operating Divisions (Operated by TransDev as of July 2023)

- **Commerce City** (6345 Colorado Blvd, Commerce City, CO 80022)
- **Denver** (100 W. 64th Ave, Denver, CO 80221)
- **Longmont** (811 S. Sherman St., Unit D, Longmont, CO 80501)
- **Englewood** (2775 S. Vallejo St., Englewood, CO 80110)

Demand Response Division

- **Via Mobility** (2855 N. 63rd Street, Boulder, CO 80301 and 6500 Franklin Street, Denver, CO 80229)

While the vast majority of bus operations employees are located at one of the above facilities, some administration staff are also located at RTD's headquarters (1660 Blake St. Denver, CO, 80202). Administrative staff includes the Assistant General Manager and Deputy Assistant General Manager of Bus Operations, Business Program Manager, Data Analyst II, and Business Support.

The Transportation subdivision has oversight of the three operating facilities - Platte, East Metro and Boulder - and the Bus Operator Training Subdivision. The transportation subdivision has managers, assistant managers, lead division supervisors, and division supervisors at each operating facility, with a general superintendent leading the subdivision. There are currently nearly 700 full-time and 100 part-time bus operators directly employed by the agency.

The Maintenance subdivision works with other subdivisions throughout the department, ensuring that they have buses and support equipment needed to meet RTD's mission to *Make Lives Better through Connections*. Bus maintenance consists of four facilities: District Shops, Platte, East Metro, Boulder. Maintenance operations is managed by the General Superintendent of Maintenance, the Assistant General Superintendent of Maintenance, division managers, assistant division managers, supervisors, engineering, quality control, and trainer positions.

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Street operations oversees the daily processes of the OCC (Dispatch) and Street Supervision. They work closely with external agencies throughout the service area to maintain an efficient and reliable transit network. The Street Operations subdivision is managed by the General Superintendent and Assistant General Superintendent of Street Operations and supported by Street Supervision, Dispatch, Station Starters, Sign Maintainers, and Sign Fabricators.

Street operations supervises the coordination, preparation, and update of all detours affected by special events, emergencies, or service disruptions. Street operations also works closely with law enforcement, jurisdictions, and municipalities for on-street activities and detours affecting bus operations. Street Operations also coordinates emergency response with the RTD Office of Emergency Management.

The Contracted Services Group is managed by the Senior Manager of Contracted Services and serves as the liaison between RTD personnel and the private contractor personnel. Private contractors operate approximately half of RTD fixed-route service, and all FlexRide (demand response) service. In addition, contracted services plans all special services and ensures that adequate personnel (both RTD and private contractors) are available to provide the service. Contracted services also serves as the conduit for service related partnerships throughout the District.

Equipment used across all divisions typically consists of radio handhelds for field communications, supervisor vehicles for field assignments and emergency response, buses and associated support systems, such as CAD/AVL, for providing transit service to customers, non-revenue vehicles for management and other staff.

Planning Assumptions

This Annex is a supplementary document to the RTD Emergency Operations Base Plan. The RTD EOP will also include hazard specific Annexes to identify the actions to be taken for a specific risk, hazard, or emergency. This Annex will remain at an all-hazards level of planning and shall identify the roles and responsibilities of the Bus Operations Division and all subdivisions thereof.

Organization and Assignment of Responsibilities

Protection

- Set up and maintain safety protection in maintenance and transportation divisions for environmental and job-related hazards
- Set up additional protocols as safety and security incidents are observed to continuously improve safety and security posture
- Video monitoring, particularly with on-street activities, assist with all operations monitoring and incidents
- Review of video and data from driving events (SmartDrive) records to provide information to create new training curriculum and safety procedures

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Prevention

- Bus operations seeks to prevent safety and security incidents with the public by providing Conflict Prevention Intervention (CPI) training to all bus operators and installing safety equipment, such as operator enclosures
- Bus operators, along with all other field-based positions in bus operations, learn to identify and assess hazardous situations, prevent collisions and accidents, and report all unsafe acts or unsafe conditions through appropriate channels
- Dispatch/OCC monitors all available video surveillance and communication channels for potential safety and security incidents

Mitigation

- Monitor all bus operations 24/7 and assist operators during periods of distress or potential safety concerns
- Ensure emergency procedures and communications are understood
- Provide first aid equipment
- Develop and implement strategies to reduce the impact of hazards
- Identify and organize resources and implement measures to continue service
- Evacuation of resources to prevent emergency/disaster damages

Response

- Street operations and the OCC will:
 - Respond to all incidents according to policy
 - Maintain communication until street supervisors or emergency responders arrive, including with first responders and SCC
 - Assess the situation
 - Advise appropriate next steps
 - Document the incident
 - Dispatch available buses according to availability to serve as a:
 - Bus bridge
 - Evacuation bus
 - Warming/cooling shelter bus
- Transportation and contracted services management will:
 - Review video recording through SmartDrive (or applicable private contractor system) to understand incident details

Recovery

- Assess recovery needs, determine the level and types of damages
- Assist in implementing recovery programs
- Assist with plans to prevent and or diminish future emergencies and events.
- Street operations, along with contracted services staff, will assist and coordinate the activities of recovery initiatives
- Work to develop a unified and accessible communication strategy
- Participate in damage and impact assessments with other recovery partners

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- Documentation of the incident is reviewed to glean important lessons learned and inform future incident response improvements, and collaborate on the development of AARs for continuous improvement

Concept of Operations

The Bus Operations Division shall participate in the larger ICS and will send qualified representatives to the EOC upon request of the EOC Manager. Street supervisors shall be trained as incident commanders and will have the authority to make decisions on scene.

The General Superintendent of Street Operations, Assistant General Superintendent of Street Operations, and one lead dispatcher shall be trained as EOC representatives and will have access to leaders for any decisions that need to be escalated, but shall also have knowledge about available resources and the authority to commit division resources. The priority of tasks will be determined jointly with the EOC Manager in accordance with the overall planning effort for the emergency or event.

The division will evaluate damage to facilities, mobilize staff and resources, prioritize restoration of services based on resources available, and coordinate with other RTD departments/divisions. The General Superintendent of Street Operations will ensure that its subdivisions keep logs of actions taken and information received.

Direction, Control, and Coordination

The AGM, Bus Operations will be responsible for overall direction of the Bus Operations Division and shall coordinate with their EOC representative to facilitate information exchange and resource management. If the AGM is unavailable, the chain of succession identified in the COOP will be followed, which is duplicated here:

1. Deputy Assistant General Manager, Bus Operations
2. General Superintendent of Street Operations
3. General Superintendent of Transportation

Communication

All internal emergency communication will be shared by ReadyOp, email, cell phone, text messages, handheld radios, tablets, and land lines.

Communications with the general public will be managed through the communications and engagement staff member serving as the PIO for the event.

Administration, Finance, and Logistics

Bus Operations Division shall be responsible for maintaining records on:

- Staffing levels and hours worked by employees on account of the emergency/disaster
- Damage incurred on relevant equipment/facilities/infrastructure because of the emergency

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- Objectives of department/division when responding to emergencies and log of relevant actions taken to accomplish

This information will be provided to the EOC upon request.

Emergency Equipment on Fixed-Route Revenue Vehicles

Each diesel bus holds between 75-182 gallons of diesel fuel. The Mall Shuttle subfleet consist of battery electrified buses and the batteries are between 292-330 kWh Lithium Iron Phosphate compound.

All transit buses are all equipped with:

- Fire extinguisher
- Emergency triangles
- Strap chains/snow chains/snow socks or auto chains depending on bus type

In the event of an emergency, operators use on-board radio systems to contact Dispatch. This system also has a backup "fallback" feature in the event the main system is down. Buses are also equipped with cameras to provide additional security. Buses procured and accepted into the fleet buses have a live look-in AV system, where transit police can view and talk to operators and customers on the bus remotely.

Forty-foot transit buses have the ability to dump the air from exterior compartment below the operator's window. By dumping the vehicle air system it will release the front doors. Coach buses can dump the air from the compartment below the operator's window. This is in place if the system fails electronically or if the batteries are dead.

All safety equipment is inspected every 6,000 miles and mid-year inventory is conducted at East Metro, Platte, and Boulder Divisions.

Annex Development and Maintenance

It is the responsibility of the Bus Operations Division to develop or update internal SOPs to ensure its own operations capabilities. The AGM, Bus Operations will coordinate the planning of all bus operations related to emergency operations.

The Bus Operations Division also is committed to testing and continuous improvement of this plan and will participate in exercises on a two-year cycle unless a real-world event or emergency makes doing so unrealistic. After each exercise or emergency, the Bus Operations Division will participate in the AAR process and will implement improvement plan items as relevant.

This Annex will be updated after any emergency or exercise from which the AAR identifies necessary changes and every three years on the same cycle as the revision of the EOP Base Plan.

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Annex B: Commuter Rail

Purpose

The purpose of this Annex is to define the actions and roles necessary for the Commuter Rail Division to participate in a coordinated response within the framework of the RTD EOP. This Annex provides guidance to groups within the Commuter Rail Division with a general concept of potential emergency assignments before, during, and following emergency or disaster situations.

Scope

This Annex applies to all staff, equipment, subdivisions, and operations of the Commuter Rail Division and primarily describes the division's emergency actions.

Situation Overview

Characteristics

The Commuter Rail Operations subdivision is responsible for timely and safe rail services. RTD commuter rail currently operates the N Line on 13.75 commuter rail system miles of track, 365 days a year with six rail stations and operates 365 days a year.

Commuter rail operations services and maintains all track, signals, overhead catenary system (OCS), and right of way access for the N Line. In addition, commuter rail maintains all certifications for train engineers, conductors, dispatchers, signal maintainers, track maintainers, communications, OCS maintainers and rail laborers. Safety procedures and practices are continuously reviewed to ensure safety of employees and customers.

Commuter Rail Operations consists of four subdivisions:

Rail Administration

Provides the overall management for commuter rail operations. This subdivision includes all budgeting, fiscal planning and monitoring, capital project planning, performance monitoring, data analysis and overall reporting, educational development, regulatory compliance, and safety/quality assurance through internal assessments/audits. Oversight and technical expertise are provided for corridor rail construction projects.

Commuter Rail Transportation (CRT)

Responsible for providing safe and reliable daily service to the customer base and provides special services for events. The OCC provides 24/7 coverage, serves as a command-and-control facility and is the main location from which all aspects of the

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system are controlled, and operational decisions are made regarding scheduled and emergency operations.

Maintenance of Way (MOW) and Infrastructure

Responsible for the maintenance of the agency's rail right of way including traction power substations, OCS, signal systems, track, and track right of way such as rail beds and structures.

Commuter Rail Oversight

Commuter Rail Contract Services (aka Oversight) oversees the Concessionaire Agreement (CA) with DTP and its operator DTO, which operates the A, B, and G lines through the CA with RTD. Oversight oversees operations and maintenance delivery to ensure the Eagle 3P Concessionaire is meeting contractual requirements as well as regulatory requirements. The oversight team provides support to the commuter rail lines and interfaces with all responsible members performing operation and maintenance.

To provide additional context to commuter rail operations, described below is the commuter rail systems and equipment components to maintain rail system operations.

WIMAX

The WIMAX system provides system monitoring and status information to OCC. WIMAX information includes train locations, speed, positive train control, and a variety of additional system information.

Commuter Rail Vehicles

The fleet consists of 66 individual Hyundai Rotem units also referred to in this document as Electro-Mechanical Units (EMU), using a 25K OCS. All vehicles are maintained by DTO at the commuter rail maintenance facility located at 5151 Fox Street, Denver, CO.

CR Maintenance Facility

The commuter rail facility located at 8215 Steele Street, Commerce City, CO is where general maintenance, repair and rolling stock storage for the N Line occur.

Operations

OCC governs the operation, control, and dispatch of commuter rail vehicles. Dispatch maintains contact with the train engineers and conductors by means of radios located in each commuter rail vehicle cab. Commuter rail engineers and conductors also carry a portable radio to be used while outside of the cab or in case of cab radio failure. Field supervisors rove throughout the system during operations. Their role is to provide support and coordination between Dispatch and commuter rail vehicle engineers and conductors during an emergency or upset in the system that may require a manual block operation, bus bridge, evacuation, or accident response and investigation.

Current operations consist of one line:

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N Line – Denver Union Station to 124th Station in Thornton

In the case of an accident or breakdown of the system, the controller will monitor movement and control train movement using a manual block system. When necessary, buses are used in a bridging procedure to move customers around a trouble area.

OCS – Overhead Catenary

OCS for the commuter rail system is the overhead catenary wire. Approximately 25,000 volts AC is fed to the overhead catenary wire. Contact between the overhead wire and the Commuter Rail Vehicle (CRV) is through the CRV pantograph located on the top of the CRV. For all incidents or maintenance involving the OCS, the pantograph should be lowered to remove electrical hazard from the CRV.

Grade Crossings

The system has 49 Grade crossings: 13 pedestrian rail-grade crossings at stations and 36 highway-rail grade crossings. Nearly all the highway-rail grade crossings will be in quiet zones and most crossings feature:

- Quad gates or concrete medians
- Loop detectors to prevent vehicles from becoming trapped between the gates
- Advanced preemption closed circuit television pedestrian treatments
 - Many locations include gates
 - Tactile warning strips with truncated domes

Pedestrian crossings are protected with a combination of flashing signals, audible bells, and ancillary 'another train approaching' signs. These warning devices will be controlled with fixed approach audio frequency track circuits.

Signals and Train Control

Commuter rail uses a traditional cab-signaling Automatic Train Control system in conjunction with a Positive Train Control (PTC) overlay system. There are wayside signals only at interlockings. The PTC system uses Wabtec's Interoperable Electronic Train Management System to meet FRA requirements in accordance with the 2008 Rail Safety Act including:

- Prevention of train-to-train collisions
- Enforcement of over-speed limits (including civil, routing, temporary)
- Prevention of incursions into established work zone limits
- Prevention of movements over switches set in the wrong direction (in interlockings and hand throw switches)

The PTC system uses a combination of fiber and wireless communication technologies deployed in a redundant manner to provide a robust, reliable and highly-available system.

Commuter rail operations has three operating facilities, which are active 24 hours a day, 365 days a year, these facilities include:

711 W 31st Avenue, Denver

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7190 Colorado Blvd, Commerce City
8125 Steele Street, Commerce City

Planning Assumptions

This Annex is a supplementary document to the RTD Emergency Operations Base Plan. The RTD EOP will also include hazard specific Annexes to identify the actions to be taken for a specific risk, hazard or emergency. This Annex will remain at an all-hazards level of planning and shall identify the roles and responsibilities of the Commuter Rail department/division and all subdivisions thereof.

Concept of Operations

Commuter Rail Operations Group shall participate in the larger ICSas stood up by RTD and will send qualified representatives to the EOC upon request of the EOC Manager. The General Superintendent of Transportation, Manager Rail Service Delivery and Lead Dispatcher shall be trained as EOC representatives and will have access to leaders for any decisions that need to be escalated but shall also have knowledge about available resources and the authority to commit department resources. The priority of tasks will be determined jointly with the EOC Manager in accordance with the overall planning effort for the emergency or event.

The General Superintendent, Rail Transportation, or their delegate, shall ensure their division has a minimum of three field supervisors trained as incident commanders and will have the authority to make decisions on scene.

The group will evaluate damage to facilities, mobilize staff and resources, prioritize restoration of services based on resources available, and coordinate with other RTD divisions. The General Superintendent, Rail Operations, or their delegate, will ensure that its subgroups keep logs of actions taken and information received.

Organization and Assignment of Responsibilities

Protection

- Commuter rail transportation will:
 - Observe and report observed signs of violence or unsafe conditions
 - Train on emergency management and response, according to Emergency Preparedness Plan

Prevention

- Commuter rail transportation will:
 - Use safety reporting system with direct notification to control

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Mitigation

- Commuter rail transportation will:
 - Train for ICS and other emergency response activities to facilitate a quick response and minimize further damages incurred as a result of emergency events

Response

- Commuter Rail Transportation will:
 - Coordinate with all internal and external agencies using SOPs related to emergency response to help navigate the correct steps during these incidents
- Commuter rail MOW and infrastructure will:
 - Assess the nature of the emergency and make a determination if sections of the right of way should be placed out of service or operated under a speed restriction to help protect the OCS, rail and signal infrastructure.
 - Determine the depth and breadth of asset degradation to the OCS, rail and signal infrastructure and gather the information needed to move into the recovery stage

Recovery

- Commuter rail transportation will:
 - Control send notification and restore service
- Commuter rail MOW and infrastructure will:
 - If interim steps are determined to be appropriate, make interim repairs to the OCS, rail and signal infrastructure
 - With assistance from engineering, repair the OCS, rail and signal infrastructure up the standards of the design criteria
 - Depending on the scope of the recovery efforts, capital programs may be engaged to contract the engineering and/or construction of the recovery efforts or the recovery efforts may be completed with internal RTD resources
- OCS, rail and signal infrastructure should have the same estimated date for their end of useful life as they did prior to the emergency and recovery efforts

Direction, Control, and Coordination

The AGM, Rail Operations will be responsible for overall direction of the Commuter Rail subdivision and shall coordinate with their EOC representative to facilitate information exchange and resource management. If the AGM, Rail Operations is unavailable, the chain of succession identified in the COOP will be followed, which is duplicated here:

Deputy Assistant General Manager, Rail Operations

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General Superintendent, Commuter Rail Transportation
General Superintendent, Commuter Rail MOW and Infrastructure

Communication

All internal emergency communication will be shared by ReadyOp, email, cell phone, text messages, handheld radios, tablets, and land lines.

Communications with the general public will be managed through the communications and engagement staff member serving as the PIO for the event.

Administration, Finance, and Logistics

Commuter Rail Group shall be responsible for maintaining records on:

- Staffing levels and hours worked by employees on account of the emergency/disaster
- Damage incurred on relevant equipment/facilities/infrastructure as a result of the emergency
- Objectives of Commuter Rail when responding to emergencies and log of relevant actions taken to accomplish
- Investigative reports and associated audio and video recordings
- Maintaining accurate records of reported incidents and incident responses

This information will be provided to the EOC upon request.

Emergency Equipment on Revenue Vehicles

RTDs EMU's all have the following emergency equipment

- Fire extinguisher in each end's cab
- Emergency tools such as a pry bar, flashlight, first aid kit marked with signage in each car
- Pantograph poles, which are insulated poles used to manually retract pantographs away from the catenary wire or unlatch from the down position
- Emergency Ladder/transfer board to be used for evacuation
- Radio that runs on EMU auxiliary power
- Safety glass at all windows
- Emergency egress override and signage for passenger egress at every door
- Passenger intercom system for the operator to communicate to passengers plus an emergency intercom at each end of the passenger area to call and talk the operator with a push of a red button
- Passenger emergency alarm button strategically placed at four locations throughout the CRV's passenger area, which notifies the engineer in the engineer area by providing an alarm and a light on the dash and outside the CRV with the emergency

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Annex Development and Maintenance

It is the responsibility of commuter rail general superintendents to develop or update internal SOPs to ensure its own operations capabilities. The Deputy Assistant General Manager, Rail Operations or their delegate, will coordinate the planning of all commuter rail operations related to emergency operations.

Commuter Rail Group also is committed to testing and continuous improvement of this plan and will conduct exercises on a yearly basis. This yearly exercise is conducted by DTO and RTD on alternating years, unless a real-world event or emergency makes doing so unrealistic. After each exercise or emergency, Commuter Rail Group will participate in the AAR process and will implement improvement plan items as relevant.

This Annex will be updated after any emergency or exercise from which the AAR identifies necessary changes and every three years on the same cycle as the revision of the EOP: Base Plan.

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Annex C: Light Rail Operations

Purpose

The purpose of this Annex is to define the actions and roles necessary for the Light Rail Operations Group to participate in a coordinated response within the framework of the RTD EOP. This Annex provides guidance to groups within the Light Rail Operations Group with a general concept of potential emergency assignments before, during, and following emergency or disaster situations.

Scope

This Annex applies to all staff, equipment, subdivisions, and operations of the Light Rail Operations Group and primarily describes the group's emergency actions.

Situation Overview

Characteristics

The Light Rail Operations (LRO) subdivision is responsible for providing safe and reliable train service. RTD light rail currently operates six light rail lines providing approximately 60 light rail system miles (double track) with 57 rail stations and operates 365 days a year.

LRO services and maintains 201 Light Rail Vehicles (LRVs) and maintains all track, signals, overhead catenary system, and right of way access. In addition, light rail maintains all certifications for train operators, electro mechanics, signal/traction power maintainers, track maintainers and rail laborers. Safety procedures and practices are continuously reviewed to ensure safety.

RTD Light Rail Operations consist of four subdivisions:

Light Rail Administration (LRA)

Provides the overall management for light rail operations. This group includes all departmental budgeting, fiscal planning and monitoring, capital project planning, performance monitoring, data analysis and overall reporting, educational development, regulatory compliance, and safety/quality assurance through internal assessments/audits. Project management is provided for all rail vehicle procurements. Oversight and technical expertise are provided for corridor rail construction projects.

Light Rail Transportation (LRT)

Responsible for providing safe and reliable service, and provides alternated schedules for events such as the Denver Broncos, Colorado Rockies, large concerts, etc. The OCC provides 24/7 coverage, serves as a command-and-control facility and is the main location from which all aspects of the system are controlled, and operational decisions are made regarding scheduled and emergency operations.

Light Rail Vehicle Maintenance (LRVM)

Maintains all certifications for light rail mechanics and is responsible for ensuring the maintenance and cleanliness of the district's rail fleet. In addition to preventive maintenance, accident repairs, electrical/electronic diagnostics, service and cleaning of the vehicles, this group provides

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emergency and road call response for vehicle recovery, component overhauls and rebuilds, as well as all body shop functions including body, paint, glass, and upholstery work.

Maintenance of Way (MOW) and Infrastructure

Responsible for the maintenance of the district's rail rights of way to include traction power substations, OCS, signal systems, track, and track rights of way such as rail beds and structures. In addition, the Supervisory Control and Data Acquisition (SCADA) group provides oversight of the fiber optics and information technology to function and maintain the SCADA system that enables staff to visually track and control the vehicles and wayside equipment, such as substations and track switches, in the district's rail corridors.

To provide additional context to light rail operations, below describes the different light rail systems and equipment components to maintain rail system operations.

Light Supervisory Control and Data Acquisition

The SCADA system provides two types of general functions: control over certain system elements from the Central Control Center; and system monitoring and status information to the Central Control Center. The SCADA system allows light rail controllers certain capabilities such as remote capability to power down sections of the alignment and control over power switches. It also provides information to the light rail controllers on the status of certain elements of the light rail system. SCADA information includes train locations, switch alignments, power status, signal status and a variety of additional system information.

Light Rail Vehicles

The RTD light rail vehicle fleet consists of two models from Siemens: the SD 100 and the SD 160. The vehicles are very similar and have two main differences. The SD 160 has an AC propulsion system and sliding plug doors where the SD 100 has a DC propulsion system and bi-fold doors. The SD 100 model is the original RTD vehicle and there are 49 vehicles in the fleet. The SD 160 was originally ordered for the Southeast Corridor extension: 68 were delivered with an additional 55 vehicles ordered for FasTracks plus an additional order of 29, the first of which arrived in August 2009 with delivery ending in 2020. RTD now has a total of 201 revenue service vehicles.

LRT Maintenance Facility

The Mariposa facility is a heavy maintenance and overhaul facility for cars and major components. The Elati facility is the operational facility with a capacity of 201 light rail vehicles. Mariposa is also used for some vehicle storage and pull-out activity to accommodate future expansion.

Operations

OCC governs the operation, control, and dispatch of light rail vehicles. Control maintains contact with the train operators by means of radio located in each light rail vehicle cab. Light rail operators also carry a portable radio to be used while outside of the cab or in case of cab radio failure. Controller/supervisors rove throughout the system during operations. Their role is to provide support and coordination between OCC and light rail vehicle operators during an

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emergency or disruption in the system that may require a manual block operation, bus bridge, evacuation, or accident response and investigation.

Current operations consist of six lines:

- D Line, 18th and California to Littleton Mineral
- E Line, Union Station to RidgeGate Parkway
- H Line, 18th and California to Florida
- L Line, 16th & Stout to 30th – Downing
- R Line, Peoria to RidgeGate Parkway
- W Line, Union Station to Jeffco Government Center

In the case of an accident or breakdown of the system, the controller will monitor movement and control train movement using a manual block system. When necessary, buses are used in a bridging procedure to move passengers around a trouble area.

System Power – Traction Power Substations and Overhead Catenary

System power for the light rail system includes two critical elements: traction power substations (TPSS) and the overhead catenary wire. TPSSs are located approximately one mile apart along the light rail alignment. Approximately 13,200 volts AC is fed to the TPSS. The TPSS converts this feed to a nominal 750 volts DC and supplies the 750 volts DC to the overhead catenary wire. Contact between the overhead wire and the LRV is through the LRV pantograph located on the top of the LRV.

For incidents involving no damage to the overhead wire and no significant damage to the side or top of the LRV, the incident can most likely be managed without removing power, i.e., without shutting down TPSS and without lowering the pantograph. For incidents with major LRV damage, the pantograph should be lowered to remove electrical hazard from the LRV. If an incident involves damage to the overhead wire or if the overhead wire and pantograph are entangled, power should be removed in one of two ways: utilize emergency shut off located in locked box on nearest TPSS, or request power removal from light rail OCC.

Light rail operations has four RTD operating facilities, which are active 24 hours a day, 365 days a year, these facilities include:

Operating Sites

- **Elati** (2701 S Elati, Denver, CO 80110) Admin Staff, LRVM Training, Rail Equipment Engineers, LRVM Supervisors, Electro Mechanics, Service workers, facilities supervisors, parts clerks, Division Supervisors, Train Operators
- **Mariposa** (655 Mariposa, Denver, CO 80204) Lead Controllers, Controllers, Fare instructor, Lead Field Supervisors, Field Supervisors, LRVM Supervisors, Electromechanics, Storeroom staff
- **Navajo** (752 Navajo St, Denver, CO, 80204) Network Engineer, SCADA Technicians

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- **Rio Court** (1350 Rio Court, Denver, CO, 80204) Admin, Senior engineers, MOW Trainers, MOW Supervisors, Track Maintainers, Rail laborers, Signal traction power maintainers, master mechanic, equipment operator/track maintainer, Storeroom staff

Light rail operates on five different corridors to include the Central, Central Platte Valley (CPV), Southeast, Southwest, and West corridors. Appendix A provides the station and park-n-ride jurisdictions by corridor.

Planning Assumptions

This Annex is a supplementary document to the RTD EOP. The RTD EOP will also include hazard specific Annexes to identify the actions to be taken for a specific risk, hazard or emergency. This Annex will remain at an all-hazards level of planning and shall identify the roles and responsibilities of the Light Rail Operations Group and all subgroups thereof.

