

EXHIBIT A

Dallas Area Rapid Transit (DART)



Public Transportation Agency Safety Plan (PTASP)

1401 N. Pacific Avenue, Dallas, TX 75202

September 2022



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Public Transportation Agency Safety Plan (PTASP) Approvals

Dallas Area Rapid Transit (DART) provides certification of compliance with the Public Transportation Agency Safety Plan (PTASP) set forth by the Federal Transit Administration. This compliance includes the signatures of the DART President & Chief Executive Officer and the DART Chair, Board of Directors who have verified that the document held within has met all the applicable compliance standards contained within the Code of Federal Regulations 49 Part 673 and the Texas State Safety Oversight Agency Program Standard.

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Date

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Revision History

<i>Revision Number</i>	<i>Revision Date</i>	<i>Description</i>	<i>Document Number</i>
0	December 2019	Initial Draft and Release	
1	December 2020	Annual Update	
2	September 2021	Annual Update	
3	October 2022	Annual Update	

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Acronyms

Acronym	Definition
AE	Accountable Executive
AHJ	Authorities Having Jurisdiction
ASP	Agency Safety Plan
CAP	Corrective Action Plan
CBD	Central Business District
CDC	Center for Disease Control and Prevention
CFR	Code of Federal Regulations
CRC	Certification Review Committee
CSO	Chief Safety Officer
DART	Dallas Area Rapid Transit
DSSC	Director of Systems Safety and Certification
EAP	Employee Assistance Program
ERRTC	Executive Roundtable Review Team Committee
ELT	Executive Leadership Team
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
FLSC	Fire Life Safety Committee
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
HAZCOM	Hazardous Communications
HMP	Hazard Management Program
HRI	Hazard Risk Index
KPI	Key Performance Indicators
LRT	Light Rail Transit
LRV	Light Rail Vehicle
LRWPP	Light Rail Worker Protection Program
MAXIMO/SPEAR	Maintenance Management System
MPO	Metropolitan Planning Organization
NABI	North American Bus Industries



Acronym	Definition
NFPA	National Fire Protection Association
NTD	National Transit Database
NTSB	National Transportation Safety Board
ODC	Operations Document Control
OE	Operations Engineering
OSHA	Occupational Safety Health Administration
OSONOC	Other Safety Occurrence Not Otherwise Classified
PMI	Preventive Maintenance Inspections
PPE	Personal Protective Equipment
PTASP	Public Transportation Agency Safety Plan
PTSCTP	Public Transportation Safety Certification Training Program
RFGPTS	Rail Fixed Guideway Public Transportation System
RMIS	Risk Management Information System
RSC	DART Rail Joint Safety Committee
RTA	Rail Transit Agency
SA	Safety Assurance
SDS	Safety Data Sheet
SME	Subject Matter Expert
SMP	Safety Management Policy
SMS	Safety Management System
SOP	Standard Operating Procedures
SP	Safety Promotion
SPB	Standard Practice Bulletins
SPCC	Spill Prevention Controls and Countermeasures
SRM	Safety Risk Management
SSCP	Safety and Security Certification Plan
SSOA	State Safety Oversight Agency
SSOPS	State Safety Oversight Program Standard
SSPP	System Safety Program Plan
SWP3	Storm Water Pollution Prevention Plans
TAC	Texas Administrative Code



Acronym	Definition
TCC	Train Control Center
TCEQ	Texas Commission on Environmental Quality
TDSHS	Texas Department of State Health Services
TES	Track Electrification Services
TVA	Threat and Vulnerability Analysis
TxDOT	Texas Department of Transportation
USC	United States Code
WI	Work Instructions

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Definitions

Accident means an event that involves any of the following: A loss of life; a report of a serious injury to a person; a collision involving a rail transit vehicle; a runaway train; an evacuation for life safety reasons; or any derailment of a rail transit vehicle, at any location, at any time, whatever the cause.

Accountable Executive means a single, identifiable individual who has ultimate responsibility for carrying out the Public Transportation Agency Safety Plan of a public transportation agency; responsibility for carrying out the agency's Transit Asset Management Plan; and control or direction over the human and capital resources needed to develop and maintain both the agency's Public Transportation Agency Safety Plan, in accordance with 49 U.S.C. 5329(d), and the agency's Transit Asset Management Plan in accordance with 49 U.S.C. 5326.

Administrator means the Federal Transit Administrator or the Administrator's designee.

Chief Safety Officer means an adequately trained individual who has responsibility for safety and reports directly to a transit agency's Chief Executive Officer, General Manager, President, or equivalent officer. A Chief Safety Officer may not serve in other operational or maintenance capacities, unless the Chief Safety Officer is employed by a transit agency that is a small public transportation provider as defined in this part, or a public transportation provider that does not operate a rail fixed guideway public transportation system.

Commission means the Texas Transportation Commission.

Contractor means an entity that performs tasks on behalf of FTA, a State Safety Oversight Agency, or a Rail Transit Agency, through contract or other agreement.

Corrective Action Plan means a plan developed by a Rail Transit Agency that describes the actions the Rail Transit Agency will take to minimize, control, correct, or eliminate risks and hazards, and the schedule for taking those actions. Either a State Safety Oversight Agency or FTA may require a Rail Transit Agency to develop and carry out a corrective action plan.

DART Senior Management means Director and above (e.g. AVP, Directors, VP, ELT)
(Appendix B)

DART Senior Leadership means Executive Management Team (e.g. VP and above)
(Appendix B)

DART Executive Leadership Team means Executive Vice Presidents. (Appendix B)

Department means the Texas Department of Transportation.

Equivalent Authority means an entity that carries out duties similar to that of a Board of Directors, for a recipient or subrecipient of FTA funds under 49 U.S.C. Chapter 53, including sufficient authority to review and approve a recipient or subrecipient's Public Transportation Agency Safety Plan.



Event means an Accident, Incident or Occurrence.

Fatality means a death that results from an event and that occurs within 30 days after the date of the event.

FRA means the Federal Railroad Administration, an agency within the United States Department of Transportation.

FTA means the Federal Transit Administration, an agency within the United States Department of Transportation.

Goal means desired result that DART foresee, plan and commit to achieve.

Hazard means any real or potential condition that can cause injury, illness, or death; damage to or loss of the facilities, equipment, rolling stock, or infrastructure of a rail fixed guideway public transportation system; or damage to the environment.

Incident means an event that involves any of the following: A personal injury that is not a serious injury; one or more injuries requiring medical transport; or damage to facilities, equipment, rolling stock, or infrastructure that disrupts the operations of a rail transit agency.

Investigation means the process of determining the causal and contributing factors of an accident, incident, or hazard, for the purpose of preventing recurrence and mitigating risk.

National Public Transportation Safety Plan means the plan to improve the safety of all public transportation systems that receive Federal financial assistance under 49 U.S.C. Chapter 53. **NTSB** means the National Transportation Safety Board, an independent Federal agency.

Objective means a thing aimed at or sought; a goal or specific measurable statement that supports achievement of the goal

Occurrence means an Event without any personal injury in which any damage to facilities, equipment, rolling stock, or infrastructure does not disrupt the operations of a rail transit agency.

Operator of a public transportation system means a provider of public transportation as defined under 49 U.S.C. 5302(14).

Performance measure means an expression based on a quantifiable indicator of performance or condition that is used to establish targets and to assess progress toward meeting the established targets.

Performance target means a quantifiable level of performance or condition, expressed as a value for the measure, to be achieved within a time period required by the Federal Transit Administration (FTA).

Person means a passenger, employee, contractor, pedestrian, trespasser, or any individual on the property of a rail fixed guideway public transportation system.

Pre-revenue Operations means operation of the rail fixed guideway public transportation system prior to revenue service that includes identification and performance of tests, drills, exercises, and audits designed to verify the functional capability and readiness of the system.