Organization and Assignment of Responsibilities

Protection

- Observe and report unsafe conditions

Prevention

- Light rail transportation will:
 - Utilize established safety and security reporting system with direct notification to control
- Light rail vehicle maintenance will:
 - Maintain the light rail fleet in a safe, reliable condition including recovery response truck fleet and equipment ready for emergency response
 - Ensure training of staff in safety and technical aspects to ensure interdepartmental coordination for a safe and successful response and recovery of light rail vehicles

Mitigation

- Participate in trainings and exercises upon request

Response

- Light rail transportation will coordinate with all internal and external agencies using Internal Work Instructions (IWI) and SOPs related to emergency response to help navigate the correct steps during these incidents including:
 - Use of ICS and NIMS
 - Electrical safety as relating to OCS and other hazards
 - Conducting Accident/Incident Investigation

RTD Emergency Operations Plan

- LRV maintenance will send an initial response team and lead to assess the severity on site to ensure adequate response, job hazard analyses, tactics, workforce and equipment is deployed
- Light rail maintenance of way/infrastructure will :
 - Assess the nature of the emergency and make a determination if sections of the right of way should be placed out of service or operated under a speed restriction; closures and/or speed restrictions may help protect the OCS, rail and signal infrastructure
 - Determine the depth and breadth of asset degradation to the OCS, rail and signal infrastructure and gather the information needed to move into the recovery stage

Recovery

- Light rail transportation will:
 - Generate notifications to stakeholders
 - Restore service
- Light rail vehicle maintenance will:
 - Create and update the Job Hazard Analysis as conditions change
 - Remove vehicle from scene, including any necessary measures to restore safe operational condition
 - Document damages to vehicle and infrastructure
 - Repair damages and return to revenue service-ready status
- Light rail maintenance of way/infrastructure will:
 - Make appropriate interim repairs to OCS, rail, and signal infrastructure up to standards of design criteria and should have the same estimated date for their end of useful life as they did prior to emergency or recovery efforts, with assistance from Capital Programs Engineering Group

Concept of Operations

Light rail operations shall participate in the larger ICS and will send qualified representatives to the EOC upon request of the EOC Manager. The General Superintendent, Rail Transportation, or their delegate, shall ensure their group has a minimum of three field supervisors trained as incident commanders and will have the authority to make decisions on scene.

The lead controllers and field supervisor lead shall be trained as EOC representatives and will have access to leaders for any decisions that need to be escalated but shall also have knowledge about available resources and the authority to commit department resources. The priority of tasks will be determined jointly with the EOC Manager in accordance with the overall planning effort for the emergency or event.

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The subdivision will evaluate damage to facilities, mobilize staff and resources, prioritize restoration of services based on resources available, and coordinate with other RTD departments/divisions. The General Superintendent, Rail Transportation, or their delegate, will ensure that its subdivisions keep logs of actions taken and information received.

Direction, Control, and Coordination

The AGM, Rail Operations will be responsible for overall direction of Light Rail Operations subdivision and shall coordinate with their EOC representative to facilitate information exchange and resource management. If the AGM, Rail Operations is unavailable, the chain of succession identified in the COOP will be followed, which is duplicated here:

Deputy Assistant General Manager, Rail Operations
General Superintendent, Light Rail Vehicle Maintenance
General Superintendent, Rail Transportation

Communication

All internal emergency communication will be shared by ReadyOp, email, cell phone, text messages, handheld radios, tablets, and land lines.

Communications with the general public will be managed through the communications and engagement staff member serving as the PIO for the event.

Administration, Finance, and Logistics

Light Rail Operations subdivision shall be responsible for maintaining records on:

- Staffing levels and hours worked by employees on account of the emergency/disaster
- Damage incurred on relevant vehicles, equipment, facilities, and infrastructure as a result of the emergency
- Objectives of light rail operations when responding to emergencies and log of relevant actions taken to accomplish
- Investigative reports and associated audio and video recordings
- Maintaining accurate records of reported incidents and incident responses

This information will be provided to the EOC upon request.

Emergency Equipment on Revenue Vehicles

RTDs SD100 and SD160 LRVs all have the following emergency equipment:

- Fire extinguisher in each end's cab
- Radio that runs on LRV auxiliary power
- Safety glass at all windows

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- Emergency egress override and signage for passenger egress at every door
- Passenger intercom system for the operator to communicate to passengers plus an emergency intercom at each end of the passenger area to call and talk the operator with a push of a red button
- Passenger emergency alarm button strategically placed at four locations throughout the LRV's passenger area, which notifies the operator silently in the passenger area and gives the operator an alarm and a light on the dash and outside the LRV with the emergency.

Annex Development and Maintenance

It is the responsibility of the light rail general superintendents to develop or update internal SOPs to ensure its own operations capabilities. The Deputy AGM, Rail Operations, or their delegate, will coordinate the planning of all light rail operations related to emergency operations.

The Light Rail Operations subdivision also is committed to testing and continuous improvement of this plan and will conduct exercises every two years, unless a real-world event or emergency makes doing so unrealistic. After each exercise or emergency, the Light Rail Operations Group will participate in the AAR process and will implement improvement plan items as relevant.

This Annex will be updated after any emergency or exercise from which the AAR identifies necessary changes and every three years on the same cycle as the revision of the EOP: Base Plan.

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Appendix A Station and Park-N-Ride Jurisdictions

Table 2 – Station and Park-n-Ride Jurisdictions

Central Corridor				
Station	Park-n-Ride	Location	Police	Fire
I-25 & Broadway I-25 & Broadway, Denver	I-25 & Broadway I-25 & Broadway, Denver	Denver	Denver	Denver
Alameda Avenue 601 South Cherokee Street, Denver	Alameda Avenue 601 S. Cherokee Street, Denver	Denver	Denver	Denver
10 th & Osage 975 Osage Street, Denver		Denver	Denver	Denver
Colfax at Auraria 1101 W. Colfax Ave, Denver		Denver	Denver	Denver
Convention Center 1325 Stout St, Denver		Denver	Denver	Denver
16th Street & Stout 1617 Stout St, Denver		Denver	Denver	Denver
16th Street & California 1516 California, Denver		Denver	Denver	Denver
18 th Street & Stout 1816 Stout St, Denver		Denver	Denver	Denver
18 th Street & California 1776 California St, Denver		Denver	Denver	Denver
20 th Street & Welton 1960 Welton St, Denver		Denver	Denver	Denver
25 th Street & Welton 2550 Welton St, Denver		Denver	Denver	Denver
27 th Street & Welton 2720 Welton St, Denver		Denver	Denver	Denver
29 th Street & Welton 2940 Welton St, Denver		Denver	Denver	Denver
30 th Street & Downing 2999 Downing St, Denver	30 th Street & Downing 2999 Downing St, Denver	Denver	Denver	Denver

Central Platte Valley Corridor				
Station	Park-N-Ride	Location	Police	Fire
Denver Union Station Platform 1601 Chestnut Pl., Denver		Denver	Denver	Denver
Pepsi Center/Elitch 1700 9 th St (West Side), Denver		Denver	Denver	Denver
Invesco at Mile High 4 th and Walnut, Denver		Denver	Denver	Denver
Auraria West 1250 5 th Street, Denver		Denver	Denver	Denver

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Southeast Corridor				
Station	Park-n-Ride	Location	Police	Fire
Dayton 4000 S. Dallas	Dayton Station PNR 4000 S. Dallas	Greenwood Village	Greenwood Village	Denver
Nine Mile (station and tunnels) 3181 S. Parker Rd	Nine Mile PNR 3181 S. Parker Rd	Arapahoe County	Aurora	Aurora
Iliff Station 13905 Wesley Avenue 80014	Iliff Parking Structure 14000 East Wesley Avenue 80014	Aurora	Aurora	Aurora
Florida Station 1490 South Abilene St 80012		Aurora	Aurora	Aurora
Metro Center Station 14555 E Centerpointe Drive 80012	Metro Center Park-N-Ride 80012	Aurora	Aurora	Aurora
2 nd and Abilene Station 210 North Abilene Street 80011	2 nd and Abilene Park-N-Ride 14051 E Ellsworth Ave 80011	Aurora	Aurora	Aurora
13 th Avenue Station 14110 East 13 th Avenue 80011	13 th Avenue Station Park-N-Ride 14110 East 13 th Avenue 80011	Aurora	Aurora	Aurora
Fitzsimons Station 2550 N Fitzsimons Parkway 80011		Aurora	Aurora	Aurora
Peoria Station 11503 East 35th Avenue 80010		Aurora	Aurora	Aurora
Southwest Corridor				
Station	Park-n-Ride	Location	Police	Fire
Evans Avenue 2151 South Delaware Denver	Evans Avenue 2151 South Delaware Denver	Denver	Denver	Denver
Englewood Center 1101 Englewood Parkway Englewood	Englewood Center 1101 Englewood Parkway Englewood	Englewood	Englewood	Englewood
Oxford Avenue 4050 S. Santa Fe Drive (near Oxford and Windermere) Sheridan	Littleton Downtown 5780 S. Prince Street, Littleton	Sheridan	Sheridan	Sheridan

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Littleton Downtown 5780 S. Prince Street Littleton	Littleton Downtown 5780 S. Prince Street Littleton	Littleton	Littleton	Littleton
Littleton Mineral 7500 S. Platte River Parkway Littleton	Littleton Mineral 7500 S. Platte River Parkway Littleton	Littleton	Littleton	Littleton

West Corridor				
Stations / Park-n-Rides / Elevator / Jurisdictions				
Jefferson County Station		Location	Police	Fire
Station Platform Parking Structure	615 Johnson Rd. 80401 605 Johnson Rd. 80401	Golden	Golden	Golden
Red Rocks College Station				
Station Platform	13400 W. 6 th Ave. 80228	Lakewood	Lakewood	Lakewood
Federal Center Station				
Station Platform Surface Parking Lot	11601 W. 2nd Place 80228 11601 W. 2nd Place 80228	Lakewood	Lakewood	Lakewood
Oak Street Station				
Station Platform Surface Parking Lot	1311 Oak Street 80215 1351 Oak Street 80215	Lakewood	Lakewood	Lakewood
Garrison Station				
Station Platform	9091 W. 13 th Ave. 80215	Lakewood	Lakewood	Lakewood
Wadsworth Station				

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West Corridor				
Station Platform Parking Structure Elevator (East of Wadsworth) Elevator (West of Wadsworth)	1298 Wadsworth Blvd. 80214 1350 Wadsworth Blvd. 80214 7599 W. 13 th Ave. 80214 7605 W. 13 th Ave. 80214	Lakewood	Lakewood	Lakewood
Lamar Station				
Station Platform	6363 W. 13 th Ave. 80214	Lakewood	Lakewood	Lakewood
Sheridan Station				
Station Platform Parking Structure Elevator (West of Sheridan) Elevator (East of Sheridan)	1198 Sheridan Blvd. 80219 1050 Ames Street 80219 1197 Sheridan Blvd. 80204 1198 Sheridan Blvd. 80219	Denver Denver Lakewood Denver	Denver Denver Lakewood Denver	Denver Denver Lakewood Denver
Perry Station				
Station Platform	1199 N. Perry Street 80219	Denver	Denver	Denver
Knox Station				
Station Platform	1245 N. Knox Ct. 80219	Denver	Denver	Denver
Decatur + Federal Station				
Station Platform	1310 N. Federal Blvd. 80219	Denver	Denver	Denver
Auraria West Station				
Station Platform	1250 5 th Street 80204	Denver	Denver	Denver

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Annex D: Paratransit Services

Purpose

The purpose of this Annex is to define the actions and roles necessary for the Paratransit Division to participate in a coordinated response within the framework of the RTD Emergency Operations Plan. This Annex provides guidance to groups within the Paratransit Division with a general concept of potential emergency assignments before, during, and following emergency or disaster situations.

The Paratransit Division is responsible for executing American with Disabilities Act of 1990 (ADA) complementary paratransit services, branded Access-a-Ride. Access-a-Ride is a shared demand response service for those who are unable to use RTD's fixed-route services. Service availability on Access-a-Ride is determined by nearby fixed-route bus service. Eligibility is established under the guidelines provided by the Federal Transit Administration. Trips on Access-a-Ride may be used for any purpose. Reservations must be made one to seven days in advance. There is no same-day Access-a-Ride service.

That said, RTD does support a same day user side subsidy program referred to as Access-on-Demand. RTD subsidizes a portion of every on-demand trip requests which are scheduled by the customer and directly with local transportation network companies and cab companies. The participating vendors are Uber, Lyft, Metro Transportation and zTrip. For the purposes of this report, Access-on-Demand will not be referenced as these vendors would not be in a position to help during an emergency.

Scope

This Annex applies to all staff, equipment, subdivisions, and operations of the paratransit division and primarily describes the division's emergency actions.

Situation Overview

The Paratransit Division is located at 1560 Broadway, Suite 1075, Denver Colorado 80202. The division consists of the following personnel:

- Senior Manager, Paratransit Services: This position provides leadership, administration, and direction for all aspects of the division's ADA complementary paratransit program
- Manager, Paratransit Services: This position is responsible for planning, coordinating, and overseeing the design, implementation and operation of ADA paratransit service-related activities delivered under contract
- Coordinator, Paratransit Eligibility Program: This position is responsible for the ADA and contractual compliance, efficiency, and operational performance of the following paratransit programs: ADA Paratransit Mobility Assessments, Travel Training, and Appeals Process
- Supervisor, Paratransit Quality Assurance: This position is responsible for establishing quality control actions and service improvement recommendations

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and oversees the receipt of commendations, complaints, investigations, and complaint resolution

- Paratransit Safety & Training Compliance Officer: This position is responsible for the evaluation and oversight of the Paratransit safety and training programs, workplace safety, training procedure compliance, sensitivity training and accident investigation review
- Technician, Contracted Services: This position is responsible for performing a variety of duties related to the monitoring and administration of Access-a-Ride paratransit service contracts in accordance with contract guidelines and the organization's standards
- Technician, Alternative Transportation: This position is responsible for administering, documenting, tracking, and maintaining the enrollment process for on demand service for eligible Access-a-Ride customers, that also receive paratransit service in accordance with the ADA
- Paratransit Customer Service Representative: This position serves as a liaison to the public, private contractors, and internal customers regarding a variety of customer service and operating issues relating to paratransit service, and coordinates customer complaint investigations and responses
- Paratransit Certification Assistant: This position is responsible for administering, documenting, tracking, and analyzing the application process for paratransit eligibility in accordance with the ADA. Assists in conducting a customer friendly and efficient transit orientation and in person paratransit eligibility assessments

The combined task of the division is to affirm contract compliance and work one-on-one with customers during the following phases:

1. Eligibility
2. Customer Care

The Access-a-Ride program provides services through the partnerships with the following prime contractors:

- First Transit/Transdev – ADA Paratransit Call Center
- Transdev – ADA Paratransit Services Provision, operated with RTD owned vehicles
- Transdev Non-Dedicated - ADA Paratransit Services Provision with provided vehicles (cabs)
- MTM - ADA Paratransit Services Provision, operated with RTD owned vehicles
- MTM – ADA Paratransit Eligibility and Travel Training Services

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A detailed review of each of these vendors are available in Appendices to this Annex A-C.

Planning Assumptions

This Annex is a supplementary document to the RTD Emergency Operations Base Plan. The RTD EOP will also include hazard specific Annexes to identify the actions to be taken for a specific risk, hazard or emergency. This Annex will remain at an all-hazards level of planning and shall identify the roles and responsibilities of the Paratransit Division and all subdivisions thereof.

Organization and Assignment of Responsibilities

The primary role of the Paratransit Division is to liaise between the contractors and RTD to prepare for, mitigate against, respond to, and recover from emergencies or disasters. The positions described above shall participate according to their normal job responsibilities and as assigned by the Senior Manager of Paratransit or their designee

Concept of Operations

The Paratransit Division shall participate in the larger ICS and will send qualified representatives to the EOC upon request of the EOC Manager. The Senior Manager and Manager of Paratransit Services shall be trained as incident commanders and will have the authority to make decisions on scene.

The Paratransit Safety and Training Compliance Officer and Coordinator, Paratransit Eligibility Program shall be trained as EOC representatives and will have access to leaders for any decisions that need to be escalated but shall also have knowledge about available resources and the authority to commit department resources. The priority of tasks will be determined jointly with the EOC Manager in accordance with the overall planning effort for the emergency or event.

The division will evaluate damage to facilities, mobilize staff and resources, prioritize restoration of services based on resources available, and coordinate with other RTD departments/divisions. The paratransit department will ensure that its subdivisions keep logs of actions taken and information received.

Direction, Control, and Coordination

The Senior Manager of Paratransit Services will be responsible for overall direction of Paratransit Division and shall coordinate with their EOC representative to facilitate information exchange and resource management. If the Senior Manager of Paratransit Services is unavailable, the chain of succession identified in the Continuity of Operations Plan will be followed, which is duplicated here:

Manager of Paratransit Services
Paratransit Safety & Training Compliance Officer
Paratransit Quality Control Supervisor

Communication

First and foremost, all emergencies related to the Access-a-Ride service exclusively will be relayed to the General Manager and CEO, Chief Operations Officer, and Chief Communications

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and Engagement Officer by way of email and phone, when applicable. All emergencies which are brought to the division's attention for the purpose of providing assistance, will be communicated to each participating service provider once the nature of the emergency and required resources are identified. Communications to each service provider will begin by phone and followed up with an email of understanding outlining the emergency and required resources. In addition, for those events outside of the contractors' or division's ability to address, Emergency Management will be brought in to coordinate.

Administration, Finance, and Logistics

The paratransit division shall be responsible for maintaining records on:

- Staffing levels and hours worked by employees on account of the emergency/disaster.
- Damage incurred on relevant equipment/facilities/infrastructure as a result of the emergency.
- Objectives of division when responding to emergencies and log of relevant actions taken to accomplish.

This information will be provided to the EOC upon request.

Emergency Equipment on Revenue Vehicles

There are a total of 343 revenue service paratransit vehicles. Emergency equipment found on these vehicles include:

1. Two-way radio
2. Fire extinguisher
3. Emergency first aid kit
4. Triangles

These vehicles are also equipped with various accessible features, such as:

1. Wheelchair Ramps and Lifts

Finally, each of the vehicles can hold up to 55 gallons of unleaded gasoline fuel.

Annex Development and Maintenance

It is the responsibility of the paratransit division to develop or update internal Standard Operating Procedures to ensure its own operations capabilities. The Manager of Paratransit will coordinate the planning of all Paratransit operations related to emergency operations.

The paratransit division also is committed to testing and continuous improvement of this plan and will participate in exercises on a consistent basis, unless a real-world event or emergency makes doing so unrealistic. After each exercise or emergency, the paratransit division will participate in the After-Action Review process and will implement improvement plan items as relevant.

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This Annex will be updated after any emergency or exercise from which the AAR identifies necessary changes and every 3 years on the same cycle as the revision of the EOP: Base Plan.

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APPENDIX A ADA Call Center Contractor First Transit/Transdev

First Transit/Transdev – ADA Paratransit Call Center
1560 Broadway, Suite 1000, Denver 80202
Marcellinus Andrew
303-292-6560

First Transit/Transdev services the U.S. transportation industry through two unique service approaches: Transit Contracting, and Transit Management. With these two service approaches, First Transit/Transdev has participated on assignments of all types, sizes, and scopes throughout the world.

Types of employees

- Managers/Supervisors
- Call Center Staff
 - Reservationist
 - Dispatchers
 - Schedulers/Verification
 - Admin

Roles and responsibilities:

Managers: Managers/Admin staff will reach out to the appropriate staff to apprise them of the crisis, will coordinate reach out to staff and coordinate, and reach out to the affected participants to apprise them of the situation and to help resolve the issue Scope of First Transit/Transdev's responsibilities and Services

- Eligibility determination: No
- Scheduling/Verification: Yes
- Dispatch: Yes
- Reservations: Yes
- The movement of people: None

Potential hazards

- Natural Disasters/Fire
- Power Outage/Servers/ Phone lines down
- Bomb threats
- Medical Emergencies

Outline the responsibilities during the following emergencies: protection, prevention, mitigation, response, and recovery.

- Protection - ensure life safety of all call center staff
 - Managers/Supervisors along with Building Security and First Responders
- Prevention - education of staff regarding what to do for each emergency situation (i.e., Fire, weather, medical, power outage)
 - Training Manager
 - General Manager

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- Supervisors
- Mitigation - determine from Risk Assessment the weaknesses and areas that need to be improved upon
 - General Manager
 - Admin staff
- Response - Each supervisor will lead the response from their departments with oversight for the GM
 - Reservations Supervisor
 - Dispatch Supervisor
 - Scheduling Supervisor
 - Training Manager/HR Coordinator (Backup)
- Recovery - will be coordinated with the client (RTD), First Transit/Transdev Corporate and local GM, based on:
 - Severity of incident
 - Critical functions necessary to return back to "normal operations."
 - Recovery time needed from incident.

Describe how information will be shared among members of the division, especially during an emergency.

- Announcements/Verbal in person communication
- Emergency Phone numbers
- Landline/Mobile phone contact
- Internet based phone system (GENESYS)

The ADA Call Center is responsible for hiring and training personnel to perform all functions relative to supporting the Access-a-Ride program. Specific functions include reservations, scheduling, and dispatching of all paratransit trips.

The ADA Call Center is also responsible for providing support for the Access-on-Demand program. Support includes reserving same-day trip requests and dispatch functionality.

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APPENDIX B ADA Paratransit Service Contractor Transdev

Transdev – Service Provider
7500 E/ 41st Ave, Denver 80216
Sarah Meredith, General Manager
303-389-2140

Purpose

Transdev Services, Inc. is dedicated to the protection of its employees and the community from emergencies. When emergencies do occur, our Emergency Action Plan (EAP) is initiated. This EAP is in place to ensure safety from emergencies during regular hours and after hours.

Vehicles used in the program include:

- ∪ 234 cutaway vehicles
- ∪ 5 minivans
- ∪ 1 Shop Truck

Administrative Duties

Safety Manager (or designee) is the EAP administrator, who has overall responsibility for the plan. This responsibility includes the following:

- Developing and maintaining a written Emergency Action Plan for regular and after hours work conditions
- Notifying the proper rescue and law enforcement authorities, and the building owner/superintendent in the event of an emergency affecting the facility
- Taking security measures to protect employees
- Integrating the Emergency Action Plan with any existing general emergency plan covering the building or work area occupied
- Distributing procedures for reporting emergencies, the location of safe exits, and evacuation routes to each employee
- Conducting drills to acquaint employees with emergency procedures and to judge the effectiveness of the plan
- Training designated employees in emergency response such as the use of fire extinguishers and the application of first aid
- Deciding which emergency response to initiate (evacuate or not)
- Ensuring that equipment is placed and locked in storage rooms or desks for protection.
- Maintaining records and property as necessary
- Ensuring that our facility meets all local fire codes, building codes, and regulations

All location Managers have full authority to decide to implement the EAP if they believe an emergency might threaten human health. The following potential emergencies might reasonably be expected at this facility and thus call for the implementation of this EAP:

Earthquakes, Flooding, Tornados, missing endangered passengers are potential emergencies.

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The following personnel can be contacted regarding further information about the written Emergency Action Plan or an explanation of duties under this plan:

Ahmed Cisse, Sarah Meredith, Joey Camp can be contacted regarding specific duties.

Key management personnel home telephone numbers are kept in a safe place, Numbers are posted in the dispatch office, for immediate use in the event of an emergency. These telephone numbers include:

<u>Key management member:</u>	<u>Telephone number:</u>
Sarah Meredith	(720) 926-2841
Joey Camp	(303) 522-2466
Dennis Morgan	(720) 207-7719
Ahmed Cisse	(720) 468-6982
Troy Kuskie	(303) 854-4490

Alarms

Different emergencies call for different alarms to indicate what actions employees should take. Transdev has established an employee alarm system. Transdev uses the radio system, email, and word of mouth.

Because we use a communication system as an alarm system, all emergency messages have priority over all non-emergency messages.

We have posted the following emergency telephone numbers near telephones, or emergency notice boards, and other conspicuous locations for use when telephones serve as a means of reporting emergencies:

<u>Emergency responder:</u>	<u>Telephone number:</u>
Denver Police Department	(303) 370-1500
Denver Fire Department	(720) 865-3865 or (720) 913-2400
All others including EMS	911
National Response Center	1 (800) 424-8802 or (202) 267-2675
Utilities/EDC/Chamber of Commerce	(303) 620-8092
Hazmat/Response Team	911

Emergency Reporting and Weather Monitoring Procedures

When employees detect an emergency that requires an evacuation, such as a fire or hazardous release, they should notify 911.

All employees should assist with passing along the evacuation signal with the expectation that someone may not have heard or understood the signal.

Evacuation Procedures

Some emergencies require evacuation or escape procedures, while some require employees to stay indoors, or in a safe area. Our emergency escape procedures are designed to respond to many potential emergencies, depending on the degree of seriousness. Nothing in these

RTD Emergency Operations Plan

procedures precludes the Plan Administrator's authority in determining whether employees should remain inside or evacuate.

At this company, the following types of emergency evacuations exist: Fire, Flood, Tornado.

Our emergency evacuation procedures and assignments are designed to respond to many potential emergencies that require them, including:

Facility fires, Earthquakes, flooding that affects the facility's safety and Chemical releases.

Employees need to know what to do if they are alerted to a specific emergency. After an alarm is sounded to evacuate, employees should take the following steps:

Immediately evacuate their area to the designated rally point. Supervisors/shift leaders should verbally inform any and all staff to evacuate.

Management and Supervisory personnel must perform facility sweeps to account for all employees, visitors, contractors, or other persons known to have been in the facility during and immediately following the evacuation.

Once evacuated, employees are to head toward their designated exterior or safe area, where a head count will be performed, and further instructions given. Following is a list of exterior refuges/safe zones:

Procedures to Account for Employees

Trained evacuation personnel assist in safe and orderly evacuation for all types of emergencies that require evacuation. Once evacuation is complete, they conduct head counts. The employees selected are trained in the complete workplace layout and the various alternative escape routes from the workplace. Before leaving, these employees check rooms and other enclosed spaces in the workplace for employees who may be trapped or otherwise unable to evacuate the area. A report on the status of any persons unaccounted for should be given immediately to emergency services upon their arrival. A list of trained personnel appears below:

Name/title:	Department:	Shift:
Sarah Meredith, General Manager	Operations	ALL
Operations Supervisor	Operations	ALL
Dennis Morgan, Training Manager	Training	ALL
Ahmed Cisse, Safety Manager	Safety	ALL
Joey Camp, AGM/ Operations Manager	Operations	ALL
Troy Kuskie, Maintenance Manager	Maintenance	ALL

This list indicates a sufficient number of employees who have been designated by the company and trained to:

- Direct and assist in safe and orderly emergency evacuation,
- Provide guidance and instruction for all types of emergency situations,
- Be aware of employees with special needs who may require extra assistance,

RTD Emergency Operations Plan

- Use the buddy system, and
- Avoid hazardous areas during an emergency evacuation.