Public Transportation Agency Safety Plan (PTASP) means the comprehensive agency safety plan for a transit agency, including a Rail Transit Agency, that is required by 49 U.S.C. 5329(d) and based on a Safety Management System.

Public Transportation Safety Certification Training Program means either the certification training program for Federal and State employees, or other designated personnel, who conduct safety audits and examinations of public transportation systems, and employees of public transportation agencies directly responsible for safety oversight, established through interim provisions in accordance with 49 U.S.C. 5329(c)(2), or the program authorized by 49 U.S.C. 5329(c)(1).

Rail Fixed Guideway Public Transportation System (RFGPTS) means any fixed guideway system that uses rail, is operated for public transportation, is within the jurisdiction of a State, and is not subject to the jurisdiction of the Federal Railroad Administration, or any such system in engineering or construction. Rail fixed guideway public transportation systems include but are not limited to rapid rail, heavy rail, light rail, monorail, trolley, inclined plane, funicular, and automated guideway. Rail fixed guideway public transportation system is also a Rail Transit Agency (RTA).

Rail Transit Agency (RTA) means any entity that provides services on a rail fixed guideway public transportation system. For the purposes of this ASP, any reference to RTA would be the same as DART.

Revenue Service means operation of the rail fixed guideway public transportation system to carry passengers that pay fares, provide payment through a contractual arrangement, or have the fares subsidized by public policy. Vehicles operated in fare free service are considered in revenue service.

Risk means the composite of predicted severity and likelihood of the potential effect of a hazard.

Risk mitigation means a method or methods to eliminate or reduce the effects of hazards.

Safety means freedom from harm resulting from unintentional acts or circumstances.



Safety Assurance (SA) means processes within a transit agency's Safety Management System that functions to ensure the implementation and effectiveness of safety risk mitigation, and to ensure that the transit agency meets or exceeds its safety objectives through the collection, analysis, and assessment of information.

Safety Event -- A collision, derailment, fire, hazardous material spill, act of nature (Act of God), evacuation, or OSONOC occurring on transit right-of-way, in a transit revenue facility, in a transit maintenance facility, or involving a transit revenue vehicle and meeting established NTD thresholds

Safety Management Policy means a transit agency's documented commitment to safety, which defines the transit agency's safety objectives and the accountabilities and responsibilities of its employees in regard to safety.

Safety Management System (SMS) means the formal, top-down, organization-wide approach to managing safety risk and assuring the effectiveness of a transit agency's safety risk mitigation. SMS includes systematic procedures, practices, and policies for managing risks and hazards.

Safety Management System (SMS) Executive means a Chief Safety Officer or an equivalent.

Safety performance target means a performance target related to safety management activities.

Safety Promotion (SP) means a combination of training and communication of safety information to support SMS as applied to the transit agency's public transportation system.

Safety risk assessment means the formal activity whereby a transit agency determines Safety Risk Management priorities by establishing the significance or value of its safety risks.

Safety Risk Management (SRM) means a process within a Rail Transit Agency's Safety Plan for identifying hazards and analyzing, assessing, and mitigating safety risk.

Security means freedom from harm resulting from intentional acts or circumstances.

Serious injury means any injury which:

- Requires hospitalization for more than 48 hours, commencing within 7 days from the date of the injury was received.
- Results in a fracture of any bone (except simple fractures of fingers, toes, or nose).
- Causes severe hemorrhages, nerve, muscle, or tendon damage.
- Involves any internal organ; or
- Involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.



State means a state of the United States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, Guam, American Samoa, and the Virgin Islands.

State of Good Repair means the condition in which a capital asset is able to operate at a full level of performance.

State Safety Oversight Agency (SSOA) means an agency established by a State that meets the requirements and performs the functions specified by 49 U.S.C. 5329(e) and the regulations set forth in this part.

Substantial damage means damage to transit or non-transit property including vehicles, facilities, equipment, rolling stock, or infrastructure that disrupts the operations of the rail transit agency and adversely affects the structural strength, performance, or operating characteristics of the property, requiring towing, rescue, on-site maintenance, or immediate removal prior to safe operation.

System Reliability The system reliability measure expresses the relationship between safety and asset condition. The rate of vehicle failures in service, defined as mean distance between major mechanical failures, is measured as revenue miles operated divided by the number of major mechanical failures.

Transit agency means an operator of a public transportation system.

Transit Asset Management Plan means the strategic and systematic practice of procuring, operating, inspecting, maintaining, rehabilitating, and replacing transit capital assets to manage their performance, risks, and costs over their life cycles, for the purpose of providing safe, cost-effective, and reliable public transportation, as required by 49 U.S.C. 5326 and 49 CFR part 625.

Vehicle means any rolling stock used on a rail fixed guideway public transportation system, including but not limited to passenger and maintenance vehicles.

I. Forward

The Dallas Area Rapid Transit (DART) system was organized with the mission to benefit the region by providing a sustainable system of innovative, affordable, reliable and safe mobility options for our riders that enhances the quality of life and stimulates economic development. Accordingly, safety is a primary concern that affects all levels of DART activities including the operations, maintenance, and administrative functions of the organization. All employees and contractors of DART are expected to conduct their duties safely, aimed at preventing, controlling and minimizing undesired events, such as customer or employee injury, equipment or property damage, or degradation to system safety in any DART function. Employees and customers are DART's most important assets, and their safety is DART's greatest responsibility.

While minimizing unsafe conditions in DART's transportation system and facilities is the responsibility of each employee, they are first and foremost the responsibility of DART's management. DART is fully committed to providing a safe work environment and safe vehicles, systems, and facilities.

The Federal Transit Administration's (FTA) final rule, 49 CFR Part 673, Public Transportation Agency Safety Plan, became effective on July 19, 2019 requiring applicable transit agencies, such as DART, to establish an Agency Safety Plan (ASP) that meets the requirements of 49 CFR Part 673. The ASP must at a minimum:

1. Be signed by the Accountable Executive and approved by the agency's Board of Directors, or an Equivalent Authority.
2. Document the processes and activities related to Safety Management System (SMS) implementation.
3. Include performance targets based on the safety performance measures established under the National Public Transportation Safety Plan.
4. Address all applicable requirements and standards set forth in FTA's Public Transportation Safety Program and the National Public Transportation Safety Plan.
5. Establish a process and timeline for conducting annual reviews and updates of the ASP.
6. Include or incorporate by reference an emergency preparedness and response plan or procedures that address, at a minimum, the assignment of employee responsibilities during an emergency, and coordination with Federal, State, regional, and local officials with roles and responsibilities for emergency preparedness and response in the transit agency's service area.

As DART operates a light rail system subject to FTA's State Safety Oversight (SSO) Program, as stated in 49 CFR Part 674, DART has developed this ASP in compliance with 49 CFR Part 673 and the Texas Department of Transportation (TxDOT) SSO Agency's Program Standard. DART's ASP replaces its previously established System Safety Program Plan (SSPP) and requires annual review and revision (as necessary) and subsequent approval by DART's Board of Directors. Each of DART's divisions and department management teams are charged with the responsibility of implementing and assuring the success of the ASP.

II. Scope and System Description

The Agency Safety Plan (ASP) applies to the Dallas Area Rapid Transit (DART) light rail operations affected by the planning, design, construction, procurement, testing, operation, and maintenance of its light rail transit systems. Safety issues affecting all units within the rail division of DART are managed in accordance with the procedures outlined in the ASP. DART's *Safety Management Policy Statement*, which articulates the commitment of DART's President & Chief Executive Officer to DART's Safety Management System (SMS) and the implementation of this ASP, is included in **Appendix A**. Organization charts depicting DART's structure and hierarchy are included in **Appendix B**.

DART Mission Statement

DART's mission statement defines the purpose for which the Agency was created and is stated as follows:

“To benefit the region by providing a sustainable system of innovative, affordable, reliable safe mobility options for our riders that enhances the quality of life and stimulates economic development.”