Frontline supervisors must be aware of the locations of those employees working on a particular day when an emergency occurs, as well as suppliers, customers, and other non-employees on the premises, when an emergency occurs, and be aware of who is absent or otherwise away from the premises. Accounting for employees and non-employees will aid local responding fire/rescue departments in determining whether rescue efforts are necessary. Described each frontline supervisor's employee/non-employees tracking method below:

Name of supervisor:	Department:	Shift:	Tracking method:
Dennis Morgan	Training Department	Day Shift	Roll Call-Work Schedule
Ahmed Cisse	Safety Department	Day Shift	Roll Call-Work Schedule
Bruce Daniels	Road Supervisor	Day Shift	Roll Call-Work Schedule
Mustafa Razzazian	Road Supervisor	Night Shift	Roll Call-Work Schedule
Stacey Hicks	Road Supervisor	Mid Shift	Roll Call-Work Schedule
Joey Camp	Operation/AGM	Day Shift	Roll Call-Work Schedule
Troy Kuskie	Maintenance	Day Shift	Roll Call-Work Schedule
Sherronda Wright	Road Supervisor	Day, Shift	Roll Call-Work Schedule

Each department reports to their respective representative as follows: Operations, Customer Service (Dispatch) Maintenance, Safety and Training.

Once each evacuated group of employees have reached their evacuation destinations, each trained evacuation employee:

- Takes roll of his or her group,
- Ensures all persons are accounted for,
- Reports to a central checkpoint managed by Safety and Operations Manager,
- Assumes role of department contact to answer questions.

Head count results should be given to the Fire Chief or firefighter, if requested.

No employees are to return to the buildings until advised by the Safety or Operations Manager or designee (after determination has been made that such re-entry is safe). If anyone is injured or contaminated, the Plan Administrator will activate rescue and first aid actions. If an emergency incident expands, the EAP Administrator may send employees home by normal means or provide them with transportation to an offsite location.

Non-Evacuation Emergency Procedures

Transdev Services, Inc. has the following non-evacuation procedures:

The following events are for emergencies that affect employees who are driving company equipment in service: In the event of an accident, the employee will notify the dispatcher. The dispatcher in turn, will notify all Denver Critical personnel informing them of the accident.

In the Event of a Tornado Watch

Tornadoes are monitored by News feeds via radio and television.

RTD Emergency Operations Plan

Tornado Alarm Response

In the event of a tornado, it is corporate policy to provide emergency warning and shelter. Once employees are made aware of a tornado situation, they are to follow these procedures:

Employees should stay away from windows, but stay inside the building they are in.

Employees are not to leave the shelter or return to their regular duties until all clear is given.

Safety or Operations Manager will determine when it is safe for employees to leave their tornado shelter and return to work.

If anyone is injured or contaminated, the Plan Administrator will activate rescue and first aid actions.

Critical Operations

Transdev Services, Inc. has critical operations that cannot be shut down for emergencies. These operations include the following:

- The transport of endangered passengers to a safe location.

The employees who are designated to remain behind during evacuation to care for critical plant operations include the following:

Name (or title):	Department:	Plan system operated:
Joey Camp	Operations	Phones
Sabrina Turner	Operations	Phones, Dispatch System
TBD	Safety (Supervisor)	Phones, Dispatch System

The procedures to be taken by those employees who have been selected to remain behind to care for essential plant operations until their evacuation becomes absolutely necessary include the following:

Employees will stay in contact with the Operations Manager or GM to report status of operations.

Plan Administrator Duties

During an emergency, the Safety Manager and GM will do the following: Make appropriate emergency contacts and coordinate evacuations as necessary.

Rescue and First Aid

Rescue and first aid may be necessary during emergency situations. Circumstances calling for rescue and/or first aid include:

Circumstances/Procedures:
TBD by first responders

RTD Emergency Operations Plan

Professional emergency services responding in an emergency will help with and direct all rescue and medical duty assignments upon their arrival on site.

Training

Transdev's Plan Administrator reviews the Emergency Action Plan at the following times with each employee covered by the plan:

- Initially when the plan is developed,
- whenever a new employee is hired,
- whenever the employee is assigned initially to a job,
- whenever an employee's responsibilities or designated actions under the plan change,
- whenever new equipment, materials, or processes are introduced into the workplace,
- whenever the layout or design or the facility changes, and
- whenever the plan is changed.

The training includes the following:

Review of the plan, mock emergencies, and evacuation drills.

The information in this plan is not intended for casual reading but is intended to get the appropriate message across. We present the material for training in the following manner:

- Safety Meetings,
- Senior Staff Meetings
- Initial Training

The contents of this plan are communicated through a briefing delivered by supervisors followed by a demonstration.

The contents of this plan are communicated through a presentation followed by a drill.

Transdev Services, Inc. performs drills for the following emergencies:

Any and all evacuation alarms. These drills are held at least annually.

After a drill, the Plan Administrator judges the effectiveness of the plan and reviews any employee input concerning the drill. Employees performing the drill may identify something that did not follow procedure or was ineffective. For example, they may discover doors that would not open; they may enter storage closets instead of exiting; they may get lost and confused or they may carry a suspicious package through the facility. These are the types of things the Plan Administrator needs to hear about after a drill. That way, they can be addressed before a real emergency.

Emergency Equipment and Support

Our company provides the following equipment and support for use by our trained personnel during emergencies:

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- Fire extinguisher

Transdev is contracted by RTD to provide 65% of the Access-a-Ride service with the use of RTD provided cutaway buses and 10% of non-dedicated service with the use of privately owned taxicab vehicles.

Transdev is responsible for hiring and training their operators, to proficiency, relating to all matters in providing safe and reliable paratransit services. Training includes customer service, vehicle operation, and a clear understanding of policies and procedures.

Additionally, Transdev is responsible for all maintenance of all RTD provided vehicles.

RTD Emergency Operations Plan

APPENDIX C ADA Paratransit Service Contractor MTM

MTM – Service Provider
280 W. 62nd Ave, Denver 80216
Denise Pinuelas, General Manager
760-885-1535

MTM Transit's System Safety Program Plan (SSPP) emphasizes that every employee is responsible for ensuring the safety of customers, employees, the public, contractors, and MTM Transit's property and fleet. The MTM Transit safety policy presented in this SSPP applies to all employees and to all MTM Transit vehicle activities, including but not limited to all operations; maintenance and support activities; and the design, construction, procurement, installation, and testing of equipment and facilities. MTM Transit's SSPP includes, but is not limited to, missions, responsibilities, rules, and procedures for a coordinated and comprehensive variety of safety programs developed to secure a systematic approach to transportation safety. The SSPP also ensures all MTM Transit's safety responsibilities and tasks are documented in a logical and organized manner, and that programs are consistent with safety programs of transportation operators throughout the State of Colorado.

MTM Transit's management is fully committed to developing, implementing, and updating clearly defined SSPP safety goals. SSPP safety goals provide direction to improve public safety by attaining a safe operating environment and reducing the number, rate, and severity of potential vehicle accidents. The SSPP also provides procedures to measure the success of meeting established goals.

Safety goals are updated annually or as required based on system changes. All employees are actively encouraged to participate in developing and updating goals by presenting suggestions to the President/CEO and/or her designated representatives. The President/CEO has final approval of SSPP safety goals.

MTM Transit's safety goals include, but are not limited to, the following:

- ∪ Reducing the number, rate, and severity of potential vehicle accidents
- ∪ Attaining the safest possible operating environment
- ∪ Providing effective maintenance and preventative maintenance for all MTM Transit property in a timely manner
- ∪ Assigning each employee with responsibility for performing job functions in the safest possible manner
- ∪ Clearly defining employee safety roles and responsibilities
- ∪ Continuously improving the skills and knowledge of all employees involved with the safety of the system through training and other means
- ∪ Continuously evaluating operations and procedures affecting system safety

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- Providing a system-wide safety policy that coordinates safety activities throughout the organization and ensures a systematic approach to managing safety hazards
- Communicating appropriate safety policies and procedures to all employees and the public
- Interfacing effectively with appropriate government agencies, professional organizations, and citizen's groups regarding safety

To serve RTD, MTM Transit employs the following positions:

- 6 managers, including a Safety Manager
- 80 operators (72 full-time and 8 part-time)
- 4 road supervisors
- 13 maintenance and utility personnel (2 supervisors, 5 technicians, and 6 utility staff)
- 6 dispatchers
- 1 trainer
- 1 talent acquisition specialist
- 1 quality assurance specialist
- 4 administrative personnel

Scope of Operation

This section covers the type of service provided by MTM Transit, as well as operating routes, schedules, and safety-related maintenance requirements.

Scope of Transportation

MTM Transit provides paratransit vehicle service for RTD's Access-a-Ride program, including transportation within, but not limited to, the counties of Boulder, Broomfield, Denver, Jefferson, Adams, Arapahoe, and Douglas. Service also includes in-house maintenance of the RTD vehicles used for Access-a-Ride.

Vehicles used in the program include:

- 86 cutaway vehicles
- 3 minivans
- 1 Shop Trucks

These vehicles include both ADA accessible and ambulatory vehicles, as outlined by RTD. All vehicles are equipped with a two-way radio system connecting them with the dispatchers.

Organization and Structure

Every employee and department of MTM Transit is expected to contribute to the safety of passengers, employees, and the public, as well as the prevention of property damage. All MTM Transit employees and departments are responsible and accountable for preventing accidents and conducting job functions safely. All employees and departments must comply with all applicable occupational safety operations standards, rules, and instructions pertaining to their job functions.

Equipment and Facilities

Equipment and facilities contribute to the safety of passengers, employees, and the public. MTM Transit puts safety first when choosing vehicle stop locations and routes. Routes avoid dangerous locations and other safety hazards, such as backing up, to every degree practical.

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Dispatchers are assigned to an office within the main building. Dispatchers are in contact with all operators through a two-way radio communication system.

All appropriate emergency numbers and copies of emergency procedures are provided to the dispatcher. A multi-line phone system is located next to the two-way radio.

All vehicles in the fleet meet or exceed State and Federal DOT standards. Two-way radio communications systems are installed in all vehicles. Safety equipment on each vehicle includes, but is not limited to, one five-pound BC fire extinguisher, one First Aid Kit, and one set of triangle reflectors.

System Safety Organization

MTM Transit has appointed a Safety Manager who reports directly to the General Manager and has ultimate responsibility for safety. Their responsibilities include ensuring operators stay current with their safety training.

In addition to overseeing safety for RTD, the Safety Manager's responsibilities include assisting the General Manager with the following tasks:

- o Investigating all accidents that are required by regulation to be reported to RTD and the Colorado DOT, including, but not limited to:
 - o All fatal accidents
 - o Accidents that result in five or more injuries
 - o A fire onboard a revenue vehicle to which emergency services respond
 - o All accidents caused by mechanical failure
- o Ensuring hazard assessments and appropriate resolution processes are initiated once an unsafe activity or situation is identified that presents a potential or actual hazard
- o Investigating all work-related employee injuries, especially those that may require immediate hospitalization, or result in disability or death
- o Evaluating health and safety issues on an ongoing basis to identify unfavorable practices and conditions that may require correction
- o Incorporating safety constraints and preventative procedures into daily operations
- o Promoting system safety coordination to ensure that relevant safety information is communicated to all departments and personnel
- o Assisting management and employees in the development and implementation of safety rules and procedures and emergency preparedness plans
- o Assisting in conducting safety inspections and performing system safety audits to monitor system-wide compliance with the SSPP
- o Supporting management to ensure the SSPP is updated on an annual basis
- o Providing SSPP information to newly hired employees

Personnel

The local management team includes the following individuals:

Name	Title/Position
Denise Pinuelas	General Manager

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Lisa Ford	Operations Manager
Pody Hunnicutt	Safety Manager
Thomas Garrecht	Training Manager
Vincent Walker	Maintenance Manager
Heather Travis	Human Resources Manager

Our local management team is supported by the following corporate support individuals:

Name	Title/Position
Alaina Maciá	President and CEO
Kerri Mileski	Chief People Officer
Brian Balogh	Chief Operating Officer
Leslie Stone	Regional Vice President
Matt Weinberg	Director of Safety Administration
John Seber	Regional Director of Maintenance
Pat Lopez	Director of Transit Technology

Hazard Identification

MTM Transit performs hazard analysis to identify hazardous conditions that may be eliminated or controlled. Potential hazards are systematically identified and assessed to determine their impact on the total system. Determinations are made regarding the extent of corrective measures to eliminate the hazard or reduce its severity.

Safety Problem Identification

The identification of hazards that may potentially result in accidents is the first step in a proactive safety program. MTM Transit's hazard resolution process provides plans and procedures to identify and manage hazards. The process identifies and analyzes safety issues for the purpose of determining hazard severity and probability, recommending corrective actions, and documenting results.

The hazard identification process is initiated through any of the following ways:

- ∪ Customer Concerns. Customer safety concerns regarding operator performance, service, or equipment are recorded. Concerns are reviewed and reported to the General Manager. Resolutions are explored.
- ∪ Employee Observations. Any employee who observes any current unsafe condition is responsible for notifying their supervisor or a member of the local management team regarding concerns at their earliest convenience.
- ∪ Internal/External Audits. Findings of audits conducted by and for MTM Transit are monitored and communicated to the responsible department.
- ∪ Unusual Events. Management is responsible for initiating responses to unusual events that occur within the facilities or vehicle system.
- ∪ Legislative Requirements. The General Manager monitors legislation pertaining to safety and informs appropriate departments as required.
- ∪ Industry Trends. Each department is responsible for analyzing industry trends that may be related to internal hazards.

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- o Safety Team. Team members are responsible for conducting safety observations and monitoring corrective action regarding observed hazards or safety compliance.

In addition to the hazard resolution process, ongoing operations are monitored and reviewed, equipment is inspected and analyzed, and operating procedures are analyzed to identify potential safety problems. Hazards that are identified are described on the Hazard Assessment Form

Methods to develop and implement resolution alternatives include, but are not limited to, the following:

- o As soon as a potential or actual hazardous condition is reported by an employee, customer, or other source, the department head responsible for the equipment, facility, or environment subject to investigation is immediately notified.
- o If, in the best judgment of the responsible party, a hazard exists that requires urgent attention, immediate action is taken to dispose of the hazard.
- o A hazard assessment is forwarded to the General Manager or their designated representative to justify decisions or actions taken or suggested to be taken regarding any hazards or reports of hazards.
- o In most situations, resolutions to problems are developed with the cooperation of the department manager or supervisor presenting the problem, a member of the local management team, and other individuals as required. Examples of recommendations include, but are not limited to, the following:
 - Repair or replacement of vehicles
 - Route changes
 - Retraining
 - Corrective action for an employee
- o Hazard assessment reports and resolution priorities are evaluated by the General Manager or their designated representatives. Recommendations may range from "Immediate Resolution Required," to "Resolution Required Within 24 Hours," to "Resolution Required Within One Week of Notification," to "Conditionally Acceptable." If at any time the General Manager does not concur with the hazard assessment or action taken, they make the final determination regarding the disposition of the hazard.
- o When evaluating assessment reports, the impact on safety resulting from implementation resolution alternatives are assessed. The effects of the implemented resolutions are assessed also for further action.
- o The safety team is responsible for coordinating all corrective action implementation.
- o Follow-up is conducted to ensure that work is completed on all implemented resolutions. The safety team is responsible for overseeing the follow-up process.
- o Hazard assessment reporting information is reviewed monthly. Trend analyses of all reported potential hazards, incidents, or accidents are also performed monthly.

Safety-Related Maintenance Activities

MTM Transit recognizes that well-maintained equipment and facilities result in a reduction in potential hazards. Service includes in-house maintenance of the RTD vehicles used for Access-a-Ride. All maintenance work adheres to applicable Federal, State, and local requirements, including RTD's requirements. All maintenance technicians are certified. Maintenance technicians complete a Preventative Maintenance Inspection and Service Checklist per RTD

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requirements. Inspections are carried out twice a year to ensure compliance with maintenance regulations.

This section refers to maintenance rules and procedures that apply to safety, including flow of information, working schedules and responsibilities of maintenance personnel, equipment and locations which require maintenance, and frequency in which activities are carried out. Routine procedures including pre-trip inspections carried out by operators prior to taking a vehicle into service and procedures regarding defects that are discovered while in service are also provided in this SSPP.

- ψ Vehicle Maintenance Policies and Programs
Vehicle maintenance policies and procedures presented in this SSPP include, but are not limited to, the following:
 - υ Employees receive orientation to vehicle maintenance policies and programs.
 - υ Scheduled service is appropriately provided for equipment, based on mileage and time.
 - υ All Preventative Maintenance on RTD vehicles is performed at regularly scheduled intervals as required by RTD Maintenance, and all PM data is input into the RTD Maintenance Management System (MMS). All PMs are performed within 300 miles of the RTD-indicated 3,000-mile interval, or, if lacking an RTD interval, of the manufacturer's recommended interval.
 - υ Outside contracted maintenance technicians providing repairs for MTM Transit are expected to adhere to maintenance policies that promote safety.
 - υ MTM Transit adheres to rigorous policies regarding the purchase and maintenance of used vehicles.
 - υ Supervisors ensure that emergency request for safety-related requirements are processed in an expeditious manner.
 - υ Prior to the award of a contract, bid, or proposal, the maintenance department ensures that MTM Transit has complied the most appropriate specifications, including all safety requirements.
 - υ Supervisors ensure that all warranty provisions contained in vehicle, product, or service agreements are complied with by vendors as required.
 - υ Supervisors ensure that tests of vehicles or products are performed with the proper tools and equipment and that employees performing tests have received appropriate training in test procedures.
 - υ Supervisors monitor vehicle and safety information issued by manufacturers and vendors to ensure that such information is disseminated to all affected departments and employees.

Internal Reviews

MTM Transit performs internal audits to help ensure that all elements within the property follow the SSPP. As appropriate, the plan includes a schedule of audits, objectives of the audits, and how identified discrepancies are resolved.

Periodic reviews are performed to ensure that operators and all other employees are following procedures. Maintenance work recall records are reviewed to check the proficiency of the maintenance personnel. The Motor Vehicle Department's instant notification system for traffic violation conditions is applied for all employees. All operators are periodically checked as

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appropriate per specific State guidelines. Periodic road checks are performed by safety personnel.

Management conducts periodic reviews to ensure that the quality of training for operators and all personnel is appropriate. Results of the reviews are distributed to appropriate personnel, with actions assigned. Management follows up on the effectiveness of actions taken because of the internal reviews.

External Reviews

MTM Transit is also subject to external reviews, audits, and/or investigations with outside agencies including, but not limited to, the following:

- ↳ Federal
 - Federal Transit Administration
 - Environmental Protection Agency
 - Occupational Safety and Health Administration
 - Bureau of Alcohol, Tobacco, and Firearms
 - American Public Transit Association.
 - National Transportation Safety Board
 - National Institute for Occupational Safety and Health (for workplace safety)
- ↳ State of Colorado
 - Colorado Department of Transportation
 - Colorado Department of Environmental Conservation
 - Colorado Department of Labor
 - Colorado Office of the Physically Challenged
 - Controller
- ↳ Local
 - Health Department
 - Fire Marshall
 - Planning Commission
 - Department of Public Works (Hazardous Materials Section)
 - Police Departments
 - Emergency Planning Commissions
 - Fire Departments
 - Audit Department
- Insurance Company audits include reviewing operator abstracts, accident files, and workplace safety. MTM Transit participates in emergency preparedness meetings under the direction of the Local Emergency Planning Commission.
- Recommendations made by external auditing agencies are reviewed by management and appropriate departments. Recommendations are filed with a rationale for action. Actions are made as required.

Professional Development

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MTM Transit encourages all employees, particularly those responsible for safety, to enhance their professional skills through training, development planning, professional affiliations, and other programs. Training is provided to all MTM Transit employees.

Mandatory and voluntary programs provided by manufacturers, educational institutions, and other sources are scheduled for employees as appropriate. Records regarding training are kept for each employee. A training and development plan is in place for individuals responsible for safety.

Safety team personnel are informed of new codes and regulations that affect MTM Transit. Members of the safety team are encouraged to attend professionally accepted safety courses, such as at USDOT Transportation Safety Institute and universities for professional development. Safety team members are encouraged to participate in industry-wide organizations.

MTM is contracted by RTD to provide 25% of the Access-a-Ride service with the use of RTD provided cutaway buses.

MTM is responsible for hiring and training their operators, to proficiency, relating to all matters in providing safe and reliable paratransit services. Training includes customer service, vehicle operation, and a clear understanding of policies and procedures.

Additionally, MTM is responsible for all maintenance of all RTD provided vehicles.

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APPENDIX D ADA Paratransit Eligibility Assessment Contractor MTM

MTM – Eligibility & Travel Training Center
3851 N. Steele Str., Unit 1479, Denver 80202
Sara Bohar, Program Manager
720-844-7099

Emergency Coordinator – Rachel Peterson 623-243-0956

Evacuation route maps have been posted throughout the work area. The following information should be marked on each map:

- Emergency Exits
- Primary and Secondary Evacuation Routes
- Locations of Fire Extinguishers
- Fire Alarm Pull Stations
- Assembly/Mustering Points

When fire is discovered:

- Activate nearest fire alarm
- Notify the local fire department by calling: 720-913-3473 or 911

Fight fire ONLY if:

- The fire department has been notified
- The fire is small and not spreading to other areas
- Escaping the area is possible by backing up to the nearest exit
- The fire extinguisher is in working condition and personnel are trained to use it

Upon being notified about the fire, occupants must:

- Leave the building using the designated escape routes
- Assemble in the designated area (specify location): YSY Yard Green Space
- Remain outside until the competent authority announces it's safe to reenter

Designated Official, Emergency Coordinator or Supervisors must:

- Coordinate an orderly evacuation of personnel
- Perform an accurate head count of personnel reported to the designated area
- Provide the fire department personnel with the necessary information about the facility

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Area/Floor Monitors must:

- Ensure that all employees have evacuated the area/floor
- Report any problems to the Emergency Coordinator at the assembly area

Tornado:

If a tornado warning is announced, take the following actions:

- Proceed to your pre-designated severe weather shelter (insert location):
Interior hallway behind MTM's Office
- Stay away from outside walls, doors and windows
- Use arms to protect head and neck
- Remain sheltered until the tornado threat is announced to be over

Earthquake:

- Stay calm and await instructions from the Emergency Coordinator
- Keep away from overhead fixtures, windows, filing cabinets and electrical power
- Assist people with disabilities in finding a safe place

MTM is responsible for all functions related to the paratransit eligibility process. In that capacity, MTM is responsible for determining paratransit eligibility for new customers and those reapplying for services.

Additionally, MTM provides travel training services for individuals seeking greater independence and a desire of using RTD fixed route services.

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Annex E: Capital Programs

Purpose

The purpose of this Annex is to define the actions and roles necessary for the Capital Programs Department to participate in a coordinated response within the framework of the RTD Emergency Operations Plan. This Annex provides guidance to subdivisions within Capital Programs with a general concept of potential emergency assignments before, during, and following emergency or disaster situations.

RTD and its departments must plan for multiple emergency situation ranging from loss of track, power, facilities, office space or major road detours. It is the responsibility for every department/division to develop contingency plans.

The objective of this Annex is to elaborate on the Capital Programs Department role in meeting the agency's mission during times of emergency. The primary objective of Capital Programs is to provide key personnel for restoring business functions at affected facilities and continue providing critical services required for transit operations in an environment that is threatened, diminished, or incapacitated.

Scope

This Annex applies to all staff, equipment, divisions/subdivisions, and operations of the Capital Programs department and primarily describes the department's emergency actions.

Situation Overview

Characteristics

Capital Programs is responsible for RTD's transit system physical modifications and maintenance for operational, and administrative buildings (Park-n-Rides, Stations, elevators and RTD owned Real Property). A, B, and G Commuter Rail Lines and Commuter Rail Maintenance Facility are maintained by Denver Transit Operators, under a concession agreement with RTD. Routine maintenance of RTD operated rail alignments are by the respective rail maintenance groups. Capital Programs undertakes larger projects that are beyond the capabilities of Rail maintenance.

In addition to maintaining these assets, the daily maintenance duties include janitorial services, groundskeeping, snow removal, contracted services, and implementation of a systematic preventative maintenance programs. Capital Programs primary mission is to maintain RTD's infrastructure to support the Operations Department in transporting customers safely. The secondary mission is to support the infrastructure needs of the rest of the agency. The district wide maintenance needs are handled by three main subdivisions with support from Real Property:

Construction

This division manages major construction projects and oversees maintenance of RTD operated public facilities and Driver Relief Kiosks.

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Engineering

The engineering division is responsible for planning and engineering the extension, modification, and major repairs of the RTD transit system. This division plans, and designs, improvements for bridges, Park-n-Rides, Roadways, and Track work. Professional staff with special capabilities contribute towards these efforts including: Architecture, Landscape, Urban Design, Civil, Drainage, Lighting, Roadway, Structural, and Utilities.

Facilities

The facilities division is responsible for inspection and maintenance for all RTD operated buildings. Specifically, the division is responsible for maintaining systems ranging from HVAC, Fire, Electrical, and Plumbing. In addition to maintenance efforts, this division is also involved with Bike Amenity Improvements, Energy Retrofits, Painting, Furniture Repairs, Electrical Upgrades, and Tenant Finish Improvements.

Rail Systems Engineering

The designing of system elements range from the overhead catenary poles and wire, traction power stations, to communications and relay houses. **Systems engineering is outsourced with one project manager overseeing the contract. There is limited technical expertise in-house in this area.**

Real Property

The real property division is primarily responsible for acquisition and disposition of all RTD properties. The division regularly interacts with the general public to manage the use of RTD properties. In addition, this division works in conjunction with the engineering division in providing inspection and permits for construction of private and public development projects with the use of RTD's right-of-way.

Mapping and Engineering Data

This division is responsible for surveying and mapping, responding to Utility Notification Center for Colorado utility locate requests, reviewing and approving utility crossing designs, and maintaining engineering information and mapping. This division maintains the Geographic Information System (GIS) related to properties and utilities.

Engineering Programs

This division works on FasTracks projects, and major initiatives such as the Facilities and Fleet Transition Plan.

Quality Assurance

This division works on various quality assurance, audit, and material testing activities.

Concept of Operations

Capital Programs shall participate in the larger ICS and will send qualified representatives to the EOC upon request of the EOC Manager. Facilities Supervisors shall be trained as Incident Commanders and will have the authority to make decisions on the scene of an emergency. Manager, Facilities Maintenance Operating Facilities, Manager, Facilities Maintenance Public

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Facilities, and Manager, Contracted Maintenance will be trained as EOC representatives and will have access to leaders for any decisions that need to be escalated, but shall also have knowledge about available resources and the authority to commit department resources. The department will evaluate damage to facilities, mobilize staff and resources, prioritize restoration of services based on resources available and coordinate with other RTD departments/divisions. Capital Programs will ensure that its subdivisions keep logs of actions taken and information received. The priority of tasks will be determined jointly with the EOC Manager in accordance with the overall planning effort for the emergency or event.

Organization and Assignment of Responsibilities

Prevention

- Utilization of Crime Prevention through Environmental Design principles when designing new or changing infrastructure

Mitigation

- Participate in trainings, exercises and drills as requested

Response

- Liaise directly with first responders regarding facility hazards, layout, and any other requested information

Recovery

- Facilities Maintenance and Facilities Engineering subdivisions will:
 - If a facility is damaged, lead efforts to make facility operational again
- Engineering Division will:
 - Conduct root cause analysis and resolve root cause if emergency occurs on Rail corridors, Park-n-Ride, Stations or Bridges

Incidents could occur during duty and/or non-duty hours. The ability and timeliness to execute the Capital Programs operating procedures is contingent upon factors associated with occurrence of the events. In most cases, it is likely there will be a warning of at least a few hours prior to an incident. Under these circumstances, the process of the activation will be more planned including complete and orderly alert and notifications. The activation for the incidents occurring with little to no warning and during duty hours is less routine and potentially more difficult.

Direction, Control, and Coordination

The AGM Capital Programs will be responsible for the overall direction of the Department and will coordinate with their EOC representative to facilitate information exchange and resource management. If the AGM CP is unavailable, the order of succession will be:

Senior Manager, Construction

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Director Quality Assurance

Chief Engineer

Administration, Finance, and Logistics

Capital Programs shall be responsible for maintaining records on:

- Staffing levels and hours worked by employees on account of the emergency/disaster
- Emergency expenses related to response/repair and recovery
- Damage incurred on relevant equipment/facilities/infrastructure as a result of the emergency
- Objectives of department/division when responding to emergencies and log of relevant actions taken to accomplish

This information will be provided to the EOC upon request.

Annex Development and Maintenance

It is the responsibility of the Capital Programs Department to develop or update internal Standard Operating Procedures to ensure its own operations capabilities. The AGM of CP will coordinate the planning of all Capital Programs operations related to emergency operations.

Capital Programs department also is committed to testing and continuous improvement of this plan and will conduct exercises on a consistent basis, unless a real-world event or emergency makes doing so unrealistic. After each exercise or emergency, Capital Programs department will participate in the After Action Review process and will implement improvement plan items as relevant.

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Annex F: Transit Police and Emergency Management Department

Purpose

The purpose of this Annex is to define the actions and roles necessary for the RTD Transit Police and Emergency Management Department to participate in a coordinated response within the framework of the RTD Emergency Operations Plan. This Annex provides guidance to groups within the Transit Police and Emergency Management Department with a general concept of potential emergency assignments before, during, and following emergency or disaster situations.

RTD Transit Police and Emergency Management Department division is responsible for Security, Traffic Control, Arrests, First Aid-First Responders, Shelter Needs, Transportation Issues, Crime Issues and Investigate any criminal matters.

Included in the Transit Police and Emergency Management Department is Emergency Management, Video Investigations, Dispatch, Integrated Security and Technology Department, and the RTD Transit Police Patrol Division.

Scope

The RTD Transit Police and Emergency Management Department will respond to an emergency with appropriate resources from each of its divisions for emergencies to include a civil disturbance, mass arrest, Law Enforcement related emergency event, a natural disaster and any other emergency which would benefit from the use of a EOC activation. The RTD Transit Police and Emergency Management Department will utilize all its resources to include mutual aid from other police departments in the Denver Metro area.

Situation Overview

Characteristics

The RTD Transit Police and Emergency Management Department is located at 1900 31st Street, Denver, Colorado 80216, which is the main headquarters of the RTD Transit Police and Emergency Management Department. At this location there are marked and unmarked patrol vehicles, radios, less lethal weapons to include less lethal shotguns, Tasers and all computers and laptops. The department also has two explosive detection dogs which roam the system to identify any potential explosive materials, as well as respond to calls where explosives or firearms crimes may be involved. All police personnel start shifts at this location, which includes officers, corporals, sergeants, lieutenants, commanders, deputy chiefs and chief. The roles and responsibilities of the RTD Transit Police are to:

- Enforce state law
- Conduct criminal investigations
- File reports
- Administer first aid
- Hold perimeters
- Make arrests
- Operate equipment-vehicles
- Patrol areas of responsibility
- Educate

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- Assist the emergency operations center with any police matter

The police department may also utilize security personnel and officers from other departments (Mutual Aid).

Included at this location is Video Investigations which utilizes surveillance cameras to view any situation on RTD property. Video Investigations also utilizes computers and cell phones. The roles and responsibilities of video investigations is to conduct video surveillance, conduct video investigations and to complete reports on the investigations.

Emergency Management is also included at this location who utilizes computers, cell phones, policies, and plans for emergency situations. The roles and responsibilities of emergency management are to respond to and coordinate during emergency events, maintain emergency plans, develop and serve as the EOC manager during activations of the emergency operations center, and organize and conduct emergency preparedness training, exercises, and drills.

Transit Police Communications (TPC) has two locations. The District 1 dispatch center is located at 1205 W 7th Avenue, Denver, Colorado 80204. The District 2 dispatch center is located at 701 W 48th Avenue, Denver, Colorado 80216. The roles and responsibilities are to:

- Manage public safety related communications, including, but not limited to receiving emergency and non-emergency safety and security-related phone calls and electronic communications from the public
- Track and dispatch RTD police and security assets to emergency and non-emergency incidents
- Request and coordinate assistance from outside agencies, including law enforcement, fire, medical, and other first responders, and serving as the point of contact for these agencies
- Maintain accurate records of reported incidents and incident responses
- Maintain awareness of officer location, activity and safety
- Make public safety related notifications to internal and external stakeholders
- Monitor district-wide CCTV systems for illegal or dangerous activities
- Set perimeters
- Monitor weather
- Managing calls for service

Also at the 1205 W 7th Ave location is the Integrated Security and Technology Department which monitor and maintains functionality for all RTD properties' security technology and video surveillance.

Planning Assumptions

All hazards that utilize an EOC, shall provide a strategic response by all members and assigns specific responsibilities in the event a plan is activated. The plan is based on the concept that emergency response functions will generally parallel the normal operations of all RTD departments and divisions. To the extent possible, the same employees will be utilized in both cases. Those day-to-day functions which would not contribute to emergency operations may be suspended for the duration of the emergency and recovery period. Resources not normally required for a day-to-day operation may be redirected to accomplish emergency tasks.

RTD Emergency Operations Plan

TPC is lead department for maintaining contact with outside agencies, including law enforcement, fire, medical, and other first responders. TPC is not a Public Safety Access Point (PSAP).

Organization and Assignment of Responsibilities

Protection:

- Set up perimeters
- Makes appropriate arrests for those violating the Code of Conduct or instigating other violence
- Crowd control
- Protect private and public property
- Video Investigations will:
 - Assist with all video surveillance monitoring and any video of the incident.
- Integrated Securities and Technology will:
 - Assist with any video evidence
 - Maintain building security through key card access

Prevention:

- Control any active dangerous situations
- Identify and assess hazardous situations
- Prevent accidents
- Prepare security incident safety plan
- Ensure messages are communicated
- Stop unsafe acts
- Correct unsafe conditions
- Video Investigations will
 - Monitor all video surveillance and
- Integrated Securities and Technology will monitor all key card access

Mitigation:

- Manage all tactical operations during the incident
- Assist in the development of the operations portion of the Special Event Action Plans
- Participate in emergency exercises conducted by other RTD departments
- Ongoing training, including web-based, self-paced and classroom training
- Maintaining required 24 POST continued education hours and certifications
- Ensure training in place for safe tactical operations for all responders
- EM will:
 - Support the EOC with its plans and procedures for RTD
 - Develop and implement strategies to reduce the impact of hazards
 - Help identify and organize resources
 - Evaluate the results of training and exercises to ensure continuous improvement of EOP and COOP

Response:

- Police officers will:
 - Respond to all emergencies according to policy
 - Maintain command until public agencies arrive

RTD Emergency Operations Plan

- Assume command or when relieved at start of next operational period
- Assess the situation
- Order warning of persons at risk or potentially at risk to take appropriate protective actions
- Transit Police Communications will:
 - Provide communications for Transit Police and Security
 - Track and dispatch RTD police and security assets to emergency and non-emergency incidents
 - Request and coordinate assistance from outside agencies, including law enforcement, fire, medical, and other first responders, and serving as the point of contact for these agencies
 - Maintain appropriate staffing levels in communications centers
 - Make necessary notifications to internal and external stakeholders
- Video Investigations will
 - Monitor current video surveillance to supplement the response as needed
- Integrated Securities and Technology will
 - Monitor and assist with any RTD building access by key card and manage all RTD Police and Communications accounts
- EM will:
 - Place the preparedness plans into action
 - Activate the EOC as appropriate
 - Liaise as appropriate with all local emergency management and partner agencies

Recovery:

- Assess recovery needs
- Determine the level and types of damages
- Assist in implementing recovery programs
- Assist with plans to prevent and or diminish future emergencies and events
- Integrated Securities and Technology and video investigations will:
 - Assist as needed in the recovery of the emergency
- EM will
 - Assist and coordinate the activities of local recovery dedicated organizations and initiatives
 - Work to develop a unified and accessible communication strategy
 - Participate in damage and impact assessments with other recovery partners

Concept of Operations

RTD Transit Police and Emergency Management Department shall participate in the larger ICS and will send qualified representatives to the EOC upon request of the Emergency Operations Center Manager. The Sergeant position and above shall be trained as incident commanders and will have the authority to make decisions on scene.

Sergeant positions and above shall be trained as EOC representatives and will have access to leaders for any decisions that need to be escalated but shall also have knowledge about available resources and the authority to commit department resources. The priority of tasks will be determined jointly with the EOC Manager in accordance with the overall planning effort for the emergency or event. Additionally the following positions will be trained and available to

RTD Emergency Operations Plan

participate in the larger ICS: Manager, 911 Operations; Managers, Public Safety Communications.; and Lead Public Safety Dispatchers.

The RTD Transit Police and Emergency Management Department will evaluate damage to facilities, mobilize staff and resources, prioritize restoration of services based on resources available, and coordinate with other RTD departments/divisions. RTD Transit Police and Emergency Management Department will ensure that its subdivisions keep logs of actions taken and information received.

Direction, Control, and Coordination

The Chief of Police will be responsible for overall direction of RTD Transit Police and Emergency Management Department and shall coordinate with their EOC representative to facilitate information exchange and resource management. If the Chief of Police is unavailable, the chain of succession identified in the Continuity of Operations Plan will be followed, which is duplicated here:

Deputy Chief of Administration
Deputy Chief of Operations
Commander (By seniority)

Communication

All internal emergency communication will be shared by ReadyOp, email, cell phone, text messages, handheld radios, tablets, and land lines.

Communications with the general public will be managed through the Communications and Engagement staff member serving as the Public Information Officer for the event.

Administration, Finance, and Logistics

RTD Transit Police and Emergency Management Department shall be responsible for maintaining records on:

- Staffing levels and hours worked by employees on account of the emergency/disaster.
- Damage incurred on relevant equipment/facilities/infrastructure as a result of the emergency.
- Objectives of the RTD Transit Police and Emergency Management Department when responding to emergencies and log of relevant actions taken to accomplish the objectives.
- Investigative Reports
- Evidence Logs
- Tracking hours worked by TPC personnel.
- Maintaining accurate records of reported incidents and incident responses.

This information will be provided to the EOC upon request.

RTD Emergency Operations Plan

Emergency Equipment on Revenue Vehicles

Transit Police are responsible for the functionality and answering of the emergency phones on commuter rail train platforms.

Annex Development and Maintenance

It is the responsibility of RTD Transit Police and Emergency Management Department to develop or update internal Standard Operating Procedures to ensure its own operations capabilities. The Chief of Police will coordinate the planning of all public works operations related to emergency operations.

RTD Transit Police and Emergency Management Department also is committed to testing and continuous improvement of this plan and will conduct exercises on a yearly basis unless a real-world event or emergency makes doing so unrealistic. After each exercise or emergency, RTD Transit Police and Emergency Management Department will participate in the After-Action Review process and will implement improvement plan items as relevant.

This Annex will be updated after any emergency or exercise from which the AAR identifies necessary changes and every 3 years on the same cycle as the revision of the EOP: Base Plan.

RTD Emergency Operations Plan

Hazard Specific Annexes

Annex G: Winter Weather

Annex H: Flood

Annex I: Wildfire

Annex J: Active Assailant

Annex K: Cyber Incident

Annex L: Hazardous Materials Incident

Annex M: Power Failure

Annex N: Train Derailment

RTD Emergency Operations Plan

Annex G: Winter Weather Annex

Purpose

The purpose of the Winter Weather Annex is to identify those planning considerations specific to Winter Weather and the planning considerations to effectively manage events. Winter Weather includes snow storms, blowing snow, blizzards (snow storms with wind speeds above 35 mph), ice storms, sleet, freezing rain, and extreme cold. Elements of this plan may also be useful for hail events.

Situation Overview

The Denver Metropolitan area sees average first freeze dates in September-October with final freeze dates falling in April-May. This means that the Agency is exposed to the potential for winter weather events for about 8 months of the year.

Geographic Risk

All of the service area is exposed to winter weather risk, areas with increased elevation will be exposed to lower temperatures and higher precipitation totals. Where Denver sees an average seasonal snowfall of 56.9", Evergreen and Nederland saw 113" and 194" inches of snowfall in the 2020-2021 season respectively. These are two municipalities served by bus service and whose routes are subject to chain law and may need to apply them upon requirement by CDOT.

Potential Impacts

Impacts of Winter Weather can range in severity:

- Reduced Visibility
- Slick pavement on roads, sidewalks, and at stations
- Increased Travel Times
- Delays in scheduled headways and arrival times
- Decrease in available staffing
- Ice in rail switches or building up around overhead catenary systems
- Damage to permanent infrastructure
- Buses becoming stuck in snow/ice/slush and requiring retrieval
- Vehicular accidents with privately-owned vehicles
- Power Failure at fixed facilities or to power stations along rail alignment

These impacts may culminate to trigger a system-wide service suspension. A decision to suspend service may only be made by the General Manager/CEO or their designee.

Mitigations in Place

Mitigations are currently taken at the operational level and are described below:

Facilities

- Distribution of Ice Slice and traction compounds on pedestrian surfaces, parking lots and roadways
- Maintain slip ramps off highways with Ice Slice

RTD Emergency Operations Plan

- Maintenance of snow removal specialty equipment and procure services for contract snow removal
- Pre-plan in coordination with local partners such as Downtown Denver Partnership, CDOT, Boulder, Boulder County, and the City and County of Denver to perform snow removal at specified locations

Bus Operations

- All buses equipped with snow tires prior to September
- Chains/automatic chains on-board all buses to meet CDOT Requirements
- Other traction devices available on all buses in event of becoming stuck
- Annual operator training for winter driving and chain installation
- Street Supervisors and Bus Maintenance staff carry traction substrate, Autosocks, and strap chains in vehicles

Rail Operations

- Application of Sand from Rail Cars under slick conditions
- Heated Pantographs and ice-cutters on all Rail Cars which will de-ice OCS
- Step-well heaters on LRV's to prevent icing on doors
- Switch heaters at interlockings to prevent icing
- Maintenance of protective equipment to mitigate impacts of winter weather

Planning Assumptions

- Typically advance notice is available for winter weather events. When advance notice is available, planning will begin when predictions indicate significant impacts.
- This advance notice will also be communicated via Situational Awareness Update, published by Emergency Management before event initiation and updated periodically as needed.
- Supplies for winter weather response will be procured seasonally in anticipation of winter weather events. Maintenance on specialized equipment shall also be conducted seasonally to remain in a state of readiness
- It is not typically the responsibility of RTD to perform snow removal on municipal, state, and federal roads. This is done by the local authorities and supported by RTD on an agreement basis

Concept of Operations

Detection/Monitoring

Winter Weather events will be monitored by Emergency Management via updates provided by the National Weather Service and CDOT. When greater than 3" of snow are forecasted OR a watch or warning has been declared, this information will be shared with the RTD workforce at large.

Response Considerations

Because Winter Weather is typical in RTD's Service Area, response will be managed by the operational groups responsible for their execution. These actions are outlined in several publications produced annually:

RTD Emergency Operations Plan

Responsible Group	Publication Title (s)	Document Storage Location & Annual Publication Timeframe
RTD Capital Programs-Facilities	Snow Book	RTD Intranet- Capital Programs page Published in October
Bus Operations-Vehicle Maintenance	Vehicle Maintenance Snowstorm Support Plan	Included as attachment in Snow Book Published in October
Service Development	Trailblazer, Operators Guide Section IV: Winter Driving Procedures	Published Triannually
Bus Operations-Transportation	Winter Operations Training (Powerpoint) Extreme Driving Conditions (Powerpoint) Your Guide to Winter Driving (Pamphlet)	Sharepoint

In addition, there are policies and procedures which address agency response activities for winter weather events which are not subject to annual revision:

Responsible Group	Policy/Procedure Title	Storage Location
Light Rail Operations	LRT Control Winter Weather Plan	PolicyTech
Light Rail Operations	SCADA Track Switch Heater Activation Procedure	PolicyTech
Light Rail Operations	Inclement Weather Operations: Snow, Ice and Hail	PolicyTech
Commuter Rail Operations	RTD_-CRO-MOWA-0012: Inclement Weather	PolicyTech
Bus Operations-Transportation	Chain Training Handout Strap Chain Instructions	Sharepoint

For those events which overwhelm the ability of normal operations to maintain safe operating conditions, the Emergency Operations Center will be activated to monitor and support operations. Upon activation, the EOC Manager will supply regular updates to the General Manager/CEO to support their situational awareness and decision making.

Suspension of Service is the final measure taken to address unsafe conditions related to winter weather events. This decision is not taken lightly and must be made with adequate consideration to factors such as:

- Safety of RTD staff and customers—Is it safe to continue providing service?
- Weather Conditions and forecast—What is the character of precipitation? Are conditions worsening? Will there be some stall in precipitation/storm conditions which will provide an opportunity to change tactic?

RTD Emergency Operations Plan

- Predictability for customers—Eg. Agency must provide service during PM peak hours if AM peak hours service were conducted, ability to communicate to customers changes being made
- Staffing availability— Communication centers, groups with winter weather impact response responsibilities, and the availability for relief to transport themselves to their work reporting location
- Rate of revenue service vehicles becoming stuck or stalled— Can support functions recover vehicles more quickly than they are becoming stuck?

Recovery Considerations

Service Restoration post-suspension will also be decided upon by the General Manager/CEO and will generally be communicated to the public in advance. This ideally would take place at the start of the next service day.

The impacts of a severe winter weather event may take over a week to fully address. This includes snow removal, de-icing, and damage assessment. These activities may need to be conducted iteratively.

Roles and Responsibilities

Capital Programs

Facilities

- Coordinate and execute a snow removal plan with current manpower and equipment per snow event.
- Plowing and distribution of Ice Slice for RTD maintained pedestrian walkways, transit lanes, facilities, and parking
- Hauling snow to storage/melt areas
- Activation and monitoring of third-party contractors for services such as snow removal

Bus Operations

- Removal of articulated buses from operating fleet as practicable

Transportation

- Effectively communicate changes in routes to maintain safe operating conditions despite winter weather impacts
- Use of report operators/extra board to accommodate reduced staffing levels, if necessary

Street Operations

- Effectively communicate changes in routes to maintain safe operating conditions despite winter weather impacts

RTD Emergency Operations Plan

- Maintain communication with bus operators, contact public safety for support or dispatch RTD Bus Street Supervisors to support operators with challenges as they arise
- Respond to requests for support from operators and provide assistance with accident investigation, application of chains, transportation of operator to an RTD facility
- Disseminate information about the operational conditions throughout winter weather events
- Monitor stuck vehicles to coordinate the activation of the "Snow Desk" by Bus Vehicle Maintenance
- Supplement staffing to accommodate increased demands from street operations staff
- Use of Loop Extra operators to cover trips that would otherwise be cancelled due to reduced staffing levels, if necessary

Vehicle Maintenance

- Retrieval of stuck buses following a priority of:
 - Buses with Customers
 - Buses with RTD operators/staff
 - Buses without persons on-board
- Staffing 'extra' on-street assistance vehicles and recovery trucks equipped with ice melt, shovels, and recovery equipment
- Staffing "Snow Desk" in Bus Dispatch to supplement tracking, coordination of retrieval of staff/passengers, and coordination of retrieval of vehicles related to stuck buses
- Equip buses with effective traction control to remain in safe operating condition despite winter weather such as snow tires, chains, snow operation mode on articulated buses, etc

Light Rail Operations

Transportation

- Adjust service to accommodate reduced staffing levels, if necessary
- Maintain communication with operators, contact public safety for support or dispatch RTD Field Supervisors to support operators with challenges as they arise
- Monitor the functioning of switches, track and OCS and dispatch Maintenance of Way crews to restore
- Respond to requests for support and provide assistance with accident investigation or transportation of operator to an RTD Facility
- Adjust Schedule, Staff, and Operate Sweep Trains to consistently de-ice alignment infrastructure

Maintenance of Way

- De-ice switches, OCS, and maintain operability of track

RTD Emergency Operations Plan

Light Rail Vehicle Maintenance

- Station mechanics at strategic locations to address winter weather disruptions

Commuter Rail

Transportation

- Adjust service to accommodate reduced staffing levels, if necessary
- Maintain communication with engineers and conductors, contact public safety for support or dispatch RTD Field Supervisors to support engineers and conductors with challenges as they arise
- Monitor the functioning of switches, track and OCS and dispatch Maintenance of Way crews to restore
- Respond to requests for support and provide assistance with accident investigation or transportation of operator to an RTD Facility
- Adjust Schedule, Staff, and Operate Sweep Trains to consistently de-ice OCS

Maintenance of Way and Infrastructure

- De-ice switches, OCS, and maintain operability of track

Commuter Rail Contract Services

- Communicate all events which impact contractor service to RTD leadership

RTD Emergency Operations Plan

Annex H: Flood Annex

Purpose

The purpose of the Flood Annex is to identify those planning considerations specific to flooding events and the planning considerations to effectively manage events. Flooding is defined as any overflow of water onto normally dry land. Flash flooding is also possible which is flooding that occurs with little or no warning.

Situation Overview

Flooding is the most common disaster cause across the United States. Flooding can originate from coastal flooding, riverine flooding, or excess precipitation; coastal flooding is not a concern within RTD’s service area and instead is generally replaced by annual snowmelt hazards from the mountains which will result in riverine flooding.

Geographic Risk

FEMA publishes Flood Maps identifying areas with 1% annual chance of flooding and 0.02% annual chance of flooding, also known as 100 year floodplain and 500 year floodplain respectively. RTD has rail and bus routes that traverse both types of floodplains as can be seen in Figure 1.

Figure 1. RTD Routes Superimposed on Floodplain

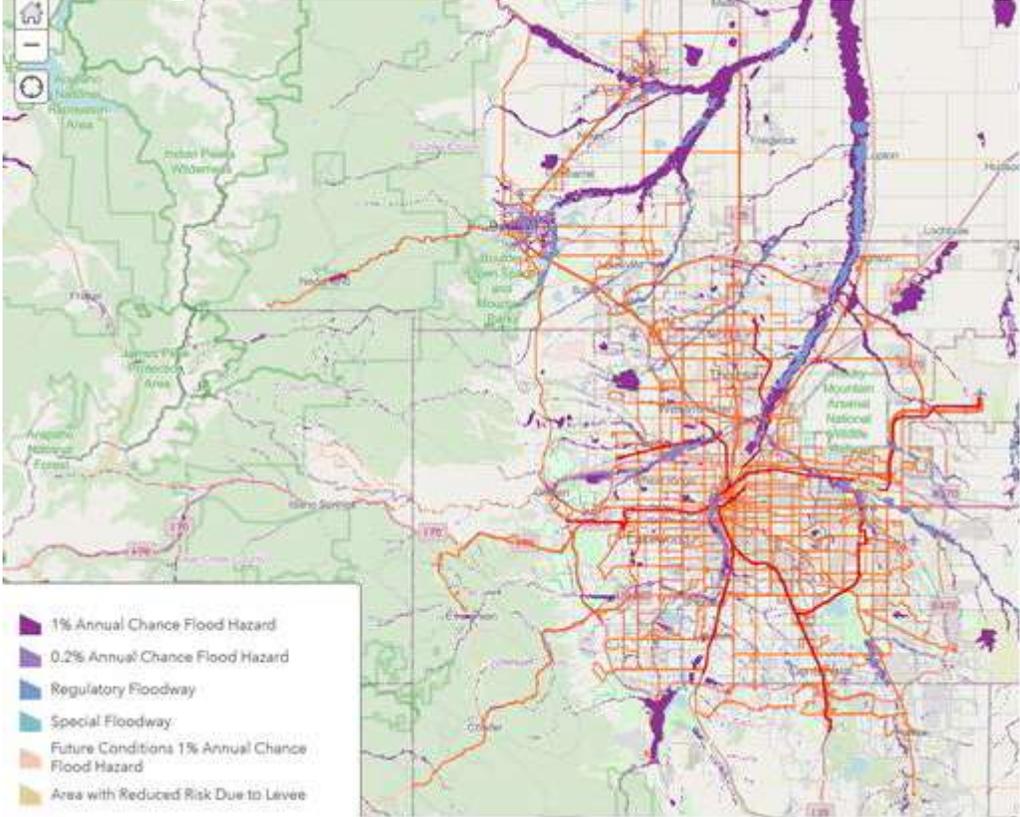


Figure 1 RTD Routes Superimposed on Floodplain: Orange-Bus Routes, Red-Rail Alignment

Table 1 identifies operational facilities or maintenance shops that lie within the floodplains

RTD Emergency Operations Plan

Table 1. Facilities in the Floodplain

Name	Address	100 yr floodplain	500 yr floodplain	Area with reduced risk due to levee	Waterway
Boulder Division	1707 Exposition Dr, Boulder, CO 80301		X		Boulder Creek
Boulder Junction at Depot Square	3175 Pearl Pkwy., Boulder, CO 80301		X		Goose Creek
Denver Union Station	1701 Wynkoop St, Denver, CO 80202		X		South Platte River and Cherry Creek
District Shops	1900 31st St, Denver, CO 80216			X	South Platte River
District Shops - Central Receiving	1940 31st St, Denver, CO 80216			X	South Platte River
Downtown Boulder Station	1400 Walnut St, Boulder, CO 80302		X		Boulder Creek
East Metro Division	14100 E. Colfax Ave., Aurora, CO 80011		X		Toll Gate Creek
Longmont Garage	815 South Main St., Longmont, CO 80501		X		St Vrain River and Left Hand Creek
Platte Division	3333 Ringsby Ct, Denver, CO 80216			Parking lot only	South Platte River
Treasury	3301 Ringsby Ct, Denver, CO 80216			X	South Platte River
Wellness Center	1919 31st St, Denver, CO 80216			X	South Platte River

While flooding is generally predictable, human intervention and water management infrastructure can fail and cause flooding in places that are outside of the floodplain.