Service Area

DART serves Dallas, Texas, and 12 surrounding cities with modern public transit services and customer facilities. DART's extensive network of Light Rail, Trinity Railway Express commuter rail, bus routes and paratransit services move more than 220,000 passengers per day across a 700-square-mile service area.

Light Rail Transit (LRT) System Description

The LRT system is a double-track system with high voltage supplied direct to a current feeding overhead catenary. It operates over a wide range of rights-of-way including the Central Business District (CBD) transit mall, tunnels, aerial structures, and reserved medians. It serves stations spaced 0.5 to 1.5 miles apart. Headways provide service every 3 to 10 minutes on the trunk line and 15 to 30 minutes on the branch lines, carrying over 57,000 passengers daily (May 2022).

DART's LRT system connects South and West Oak Cliff, downtown Dallas, the Northeast Corridor to Rowlett, the North Central Corridor to Plano, and the Northwest Corridor to Frankford Road. Additional line sections connect downtown Dallas to Irving and Rowlett. **Table 1** below lists the light rail corridors that make up the current system. **Appendix C** provides the DART LRT system map.



Table 1: DART Light Rail Transit Corridor Descriptions

CORRIDOR	DESCRIPTION
Red Line North	Mockingbird Station to Parker Road Station
Red Line South	8 th & Corinth Station to Westmoreland Station
Blue Line Northeast	Mockingbird Station to Rowlett Station
Blue Line South	Convention Center Station to UNT Dallas Station
Green Line Southeast	Deep Ellum Station to Buckner Station
Green Line Northwest	Victory Station to Frankford Station
Central Business* District	Pearl Street Station to West End Station
Orange Line	Parker Road/LBJ Central Station to DFW Airport Station

*All Lines pass through the Central Business District

Light Rail Vehicles

The LRT system operates a fleet of 163 Light Rail Vehicles (LRV), Provided in **Appendix H**. Each LRV is 124 feet long and weighs 139,000 pounds. Each vehicle has a top operating speed of 65 miles per hour and a passenger capacity of 209.

LRV operations are required to be conducted in accordance with the requirements of the *Rail Book of Operating Rules*, provided in **Appendix D**.

Bus Transit System Description

DART provides mass transit bus service to the residents of the DART service area, which covers 700 square miles with a total population of 2.5 million people. Bus service is provided 22 hours a day, 7 days a week. The DART bus network includes 96 bus routes, 13 transit centers and 6,993 bus stops. Buses traverse 1,300+ miles of roadway in the service area, averaging 108,000 weekday passengers. **Appendix E** includes a list of the Transit System Bus Routes.

Bus service is provided with a fleet of 569 buses. The fleet has been updated with a combination of 30’ and 40’ buses. In addition, 115 seventeen seat buses have been added to the fleet. Both fleets have a low-floor design increasing the ease and safety of boarding the vehicle. Buses are equipped with cameras to increase the safety and security of the riding public. DART also operates 46 suburban express vehicles.

Bus and van operations are divided into four categories reflecting the types of service provided, as indicated in **Table 2**, below.

Table 2: DART Bus and Van Passenger Service

SERVICE		AREA OPERATION	SERVICE PROVIDED	VEHICLES	NOTES
1	Fixed Route	Urban areas Suburban areas - Between DART's transit centers & rail stations	Reduced bus speeds Frequent stops for boarding/alighting of passengers or making transfers	DART-owned	
2	Express Bus	Suburban areas – From transit centers, park-and-ride locations into downtown Dallas	Few stops Higher bus speeds with travel over expressways	DART-owned	See Appendix H for DART-owned Fleet Stock.
3	Go Link	Contracted service Operated in designated areas	Replace fixed route service that does not meet DART route efficiency standards	Vans Taxis Uber	Mobility on Demand contracted service
4	Paratransit	All member city jurisdictions	For passengers with disabilities	Vans Minivans Taxis	Contracted service that provides its own safety programming.

DART Facilities

Appendix F provides a list of DART facilities, including the facility type and location.

The DART Transit System Plan

DART's Board of Directors adopted the Transit System Plan for DART on June 27, 1989. The Plan was subsequently revised in 1995, 1997 and 2006. The Transit System Plan calls for the design of projects to improve mobility and public transit services in the metropolitan Dallas area. DART established a Capital Improvement Program to expand its passenger amenities and facilities, and to upgrade and improve its operational facilities and equipment. The Transit System Plan and Capital Improvement Program define DART's current services and recommend expansion of those services when warranted. The Transit System Plan includes 93 miles of light rail transit, 34 miles of commuter rail service, and 1,003 miles of bus routes. The Transit System Plan also coordinates bus service with rail service and expanded passenger facilities and amenities. It eliminates bus routes that duplicate or run parallel to the light rail system and establishes feeder bus routes to bring passengers to the rail system.

III. Mode(s) of Service Covered by the Agency Safety Plan

The current DART ASP applies to all rail operations. In the future, the ASP will be updated to include all modes of service provided by DART.

IV. ASP / SMS Executives

Accountable Executive

DART's President & Chief Executive Officer is designated as the Agency's Accountable Executive. As such, the President & Chief Executive Officer is accountable for ensuring that the Agency's Safety Management System (SMS) is effectively implemented throughout DART's public transportation system. Additionally, the President & Chief Executive Officer is accountable for ensuring action is taken to address substandard performance in the Agency's SMS.

Chief Safety Officer

The Vice President & Chief Safety Officer (CSO) is designated by DART's President & Chief Executive Officer (Accountable Executive) as the SMS Executive. The Vice President, CSO holds a direct line of communication and reporting to the Accountable Executive. As an adequately trained senior leader at DART, the Vice President & CSO has the authority and responsibility for the establishment, implementation and operation of a compliant ASP. The Vice President & CSO is also responsible for the implementation of SMS throughout the DART organization. This responsibility includes:

- Planning and fostering a positive SMS culture.
- Ensuring the ASP is reviewed annually (and updated as needed).
- Coordinating Safety Risk Management (SRM) across the DART organization.
- Overseeing and coordinating Safety Assurance practices throughout the DART organization.
- Monitoring safety performance and targets through data collection and analysis.
- Tracking of safety critical issues.

The Vice President, CSO does not serve in other operational or maintenance capacities.

V. Purpose, Goals, and Objectives

Purpose

The purpose of the ASP is to establish formal mechanisms each DART department must use to identify hazards associated with DART's transportation systems; eliminate, minimize or



control hazards; and to prevent injuries, accidents and other losses. The ASP demonstrates DART's commitment to safety and compliance with Federal, State and local regulations.

Goals

The goals of the ASP are to establish processes and procedures that will:

- Enable the identification, elimination, minimization and control safety hazards and their risks.
- Allow DART to maintain a superior level of safety in its transportation operations and in work environments.
- Comply with the applicable requirements for regulatory agencies.
- Maximize the safety of future operations through design, procurement, construction, and testing processes.

Objectives

DART's management is responsible for providing leadership in promoting safety and ensuring employees are committed to the safety of DART's customers, employees, property, and the public coming in contact with DART's system. Each DART department is directed and empowered to administer the ASP and its specific activities for the prevention, control, and resolution of unsafe conditions and actions. DART's successful safety record results from the use of this Plan, and from the regular review and revision process that has been established to assure the ASP remains current.

The following objectives have been established to assist DART in achieving its safety initiatives. Each Department is responsible for establishing activities and goals to assist DART in meeting its principal objectives. **Appendix G** provides DART's Departmental Safety Responsibilities Matrix, which details the departments, tasks and responsibilities required to be implemented to meet the following objectives.