Potential Impacts

Impacts of flooding can range in severity:

- Bus detours to avoid flooded areas, resulting in increased travel times
- Flooded rail alignments, with potential to cause damage to infrastructure
- Water can potentially short circuit rail, causing gates to malfunction, impacting service and causing a need for manual flagging at intersections or switches
- Decrease in available staffing
- Vehicles becoming stuck in flooded areas or before traversing flooded areas
- Damage to vehicle components, with possibility to cause arc-flash on LRV. This can cause the LRV to become disabled on tracks
- Vehicular accidents with privately-owned vehicles
- Requests to support evacuation or emergency responders
- Increased traffic due to evacuation from affected areas

Mitigations in Place

Mitigations against the impacts of flooding are in place at several levels.

RTD Emergency Operations Plan

Capital Programs

- Facilities must be built outside of the 100 year floodplain. When a location is selected that is within the floodplain, physical mitigations will be added to the building design such as elevating the foundation's footprint
- Drainage maintenance for facilities and stations, including participation in inspections from local jurisdictions to ensure proper compliance with local ordinances
- Pumps are included as part of design in elevator pits whereby there is an increased flood risk

Bus Operations

- Flood avoidance training, including when to stop the bus and not traverse through a flooded area. Bus Operators are trained that conventional buses can traverse approximately 1 foot depth of water.
- Repair to flooded engines to ensure proper functioning

Rail Operations

- Training to avoid flooded areas, LRV operators are trained that the LRV can traverse through up to 3 inches of water above the railhead while CRV conductors are trained that the CRV can traverse through 2 inches of water above the railhead. Generally operators should not traverse through water if the railhead is not visible
- Repair to flooded LRV's
- Elevated rail on ballast to prevent standing water on rail. Most of the rail system is built this way, with embedded rail in downtown areas being the exception

Planning Assumptions

- Advance warning is not always available for flooding events, especially flash flooding
- When Flood Watches or Warnings are declared this information will be shared via situational awareness update. Planning will begin when predictions indicate significant impacts
- It is not typically the responsibility of RTD to clear debris resulting from flooding off of RTD property
- Flooding may displace individuals who require evacuation. RTD will collaborate with local jurisdictions on a case-by-case basis according to resource availability
- Because flood events can escalate quickly, it is important to maintain diligent monitoring and to be proactive with making decisions to evacuate assets from areas that may become impacted by flooding, especially due to the staff credentialing requirements to safely move buses and rail vehicles

RTD Emergency Operations Plan

Concept of Operations

Detection/Monitoring

Flooding events will be monitored by Emergency Management via updates provided by the National Weather Service and Colorado Department of Transportation. When a watch or warning has been declared, this information will be shared with the RTD workforce at large.

Response Considerations

Not all flooding events have significant impact to RTD and can be managed by the communications centers and street or field supervision staff. For those events which overwhelm the ability of normal operations to maintain safe operating conditions, the Emergency Operations Center will be activated to monitor and support operations. Upon activation, the EOC Manager will provide regular updates to the General Manager/CEO to support their situational awareness and decision making.

Detours and cancellation of certain routes may need to be implemented, though full system service suspension is unlikely.

Recovery Considerations

The impacts of a flooding event may take over a week to fully address. This includes debris removal, drainage restoration, and damage assessment. These activities may need to be conducted iteratively.

If significant fleet impacts occurred, maintenance and restoration could cause service restrictions that would last until a normal operating fleet was restored. This could take weeks or months to fully restore.

Roles and Responsibilities

Administration

Information Technology

- Repair systems on revenue and non-revenue vehicles which have been damaged as a result of flooding incidents
- Repair IT infrastructure in buildings damaged by water as a result of excessive precipitation or flooding incidents

Capital Programs

Facilities

- Drainage maintenance and clearing in the event of flooding incidents
- Pumps maintenance
- Green space maintenance
- Debris removal
- Power shutdown at facilities experiencing flooding
- Damage assessment for facilities

RTD Emergency Operations Plan

Bus Operations

Transportation

- Effectively communicate changes in routes to maintain safe operating conditions despite flooding impacts
- Adjust service to accommodate reduced staffing levels, if necessary

Street Operations

- Maintain communication with bus operators, contact public safety for support or dispatch RTD Bus Street Supervisors to support operators with challenges as they arise
- Respond to requests for support from operators and provide assistance with accident investigation and transportation of operator to an RTD facility
- Disseminate information about the operational conditions throughout flooding events
- Reactive detour creation and implementation
- Monitor the need to evacuate buses from facilities or areas which may become inaccessible, including the need to activate non-operator represented staff with CDL's followed by non-represented staff with CDL's to execute evacuation
- Monitor stuck vehicles to coordinate the activation of the "Snow Desk" by Bus Vehicle Maintenance
- Supplement staffing to accommodate increased demands from street operations staff
- Support evacuation on a resource availability basis

Vehicle Maintenance

- Retrieval of stuck buses following a priority of:
 - Buses with Customers
 - Buses with RTD operators/staff
 - Buses without persons on-board
- Staffing 'extra' on-street assistance vehicles and recovery trucks equipped with recovery equipment
- Staffing "Snow Desk" in Bus Dispatch to supplement tracking, coordination of retrieval of staff/passengers, and coordination of retrieval of vehicles related to stuck buses
- Maintain buses and repair damage that may be incurred as a result of flooding

Light Rail Operations

Transportation

- Adjust service to accommodate reduced staffing levels, if necessary
- Maintain communication with operators, contact public safety for support or dispatch RTD Field Supervisors to support operators with challenges as they arise
- Monitor the functioning of switches, track and OCS and dispatch Maintenance of Way crews to restore

RTD Emergency Operations Plan

- Monitor the need to evacuate LRVs to areas not impacted by flooding while assessing the impact to service if rail was used to store LRV's, this must be completed by current operators
- Respond to requests for support and provide assistance with accident investigation or transportation of operator to an RTD Facility

Maintenance of Way

- Keep in operating condition switches, OCS, and track
- Repair any damages caused by flooding
- Damage assessment, including clearing of track for safe revenue service use

Light Rail Vehicle Maintenance

- Station mechanics at strategic locations to address flooding disruptions
- Repair any damages caused by flooding
- Damage assessment

Commuter Rail

Transportation

- Adjust service to accommodate reduced staffing levels, if necessary
- Maintain communication with engineers and conductors, contact public safety for support or dispatch RTD Field Supervisors to support engineers and conductors with challenges as they arise
- Monitor the functioning of switches, track and OCS and dispatch Maintenance of Way crews to restore
- Monitor the need to evacuate CRV's to areas not impacted by flooding while assessing the impact to service if rail was used to store CRV's, this must be completed by current engineers
- Respond to requests for support and provide assistance with accident investigation or transportation of operator to an RTD Facility

Maintenance of Way and Infrastructure

- Keep switches, OCS, and track in operating condition
- Repair any damages caused by flooding
- Damage assessment, including clearing of track for safe revenue service use

Commuter Rail Contract Services

- Communicate all events which impact contractor service to RTD leadership

RTD Emergency Operations Plan

Annex I: Wildfire Annex

Purpose

The purpose of the Wildfire Annex is to identify those planning considerations specific to wildland fire events and the planning considerations to effectively manage events. A wildfire is an unplanned, wildland fire and can be caused by human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and natural causes such as lightning strikes. For the RTD service area, interface fires that abut the wildland/urban boundary are more likely to have significant impacts. High wind speeds can also impact the direction or speed of wildfire spread.

Situation Overview

Wildfire one of the top hazards at the state level, triggering the majority of Colorado emergency declarations, though the majority of these are not in areas served by RTD. This is not the case for the costliest emergency declaration in the state's history relative to structure damage, The Marshall Fire in Boulder County of 2021. RTD provided some assistance for the recovery efforts relating to this fire.

Geographic Risk

Areas with significant vegetation are at most risk for wildland fires. This generally concentrates the geographic risk to wildland fire within the western and southern parts of the service area, especially Boulder, Jefferson, and parts of Arapahoe and Douglas counties. The Colorado State Forest Service maintains an interactive Wildfire Risk Viewer on their website. Figures 1 and 2 are snapshots of the risk to both wildland fire in general, and the Wildland Urban Interface Risk for the RTD service area.

Figure 1. Wildland Fire Risk

RTD Emergency Operations Plan

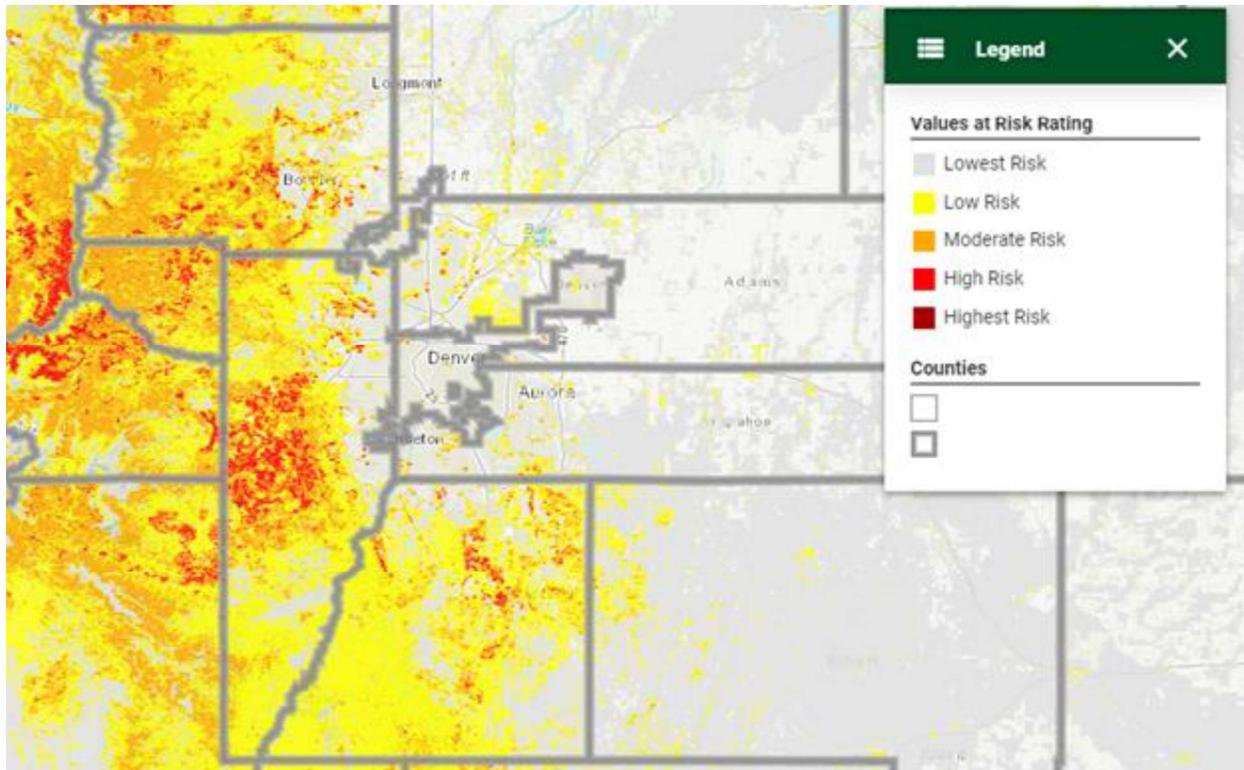
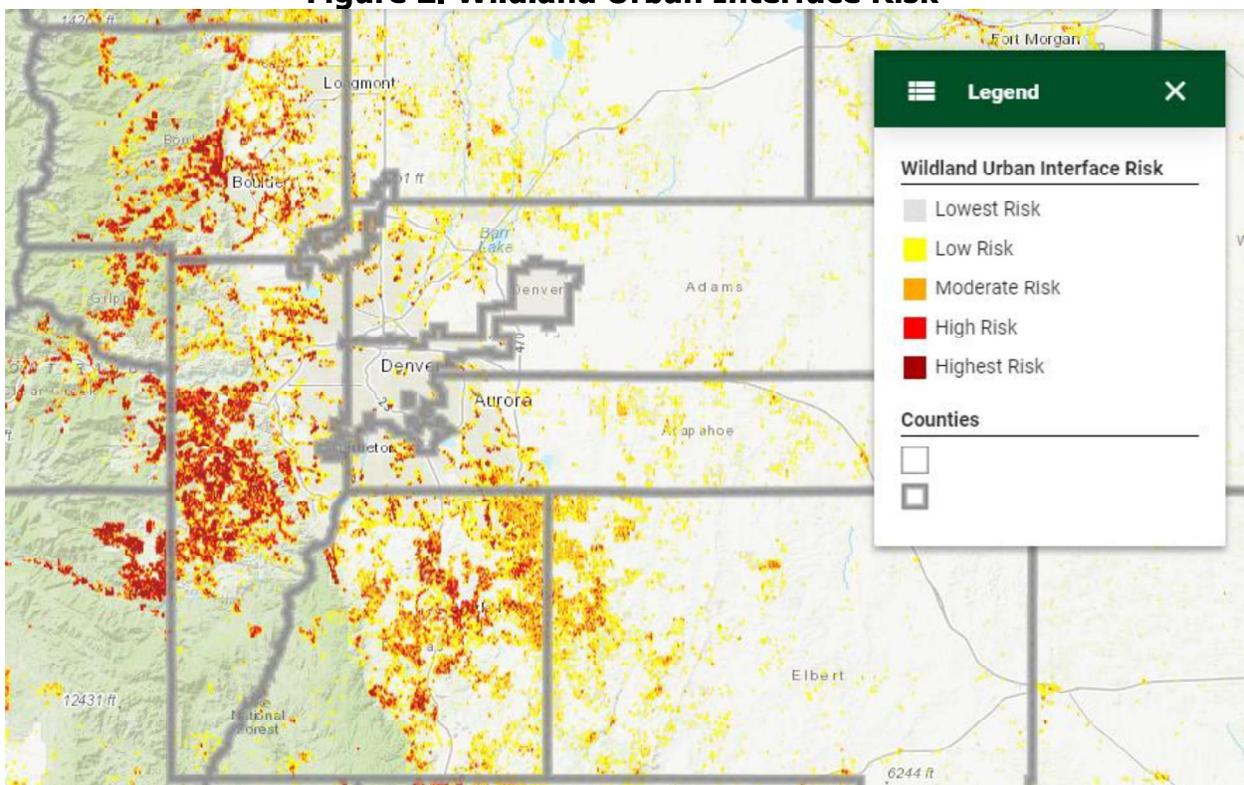


Figure 1 Wildland Fire Risk, Source: Colorado State Forest Service

Figure 2. Wildland Urban Interface Risk



RTD Emergency Operations Plan

Figure 2 Wildland Urban Interface Risk, Source: Colorado State Forest Service

Potential Impacts

Impacts of wildfire can range in severity:

- Bus detours to avoid evacuated areas, resulting in increased travel times
- Decrease in available staffing
- Damage to vehicle or vehicle components
- Vehicular accidents with privately-owned vehicles
- Long-term road closures requiring detours or route suspension, including bus bridging on detour for rail suspension
- Increased traffic due to evacuation from affected areas
- Power failure caused by damaged power delivery infrastructure
- Requests to support evacuation or emergency responders
- Buildings, facilities, landscape, and irrigation damaged by heat, fire, or smoke

Mitigations in Place

Mitigations against the impacts of wildfire are in place at several levels.

- Practice fire drills for facilities and maintenance shops to allow for safe evacuation of buildings

Capital Programs

- Green space management to cut back overgrown vegetation on RTD owned properties, either with in-house staff or through contract
- Remove and deter encampments of people experiencing houselessness on RTD owned properties, in partnership with law enforcement personnel

Rail Operations

- Weed control schedule to prevent overgrowth along alignment, performed by MOW for LR and MOW & I for CR

Planning Assumptions

- Advance warning is not always available for wildfire events
- When fires are observed or under management in the service area this information will be shared via situational awareness update. Planning will begin when predictions indicate significant impacts
- Wildfire may displace individuals who require evacuation. RTD will collaborate with local jurisdictions on a case-by-case basis according to resource availability
- Smoke inhalation is one of the risks presented by wildfire. While air quality monitoring has become routine for Colorado in recent years, the risk escalates the closer an individual or community is to the fire. This risk will be taken into consideration when planning detours or for additional assistance provided by the agency to maintain operator and customer safety
- While other events may create conditions that are appropriate to respond to during the event, wildfires frequently require a full evacuation of the impacted area until the fire can be controlled. This may prevent mid event maintenance, repair, or damage assessment until the area is cleared by fire professionals

RTD Emergency Operations Plan

- Because wildfire events can escalate quickly, it is important to maintain diligent monitoring and to be proactive with making decisions to evacuate assets from areas that may become impacted by wildfire, especially due to the staff credentialing requirements to safely move buses and rail vehicles

Concept of Operations

Detection/Monitoring

Wildfire events will be monitored by Emergency Management via updates provided by the National Weather Service, Colorado Department of Transportation, and Colorado Department of Homeland Security and Emergency Management. Though elevated risk levels will not generally be communicated, upon notification of a named fire being managed, this information will be shared through a Situational Awareness Update.

Response Considerations

Not all wildfire events have significant impact on or to RTD and can be managed by the communications centers and street or field supervision staff. For those events which overwhelm the ability of normal operations to maintain safe operating conditions, the Emergency Operations Center will be activated to monitor and support operations. Upon activation, the EOC Manager will provide regular updates to the General Manager/CEO to support their situational awareness and decision making.

Detours and cancellation of certain routes may need to be implemented, though full system service suspension is unlikely. If the fire is not affecting a rail alignment directly, the operators and engineers may be instructed to turn off their ventilation systems momentarily to prevent smoke entering the cab but to continue to serve the route.

Recovery Considerations

The impacts of a wildfire event may take a long time to fully address. This includes debris removal, damage assessment, and possibly reconstruction. These activities may need to be conducted iteratively.

If significant fleet impacts occurred, maintenance and restoration could cause service restrictions that would last until a normal operating fleet was restored. This could take weeks or months to fully restore.

Roles and Responsibilities

Administration

Information Technology

- Repair systems on revenue and non-revenue vehicles which have been damaged as a result of wildfire incidents
- Repair IT infrastructure in buildings damaged by fire, heat, or smoke

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Capital Programs

Facilities

- Green space maintenance, specifically to prevent overgrowth
- Debris removal
- Power shutdown at facilities evacuated due to wildfire risk
- Damage assessment for facilities
- Repair or replacement of any damaged facilities or facilities utilities as a result of wildfire events

Bus Operations

Transportation

- Effectively communicate route changes to maintain safe operating conditions despite wildfire impacts
- Adjust service to accommodate reduced staffing levels, if necessary

Street Operations

- Maintain communication with bus operators, contact public safety for support or dispatch RTD Bus Street Supervisors to support operators with challenges as they arise
- Respond to requests for support from operators, transportation of operator to an RTD facility, and provide assistance with accident investigation
- Disseminate information about the operational conditions throughout wildfire events
- Reactive detour creation and implementation
- Monitor the need to evacuate buses from facilities or areas which may become inaccessible, including the need to activate non-operator represented staff with CDL's followed by non-represented staff with CDL's to execute evacuation
- Supplement staffing to accommodate increased demands from street operations staff
- Support evacuation on a resource availability basis

Vehicle Maintenance

- Maintain buses and repair damage that may be incurred as a result of fire, heat, or smoke damage

Light Rail Operations

Transportation

- Adjust service to accommodate reduced staffing levels, if necessary
- Maintain communication with operators, contact public safety for support or dispatch RTD Field Supervisors to support operators with challenges as they arise
- Monitor the functioning of switches, track and OCS and dispatch Maintenance of Way crews to restore once appropriate

RTD Emergency Operations Plan

- Respond to requests for support and provide assistance with accident investigation or transportation of operator to an RTD Facility

Maintenance of Way

- Repair any damages caused by fire, heat, or smoke
- Damage assessment, including clearing of track for safe revenue service use

Light Rail Vehicle Maintenance

- Damage assessment
- Repair any damages caused by fire, heat, or smoke

Commuter Rail Operations

Transportation

- Adjust service to accommodate reduced staffing levels, if necessary
- Maintain communication with engineers and conductors, contact public safety for support or dispatch RTD Field Supervisors to support engineers and conductors with challenges as they arise
- Monitor the functioning of switches, track and OCS and dispatch Maintenance of Way crews to restore once appropriate
- Respond to requests for support and provide assistance with accident investigation or transportation of operator to an RTD Facility

Maintenance of Way and Infrastructure

- Repair any damages caused by fire, heat, or smoke
- Damage assessment, including clearing of track for safe revenue service use

Commuter Rail Contract Services

- Communicate all events which impact contractor service to RTD rail operations leadership

RTD Emergency Operations Plan

Annex J: Active Assailant Annex

Purpose

The purpose of the Active Assailant Annex is to identify those planning considerations specific to risks and impacts from an Active Assailant and the planning considerations to effectively manage events. The FBI definition of an Active Assailant is “an individual engaged in killing or attempting to kill people in a populated area.” They go on further to specify that firearms are the most common weapon used, but others are also possible, including knives, clubs, explosives, or any other implement used with the intention of harming others.

Situation Overview

Active Assailant events are becoming more common across the US, with a 57% increase in average incidents per year from 2000-2010 and a 53% increase from 2010-2020 to 2021-2022. The highest casualties from active assailant events are at businesses open to the public, which also is the location with the second highest fatalities behind open spaces, which are public or private properties openly accessible to the public. Except for maintenance facilities, RTD properties mostly fall within these two categories. Due to the increasing nature of active assailant events, it is important to plan, train, and exercise for active assailant.

Geographic Risk

Risk from an active assailant event is not defined geographically but rather follows trends of the locations that tend to be targeted. Some features which raise the risk of a location being targeted by an active assailant include:

- High volume of population, especially populations who are perceived as being ‘easy’ targets
- Low security measures, including access controls, identification measures, surveillance, presence of security or sworn officers

Potential Impacts

Impacts of active assailant events can range in severity, these are generally ranked from lowest to highest severity:

- Requests to support evacuation or emergency responders
- Damage to buildings, facilities, and vehicles
- Damage to reputation
- Negative impacts to employee or contractor mental health and sense of security
- Injuries and loss of life

Mitigations in Place

Mitigations against the impacts of active assailants are in place at several levels.

- Training for staff to recognize early signs of ‘testing’ or suspicious behavior that may indicate an individual is planning violence
- Training for staff to de-escalate conflict to prevent antisocial violence

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- Threat Assessment Team assigned to identify and intervene when a current or former employee demonstrates behaviors which indicate that they may retaliate violently against the agency or its employees, contractors, customers, or property

Capital Programs

- Application of Crime Prevention through Environmental Design concepts when designing or replacing elements of facilities including measures like:
 - Access Control
 - Surveillance
 - Space/Activity Management eg. Bollards, fencing

Transit Police and Emergency Management

- Training and exercises with local partners to facilitate collaboration in responding to active assailant events
- Visible deterring police and security presence at locations which may be targeted by active assailants

Planning Assumptions

- While active assailant events cannot be reliably predicted, there are some indicators that can signal that an individual is on a path to violence and observing/testing sites for their planning efforts. These include:
 - Surveillance
 - Elicitation
 - Tests of Security
 - Funding
 - Acquiring Supplies
 - Impersonation
 - Rehearsal and dry runs
 - Deployment
- Transit Police Communications will be the primary communication entity providing direction to Operations when informed of an active assailant event
- All employees are asked to provide information when asked about active assailant events, including suspect information, weapon, hostages, etc. and to cooperate with communication centers and law enforcement in any investigation into criminal activity
- At no point should anyone not visibly identified as a police officer handle a suspect's weapon, even to secure it. This will create a risk of being confused for a perpetrator
- If a facility is unavailable for use due to an ongoing event or designation as a crime scene, employees are expected to follow the Continuity of Operations Plan for relocation or change to the nature of their work

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Concept of Operations

Detection/Monitoring

RTD-PD and Emergency Management are in communication with partner law enforcement agencies, including the Colorado Information Analysis Center (CIAC) who are actively monitoring social media, internet/darkweb sources, and other sources to identify individuals or groups that may be planning violent or destructive actions. If a threat is identified, Police and Emergency Management staff will communicate with their chain of command and create a communication plan to include all relevant parties. Due to the nature of active assailant events, information about potential threats is not public information and must be handled with all due care and consideration.

Response Considerations

The response efforts for active assailant events are typically not long-lived in nature, with most active shooter events lasting no more than 5 minutes, which is normally constrained by the time for first responders to arrive. Short-term recovery efforts are generally much longer lasting with patient reunification and survivor support lasting days or weeks.

Not all active assailant events have significant impact to RTD and can be managed by the communications centers and street or field supervision staff, especially those events occurring near but not on agency property. For those events which overwhelm the ability of normal operations to maintain safe operating conditions, the Emergency Operations Center will be activated to monitor and support operations. Upon activation, the EOC Manager will supply regular updates to the General Manager/CEO to support their situational awareness and decision making.

In general, the guidance for individuals who find themselves in an active assailant incident is to follow the "Run, Hide, Fight" guidance. This enhances the lockdown procedures that many organizations had adopted and places agency with the individual to decide the most effective course of action in the moment and with their skillset.

'Run' refers to evacuating away from the assailant. Once an individual is in a safe location, they should notify authorities of the event and provide any information they have about weaponry, suspect, or hostages.

'Hide' is preferential if evacuation is not an option. There are strategies one can learn to barricade a room more effectively, which may deter the assailant from spending time to gain entry. Once an individual has barricaded themselves into a room, do not open the door for anyone but police and if possible, confirm with 911 dispatch that it is police outside the door. When active assailant incidents occur, one should try to hide behind cover which could prevent projectiles passing through.

'Fight' is a last resort and should only be used if an individual is confident that they will be able to react effectively to the assailant. This may be more effective with groups deciding together to fight, but injuries should be expected. Some people will not feel

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empowered to fight, and it is their right to decide which of the actions to take, based upon their judgement.

“Run, Hide, Fight” actions may need to be modified for individuals employed by RTD based upon their position and the activity for which they are currently engaged. The primary objective of a Light Rail operator/Commuter Rail engineer is to stop the vehicle and provide a PA announcement for customers to evacuate. The conductor on a moving commuter rail trains will also direct customers to evacuate to a different car, away from the assailant. Communication with OCC/Control should always be maintained.

On buses, operators are individually responsible for the security and safety of their vehicles and customers. Bus operators are empowered to use their own discretion to protect themselves and customers. The judgement of the operator in the immediate circumstances of the attack will be critical and the decision to act in each unique situation ultimately falls to the operator. No agency policy can or should dictate an operator’s response. This can include making decisions about the next safest location to stop the vehicle and evacuating customers.

Detours and cancellation of certain routes may need to be implemented. If intelligence information indicates that a threat has not been resolved or that multiple actors may be targeting the agency and its modes of transportation, then a full-service suspension may be requested by local law enforcement agencies. This decision can be made by the communication centers or Transit Police. All due effort will be made to inform the General Manager/CEO, though the time sensitive nature of these events may preclude such an effort.

Recovery Considerations

RTD is not well-equipped to address the needs of patient reunification and survivor support and will partner with local jurisdictions in these short term recovery efforts. This partnership will include information sharing, staffing any EOC or JIC that may be stood up, or personnel support needs.

Service restoration will occur when law enforcement officials have given indication that it is safe for operators to resume service. This may include detours to avoid sites of investigation or other security concerns. This will be communicated with the public through all available channels.

The impacts of an active assailant event may take a long time to fully address. This includes debris removal, damage assessment, and possibly reconstruction. These activities may need to be conducted iteratively.

Roles and Responsibilities

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Administration

Information Technology

- Repair systems on revenue and non-revenue vehicles which have been damaged as a result of active assailant incidents
- Repair IT infrastructure in buildings damaged as a result of active assailant incidents

Capital Programs

Facilities

- Maintain mitigation infrastructure
- Provide information about locations to first responders upon request
- Damage assessment
- Repair of damage caused by active assailant events

Bus Operations

Transportation

- Effectively communicate changes in routes to maintain safe operating conditions despite active assailant impacts

Street Operations

- Send Notification according to RTD-EM-PRC-0001
- Maintain communication with bus operators, contact public safety for support or dispatch RTD Bus Street Supervisors to support operators with challenges as they arise
- Disseminate information about the operational conditions caused by active assailant event
- Reactive detour creation and implementation
- Supplement staffing to accommodate increased demands from street operations staff
- Support evacuation on a resource availability basis

Vehicle Maintenance

- Maintain buses and repair damage that may be incurred as a result of active assailant events
- Properly store bus or other vehicles which may be considered evidence in any ongoing investigations

Light Rail Operations

Transportation

- Send Notification according to RTD-EM-PRC-0001

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- Maintain communication with operators, contact public safety for support or dispatch RTD Field Supervisors to support operators with challenges as they arise
- Respond to requests for support and provide assistance with accident investigation or transportation of operator to an RTD Facility

Maintenance of Way

- Repair any damages caused by active assailant events
- Damage assessment, including clearing of track for safe revenue service use

Light Rail Vehicle Maintenance

- Damage assessment
- Repair any damages caused by active assailant
- Properly store rail vehicles which may be considered evidence in any ongoing investigations

Commuter Rail Operations

Transportation

- Send Notification according to RTD-EM-PRC-0001
- Adjust service to accommodate reduced staffing levels, if necessary
- Maintain communication with engineers and conductors, contact public safety for support or dispatch RTD Field Supervisors to support engineers and conductors with challenges as they arise
- Respond to requests for support and provide assistance with accident investigation or transportation of operator to an RTD Facility

Maintenance of Way and Infrastructure

- Repair any damages caused by active assailant events
- Damage assessment, including clearing of track for safe revenue service use

Commuter Rail Contract Services

- Communicate all events which impact contractor service to RTD leadership
- Arrange for the storage of rail vehicles which may be considered evidence in any ongoing investigations

Transit Police and Emergency Management

Transit Police Patrol

- Identify individuals or groups who may be planning violence on RTD employees, contractors, customers, or property
- Respond to active assailant events using current best practices and principles
- Participate in the formation of a Rescue Task Force
- Investigate criminal activities related to active assailant events

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Transit Police Communications

- Dispatch Transit Police resources to respond to event
- Communicate with local partners and provide information as requested
- Send Notification according to RTD-EM-PRC-0001
- Live-monitor event via camera views as available

Video Investigations

- Live-monitor event via camera views as available
- Provide video evidence for investigation and any prosecution as necessary

Emergency Management

- Coordinate the training, exercise, and pre-planning efforts of the agency and partners related to active assailant incidents
- Coordinate with local partners for short- and long-term recovery efforts including:
 - EOC/JIC Activation
 - Patient Tracking
 - Family Reunification

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Annex K: Cybersecurity Incident

The Cybersecurity Incident Annex is a reproduction of the Cybersecurity Incident Response Plan as created by the Cybersecurity Division.

1. PURPOSE AND SCOPE

The Cybersecurity Incident Response procedure defines and guides how cybersecurity incidents are managed to minimize impact on RTD, thus ensuring the best possible levels of service quality and availability are maintained.

Using this procedure, RTD will be able to:

- Confirm whether an incident occurred
- Promote the accumulation and documentation of accurate information
- Establish controls for proper retrieval and handling of evidence
- Contain the incident and stop the unwanted activity
- Minimize disruption to business and network operations
- Allow for legal or civil action against perpetrators
- Provide accurate reports and useful recommendations to management
- Provide timely and accurate communication to management and affected parties

This procedure addresses cybersecurity incidents only. This procedure does not address:

- Requests for investigation of employee misconduct or litigation response
- Routine operational incidents that can be handled during business hours using the RTD Service Desk ticketing system
- Isolated outages for which the cause is known and do not impact business operations
- Adverse events caused by natural disasters, power failures, etc.

DEFINITIONS

Cardholder data at a minimum, cardholder data consists of the full Primary Account Number (PAN). Cardholder data may also appear in the form of the full PAN plus any of the following: cardholder name, expiration date and/or service code.

Cardholder data environment the people, processes and technology that store, process, or transmit cardholder data or sensitive authentication data.

Cybersecurity event means any observable occurrence in RTD's system or network, including partner organizations and personal devices that store or process RTD data.

Cybersecurity alert means a notification that an event (or series of events) has occurred, which is sent to responsible parties for the purpose of spawning action.

Cybersecurity incident means a violation or imminent violation of RTD's information technology policies, other RTD policies, or standard security practices. Loss of service or

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potential corruption or exposure of critical business resources may or may not result from a cybersecurity incident. Examples of incidents may include, but are not limited to:

- An attacker commands a botnet to send high volumes of connection requests to a web server, causing it to crash
- Users are tricked into opening a “quarterly report” sent via email that is malware; running the file infects computers and established connections with an external host
- An attacker encrypts systems and obtains sensitive data and threatens the systems will not be restored or the sensitive data details will be released publicly if the organization does not pay a designated sum of money
- Indicators of suspicious activity in relation to a critical RTD technology system

Major incident means an incident that has a substantially widespread or serious negative effect on RTD’s employees, customers, or ability to conduct business; or when the incident affects RTD’s ability to comply with the law or applicable regulations.

System means a group of network equipment, endpoint computers, and applications that are required to perform a certain business function or provide a business service. Examples include the payroll, maintenance, and Smart Media systems.

Acronyms

CDE	Cardholder Data Environment
CHD	Cardholder data
CIRT	Cybersecurity Incident Response Team
IT	Information Technology
CSOC	Cybersecurity Operations Center

3. RESPONSIBILITIES

Department Senior Managers – Senior managers within the affected departments are engaged to allocate resources from that department to act as the Cybersecurity Incident Response Team (CIRT) and assist with operations-based decision making.

Cybersecurity Incident Response Team – The CIRT is a designated group of system, network, and application administrators and other supporting stakeholders trained to respond to cybersecurity incidents. The CIRT may be expanded to include additional members as necessary to address the incident. The CIRT Lead is responsible for leading the Incident Response Procedure and the CIRT Team is responsible for executing it. Refer to the CIRT Escalation list for a list of members on the CIRT Team: [CIRT Contact and Escalation](#)

CIRT Lead – The CIRT Lead is the Incident Commander, who directs the efforts of the CIRT when responding to a cybersecurity incident. The CIRT Lead has the primary authority in response decisions for RTD cybersecurity incidents. This is a functional role; the CIRT Lead is always a member of the CIRT, however, the specific person assuming the role of CIRT Lead may vary depending on the nature and scope of the incident.

Cybersecurity Operations Center – The Cybersecurity Operations Center (CSOC) is responsible for the monitoring, detection, and initial analysis of RTD cybersecurity events. CSOC analysts intake and categorize user and Managed Security Service Provider (MSSP) reported incidents

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and issues and perform classification and/or coordination, analysis, and recovery activities. The CSOC is an extension of RTD's internal Cybersecurity Team.

IT Service Desk – The IT Service Desk is the initial intake point for reports of incidents or suspicious activity, creates tracking tickets, and engages the CIRT members that are needed to respond to an incident. For complex incidents, the IT Service Desk additionally helps coordinate communications among the CIRT members.

Business Process Owner – The business process owner is the lead or manager of the primary business process that is impacted by the incident. The business process owner typically controls the day-to-day access to, business use of, and appropriate operation of a computerized business system. The business process owner provides support to the CIRT by providing information and coordinating access and outages. The business process owner is also responsible for understanding and addressing any legal, contractual, or regulatory incident reporting requirements (e.g., data breach requirements) that are relevant to the system or the type of data it contains.

Supporting Stakeholders

The following groups may provide support to the CIRT based on the context and nature of the incident.

- **System Administrators:** System administrators are technical experts with specialized skills and intimate knowledge of RTD technology. Enterprise system administrators are typically members of the IT division; however, other system administrators also exist within RTD. If applicable, system administrators coordinate activities with vendors supporting the technology base.
- **General Counsel:** Provides guidance to ensure compliance with local, state, and federal laws, and industry regulatory requirements (Payment Card Industry Data Security Standard (PCI), credit card brands, etc.). Provides advice if there is reason to believe that an incident may have legal ramifications, including evidence collection, prosecution of a suspect, or a lawsuit. If an employee is implicated in the incident, coordinates with Human Resources and provides advice, including appropriate internal investigations.
- **Transit Police:** Immediately notified if the CIRT determines or suspects imminent danger to people or criminal activity. Provides oversight and assistance during incidents involving criminal activity. Provides physical security to CIRT members as otherwise requested.
- **Human Resources:** Provides assistance if an incident directly involves an employee or employee data (e.g., employee is the victim of the incident or is suspected of causing the incident). This may include, but is not limited to, assistance with disciplinary action or counseling, and employee termination.
- **Communications:** Responsible for handling public relations needs (e.g., media inquiries, press releases, or public statements). Depending on the nature and impact of the incident, Communications may need to confer with other parties in the incident response process (CIRT, senior management, legal, etc.) to ensure public statements comply with constraints imposed by business, security, and law

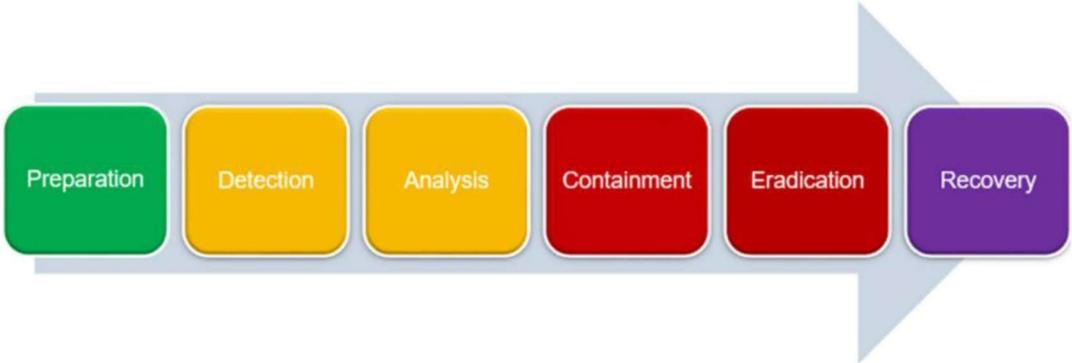
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enforcement interests.

- **Risk Management:** Responsible for initial engagement of RTD’s Cyber liability insurance incident response providers.
- **End Users:** Participate in annual awareness training and immediately report all suspicious activity or observed incidents through ServiceNow. Where implicated in an incident, cooperate with the CIRT’s investigation.

4.1 PROCEDURE

As defined in NIST 800-61, the Computer Security Incident Handling Guide, the incident response procedure encompasses six phases: preparation, detection, analysis, containment, eradication, and recovery. The dynamic relationship between those phases is highlighted in the figure below.



The integration of these steps with RTD’s Cybersecurity Incident Response Plan aids in addressing compliance with Transit Security Administration (TSA) Security Directive 1582- 21-01. Section 4 will detail the integration of these six phases for incident response at RTD.

4.1 PREPARATION



Cybersecurity Awareness Training

The Cybersecurity Incident Response policy requires all employees and contractors to participate in annual cybersecurity awareness training. This training shall include, at minimum, learning activities focused on recognizing and avoiding common types of end- user cybersecurity incidents (e.g., credential theft, malware, and phishing or other social engineering attacks). Additionally, users receive training on how to report incidents through ServiceNow.

All employees, contractors, or any agency representative with RTD email accounts shall participate in training once per calendar year. New members will be enrolled in training within 30 days of employment start date and shall complete training within 30 days of enrollment date.

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Cybersecurity Incident Response Team (CIRT) Members

The Senior Managers who have oversight of technology systems and incident response stakeholders shall appoint members to the CIRT. The CIRT shall comprise at least one primary and one alternate member for each critical technology function supported by the team. The CIRT members, or their management, shall provide both business hours and off- hours contact information for the CIRT members (e.g., a call list, escalation tree, primary number, or rotation). The responsible senior manager shall review CIRT membership at least annually or as members change roles or leave RTD. The senior manager shall provide an updated contact list to the IT Service Desk when changes are made.

CIRT Contact information: [CIRT Contact and Escalation](#)

CIRT Training

The CIRT shall participate in annual incident response training and incident response testing exercises related to their supported technologies. Supporting stakeholders may participate in training or testing at the invitation of the CIRT or as necessary to meet business needs but are not required to participate in annual training or testing.

Supporting Procedural and Technical Tools and Resources

The following resources are critical to an appropriate, timely, and well-documented response and shall remain available in case of an incident:

- RTD's standard communication toolset, including the ServiceNow ticketing system and designated rooms or bridge lines for incidents occurring on platforms such as Microsoft Teams
- Incident response runbooks, playbooks, wiki pages, or other standard procedures, forms, decision trees, and checklists (as exist). These living documents are maintained by the CIRT and are adapted based on the CIRT's experience and changes in industry best practices. These should be available in physical copies, on the N drive, and in the cloud on sites such as Microsoft Teams and Microsoft office365
- RTD published security policies, procedures, and best practices
- Contingency procedures designed and endorsed by the business process owner

Optionally, equipment used to capture information and perform system analysis may be helpful in determining the root causes of an incident and/or capturing information for future forensic analysis.



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4.2 DETECTION AND REPORTING

4.2 Detection Method

Managed Security Service Provider (MSSP)

Tier 1 support is provided by Critical Start, RTD's MSSP. Security events are monitored, and alerts are triaged and investigated appropriately. Alerts that require additional investigation are escalated to Tier 2, RTD's Cybersecurity Operations Center.

RTD Cybersecurity Operations Center (CSOC)

Escalated alerts from the MSSP are handed off to RTD for Tier 2 support and are investigated further. A ServiceNow ticket is opened for any alerts that require remediation. Refer to Classification section below regarding impact and criticality. Additionally, threat hunting is conducted across several data sets to proactively search for anomalies in the environment that may be a threat.

Internal Staff

Cybersecurity incidents may also be reported by internal staff via ServiceNow. Technical administrators may identify an issue with their system, for example, or end users may report a phishing email.

4.2.1 Reporting Method

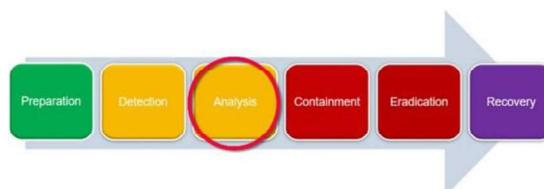
Employees, contractors, and agency representatives shall open a Service Desk ticket to report cyber-related incidents. Employees and contractors may contact the Service Desk via:

- Normal Business Hours Phone Number: 303-299-6100
- After Hours Support Phone Number: Vitalyst, 303-299-5100
- ServiceNow ticket: <https://rtd.service-now.com/sp> > Get Help > Create Incident
- Create ServiceNow ticket via Email: servicedesk@rtd-denver.com
- Email the Service Desk team: servicedeskteam@rtd-denver.com

For urgent incidents, employees, contractors, and agency representatives shall additionally notify the IT Service Desk and appropriate CIRT member (if known) by phone. If emergency response is required to contain the threat, in addition to creating a ticket, the IT Service Desk or CIRT member immediately notifies the business process owner to start communications and business continuity procedures.

4.2.2 Documentation and Routing

The IT Service Desk shall ensure that each incident report is documented in an IT Service Ticket. The IT Service Desk or CIRT may bundle multiple reports related to the same incident into a single ticket. If the ticket contains sensitive information, the IT Service Desk shall ensure that access to the details is limited to those with a need-to-know.



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4.3 CLASSIFICATION

The CIRT shall respond to incidents according to their urgency by classification.

- Table 1 describes common attack vectors related to cyber-related events that can result in an incident. As the investigation continues and a more accurate characterization of the impact is understood, the CIRT may reassign the incident to a different category.
- Refer to Table 2 for the ServiceNow Incident Impact and Urgency and Section 4.3.1 for the Functional, Information and Recoverability Impact matrices.

Attack Vectors and Description
Unknown: Cause of attack is unidentified
Attrition: An attack that employs brute force methods to compromise, degrade, or destroy systems, networks, or services
Web: An attack executed from a website or web-based application
Email/Phishing: An attack executed via an email message or attachment
External/Removable Media: An attack executed from removable media or a peripheral device
Impersonation/Spoofing: An attack involving replacement of legitimate content/services with a malicious substitute
Improper Usage: Any incident resulting from violation of an organization’s acceptable usage policies by an authorized user
Loss or Theft of Equipment: The loss or theft of a computing device or media used by the organization
Other: An attack method that does not fit into any other vector

Table 1: Incident Type/Attack Vectors

Should multiple same category incidents occur concurrently, the CIRT shall prioritize their response based on their relative level of impact to RTD (see Table 2 and Section 4.3.1 for guidance).

Priority	IMPACT			Response Time	
	1. High (Outage)	2. Medium (Performance Degradation)	3. Low (Incomplete Functionality)	Response Time	Resolution Time
URGENCY	1.High	Priority 1	Priority 2	Priority 3	P1: 30 minutes Target resolution time <4 hours
	2.Medium	Priority 2	Priority 3	Priority 4	P2: 2 business hours Target resolution time <8 business hours
	3.Low	Priority 3	Priority 4	Priority 5	P3: 8 business hours Target resolution time <5 business days

Table 2: ServiceNow Incident Impact, Urgency and Priority Table

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Functional, Information, and Recoverability Impact Matrix

Multiple tables below define each impact category description and its associated security levels in relation to ServiceNow priorities.

- *Functional Impact:* A measure of the impact to business functionality or ability to provide services
- *Information Impact:* Describes the type of information lost, compromised, or corrupted
- *Recoverability:* Identifies the scope of resources needed to recover from the incident

Priority: Critical | "Major Incident"

ServiceNow Priority: P1		
ServiceNow Impact and Urgency Category: - High Impact and High Urgency		
Functional	Information	Recoverability
Denial of Critical Services/Loss of Control – A critical system has been rendered unavailable	Destruction of Critical System – Destructive attacks, such as ransomware, have been used against a critical system	Not Recoverable – Recovery from the incident is not possible (e.g., sensitive data exfiltrated and posted publicly)
Significant Impact to Critical Services – A critical system has a significant impact, such as a local administrative account compromise	Core Credential Compromise – Core system credentials (such as domain or enterprise administrative credentials) or credentials for critical systems have been exfiltrated	
	Critical Systems Data Breach – Data pertaining to a critical system has been exfiltrated	
	Payment Card Industry Data Breach – Customer credit card data has been exfiltrated	

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Priority: High

ServiceNow Priority: P2		
ServiceNow Impact and Urgency Categories High Impact and Medium Urgency Medium Impact and High Urgency		
Functional	Information	Recoverability
Denial of Non-Critical Services – A non-critical system is denied or destroyed Significant Impact to RTD’s Non-Critical Services – A non- critical service or system has a significant impact Minimal Impact to Critical Services – Minimal impact but to a critical system or service, such as email or active directory	Destruction of non-critical systems – Destructive attacks, such as ransomware, have been used against a non- critical system Proprietary Information Breach – The confidentiality of unclassified proprietary information, such as protected critical infrastructure information, intellectual property, or trade secrets was compromised Privacy Data Breach – The confidentiality of personally identifiable information (PII) or personal health information (PHI) was compromised	Extended – Time to recovery is unpredictable; additional resources and outside help are needed

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Priority: Moderate

ServiceNow Priority: P3		
ServiceNow Impact and Urgency Category: - Medium Impact and Medium Urgency Low Impact and High Urgency High Impact and Low Urgency		
Functional	Information	Recoverability
Minimal Impact to Non-Critical Services – Some small level of impact to non-critical systems and services	Suspected but not Identified – A data loss or impact to availability is suspected, but no direct confirmation exists	Supplemented – Time to recovery is predictable with additional resources

Priority: Low

ServiceNow Priority: P4		
ServiceNow Impact and Urgency Category: Low Impact and Medium Urgency Medium Impact and Low Urgency		
Functional	Information	Recoverability
No Impact to Services – Event has no impact to any business or Industrial Control Systems services or delivery to entity customers No Impact – Event has no impact	No Impact – No known data impact	Regular – Time to recovery is predictable with existing resources

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4.2 INCIDENT HANDLING



Response Timeframes by Incident Category Critical (P1) Incidents

Critical incidents require immediate 24x7 response. The CIRT is notified via office phone, email, and cell phone/off hours contact list if available.

Event	Performed By	Timing Guideline
Notify CIRT, CSOC, and Business Process Owner (open / redirect ticket)	IT Service Desk	Within 5 minutes of verification, 24x7, by phone and email
Notify CIRT dept. senior managers	CIRT Lead	Within 60 minutes of declaration, 24x7
Hold triage and initial response plan meeting	CIRT Lead	Within 60 minutes of declaration, 24x7
Additional follow up	CIRT	Continuous communications until resolved, 24x7
Post-incident review	CIRT Lead	Within 5 business days of incident conclusion

Table 3: Critical (P1) Incident Timetable

Additional considerations for severe incidents

Certain severe incidents may require more delegation and communications than normal. For example, the CIRT Lead may need to form additional teams to cover Communications, Business Continuity, Technical and Operational functions. This will likely require further delegation of authority to designated leads and setting up call bridges and/or Microsoft Team sites. These functional leads will be in close communications with the CIRT lead.

In the event of a serious breach, Cybersecurity will reach out to RTD Risk Management for direction on engagement with the agency’s cyber insurance. Additionally, for incidents that are complex and warrant root cause analysis or forensics, a third-party consultant may be engaged to utilize RTD’s Incident Retainer, as of 2023 RTD retains Mandiant for this service.

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High (P2) Incidents

Most High incidents require priority business-hours response. RTD personnel are notified via email and/or office phone call.

The necessity to provide off-hours support for P2 incidents is determined by the level of functional, information, and recoverability impact to RTD (see Section 4.3.1 above for guidance). Incidents with "High" priority require immediate and off-hours resolution; incidents with "Medium" priority require off-hours analysis and scope determination at minimum. In such cases, the P1 notification procedure applies.

Event	Performed By	Timing Guideline
Notify CIRT, CSOC, and Business Process Owner (open / redirect ticket)	IT Service Desk	Within 30 minutes of verification, business hours only, impact dependent, by email
Additional follow up	CIRT Lead	As needed, 2-hour intervals minimum, business hours only
Post-incident review	CIRT Lead	Within 5 business days of incident conclusion

Table 4: High (P2) Incident Timetable

Medium (P3) and Low (P4) Incidents

The CSOC monitors open incidents that are classified as Medium or Low on an ongoing basis. Typically, there is no impact to system function, information, or recoverability during a Medium or Low incident. If relevant or useful, the CSOC will update impacted system administrators and business process owners via email.

Internal Notification

Depending on the type of incident, various teams may need to be involved. Refer to the [CIRT Contact and Escalation](#) call list for a complete listing of departments and corresponding contact escalation.

External Notification

The CIRT Lead may notify or additionally engage approved external resources to assist with analysis and response, or to provide information for situational awareness across agencies. General Counsel should be consulted before any external sharing or reporting of threat intelligence. Examples of external notification include the following:

- Personally Identifiable Information (PII) report to CO State Attorney General's office

RTD Emergency Operations Plan

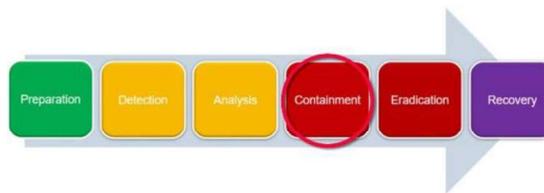
- If there is a PCI breach, follow the breach steps and notification process outlined in the following document: Breach Steps and Requirements - Wells Fargo.
- Multi-State Information Sharing and Analysis Center (MS-ISAC)
- FBI local field (regarding criminal or terrorist activities)
- U.S. Department of Homeland Security Transportation Security Administration (TSA)
 - Security Directive 1582-21-02, which enhances Public Transportation and Passenger Railroad (PTPR) Cybersecurity and requires the PTPR Owner/Operator to report cybersecurity incidents to the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency (CISA) as soon as practicable, but no later than 24 hours after a cybersecurity incident is identified
- Reporting Cybersecurity Incidents:
 - 1 RTD must report cybersecurity incidents to CISA involving systems that the Owner/Operator has responsibility to operate and/or maintain, including:
 - a. Unauthorized access of an Information or Operational Technology system
 - b. Discovery of malicious software on an IT or OT system
 - c. Activity resulting in a denial of service to any IT or OT system
 - d. Any other cybersecurity incident that results in operational disruption to the Owner/Operators Information or Operational Technology systems or other aspects of the Owner/Operator's rail systems or facilities, or an incident that has the potential to cause impact to a large number of passengers, critical infrastructure or core government functions, or impacts national security, economic security, or public health and safety
 - 2 Cybersecurity incidents reported to CISA will be conveyed through the CISA Incident Reporting System at the following link: <https://us-cert.cisa.gov/forms/report>. To assist with filling out this form, utilize the RTD CISA Incident Reporting template, which outlines the required fields and serves as a local RTD record of the Cyber incident submitted to CISA.

The CIRT Lead may notify or additionally engage approved external resources to assist with analysis and response, or to provide information for situational awareness across regional partners or other public transit agencies like RTD.

The CIRT Lead should submit notification to any applicable payment card brands (American Express, Visa, MasterCard, Discover, JCB) if a confirmed breach includes CHD.4.5 CONTAINMENT, ERADICATION, AND RECOVERY

The CIRT Lead identifies and assigns all subsequent analysis, containment, eradication, and recovery activities performed by the CIRT or others assisting with the incident. The CIRT (and others) perform the following activities at the direction of the CIRT Lead.

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Containment

Containment is maintaining control of the affected system(s) and surrounding environment and preventing an incident from causing further damage. It may be technical (e.g., removing the affected system from the network) or non-technical (e.g., working with supporting stakeholders and the business process owner to identify strategies to manage customer impacts).