- Establish safety policies, procedures and requirements that integrate safety into DART's decision-making and operations.
- Hire and train qualified personnel.
- Assign responsibility related to safety policies, procedures, and requirements.
- Establish standards and procedures for safety training and performance.
- Verify employee adherence to safety policies, procedures, and requirements.
- Meet or exceed safety requirements in specifications, facility construction, equipment installation, vehicle operations and maintenance, and system testing, operations and maintenance.
- Evaluate routes and scheduling for safety issues.
- Evaluate and verify the operational readiness of new transportation systems.

- Evaluate the safety implications of proposed modifications prior to implementation.
- Investigate accidents, fires, injuries, and incidents.
- Identify, analyze, and resolve hazards in a timely manner.

VI. State Safety Oversight Authority

In 1997, the Texas Legislature, with enactment of Senate Bill (S.B.) 735 designating the Texas Department of Transportation (TxDOT) as the SSOA. TxDOT derives its authority through Texas Transportation Code, Chapter 455, General Powers and Duties of Department of Transportation Regarding Mass Transportation.

During the 85th Regular Legislative Session, S.B. 1523 was enacted on June 1, 2017. This statute provides TxDOT the authority to establish and enforce minimum standards for the safety of all Rail Transit Agencies (RTA) within its oversight. These standards are consistent with the National Public Transportation Safety Plan, Public Transportation Safety Certification Training Program, rules for Public Transportation Agency Safety Plans, and all other applicable federal and state laws.

Chapter 7, Subchapter E. - Rail Fixed Guideway System State Safety Oversight Program, of the Texas Administrative Code (TAC) describes how TxDOT will carry out its SSO Program responsibilities consistent with both State and Federal requirements. DART's LRT system is subject to these standards and requirements.

On March 16, 2016, FTA published 49 CFR Part 674 to carry out the mandate of 49 U.S.C. 5329(e) for States to perform oversight of rail fixed guideway public transportation systems within their jurisdictions. TxDOT's SSO Program, as documented in its SSO Program Standard, has been established to meet these updated requirements.

VII. ASP Development, Annual Review, and Updates

FTA Requirements

Published in July 2018, 49 CFR, Part 673, establishes requirements for PTASPs in order to carry out the explicit statutory mandates of the Moving Ahead for Progress in the 21st Century Act (Pub. L. 112-141; July 6, 2012) (MAP-21), which was reauthorized by the Fixing America's Surface Transportation Act (Pub. L. 114-94; December 4, 2015) (FAST Act), and codified as 49 U.S.C. 5329(d) to strengthen the safety of public transportation systems receiving Federal financial assistance under 49 U.S.C. Chapter 53. The rule requires Rail Fixed Guideway Public Transportation Systems to adopt SMS principles and methods; to develop, certify, implement, and update PTASPs; and to coordinate PTASP elements with other FTA programs and rules, as specified in 49 U.S.C. 5303, 5304, and 5329. 49 CFR Part 673 became effective on July 19, 2019, and DART was required to have its ASP approved by TxDOT's SSO Program by July 20, 2020.

SSO Program Standard Requirements

As stated in TxDOT's SSO Program Standard, dated August 2022, Section 4.1, Public Transportation Agency Safety Plans (PTASP):

Section 4.2, PTASP General Requirements, further states:

“The PTASP must comply with 49 CFR 673.11 General Requirements; which include the following elements:

- (1) The Public Transportation Agency Safety Plan, and subsequent updates, must be signed by the Accountable Executive and approved by the agency's Board of Directors, or an Equivalent Authority.
- (2) The Public Transportation Agency Safety Plan must document the processes and activities related to Safety Management System (SMS) implementation, as required under Subpart C of 49 CFR 673.
- (3) The Public Transportation Agency Safety Plan must include performance targets based on the safety performance measures established under the National Public Transportation Safety Plan. NOTE: the RTA must coordinate with their MPO and State to communicate their safety performance measures.
- (4) The Public Transportation Agency Safety Plan must address all applicable requirements and standards as set forth in FTA's Public Transportation Safety Program and the National Public Transportation Safety Plan. Compliance with the minimum safety performance standards authorized under 49 U.S.C. 5329(b)(2)(C) is not required until standards have been established through the public notice and comment process.
- (5) Each transit agency must establish a process and timeline for conducting an annual review and update of the Public Transportation Agency Safety Plan.
- (6) A rail transit agency must include or incorporate by reference in its Public Transportation Agency Safety Plan an emergency preparedness and response plan or procedures that addresses, at a minimum, the assignment of employee responsibilities during an emergency; and coordination with Federal, State, regional, and local officials with roles and responsibilities for emergency preparedness and response in the transit agency's service area.
- (7) A rail transit agency must maintain documents that set forth its PTASP, including those related to the implementation of its safety management system (SMS) processes, for a minimum of three years after the records were created.”

VIII. Annual Review and Update of the ASP

The ASP is reviewed on an annual basis. The annual rail safety review triggers the document review and update process. Per 49 CFR Part 673.11(a)(4), DART is required to annually assess its ASP to determine if modifications or updates are necessary. DART conducts this annual review to ensure the ASP is current and in compliance with Federal rules and those of the TxDOT SSO Program. TxDOT requires DART's ASP be submitted for assessment prior to September 1st of each year.

When DART submits the ASP for initial approval, a review template detailing the page number, section and location of each required element, is required. DART is required to submit referenced material and supporting procedures to document how each required element is addressed. The revised PTASP must be approved by DART no later than December 31st and submitted to TxDOT no later than January 31st. The ASP and supporting procedures are submitted electronically to TxDOT.

Per TxDOT's SSO Program Standard, DART's annual submittal to TxDOT SSO must include documentation of the Board's approval with resolution, proclamation, meeting minutes, or other official action which evidences the Board's formal approval.

Annual ASP Update Procedures

The following departments and personnel are responsible for initiating, developing, approving, and issuing changes to the ASP:

- Vice President, Chief Safety Officer (CSO)
- Director Operations Safety
- Senior Management
- Rail Joint Safety Committee
- Bus Safety Committee
- Accountable Executive (approval)

After submission of an updated DART ASP, TxDOT will acknowledge receipt within 10 days. If submission is favorable for review, TxDOT will acknowledge acceptance within 30 days. A TxDOT request or any number of other variables could warrant an assessment and update of the ASP more frequently than the annual minimum. New regulations, significant organizational structure changes, and/or internal or external audit review activities could prompt additional assessments. DART's Operations Safety works closely with TxDOT SSO for guidance and technical assistance during the ASP approval process.

If the ASP submission is not sufficient for approval, TxDOT notifies DART and requests additional documentation or clarification. Upon receipt of requested information, the process restarts. If the ASP fails to comply with the TxDOT SSO Program Standard, DART's President & Chief Executive Officer is formally notified via letter. A completed checklist identifying the required changes and any required documentation accompanies the TxDOT letter.

If the Accountable Executive determines that the ASP is not current, the letter must detail DART's action plan to achieve compliance. Once the ASP is approved, DART is required to submit a formal letter of certification signed by DART's President & Chief Executive Officer to notify TxDOT that the ASP is current and in compliance with TxDOT SSO Program Standard.

ASP Annual Certification

On an annual basis, the Vice President & CSO completes a comprehensive review of the ASP, addresses needed updates, and ensures that the ASP is compliant with 49 CFR Part 673 and the TxDOT SSSO Program Standard. Upon final certification, the Vice President & CSO reviews the final ASP with the President & Chief Executive Officer, ensuring that all signatures (including Board of Directors approval) are included on the approval page of the ASP.

If the President & Chief Executive Officer cannot attest to compliance, the annual certification letter must include a plan describing the process that will be used to update the ASP and provide a timeframe for completion.