If an intruder's actions are rapid, destructive, and/or spreading, the CIRT Lead shall authorize the CIRT's immediate action to contain the threat, including actions that could be disruptive to business operations or public service. Examples may include:

- Disconnecting IT networks impacting fare collections and business operations
- Shutting down servers disrupting rail operations
- Isolating systems supporting paratransit operations
- Restricting networks impacting critical back office and administrative functions

General Guidance for Containment Governance

Any containment actions that will significantly disrupt RTD's operations or ability to achieve its strategic priorities, shall require prior approval by the General Manager and CEO.

For other less disruptive containment directives, the CIRT Lead shall seek prior approval from affected Chiefs or Assistant General Managers (AGM), but if they are unavailable after best effort attempts, these actions do not require process owner or leadership approval.

After containment actions are performed, the CIRT will stand-up a Communications Call Bridge to provide real-time updates to RTD's Leadership Team and affected stakeholders. A notification with call-in information will be sent to the business stakeholders and leadership within 15 minutes of containment directives being issued.

Specific requirements for the approval of containment actions will be defined in the Containment Procedures.

4.5.1 Containment Procedures

To facilitate timely containment of cybersecurity attacks, each of the following containment procedures should be documented and annually reviewed for accuracy.

Each procedure should include provisions for the designation of different approval methods depending on the impact and scope of the incident, if applicable.

Each procedure will need to be signed and approved by the associated department's Chief or AGM.

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Containment Procedure	Responsible Department
Preservation of Critical Enterprise IT Servers	Information Technology / Server Team
Preservation Backup Systems	Information Technology / Server Team
Containment of Infected Workstations Hosts	Cybersecurity Team
Isolation of Local Networks	Information Technology / Network Team
Isolation of Enterprise Networks	Information Technology / Network Team
Disconnection of Internet / WAN / VPN Connections	Information Technology / Network Team
Isolation of Light Rail Networks	Rail Operations / Light Rail SCADA
Isolation of Commuter Rail Networks	Rail Operations / Commuter Rail
Preservation of Critical Light Rail SCADA Servers	Rail Operations / Light Rail SCADA
Preservation of Critical Commuter Rail Servers	Rail Operations / Commuter Rail
Preservation of Critical Bus Operations Servers	Information Technology / Intelligent Transportation Systems
Preservation of Ticket Vending Machines	Finance / Treasury

Table 5: Containment Procedures

Eradication



Eradication involves removing the identified threat from the environment. In order to ensure that the threat is completely removed, additional threat mitigation actions may need to be taken to prevent immediate reoccurrence and reduce the chances of future reoccurrence of the incident.

In the event of a major incident, a cybersecurity forensics firm should be engaged to ensure that the threat has been completely eradicated.

Evidence Gathering

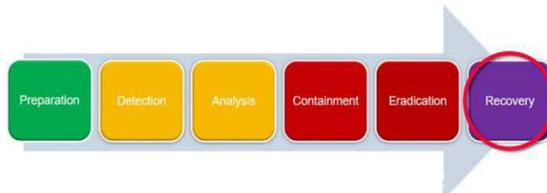
Critical incidents often require evidence gathering to resolve the incident; however, it may also be needed for legal proceedings. It’s important to document how all evidence, including compromised systems, have been preserved. A detailed log should be kept for all evidence, including the following:

- Identifying information (e.g., the location, serial number, model number, hostname, media access control (MAC) addresses, and IP addresses of a computer)

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- Name, title, and phone number of everyone who collected or handled the evidence during the investigation
- Time and date (including time zone) of each occurrence of evidence handling
- Locations where the evidence was stored

Recovery



Recovery involves testing and restoring the systems to vulnerabilities to prevent similar incidents (e.g., restoring systems from clean backups, rebuilding systems from scratch, replacing compromised files with clean versions, installing patches, changing passwords, tightening network security, increasing logging and monitoring levels).

To ensure the integrity and security of backed-up data and systems, the following measures must be considered and implemented where technically feasible:

- Backups should be secured and maintained offline
- Procedures are documented so that when data backups are made, they are scanned by security software to check that it is free of malicious artifacts
- Procedures are documented so that when backups are tested for restoration, they are scanned by security software to check that it is free of malicious artifacts

Incident Closure

This step involves documenting and communicating closure of the incident to all involved stakeholders.

4.6 POST-INCIDENT REVIEW

Following a major incident, the CIRT Lead schedules a meeting with the CIRT and any other individuals who participated in the incident response to discuss the following:

Root Cause Detail

The root cause of the incident should be identified and detailed, including the technical and non-technical causes of the incident using a standard methodology.

Lessons Learned

Identify what went well during the incident response, so that those procedures or techniques can be repeated, and areas for improvement, so those procedures can be revised or additional support can be obtained. A post-incident report (PIR) shall be completed at this time. To facilitate the PIR, collect the following information:

- A timeline of activities taken by RTD from when the incident was discovered, to recovery
- Were documented procedures followed? Why or why not?

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- What information was needed sooner?
- Were any steps or actions taken that may have inhibited the recovery?
- What would staff and management do differently the next time a similar incident occurs?
- How could information sharing with other organizations be improved?
- What corrective action can prevent similar incidents in the future?
- What precursors or indicators should be watched for in the future to detect similar incidents?
- What additional tools or resources are needed to detect and mitigate future incidents?
- What corrective action items need to be completed, who are the owners, and what are the agreed-upon milestones and completion timelines?

During the meeting, the CIRT Lead assigns action items to the CIRT as necessary to improve future response strategies and address vulnerabilities that led to the incident.

4.7 METRICS AND REPORTING

The CSOC generates a monthly report of all observed and reported incident activity to identify trends and common root causes. The report is shared with potential CIRT members and associated Senior Managers; emergency management, including Transit Police; and other technical leads/managers within for increased cybersecurity situational awareness and threat intelligence sharing.

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5 External Contacts

Contact	24x7 Contact Information	Roles and Responsibilities
Critical Start	Email: support@criticalstart.com Phone: 1.877.684.2077 Account Manager: Matthew McIntosh, matthew.mcintosh@criticalstart.com or 214.478.1060	Managed Security Service Provider (MSSP), Tier 1 Incident Response support
AIG	AIG’s CyberEdge Claims Hotline Phone: 1.800.292.7345	Cybersecurity Insurance
Mandiant	Report claims through: Email: investigations@mandiant.com Phone: 1.866.962.6342	Cybersecurity Incident Response Retainer for a Security Breach or immediate Incident Response services
Cybersecurity and Infrastructure Security Agency (CISA)	Report claims by email: Central@cisa.gov Report claims by phone: 1.888.282.0870 Website: https://us-cert.cisa.gov/cisa-regions Submit RTD Cyber Incident to CISA: https://us-cert.cisa.gov/forms/report Local Contact: Dave Sonheim, Chief of Cybersecurity – Supervisor Region 8, CISA-Cybersecurity and Infrastructure Security Agency Phone: 720.661.1643 Email: David.sonheim@hq.dhs.gov	Federal agency, an operational component under Department of Homeland Security oversight Note: Once an incident has been identified it must be reported to CISA within 24 hours; refer to the 4.4 Incident Handling section above for additional details

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<p>Multi-State Information Sharing and Analysis Center (MS-ISAC)</p>	<p>Email: CSOC@msisac.org Phone: 1.866.787.4722</p>	<p>Voluntary and collaborative organization designated by U.S. Department of Homeland Security as key resource for cyber threat prevention, protection, response and recovery for the nation’s state, local, tribal, and territorial governments</p>
<p>Federal Bureau Investigation (FBI)</p>	<p>Website: https://www.fbi.gov/contact-us/field-offices</p>	<p>Cyber incidents should be reported to FBI if it may impact national security, economic security, or public health and safety; affects core government or critical infrastructure functions; or results in a significant loss of data, system availability, or control of systems</p>
<p>Colorado State Attorney General’s Office</p>	<p>Website: https://coag.gov/ Phone: 720.508.6000 Contact: Phil Weiser, Colorado Attorney General Email: databreach@coag.gov Reference: https://coag.gov/resources/data-protection-laws/</p>	<p>In the event of a security data breach affecting 500 or more Colorado residents, a notice must be sent to the Colorado Attorney General as soon as possible, but no later than 30 days after the date of determination that a security breach occurred</p>
<p>Wells Fargo</p>	<p>Breach Steps and Requirements</p>	<p>If there is a data breach related to PCI, Cybersecurity will coordinate efforts for a forensic investigation</p>

6 Ransomware Specific Response Guidelines

Section 6 serves as a CIRT reference for responding to ransomware attacks.

6.1 Ransomware Detection and Analysis

1. Determine which systems were impacted, and immediately isolate them.

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- If several systems or subnets appear impacted, take the network offline at the switch level. It may not be feasible to disconnect individual systems during an incident.
- If taking the network temporarily offline is not immediately possible, locate the network (e.g., Ethernet) cable and unplug affected devices from the network or remove them from Wi-Fi to contain the infection.
- After an initial compromise, malicious actors may monitor an organization's activity or communications to understand if their actions have been detected. Be sure to isolate systems in a coordinated manner and use out-of-band communication methods like phone calls or other means to avoid tipping off actors that they have been discovered and that mitigation actions are being undertaken. Not doing so could cause actors to move laterally to preserve their access—already a common tactic—or deploy ransomware widely prior to networks being taken offline.

Note: Step 2, which follows, will prevent from maintaining ransomware infection artifacts and potential evidence stored in volatile memory. It should be carried out only if it is not possible to temporarily shut down the network or disconnect affected hosts from the network using other means.

2. Only in the event devices cannot be disconnected from the network, power them down to avoid further spread of the ransomware infection.

Containment actions should prioritize RTD's most critical assets. Should initial containment fail, consider asset and business service prioritization when performing disruptive proactive actions, as follows:

- a) Disconnect Windows domain controllers
 - b) Disconnect network backups
 - c) Disconnect firewall and network connections into commuter rail
 - d) Disconnect firewall and network connections into light rail
 - e) Disconnect Ticket Vending Machines (TVM) and supporting VPN connections
 - f) Disconnect core switches isolating user and data center environments
 - g) Disconnect internet connections
3. Triage impacted systems for restoration and recovery.
 - Identify and prioritize critical systems for restoration and confirm the nature of data housed on impacted systems.
 - Prioritize restoration and recovery based on a predefined critical asset list that includes information systems critical for health and safety, revenue generation, or other critical services, as well as systems they depend on.
 - Keep track of systems and devices that are not perceived to be impacted so they can be deprioritized for restoration and recovery. This enables the organization

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to get back to business in a more efficient manner.

4. Confer with the team to develop and document an initial understanding of what has occurred based on initial analysis.
5. Using the contact information below, engage internal and external teams and stakeholders with an understanding of what they can provide to help mitigate, respond to, and recover from the incident.
 - Share the information on hand to receive the most timely and relevant assistance. Keep the leadership team and senior managers informed via regular updates as the situation develops. Relevant stakeholders may include the IT department, managed security service providers, the cyber insurance company, and departmental or elected leaders.
 - Consider requesting assistance from CISA; MS-ISAC; and local, state, or federal law enforcement (e.g., Federal Bureau of Investigation [FBI] and U.S. Secret Service [USSS]).
 - As appropriate, coordinate with communications and public relations personnel to ensure that accurate information is shared internally with the organization and externally with the public.
 - The Public Power Cyber Incident Response Playbook (<https://www.publicpower.org/system/files/documents/Public-Power-Cyber-Incident-Response-Playbook.pdf>) contains guidance for organizational communication procedures as well as templates for cyber incident holding statements for public consumption. Work with the team to develop similar procedures and draft holding statements as soon as possible, as developing this documentation during an incident is not optimal. This will allow the organization to reach consensus, in advance, on what level of detail is appropriate to share within the organization and with the public, and how information will flow.

Ransomware Containment and Eradication

If no initial mitigation actions appear possible:

1. Take a system image and memory capture of a sample of affected devices (e.g., workstations and servers). Additionally, collect any relevant logs as well as samples of any “precursor” malware binaries and associated observables or indicators of compromise (e.g., suspected command and control IP addresses, suspicious registry entries, or other relevant files detected).
 - Take care to preserve evidence that is highly volatile in nature—or limited in retention—to prevent loss or tampering (e.g., system memory, Windows Security logs, data in firewall log buffers).

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2. Consult federal law enforcement regarding possible decryptors available, as security researchers have already broken the encryption algorithms for some ransomware variants.

To continue taking steps to contain and mitigate the incident:

1. Research the trusted guidance (i.e., published by sources such as government, MS-ISAC, reputable security vendor) for the particular ransomware variant and follow any additional recommended steps to identify and contain systems or networks that are confirmed to be impacted.
 - Kill or disable the execution of known ransomware binaries; this will minimize damage and impact to systems. Delete other known, associated registry values and files.
2. Identify the systems and accounts involved in the initial breach. These can include email accounts.
3. Based on the breach or compromise details determined above, contain any associated systems that may be used for further or continued unauthorized access. Breaches often involve mass credential exfiltration. Securing the network and other information sources from continued credential-based unauthorized access may require the following actions:
 - Disabling virtual private networks, remote access servers, single sign-on resources, and cloud-based or other public facing assets.
4. If server-side data is being encrypted by an infected workstation, quick-identification steps are to:
 - Review Computer Management > Sessions and Open Files lists on associated servers to determine the user or system accessing those files.
 - Review file properties of encrypted files or ransom notes to identify specific users that may be associated with file ownership.
 - Review the TerminalServices-RemoteConnectionManager event log to check for successful RDP network connections.
 - Review the Windows Security log, SMB event logs, and any related logs that may identify significant authentication or access events.
5. Run Wireshark on the impacted server with a filter to identify IP addresses involved in actively writing or renaming files (e.g., "smb2.filename contains cryptxxx").

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6. Conduct an examination of existing organizational detection or prevention systems (e.g., antivirus, Endpoint Detection & Response, IDS, Intrusion Prevention System) and logs. Doing so can highlight evidence of additional systems or malware involved in earlier stages of the attack.
 - Look for evidence of precursor “dropper” malware. A ransomware event may be evidence of a previous, unresolved network compromise. Many ransomware infections are the result of existing malware infections such as TrickBot, Dridex, or Emotet.
 - Operators of these advanced malware variants will often sell access to a network. Malicious actors will sometimes use this access to exfiltrate data and then threaten to release the data publicly before ransoming the network in an attempt to further extort the victim and pressure them into paying.
 - Malicious actors often drop manually deployed ransomware variants on a network to obfuscate their post-compromise activity. Care must be taken to identify such dropper malware before rebuilding from backups to prevent continuing compromise.
7. Conduct extended analysis to identify outside-in and inside-out persistence mechanisms.
 - Outside-in persistence may include authenticated access to external systems via rogue accounts, backdoors on perimeter systems, exploitation of external vulnerabilities, etc.
 - Inside-out persistence may include malware implants on the internal network or a variety of living-off-the-land style modifications (e.g., use of commercial penetration testing tools like Cobalt Strike; use of PsTools suite, including PsExec, to remotely install and control malware and gather information regarding—or perform remote management of—Windows systems; use of PowerShell scripts). Identification may involve deployment of endpoint detection and response solutions, audits of local and domain accounts, examination of data found in centralized logging systems, or deeper forensic analysis of specific systems once movement within the environment has been mapped out.
8. Rebuild systems based on a prioritization of critical services (e.g., health and safety or revenue generating services), using pre-configured standard images, if possible.
9. Once the environment has been fully cleaned and rebuilt (including any associated impacted accounts and the removal or remediation of malicious persistence mechanisms), issue password resets for all affected systems and address any associated vulnerabilities and gaps in security or visibility. This can include applying patches, upgrading software, and taking other security precautions not previously taken.

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10. Based on established criteria, which may include taking the steps above or seeking outside assistance, the designated IT or IT security authority declares the ransomware incident over.

6.2 Ransomware Recovery and Post-Incident Activity

1. Reconnect systems and restore data from offline, encrypted backups based on a prioritization of critical services.
 - Take care not to re-infect clean systems during recovery. For example, if a new Virtual Local Area Network has been created for recovery purposes, ensure only clean systems are added to it.
2. Document lessons learned from the incident and associated response activities to inform updates to—and refine—organizational policies, plans, and procedures, and guide future exercises of the same.
3. Consider sharing lessons learned and relevant indicators of compromise with CISA or the sector ISAC/ISAO for further sharing and to benefit others within the community.

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Annex L: Hazardous Materials Annex

Purpose

The purpose of the Hazardous Materials (Hazmat) Annex is to identify those planning considerations specific to hazardous materials both at RTD Facilities and in the broader service area. Hazardous materials are defined by the NFPA 400, Hazardous Materials Code as:

A chemical or substance that is classified as a physical hazard material or a health hazard material, whether the chemical or substance is in usable or waste condition.

Where physical and health hazards can be any of the classifications (Table 1):

Table 1. Physical and Health Hazards

Physical Hazard	Health Hazard
Explosive	Toxic
Flammable cryogen	Highly toxic
Flammable gas	Corrosive material
Flammable solid	
Ignitable (flammable or combustible) liquid	
Organic peroxide	
Oxidizer	
Oxidizing cryogen	
Pyrophoric	
Unstable (reactive)	
Water-reactive material	

Source: NFPA 400, Hazardous Materials Code

Situation Overview

RTD uses/stores Hazmat in nine facilities, which are all accounted for in the annual Tier II Emergency and Hazardous Chemical Inventory submitted in whole or part to the State Emergency Response Commission, Denver County LEPC, Arapahoe County LEPC, Boulder County LEPC, Denver Fire Department, Aurora Fire Rescue Department, Englewood Fire Area Control District, and Boulder Fire-Rescue Department. Denver Fire Department also requires additional hazmat reporting for permitting purposes.

Additionally Hazmat is transported through Denver along designated Hazardous Materials Routes (entire portion contained in service area unless otherwise noted): I-25, I-70 from 270 East to Kansas, I-70 from I-25 West to US 6 (East of Loveland Pass), I-225, I-76, I-270, US 36 from I-25 to CO 157, US 285 from CO 470 to CO 112, US 85, CO 52, CO 470 from I-70 to I-25 (Southwest), CO 157 from US 36 to CO 119, CO 119 from CO 157 to CO 25, CO 52, and I-70 with a radioactive restriction (Type 7) from I-25 to CO 2 (Figure 1).

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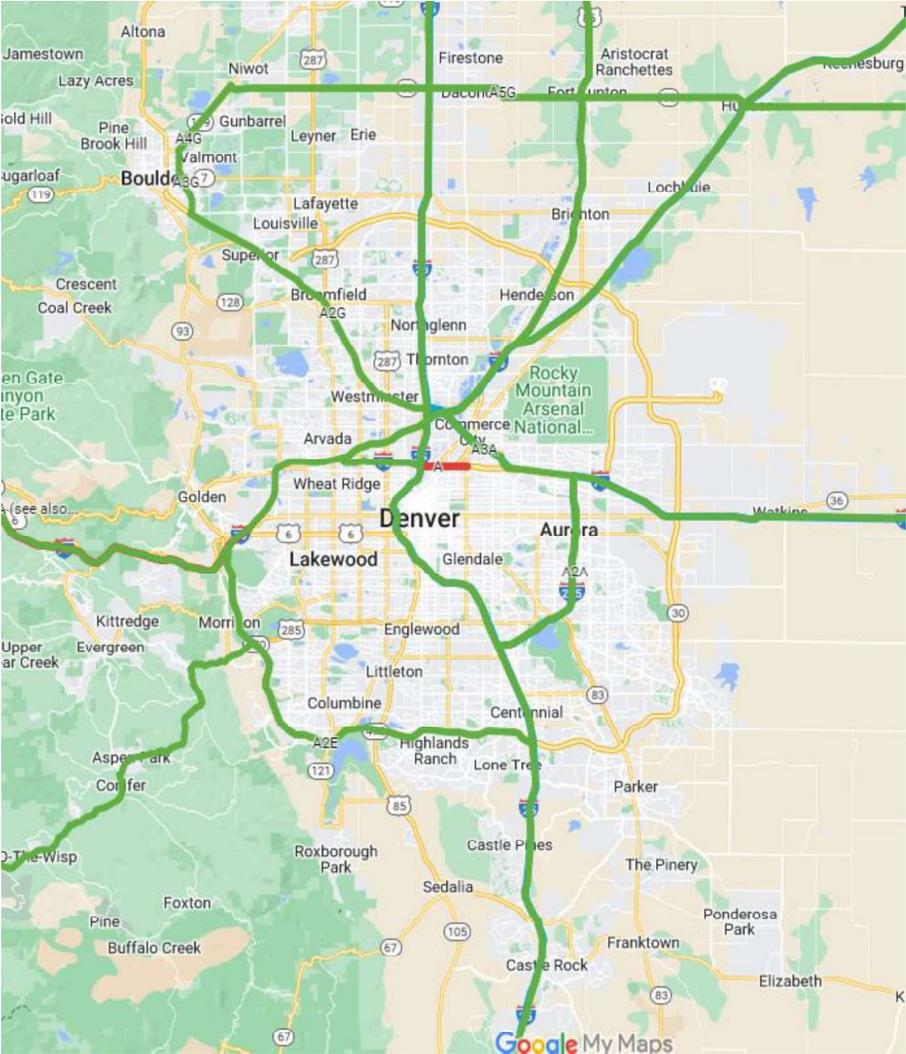


Figure 1 Designated Hazardous Materials Routes in RTD Service Area

Further, Light and Commuter Rail run within 100m of Freight Rail Alignments for about 42.51% of the system (Figure 2). Freight Rail in the service area is predominantly operated by Burlington North Santa Fe Railroad (BNSF) and Union Pacific Railroad (UPRR). Freight cargo can include coal, mixed-freight, and hazardous materials at any time.

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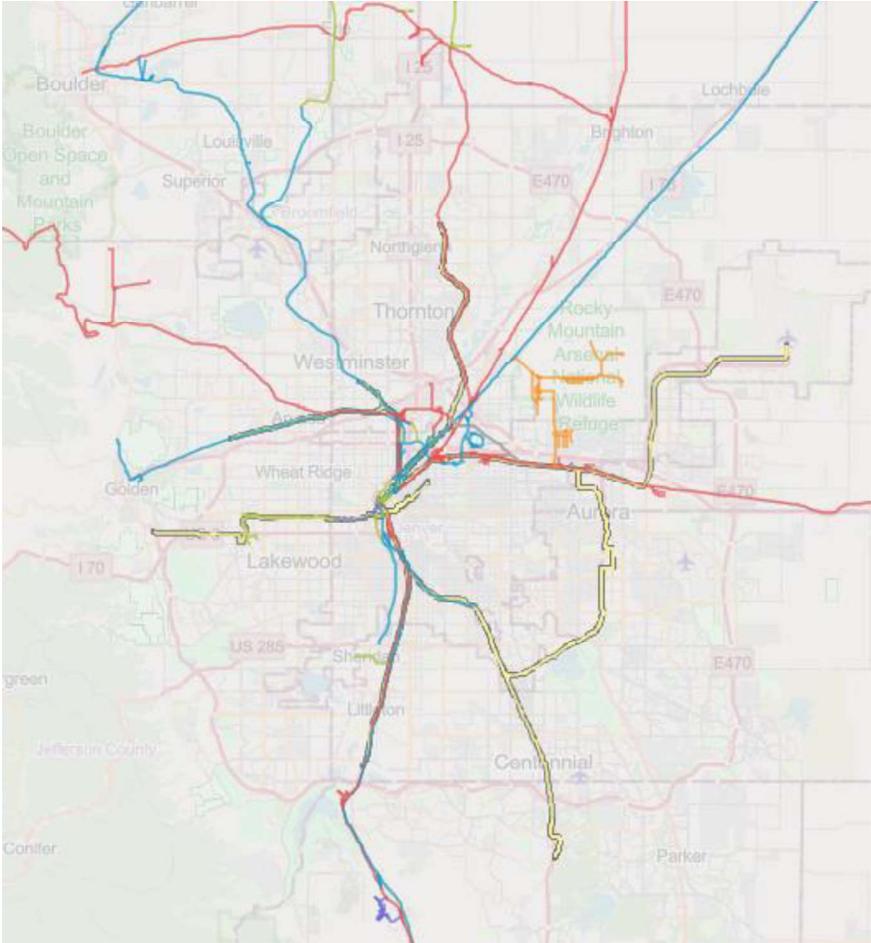


Figure 2 RTD Rail Alignments (Yellow on Black) overlaid on a map of Freight Railroads in the RTD Service Area. Red- Union Pacific, Blue-BNSF, Green, Orange, Purple-Others

Geographic Risk

RTD uses/stores Hazardous Materials at the following facilities (Table 2).

Table 2. RTD Facilities storing Hazardous Materials

Facility Name	Facility Address	Operations Housed	Types of Hazards presented by Stored Chemicals
RTD Blake St Admin Offices	1660 Blake St Denver, CO 80202	Executive Office, Finance, Safety, HR, Planning, Operations, Administration	Simple Asphyxiant
RTD Boulder Operating Facility	1707 Exposition Dr Boulder, CO 80301	Bus Operations	Flammable Oxidizer Gas Under Pressure Corrosive to metal Skin Corrosion or irritation Serious Eye damage or eye irritation Respiratory or Skin Sensitization

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			Carcinogenicity Simple Asphyxiant
RTD Civic Center Station	1550 Broadway Denver, CO 80202	Bus Operations, Customer Care	Flammable Simple Asphyxiant
RTD District Shops Maintenance Facility	1900 31 st St Denver, CO 80216	Bus Operations, IT, Finance, Facilities, RTD PD	Flammable Gas Under Pressure Corrosive to metal Acute Toxicity Skin Corrosion or irritation Serious Eye damage or eye irritation Respiratory or Skin Sensitization Carcinogenicity Simple Asphyxiant
RTD East Metro Operating Facility	14100 East Colfax Ave Aurora, CO 80011	Bus Operations	Flammable Corrosive to Metal Gas Under Pressure Skin Corrosion or irritation Serious eye damage or eye irritation Simple Asphyxiant
RTD Elati Light Rail Maintenance Facility	2701 South Elati St Englewood, CO 80110	Light Rail Operations	Flammable Oxidizer Corrosive to Metal Gas Under Pressure Skin Corrosion or irritation Serious eye damage or eye irritation Carcinogenicity Simple Asphyxiant Hazard not otherwise classified
RTD Mariposa Light Rail Maintenance Facility	655 Mariposa St Denver, CO 80204	Light Rail Operations	Flammable Corrosive to Metal Gas under pressure Skin corrosion or irritation Serious eye damage or eye irritation Respiratory or skin sensitization Carcinogenicity Simple Asphyxiant Hazard not otherwise classified
RTD Platte Operating Facility	3333 Ringsby Ct Denver, CO 80216	Bus Operations	Flammable Oxidizer Corrosive to metal Gas under pressure Skin Corrosion or irritation Serious eye damage or eye irritation

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			Respiratory or skin sensitization Carcinogenicity Simple asphyxiant Hazard not otherwise classified
RTD Rio Court Light Rail Facility	1350 Rio Court Denver, CO 80204	Light Rail Operations	Flammable Oxidizer Corrosive to Metal Gas under pressure Skin corrosion or irritation Serious eye damage or eye irritation Carcinogenicity Simple Asphyxiant Hazard not otherwise classified
RTD 711 Building	711 W 31 st Ave Denver, CO 80202	NMRL Operations, Treasury, Customer Care	None at reportable quantity as of 2022 Tier II submission, composition is similar to Blake St
RTD Steele St Building	8215 Steele St Denver, CO 80216	Commuter Rail	None at reportable quantity as of 2022 Tier II submission, composition is similar to Rio Court

Bus operates the following routes on designated hazardous materials routes (Table 3)

Table 3. Bus routes on Designated Hazardous Materials Routes

I-25	120X 104L Pull in and Pull out
I-70	Pull in and Pull out
I-76	Pull in and Pull out
I-225	AT Pull in and Pull out
I-270	FF5 Pull in and Pull out
US 85	RX Pull in and Pull out
US 36	FF AB LD Pull in and Pull out
US 285	CV Pull in and Pull out
CO 119	BOLT Pull in and Pull out
CO 157	Pull in and Pull out
CO 470	Pull in and Pull out

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Rail Operations have several lines which travel within 100 m of freight rail alignments. These are described in Table 4.