IX. Emergency Preparedness and Response Plan

DART will follow Center for Disease Control and Prevention (CDC) and State health authority guidelines to minimize exposure of the public and personnel to infectious diseases. (See Administrative Policy No. 5.03). The Emergency Preparedness Section of DART's Police Department participates in emergency response groups in the region and member cities. Regularly scheduled meetings include:

- Regional Sheltering Working Group
- Dallas County Family Assistance Working Group
- Regional Training and Exercise Working Group
- Regional Emergency Managers

These meetings keep emergency managers and DART responders apprised of current issues and address Federal and State requirements to ensure contact information is current and appropriate measures are taken during serious, unexpected, and or dangerous situations requiring immediate action. DART participates in local and regional exercises developed to gain familiarity with how response activities will occur in the field. Changes in DART's Emergency Preparedness policies and procedures can be made in response to the findings presented in the exercise or actual incident debriefings.

The Emergency Preparedness Manager works with Emergency Management Coordinators in member cities and counties to ensure there is a unified emergency response among DART's member cities. Coordination takes place through meetings, email, phone conferences or other means as determined by the Emergency Management Coordinators.

The DART Emergency Preparedness section maintains a Multi-Year Training and Exercise Plan that projects agency and regional exercises quarterly. This plan is updated annually. The Emergency Operations Plan (EOP) is also reviewed annually and revised as necessary to ensure it incorporates lessons learned and is in-line with current Federal and industry guidelines and requirements. The EOP is available to all employees through the InfoStation library and is made available to local responders. The EOP may be reviewed by Federal and State stakeholders upon request and on-site at DART's headquarters.

Employee training is provided at employee quarterly meetings and weather specific information, such as tornado shelter locations and winter weather preparation, is updated annually and posted on InfoStation. Active shooter training is available through the Police Department or on-line through the Federal Emergency Management Agency (FEMA) independent study training. Other information on topics of interest is provided by InfoStation or through the digital dashboard.

Emergency Exercises

The DART Emergency Preparedness Section coordinates with DART departments and first responders for effective joint training exercises. Objectives of the training exercises are to:

- Practice group problem solving.
- Familiarize DART senior officials with DART's emergency plans, procedures and policies.
- Evaluate the effectiveness of standard operating procedures.
- Familiarize local jurisdictions with DART's emergency plans, procedures and policies.
- Examine personnel contingencies.
- Test consistency of group message interpretations.
- Participate in information sharing.
- Assess interagency communication and coordination.

DART participates in state and regional exercises and conducts after action reviews to ensure lessons learned are incorporated into the emergency preparedness programs of all participants. Participants include but are not limited to counties, cities, towns, police departments, fire departments, hospitals, airports, emergency management, and SWAT teams. The number and type of participants vary in accordance with the exercise. This is a regional effort.

Operation Safety collaborates with the Emergency Preparedness group as participants on exercises and coordinates agency policy that effect the entire organization. Operations Safety Program Managers attend exercises, simulations and tabletop exercises to ensure that measures are in place to safeguard property, participants, stakeholders and the public at large.

After Action Reviews are conducted by the Emergency Preparedness group for exercises and major real-world incidents. Observations and findings are compiled into Improvement Plan matrix by the Manager of Emergency Preparedness and the DART Chief Safety Officer, who assigns responsibility and timelines. With this collaborative effort, the observations and findings are tracked to completion and documented following TxDOT's Program Standard.

Emergency Response

The Emergency Management Response Group is activated when the President & Chief Executive Officer or their designee determines that service interruptions beyond the norm or the potential of public or employee harm is imminent. This group is comprised of the executive management team and department heads that meet to determine solutions to minimize the effect on agency operations. This group will assess mitigations and strategize how best to communicate, partner, resolve and reduce the risk of each event to an acceptable level. The Chief Safety Officer and the Manager of Emergency Preparedness partner to direct the Executive Management to utilize their individual resources and expertise to reduce or eliminate the event causations.

Upon a return to normalcy, usually within 10 business days, an after-action review is scheduled by the Manager of Emergency Preparedness to analyze the event, determine if lessons learned occurred and to determine if future events of a similar nature, can best be processed differently to stream-line the effectiveness of the agency response.

Emergency Response Training

System familiarization training is scheduled bi-annually for local fire departments. This training is also available out-of-cycle by request of the response organization. The DART Emergency Preparedness section also offers a training program in conjunction with the Dallas Fire Rescue Academy in an effort to have ALL trainees receive familiarization training on buses, light rail vehicles, and the north central tunnel training is coordinated with the necessary DART departments and agencies. Records for training are maintained by the local responders' organization. Summary after action reviews of agency exercises and Improvement Plans due to real-world emergencies are written and maintained by the Emergency Preparedness Section.

DART provides on-board security brochures to educate passengers on what to consider suspicious and how to report an incident.

The *Emergency Preparedness Guide for Transit Employees on the Job and at Home* is available to all employees on the FTA website. Employees are notified of new emergency conditions or special events that may require modification to or activation of DART's emergency response program via email, internet postings, bulletins, notification to the ERRTC or at quarterly security meetings hosted by DART Police.

X. Safety Performance Targets

Pursuant to 49 U.S.C. § 5329(d), DART's ASP includes safety performance targets based on the safety performance measures in the National Safety Plan. These measures help to inform DART staff of the actions required to be taken to improve DART's safety outcomes and SMS. DART's performance targets are specific, measurable, attainable, relevant, and time-bound (SMART). Safety Performance Targets are produced by the data compliance section of Operations Safety. Historical data is for each category of the seven FTA guidance measures provided by part



673.15(b) for RTAs continuous improvement processes. Each measure is vetted by the DART Chief Safety Officer who communicates with TxDOT SSOA Program Manager and the local Metropolitan Planning Organization (MPO) for guidance and concurrence in establishing relevant targets.

Operations Safety captures all reported safety events that occur during transit operations and the performance of regular supervisory or maintenance activities. A reduction in safety events will support efforts to reduce fatalities and injuries, as well as damage to transit assets. Measuring the number of safety events by mode over vehicle revenue miles provides a safety event rate from which future performance can be compared.

As part of the annual review of the DART ASP, Sr. Manager of Safety and Data Compliance reevaluates safety performance measures and determines how the measures should be refined, sub-measures developed, and performance targets selected. Safety performance data is gathered monthly by Operations Safety to coordinate reporting agency Key Performance Indicators (KPI). These indicators are distributed quarterly to executive management and correlated with historical targets set by the VP of Rail Operations.

Fatalities, Injuries, Safety Events, and System Reliability

DART’s safety performance targets for Fiscal Year 2023 are included below. Each target category is included as a rate per 100,000 total revenue miles and a total number of incidents, not to exceed annually.

<i>FY 23 Performance Targets</i>	100K Performance Target	Not to Exceed Annually
<i>Fatalities</i>	0.07	4
<i>Injuries</i>	0.28	15
<i>Safety Events</i>	0.99	32
<i>System Reliability</i>	3.31	180

Coordination with SSO

The Sr. Manger of Safety and Compliance creates annual safety performance targets using historical baselines as projections and utilizes input from the Chief Safety Officer who determines the aggressiveness of each forecasting indicator. Annually this matrix is presented to the agency stakeholders and the TxDOT SSOA Program Manager for guidance. The process of setting targets and measuring progress reflects the increased expectations for improving transit safety.

Each year during September, the Chief Safety Officer will provide a matrix of FTA mandated Safety Performance Targets proposals for review to the TxDOT SSOA Program Manager. Once communicated, these targets will also be forwarded to the regional Metropolitan Planning Organization (MPO) via e-mail.

Coordination with Metropolitan Planning Organization (MPO)

The North Texas Council of Governments (NTCOG) is the local Metropolitan Planning Organization (MPO) that is the policy board of an organization created and designated to carry out the metropolitan transportation planning process. This organization continues to set priorities for implementing projects listed in the transportation improvement program and is responsible for additional planning products.

The safety performance targets that are shared with the MPO provide data that is critical to ensuring consistency with state / regional planning processes.

Key Performance Indicators (KPI's) are used to gauge the effectiveness of DART safety objectives. Light Rail Vehicle (LRV) collisions per 100,000 total revenue miles operated are reported monthly and contribute to an annual not to exceed goal. Additional performance measures include derailments, rail violations, incidents and pedestrian collisions which are tracked and compared to previous month's events.

XI. Development and Implementation of SMS

The President & Chief Executive Officer has delegated responsibility for implementing and maintaining the ASP to DART's Vice President & CSO. The Vice President & CSO oversees the Safety Section, which monitors ASP development, implementation and continuous improvement of the SMS. This includes DART's Safety Management Policy, and processes for Safety Risk Management, Safety Assurance, and Safety Promotion.

DART's implementation of its SMS is a multi-year, phased process. Based on the current industry practices, the expected timeframe for a fully implemented SMS is 3-5 years. DART's phased approach to SMS implementation is adapted from the *Safety Management Guide*, of the *International Civil Aviation Organization, 2012*, and includes four (4) phases as detailed below. the length of time anticipated to complete each phase is included, however, these times are approximate and may vary depending on resources available, training, how efficiently the previous phase was implemented, or various other factors outside of DART's control.

Implementation Phase 1

Phase 1 aims to set the foundation for how DART's SMS requirements will be met. The framework developed during this Phase guides DART's implementation activities in subsequent phases. The approximate time to complete Phase 1 is anticipated to be 12 months. Activities and tasks that will occur during this phase include:

- Identification of the Accountable Executive.
- Establishing the DART team member responsible for ensuring SMS implementation.
- Establishing the team that is responsible for SMS implementation.
- Define the system for the SMS.
- Identify the differences between DART existing safety efforts in comparison to SMS requirements.
- Develop an ASP defining processes for and supporting SMS implementation.
- Establish a means for safety communication through the DART organization.

Implementation Phase 2

Phase 2 furthers the SMS implementation process by creating essential safety management processes while also updating existing processes to address identified deficiencies. The primary goal of this Phase is to affirm existing practices and develop those that are still needed for full SMS implementation. The approximate time for this Phase is anticipated to be 12 months. Activities that will occur during this Phase include:

- Establishment of or redefining safety policy and objectives.
- Deliver training to DART staff regarding the ASP and SMS plan components.
- Formalize safety risk management related to SMS.
- Further develop the means for safety communication as identified in Phase 1.

Implementation Phase 3

Phase 3 is directed toward ensuring safety information management, data gathering, and analysis processes are in place and defined. At the end of this Phase, DART should be able to begin to use its data to aid in safety and hazard analysis. The approximate time to complete this Phase is anticipated to be 12 months. Activities that will occur include:

- Formalize voluntary hazards reporting procedure.
- Refine the safety risk management procedure.
- Refine occurrence reporting and investigation processes.
- Establish safety data collection system and metrics for which this data will be analyzed.
- Establish a formal management of change procedure that focuses on safety risk management.
- Review and update DART's internal and external audit or review program.
- Continue SMS training for DART personnel.

Implementation Phase 4

Phase 4 will finalize the SMS implementation process. This Phase focuses on Safety Assurance and relies on periodic monitoring and feedback to identify and correct issues in the SMS. The approximate time to complete this phase is anticipated to be 12 months. Activities that will occur include:

- Further refine the voluntary reporting procedure to include integration of hazards identified from these occurrence reports.
- Integrate hazard identification and safety risk management procedures with DART contractors.
- Integrate hazard identification and safety risk management procedures for dealing with items identified by the public (non-employees).
- Further define safety performance indicators to include targets.
- Establish operational and safety culture surveys for DART employees in order to gauge the effectiveness of the SMS.
- Continue SMS training for DART personnel.
- Review and refine means of safety communication (if needed).

Safety Task Responsibility Matrix

The Safety Task Responsibility Matrix, which identifies the specific DART Departments and tasks to be completed to implement DART's SMS is provided in **Appendix G**.



1.0 Safety Management Policy

DART has established a Safety Management Policy Statement for its Light Rail Transit (LRT) system.

1.1 DART, President & Chief Executive Officer's Safety Management Policy Statement

DART was organized with the mission to provide a sustainable system of innovative, affordable, reliable and safe mobility options for our riders that enhances the quality of life and stimulates economic development. Accordingly, safety is a primary concern that affects all levels of DART activities including operations, maintenance, and administrative functions of the organization. All employees and contractors of DART are expected to conduct their duties safely, aimed at preventing, controlling and minimizing undesired events, such as customer or employee injury, equipment or property damage, or degradation to system safety in any DART function. Employees and customers are DART's most important assets, and their safety is DART's greatest responsibility.

This full policy statement has been reviewed and signed by the DART President & Chief Executive Officer and is included in **Appendix A**.

1.2 DART's Safety Principles

In line with DART's Safety Management Policy, DART has established the following Safety principles as a basis for implementing its Safety Management System (SMS):

- Injuries and occupational illness can be prevented.
- Preventing injuries and incidents is good business.
- Operating exposures can be safeguarded.
- Management will train all employees to work safely.
- Appropriate safety equipment will be available to all employees.
- Safety is the responsibility of every employee.

1.3 Employee Safety Reporting Program

DART utilizes a “*See Something Say Something*” reporting program for employees. Employees are reminded that this program is for issues that may affect their safety and all other concerns should be directed to their supervisor. Employees may remain anonymous in this reporting program. This system wide approach to hazard awareness can be utilized at DART facilities and is managed by the Safety Program Managers.

DART also utilizes the Hazard ID Workflow system to allow employees to submit a safety concern. When a hazard has been submitted for review and resolution, the following procedure is used to reduce or eliminate it. The employee inputs the Hazard into the Hazard ID Workflow System, which forwards it to the employee’s manager. If the manager is unable to resolve the issue, the Hazard ID is forwarded to Safety or to the appropriate safety committee. The safety committee responds to the Hazard ID and, if required, recommends a course of action.

If the Hazard is not resolved within 90 days, the Hazard ID will be forwarded to ERRTC for consideration and review. The ERRTC Committee may review the hazard and initiate its own resolution. The ERRTC’s decision is final.

1.3.1 Protections for Employees Who Report Safety Conditions

DART explicitly forbids any action(s) to be taken against any employee or contractor who discloses a safety concern through the safety reporting program, unless such disclosure indicates beyond any reasonable doubt, an illegal act, gross negligence, or a deliberate or willful disregard of regulations or procedures. This policy can be found in the Administrative Employment Manual, Section 3.2.A and in the Hourly Employment Manual, Section 2.3.f.

It is the responsibility of each employee to report unsafe work conditions. Employees, who are uncomfortable reporting to their immediate supervisor/manager, may contact any member of DART’s Executive Roundtable Review Team Committee or speak directly to the staff within the office of the Vice President, CSO. DART maintains a zero tolerance for retaliatory behavior towards any employee and for any reason: especially reporting safety concerns. The Vice President, CSO or his/her staff members will enter the safety concern into the Hazard ID Workflow system, interview the reporting employee and determine the best course of action to address the employee’s concerns/reason(s) for electing to bypass his/her immediate supervisor; to include referring the employee to the Human Resources Department for follow-up.

1.3.2 Employee Behaviors Subject to Disciplinary Action(s)

Employees are subject to the provisions of DART Employment Manuals, Substance Abuse Policy and all DART regulations. Additional employee expectations are further detailed in the DART Light Rail Book of Operating Rules included in **Appendix D**. Some of the descriptions of employee behaviors that may result in disciplinary action are listed under Hourly Employment Manual Chapter 8, Administrative Employment Manual Chapter 9 and Administration of Corrective and Disciplinary Action (TOG-1002).