Table 4. Rail Alignments within 100 m of Freight Rail

Corridor	Total Length (km) within 100m of active freight (approximate)	Portions within 100m of Freight
Light Rail		
Central	4.65	Junction to I-25 & Broadway
Southwest	15.9	Entire Corridor
Central Platte Valley Spur	2.90	All
Southeast	3.59	I-25 & Broadway Station until intersection with S University Blvd and Colorado Boulevard until E Evans Intersection
West	None	Though rails are present, they are abandoned
I-225	.54	At Peoria Station
Commuter Rail		
N		E 70 th Ave Bend to Northern Terminus
A	18.00	Entire Corridor
B	8.51	Entire Corridor
G	16.49	Entire Alignment except where parallel to Pecos St

Potential Impacts

Hazardous materials spills can vary widely in severity and their impacts. Physical and health impacts as outlined above are potential risks as well as:

- Property damage
- Service Disruption or detours
- Regulatory non-compliance
- Financial cost to remediate
- Investigation to identify cause or impacts can cause long-lasting disruption
- Reputation damage
- Injury or loss of life to RTD employees or customers

Mitigations in Place

All hazardous materials stored in RTD facilities are properly labeled and stored in appropriate size, material, and quantity according to their state (gas, liquid or solid), concentration, and application.

RTD facilities with petroleum products also have leak detection equipment and secondary containment to identify and prevent spills. Regular monitoring is conducted by RTD Personnel and a third-party contractor, including inspections, maintenance, and regulatory compliance.

RTD Emergency Operations Plan

All RTD staff responsible for handling of hazardous materials are trained on their safe handling instructions and have Safety Data Sheets available in any workspace that has hazardous materials. These are also communicated with local first response partners to ensure they are able to respond safely to facilities storing hazardous materials. Fire Department partners have also been familiarized with all RTD Facilities.

RTD has Contracted CG Environmental and Belfor Environmental to do asbestos, mold, flooding, lead-based paint, groundwater and soil contamination, and fire damage remediation, as well as waste disposal to prevent exposure hazards at RTD facilities.

RTD vehicles have ventilation systems in place to protect operators and customers. Buses, including paratransit buses, have recirculating ventilation systems which can prevent air from the outside of the bus from entering into the space when all doors and windows are closed. On light and commuter rail vehicles, operators are able to turn off HVAC systems to prevent external air from entering the internal operator and customer area when doors are closed.

Planning Assumptions

- Hazardous materials are stored and transported throughout the Service Area and events impacting RTD may not originate at RTD facilities or vehicles
- Wind and other weather conditions can increase the area impacted by a hazardous materials incident and may be unpredictable
- Impacts of Hazardous Materials incidents may have long-lasting response/recovery efforts to address the event's impacts, including the mitigation of environmental impacts, especially to affected waterways

Concept of Operations

Detection/Monitoring

Hazardous materials incidents are the responsibility of the originating agency to report to authorities. Air quality monitoring may be an early detection point for hazardous materials releases not sufficiently reported. This information will be disseminated by local response/public safety agencies.

RTD facilities with petroleum products have leak detection equipment and secondary containment to identify and prevent spills. Regular monitoring is conducted by RTD Personnel and a third-party contractor, including inspections, maintenance, and regulatory compliance.

Safety & Environmental staff perform regular inspections to identify any potential hazmat hazards, among other factors.

Safety and Environmental create and disseminate training for frontline staff to identify improper hazmat handling with reporting tools made available to encourage efficient identification of any risky behaviors and storage methods. Industrial spill response training and other training is available on HR management platforms, currently under the name of "Safety Skillz (implemented in 2023)."

RTD Emergency Operations Plan

Response Considerations

If necessary for RTD personnel to enter an area contaminated with Hazardous Materials, they must don the appropriate level of PPE. If the chemical identity is unknown or has mixed with secondary chemicals, Level A PPE is required. In this case, do not approach the spill and advise first responders upon their arrival.

First Responders and Environmental Professionals will primarily be responsible for response and notification of when it is safe to return to an affected area.

For hazardous materials incidents originating at an RTD facility, the primary point of contact within RTD will be Bus dispatch, 303-299-3000, and Light Rail Control at 303-299-3480, with secondary contacts being RTD's Environmental Compliance Manager and Environmental Specialists. If the spill is larger or more hazardous/unsafe than what RTD is adequately able to address independently, they will then contact one of two hazardous materials clean-up contractors, CG Environmental or Belfor Environmental as of 2023.

Facility specific plans have been developed for six facilities containing the majority of the agency's hazmat: Boulder, District Shops, East Metro, Elati, Mariposa and Platte (Format name 2023 RTD ICP *Facility Name*). These are available on The Hub, the agency's intranet, and should be reviewed by all individuals responsible for response operations taking place at an RTD facility.

Recovery Considerations

RTD Facilities impacted by a hazardous materials incident may not be accessible for days or weeks following the incident. In this case, affected staff members located at that facility will report to the alternate facility identified in the Continuity of Operations Plan.

Roles and Responsibilities

Facilities

- Secondary responsibility to maintain spill kits, including procurement of spill kits
- Safely handle and store hazardous materials, in consultation with Safety and Environmental
- Provide RTD Incident Command for the initial response and liaise directly with first responders

Operations

- Safely handle and store hazardous materials, in consultation with Safety and Environmental
- Notify operators in affected areas or reporting to a facility impacted by a hazardous materials incident
- Evacuate vehicles from impacted area
- Modify routes and provide detours as appropriate to continue service without travelling through any area impacted by a hazardous materials incident
- Secondary responsibility to provide safe hazardous materials handling training
- Assist with evacuation from affected areas according to resource availability

RTD Emergency Operations Plan

Safety and Environmental

Safety Group

- Inspect and work with operations staff to address any potential hazards at facilities

Environmental Group

- Complete and submit Tier II report to relevant agencies
- Maintain the Integrated Contingency Plans for locations storing hazardous materials at reportable quantities
- Primary responsibility to maintain Spill kits with especial emphasis on kits near water, including procurement of spill kits
- Primary responsibility to provide safe hazardous materials handling training, including industrial emergency response
- Maintain and update digital database of Safety Data Sheets
- Report Hazardous Materials incident to relevant regulatory agency
- Contact Hazmat Cleanup contractors if necessary

Contracting and Procurement

Contracting Group

- Review purchase requisitions for contracted first responders for hazardous materials

Materials Management Group

- Provision and distribution of personal protective equipment
- Procure and provide oversight to hazardous materials suppliers and transporters with Safety & Environmental Compliance Division

RTD Emergency Operations Plan

Annex M: Power Failure

Purpose

The purpose of the Power Failure Annex is to identify those planning considerations specific for the loss of power to any major RTD facility and the planning considerations to effectively manage these events.

Situation Overview

Xcel Energy is the only power supply company within the RTD service area and maintains all pre-RTD infrastructure related to power delivery. Occasionally, RTD will have power loss to one or more building, or to power substations serving the rail alignment during a power grid failure. In the past, there have been one to three major outages on average per year affecting the agency. These outages can range in duration from six to 36 hours.

Geographic Risk

As the entire service area is supplied with power from a single entity, no single location has an elevated geographic risk. However, power failures can be caused by severe weather such as extreme heat, extreme cold, snow, hail, or high winds. Power failures can also occur due to technological or human-caused events such as excavation or malicious actors.

Potential Impacts

Impacts of power failure can range in severity:

- Dependency on diesel generator power for facilities
- Impacts to maintenance and transportation caused by inoperable equipment, such as not being able to fuel, inoperable lifts, power charging for electric fleet
- Loss of power to access control systems
- Loss of traction power for rail system
- General loss of power to buildings (lights, computers, conveyances)
- Lack of power to life and safety systems
- Loss of Communication center (Bus, Light Rail, Commuter Rail, Transit Police, Customer Care), including train control systems like SCADA and LRV signaling system for light rail and Wabtec and WiMax for commuter rail
- Data center failure, Network failure, Security Camera system failure, Radio system failure

These impacts may culminate to trigger a system-wide service suspension. A decision to suspend service may only be made by the General Manager/CEO or their designee.

Mitigations in Place

Mitigations are currently taken at the operational level and are described below:

RTD Emergency Operations Plan

- Development of Business Continuity Plans and Continuity of Operations Plan across agency to identify back-up processes without power/IT services

Facilities

- Identify key locations that a generator is required and equip them with generators, including an uninterruptible power supply (UPS) for Communications Centers
- Maintain the generator switch gear in a state of readiness
- Maintain, inspect, and test all generators
- Generators are maintained in a state of readiness: Weekly operation and inspections
- Fuel levels are no less than $\frac{3}{4}$ of a tank
- Annual inspections are done by a third party in which a load test is performed
- Registered for Utility Notification Center of Colorado (811) notification system to alert to potential excavations around power utility supply

IT

- Back-ups of data taken on regular intervals, as appropriate for each system's requirements. This is stored locally and then synchronized to an off-site, cloud location to preserve data
- Third-party cloud services utilized where available, for instance Microsoft, AWS, Oracle Cloud
- Ensure operations critical IT infrastructure is supported by generator power and uninterrupted power supply where necessary
- Resiliency with critical systems to operate without on-premises IT infrastructure
- UPS available to facilitate functioning of Emergency Phones on Rail Platforms
- Local survivable mode enabled as failover for phone system in the event of loss of network or other power
- Business impact analysis to define restoration priorities for business and software systems, including prioritizing cybersecurity systems as high priority
- Development of disaster recovery plans
- Partitioned environments for systems like Radio and PIDS
- Future planning for off-site data centers, through the technology resiliency assessment

Rail Operations

- Power substations arranged in such a way to allow redundancy and diverse power grid placement
 - Light Rail substations being resilient to loss of one substation but not two directly adjacent, of 64 total traction power substations
 - Commuter Rail is powered by two substations and can be powered entirely by one when necessary
- Failsafe conditions installed on all rail infrastructure, this may be triggered by temporary risk factors which may not need to be mitigated

RTD Emergency Operations Plan

- UPS supplied to selected substations for control power, not traction power
- Most relay houses equipped with transfer switch to facilitate portable generator compatibility
- When trains lose power, they are able to coast to a stop.
 - When possible, LRV operators will stop at stations, outside of grade crossings, and as much as possible avoiding bridges and overpasses.
 - CRV operators will prioritize stopping the train at a platform, move customers from the affected car to an unaffected car in the same consist, move customers through the end door to a rescue train on the same track, and only if necessary will discharge passengers to the roadbed
- SCADA is supplied by UPS generator power
- Back-up OCC for commuter rail located at District Shops

Planning Assumptions

- When these events occur, the priority restoration of power is given to life-saving or supporting facilities. RTD may be secondary priority to restore depending upon the other facilities impacted
- When far-reaching power failures occur, temperature controls are likely to fail in residential settings and may result in warming/cooling centers being open. This may cause increased traffic on RTD revenue service vehicles
- Power restoration times are almost always estimates and are subject to change
- Generally, loss of power to servers does not necessarily mean a loss of historic data, the predicted data loss should be limited to the data that has not been backed-up at the time of the power outage, typically no more than 24 hours of loss. New data generated since the loss of power may not be stored
- Many elements of ensuring continuity from a power loss are included in the COOP. Where facilities, IT systems, or communication systems are impacted the COOP is the most up to date record of backup procedures. This includes prioritization of restoration from the agency-wide perspective

Concept of Operations

Detection/Monitoring

Power failures can be identified by RTD staff, systems, or through notification from Xcel Energy. Once a power failure has been identified, facilities staff will communicate with Xcel to gather restoration information.

Response Considerations

For those events which overwhelm the ability of normal operations to maintain safe operating conditions, the Emergency Operations Center will be activated to monitor and support operations. Upon activation, the EOC Manager will supply regular updates to the General Manager/CEO to support their situational awareness and decision making.

Suspension of Service is the final measure taken to address impacts related to power failure events. This decision is not taken lightly and must be made with adequate consideration to factors such as:

RTD Emergency Operations Plan

- Are communication centers able to operate and maintain contact with operators/conductors, including the use of hand-held radios? How long will charged batteries for radios be available?
- Can vehicles be kept in a safe operational condition?
- Is fuel available to keep generators and vehicles running? For how long?
- Predictability for customers-Eg. Agency must provide service during PM peak hours if AM peak hours service was conducted, ability to communicate to customers changes being made

Recovery Considerations

Service Restoration post-suspension will also be decided upon by the General Manager/CEO and will generally be communicated to the public in advance. This ideally would take place at the start of the next service day.

The impacts of a complete power outage event may take some time to fully address. This includes IT data and system restoration, inspections of equipment before clearing for use, and repair of damage to infrastructure if surge events occurred, inclusive of staff availability.

Roles and Responsibilities

Administration

Information Technology

- Maintain radio system in fallback, on hand-held radios, or otherwise as necessary
- Monitor network availability, especially for mission essential functions with network dependency
- Monitor phone systems for functionality, especially for communication centers
- Monitor and test recovery of technology systems once power is restored

Capital Programs

Facilities

- Notify power provider of the power outage and acquire estimated time of repairs to the system
- Ensure Communication Centers are powered and running
- Refuel the generators during outages
- Ensure key power supported systems are operating
- When power returns, check all building systems
- Repair or contract to repair electrical systems that may have sustained damage
- Open gates where they have failed closed as a result of power failure

RTD Emergency Operations Plan

Bus Operations

Street Operations

- Maintain communication with operators, contact public safety for support or dispatch RTD Street Supervisors to support operators with challenges as they arise
- Supplement staffing to accommodate increased demands from street operations staff
- Facilitate bus bridges for rail outages
- Support Facilities where possible

Vehicle Maintenance

- Cycle electric buses for pull-out if electric buses are available to safely run, with as low as a 20% charge

Light Rail Operations

Transportation

- Maintain communication with operators, contact public safety for support or dispatch RTD Field Supervisors to support operators with challenges as they arise
- Monitor the functioning of switches, track and OCS and dispatch Maintenance of Way crews to restore

Maintenance of Way

- Restore functioning of substations sequentially
- Repair damage from event or triggering weather hazard

Light Rail Vehicle Maintenance

- Tow vehicles which are impeding traffic away from intersections or crossings using the Shuttlewagon or other non-electric equipment

Commuter Rail

Transportation

- Maintain communication with engineers and conductors, contact public safety for support and dispatch RTD Field Supervisors to support engineers and conductors with challenges as they arise
- Coordinate with contractor OCC for information regarding damages and restoration information
- Monitor the functioning of switches, track and OCS and dispatch Maintenance of Way crews to restore

RTD Emergency Operations Plan

Maintenance of Way and Infrastructure

- Repair damage from event or triggering weather hazard

Commuter Rail Contract Services

- Communicate all events which impact contractor service to RTD Leadership Team

RTD Emergency Operations Plan

Annex N: Train Derailment Annex

Purpose

The purpose of the Train Derailment Annex is to identify those planning considerations specific to a train derailment either on or off RTD alignments and the planning considerations to effectively manage events.

Situation Overview

Rail infrastructure throughout Denver is owned and operated by RTD, DTP, and a number of commercial freight companies. Derailments are possible on any rail alignment and could impact RTD service delivery at rail crossings, on parallel alignments, or on RTD alignments.

Geographic Risk

Rail infrastructure in RTD's service area is shown in Figure 2.

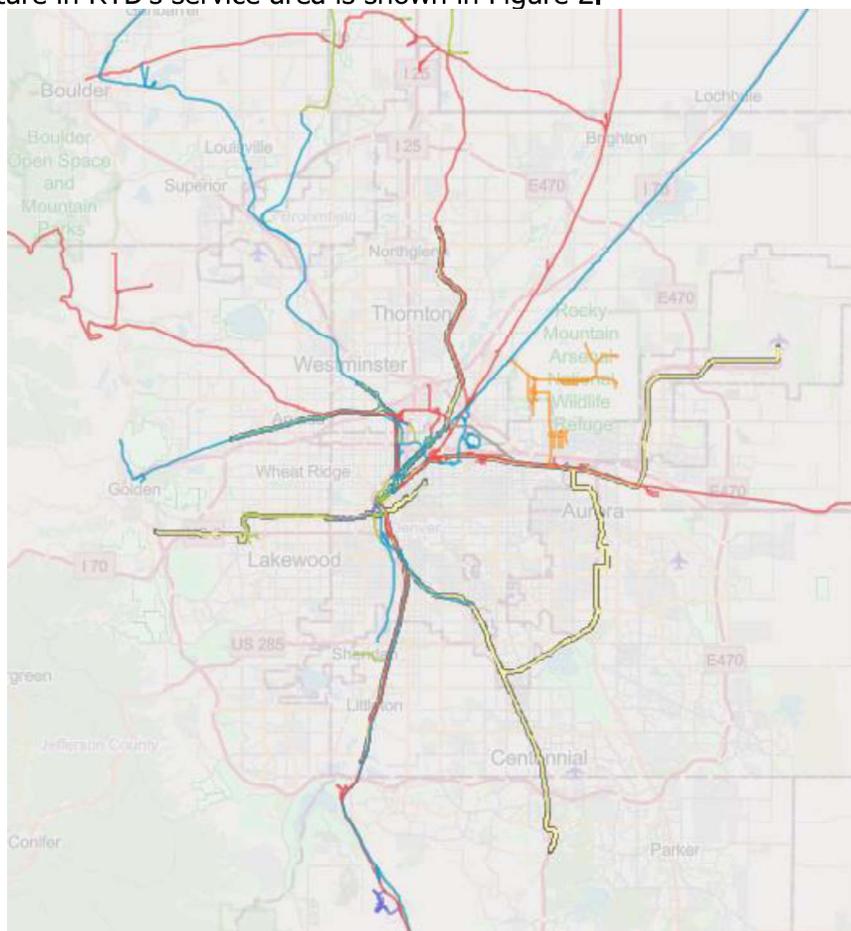


Figure 2 RTD Rail Alignments (Yellow on Black) overlaid on a map of Freight Railroads in the RTD Service Area. Red- Union Pacific, Blue-BNSF, Green, Orange, Purple-Others

Potential Impacts

Impacts of train derailment events can range in severity:

RTD Emergency Operations Plan

- Service Disruption or detours
- Property damage
- Investigation to identify cause or impacts can cause long-lasting disruption
- Damage to environmental resources at the site of derailment or downstream
- Reputation damage
- Injury or loss of life to RTD employees, contractors, or customers

Mitigations in Place

Mitigations are currently taken at the operational level and are described below:

Capital Programs

- Application of engineering design best practices, specification of materials, and construction oversight to create a quality product to ensure safe and reliable train operations.
- Track quality is correlated with the speed of allowed operations; in case of minor issues, reducing the speed of operation can be considered.

Facilities

- Maintenance of station infrastructure to prevent collision with oncoming rail vehicles

Light Rail Operations

- Application of sand from Rail Cars under slick conditions
- Automatic Train Stop, to stop the vehicle when train proceeds through a stop signal
- Seismic alarms to detect seismic activity which will then activate signals to stop trains, on Southwest corridor between Evans and Mineral stations
- Regular maintenance to rails, switches, and vehicles to ensure high levels of safety and reliability
- Set speed limits according to safe operating speeds, including a safety margin relative to the distance for placement of speed limits
- Operators trained to monitor track infrastructure for items such as obstructions, trespassers, broken rail, malfunctioning switches, and proper switch alignment
- Standard Operating Procedures for operation under inclement weather to ensure train safety

Commuter Rail Operations

- Positive Train Control system to avoid excessive speeds and prevent collision
- Automatic Train Control as a redundant system for Positive Train Control
- Regular maintenance to rails, switches, and vehicles to ensure high levels of safety and reliability
- Set speed limits according to safe operating speeds, including a safety margin relative to the distance for placement of speed limits

RTD Emergency Operations Plan

- Engineers trained to monitor track infrastructure for items such as obstructions, trespassers, broken rail, malfunctioning switches, and proper switch alignment using signals, aspects and indications
- Standard Operating Procedures for operation under inclement weather to ensure train safety
- Maintenance of Way and Infrastructure perform proactive heat inspections of track to ensure proper performance under extreme temperatures

Planning Assumptions

- Train derailments are no-notice events which cannot reliably be predicted, but may be more likely to occur during inclement weather
- Not all train derailments which affect RTD will be on RTD alignment or involving RTD vehicles. For these events, RTD will liaise with the primary rail service provider to gather timelines to restoration as well as resolve financial matters related to damages and service delay
- RTD will liaise with first responders but will take ownership of any event impacting RTD property once life-saving activities have concluded

Concept of Operations

Detection/Monitoring

Derailment events will be communicated by the Communication Center which has identified the impacts. At time of Emergency Management notification, a Situational Awareness Update will be sent to the RTD workforce at large.

Response Considerations

Due to regulation from FRA and FTA, derailment and rerailling procedures for RTD vehicles are maintained and reviewed regularly. An index of these policies/procedures is below:

Responsible Group	Publication Title (s)	Document Storage Location & Review Timeline
Light Rail	Light Rail SOP 105.7: Procedure for Rerailling	Policy Tech, Annual
Light Rail	Light Rail SOP 105.18: Operation of Rerailling Equipment	Policy Tech, Annual
Light Rail	Light Rail SOP 103.25: Recovery Vehicle Shuttle Wagon Operation	Policy Tech, Annual
Light Rail	Light Rail IWI 23-04: RTD Incident Command System (ICS)	Policy Tech, Annual
Commuter Rail	Procedure for Rerailling RTD_-CRO-MOWP-0006	Policy Tech, Annual
Commuter Rail	Atlas TrackMobile/Rescue Vehicle Procedure RTD_-CRO-MOWP-0006	Policy Tech, Annual

For those events which overwhelm the ability of normal operations to maintain safe operating conditions, the Emergency Operations Center will be activated to monitor and support

RTD Emergency Operations Plan

operations. Upon activation, the EOC Manager will supply regular updates to the General Manager/CEO to support their situational awareness and decision making.

Recovery Considerations

The impacts of a derailment event may take a long time to fully address. This includes accident investigation, rerailling, removal of debris, repair and inspection before restoration of service. These activities may need to be conducted iteratively.

Roles and Responsibilities

Administration

Safety and Environmental Compliance

- Report derailment event to relevant regulatory agency such as FRA, FTA and PUC
- Investigate the cause and changes required to the system to mitigate risk moving forward
- As requested, perform the duties of the safety officer during re-railing operations
- Develop corrective action plans in partnership with affected departments/divisions to safeguard against future occurrences of hazards/risks

Capital Programs

- Assess infrastructure damage and any steps needed to stabilize the area
- Develop options to repair and arrive at a preferred alternative
- Prepare engineering design, specifications, scope of work, and arrange for procurement of external contractors to do the repair
- Coordinate with Local Agency public works on logistics as applicable
- Oversee of construction work
- Arrange for integrated testing and participate in safety certification activities before service resumption
- Manage repair/reconstruction project activities

Bus Operations

Street Operations

- Use of available resources to provide an evacuation bus, a bus bridge, or respite if RTD rail service is impacted, may be dependent upon the nature of the event, which rail line is impacted, and proximity to a station, special difficulty may be encountered when a train is in between platforms or if a commuter rail train is impacted
- Effectively communicate changes in routes to maintain safe operating conditions despite rail event impacts
- Maintain communication with bus operators, contact public safety for support or dispatch RTD Bus Street Supervisors to support operators with challenges as they arise

RTD Emergency Operations Plan

Light Rail Operations

Transportation

- Maintain communication with operators, contact public safety for support and dispatch RTD Field Supervisors to establish/integrate with Incident Command
- Adjust service reactively around derailment impact site, and contact Bus Dispatch for necessary resources
- Monitor the functioning of switches, track and OCS and dispatch Maintenance of Way crews to restore
- Respond to requests for support and provide assistance with accident investigation or transportation of operator to an RTD Facility
- Provide incident command for duration of rerailling operation

Maintenance of Way

- Repair damaged infrastructure and perform safety inspection before resumption of service, including track, OCS, and bridges if within MOW capability
- Ensure safe electrical environment for re-rail operation

Light Rail Vehicle Maintenance

- Dispatch Light Rail Vehicle Maintenance Supervisor to scene as first Vehicle Maintenance resource to establish impacts of incident and required personnel and equipment to re-rail
- Rerail vehicle, assess vehicle operational safety, and recover to operating facility for repair
- Coordinate with outside contractors as needed to provide additional resources required for re-rail operation

Commuter Rail Operations

Transportation

- Maintain communication with operators, contact public safety for support and dispatch RTD Field Supervisors to establish/integrate with Incident Command
- Adjust service reactively around derailment impact site, and contact Bus Dispatch for necessary resources
- Monitor the functioning of switches, track and OCS and dispatch Maintenance of Way crews to restore
- Respond to requests for support and provide assistance with accident investigation or transportation of operator to an RTD Facility
- Coordinate with contractor vehicle maintenance crews for re-railing operation, if necessary

RTD Emergency Operations Plan

- Provide incident command for duration of rerailing operation

Maintenance of Way and Infrastructure (N-Line Only)

- Repair damaged infrastructure and perform safety inspection before resumption of service, including track, OCS, and bridges
- Ensure safe electrical environment for re-rail operation
- Depending upon severity (eg. one wheel of track or minimal distance of vehicle off-track), re-rail vehicle using in-house re-rail equipment
- Coordinate with outside contractors as needed to provide additional resources required for re-rail operation

Commuter Rail Contract Services

- Communicate all events which impact contractor service to RTD leadership

Denver Transit Partners Vehicle Maintenance

- Re-rail vehicles that have derailed along A, B, or G alignment
- Perform assessment of vehicle operational safety
- Repair vehicles which have sustained damage as a result of a derailment events, for all commuter rail alignments

Transit Police and Emergency Management

Patrol Division

- Provide scene control during rerailing operations