1.4 Safety Management Policy Communication

DART's Executive Leadership Team (ELT) is responsible for communicating to their subordinate staff the agency culture that fosters safe operational policies and practices. To effectively promote a positive safety culture, DART's safety management policy is regularly communicated by several methods. The communication of the Safety Management Policy will be conveyed with a top-down strategy beginning with DART's Executive Leadership Team and Operations Safety.

The Safety policy is delivered to employees during the new hire orientation process, through agency wide safety campaigns as well as utilizing DART's intranet (InfoStation) to continually promote our safety policies and ensure that any modifications to safety policies are immediately available for employees to review.

Additionally, our safety management policy is promoted through quarterly safety meetings, informal minute clinics that are held with our front-line employees, electronic bulletin boards, and Agency wide e-mail with the ability to target a specific employee group.

1.5 Authorities, Accountabilities, and Responsibilities for Safety Management and SMS Implementation

DART's Organizational Chart is included in **Appendix B**.

1.5.1 Accountable Executive

The President & Chief Executive Officer is the Accountable Executive administering the goals and policies approved by the DART Board of Directors and providing leadership for the management of safety performance targets within the organization. As such, the President & Chief Executive Officer is ultimately accountable for DART's SMS. This includes the effective use of resources for the mitigation of safety risk through collaboration with stakeholders and making safety influenced decisions.

1.5.2 Chief Safety Officer (CSO)

The Vice President of Operations Safety serves as DART's CSO and reports to DART's President & Chief Executive Officer. The location of this position within the Agency's reporting structure emphasizes the critical importance of Safety to the organization. The CSO is authorized by the Accountable Executive to create, implement and administer an integrated and coordinated ASP, to include the establishment of SMS for the purposes of identifying, preventing controlling and resolving unsafe conditions.

1.5.3 Agency Leadership and Executive Management (Key Staff)

Responsibilities of Agency Leadership and Executive Management are summarized in **Table 3** below.

Table 3: General Safety Responsibilities

DEPARTMENT	DESCRIPTION
Operations Safety	<ul style="list-style-type: none"> ▪ Develops and administers programs for safety audits and compliance; accident prevention; industrial safety, investigation, and documentation; operations monitoring; and coordination of state safety oversight activities for light rail applicable operations. ▪ Day to day implementation of DART’s SMS ▪ Is empowered to: <ul style="list-style-type: none"> – Enter DART property on own authority at any time while performing duties. – Perform audits, field exercises, and inspections, both announced and unannounced. – Obtain data and evidential material upon request in the course of an investigation or other safety activity. – Stop work where continuation would endanger life, health or cause significant damage to property.
Senior Management Team	<ul style="list-style-type: none"> ▪ Approves organizational safety policies. ▪ Establishes safety goals and objectives. ▪ Assigns safety responsibility and authority. ▪ Designs systems to measure safety performance. ▪ Participates on the DART ERRTC ▪ Day to day implementation of DART’s SMS ▪ Holds managers accountable for achieving safety goals and objectives. ▪ Approves budgets and ensures adequate resources are available
Managers & Supervisors	<ul style="list-style-type: none"> ▪ Establish appropriate budgets and allocate resources necessary to implement safety policies; monitor and enforce section compliance with safety standards and procedures. ▪ Conduct accident investigations. ▪ Participate in the hazard identification and resolution process. ▪ Participate in bus and rail safety committees. ▪ Day to day implementation of DART’s SMS
DART Employees	<ul style="list-style-type: none"> ▪ Follow established safety rules, procedures, policies, and work practices. ▪ Report unsafe conditions and behavior to immediate supervisor, Senior Management, or Safety Management. ▪ Contribute to the background information for the DART Hazard ID and to the workflow reporting system.

Responsibilities of Operations Personnel are summarized in **Table 4**.

Table 4: Responsibilities of Operations Personnel

DEPARTMENT	SERVICE	DESCRIPTION
Transportation	Bus and LRT Services	<ul style="list-style-type: none"> ▪ Bus and LRT service to DART’s service area ▪ Training for bus and rail operators and supervisory employees ▪ Evaluation of routes, schedules, bus stops, shelters and facilities to determine the effectiveness and condition of service and amenities ▪ Assistance to customers at each transit center or transfer station and monitoring of the centers’ maintenance and security
	System Monitoring	<ul style="list-style-type: none"> ▪ Bus & LRT Operators’ service and performance • Two-way radio communication • Coordination of charter and flyer bus services (few or no stops) • Integrated testing and preparation for the opening of future light rail line segments
Maintenance	System Support	<ul style="list-style-type: none"> ▪ Technical training for maintenance employees ▪ Technical information related to vehicles, equipment and facilities ▪ Preventive maintenance inspections (PMI) and repairs ▪ Specifications, procedures and requirements for the purchase, maintenance and improvement of vehicles, equipment and facilities ▪ Management of contracts for grounds keeping and janitorial services
	System Maintenance	<ul style="list-style-type: none"> ▪ Repair and maintenance of operating facilities and equipment, LRT track, right-of-way, tunnels and bridges ▪ DART electronics, radio, fare collection and communications equipment for bus and rail operations, HOV operations, and DART police (non-revenue vehicles, electronic equipment, and facility) ▪ Tests, inspections and maintenance of LRT system and equipment ▪ Maintenance of system-wide passenger amenities, including rail stations, transit centers, bus stops, shelters and benches.
	System Monitoring	<ul style="list-style-type: none"> ▪ Analysis of wear, metal and fluid contamination ▪ Corrosion-control test stations and emergency repairs ▪ Consumable goods and services for contractual compliance to technical specifications and quality ▪ Equipment maintenance for contracted paratransit services

1.5.4 DART Executive Roundtable Review Team Committee

The ASP implementation and operation, including support of SMS functions, is carried out through the DART Rail Safety Committee (RSC) and DART ERRT Committee (ERRTC). The RSC is composed primarily of DART Vice President level personnel that have direct responsibilities for the daily operations of the light rail system. These leaders possess a high level of rail knowledge and expertise which strengthens their abilities to effectively mitigate hazards. The Director of Operations Safety monitors the internal hazard database and assigns directly conveyed hazards to Operations Safety staff. The Director additionally tracks the remaining hazards to determine if resolution can be achieved on the departmental level or if the RSC involvement is warranted.



The DART RSC meets monthly to review newly identified hazards, analyze safety-related reports, recommend mitigations to previously identified hazards and to make safety-related decisions in accordance with their authority. The Director of Operations Safety chairs the Committee. The charter of the RSC identifies the following representatives by function:

Director of Operations Safety, Chair	Sr. AVP Engineering
AVP Rail Maintenance	AVP, Capital Program Support
VP Rail Operations	AVP Transportation Services
AVP Rail Operations	DART Police Chief
AVP Ways Structures and Amenities	City of Dallas Streetcar Representative
Safety Program Managers (2)	Safety Certification Representative

The role of the Director of Operations Safety includes:

- Chair the BSC and RSC meetings.
- Initiate the review and update process;
- Review the findings and responses from internal and external audits and forwards to ERRTC.
- Ensure that revisions to the ASP are completed and retains a copy of the revised document.
- Ensure most recent version of ASP is present on DART Intranet.
- Ensure that RSC meeting minutes are developed for each meeting.

If the Director of Operations Safety deems a hazard to have immediate and detrimental negative consequences via the assessment performed in conjunction with the MIL-STD-882E matrix, an emergency session of the RSC will be instituted. All hazards that have risen to the level of Acceptable with ERRTC review trigger immediate committee level attention. Once an RSC session convenes the members are briefed on the hazard and the hazard is re-assessed for validity. RSC general agreements include actions to mitigate hazards and are documented in the workflow system. Hazards that require policy modifications or expenditures that rise to capital expenditure level are forwarded to the DART Executive Roundtable Review Team Committee level for mitigation.

The DART Executive Roundtable Review Team Committee is briefed by the Director of Operations Safety providing insight on all hazards aged beyond ninety days or that may require executive level mitigation efforts.

If hazard resolution requires immediate mitigation due to an undesirable risk assessment, then an emergency session of the ERRTC is also convened. The purpose of this elevation is to allow for succinct, informed decisions at the agency’s senior executive level where immediate decisions of policy and resource allocations are ratified.

The ERRTC meets monthly or more frequently if deemed necessary by the DART Vice President, CSO. The ERRTC holds the final decision-making approval within the Hazard

Management process. Hazards presented at this level potentially could lead to system modifications, large expenditures or operating rules changes. In some instances, the ERRTC could decide the likeliness of occurrence is minimal or given the circumstance the risk is acceptable to the agency. The ERRTC encompasses the following Executive Personnel:

- VP Chief Safety Officer, Chair
- EVP Chief Operations Officer (COO)
- EVP Chief Administrative Officer (COA)
- EVP Chief Financial Officer (CFO)
- EVP Growth and Regional Development
- Ad-hoc Member: City of Dallas Representative (as needed)
- Director Operations Safety

The role of the Vice President, CSO includes:

- Chairs the ERRTC meetings.
- Schedules committee meetings, prepares agendas, requests assistance from non-members, and distributes ERRTC reports.
- Maintains documentation of ERRTC proceedings, including system modifications reviewed by the ERRTC.
- Provides administrative, coordination, and analysis support for ERRTC activities.
- Reviews monthly reports from ERRTC members to ensure required system safety activities are carried out, and issues reports.
- Sends the proceedings of the ERRTC, which includes the minutes from the RSC and BSC meetings, to TxDOT officials.
- Documents system changes and required actions when ERRTC reaches consensus.
- Tracks changes needing unbudgeted funding and ensures funding is obtained.
- Requests referral to the ELT for changes that cannot be resolved by consensus of the ERRTC.



2.0 Safety Risk Management (SRM)

DART’s Hazard Management Program is currently overseen by two (2) distinct divisions within the organization. All safety aspects related to revenue service operations, maintenance, and public safety are managed by DART Operations Safety. All safety aspects related to capital projects, new starts, and service expansions are managed by the Capital Program Support unit of Growth and Regional Development division (until the infrastructure is turned over to operations).

The Safety & Security Certification Plan (SSCP) includes a Hazard and Vulnerability Management Program that details the steps to mitigation of hazards identified via individuals or systems. The program categories, assesses, ranks, administers, resolves, closes and tracks identified hazards generally discovered during the design process, however this procedure remains valid throughout construction. The Typical Hazard Analysis Worksheet and Typical Hazard Tracking Matrix are tools that document these identified hazards.



The Systems Safety and Security Program (SSSP) addresses Hazard Identification in design review and establishes the team that tracks and maintains via the Hazard Resolution Matrix flowchart. This flowchart was developed from the examples in the FTA Guidelines for Hazard Management and highlights the flow and control of information.

Following approval of the ASP by the DART President & Chief Executive Officer, DART Rail Joint Safety Committee, DART’s Board of Directors, and TxDOT SSOA, DART senior leadership will continue ASP implementation.

DART’s ASP is intended to support the hazard management process (HMP) by outlining the process for hazard identification, review and mitigation. The HMP is structured to adhere to

the requirements of the TxDOT SSO Program Standard. Per application of the HMP for any hazard identified as an “unacceptable hazardous condition”, the SSO Tracker is configured to report such types of hazardous conditions to TxDOT SSO. In addition, the appropriate safety committee will investigate, led by Operations Safety. At conclusion, the final investigation report will be provided to TxDOT SSO for review and comment. Any corrective action plans developed because of the investigation will be reviewed by TxDOT SSO, which retains the authority to request a status briefing on any unacceptable hazardous condition investigation.

Hazard management is a process to discover, mitigate, and control conditions that, if not altered, have the potential to cause accidents, injuries or other losses. Sources for identifying hazards include:

- **FTA**
- **TxDOT**
- **Reports from passengers** – DART Customer Service receives reports from passengers and documents their concerns.
- **Reports from operators and other field personnel** – Operator reports are submitted through the accident reporting portal on DART InfoStation. These reports can be tracked via the workflow process, OCC Log, related supervisor report and the Risk Management Information System (RMIS) database system
- **Reports from maintenance personnel** - Maintenance reports are submitted through the accident reporting portal on DART InfoStation. These reports can be tracked via the workflow process, OCC Log, related supervisor report and the RMIS system. In addition, maintenance also uses Maximo/SPEAR database to report damage, labor and to track any form of repair costs
- **Investigations and review of accidents/incidents** – Reports from accidents and incidents are tracked through the OCC Log, SSO Tracker and RMIS.
- **Accident statistics and risk-management information** – Accident information is captured in the RMIS database, downloaded by DART IT and provided for review. This data is then reviewed by operating division, type and preventability. Reports are developed and used to compare to previous months and years.
- **System data regarding safety-related items** – The DART hazard ID process allows employees to submit any potential safety issues or hazards into the workflow. In addition to beginning the workflow for hazard analysis, the system also maintains a history of employee reports and details of those reports.
- **Internal Audits** – Results of Internal Audits are submitted by Operations Safety.
- **Safety data obtained from external sources** – When DART receives a communication from an external source, the format is retrieved via email in pdf or word document format and is stored in the Operations Safety compliance section. Items submitted are managed and stored via the DART organization Record Management filing system.

Hazards identified by internal sources will be input by the reporting employee or their direct Supervisor/Manager. Hazards identified by external sources or employees that wish to remain anonymous will be input by Chief Safety Officer or Safety Program Manager.

2.1 SRM Activities:

The process of identifying and resolving hazards in the system is based on the U.S. Military Standard MIL-STD-882E and involves:

1. Hazard Identification
2. Hazard Risk Assessment
3. Hazard Risk Mitigation
4. Follow-up on Risk Mitigation effectiveness to include necessary Corrective Action Plans (CAPs) (see **Appendix I**)

2.1.1. Hazard Identification

The following procedure is used to reduce or eliminate a hazard when it has been submitted for review and resolution. All employees have the ability to input a hazard ID into the Hazard Workflow system, which forwards it to the employee's manager. If the manager is unable to resolve the issue, he can request mitigation dialogue at the next scheduled Safety Committee meeting which is held monthly. The safety committee responds to the Hazard ID and, if required, recommends a course of action. The safety committee must address each open Hazard ID every month until a resolution is reached.

If the Hazard is not resolved within 90 days, the Hazard ID will be escalated to ERRTC for consideration. The ERRTC may review the hazard and initiate its own resolution. The ERRTC's decision is final.

The SRM process requires understanding the differences between hazards, events and potential consequences. The SRM definitions checklist presented in **Figure 1** helps support the DART Executive Roundtable Review Team Committee's understanding of these terms when considering safety concerns.

Figure 1: SRM Definitions Checklist

<p>What is it? If you can select all 3 in one box, it's</p>	<p>A Potential Consequence</p> <ul style="list-style-type: none"> <input type="checkbox"/> Not a real or potential condition <input type="checkbox"/> Can be caused by a hazard <input type="checkbox"/> Hasn't happened yet but could be similar to a past event
<p>A Hazard</p> <ul style="list-style-type: none"> <input type="checkbox"/> Real or potential condition <input type="checkbox"/> Can cause a consequence <input type="checkbox"/> Not an event 	<p>An Event</p> <ul style="list-style-type: none"> <input type="checkbox"/> Accident, incident or occurrence <input type="checkbox"/> Not a real or potential condition <input type="checkbox"/> Has already occurred

2.1.2 Hazard Risk Assessment

Hazard risk assessment determines if the risk of a hazard is acceptable and whether corrective action is warranted.

If the Director of Operations Safety deems a hazard to have immediate and detrimental negative consequences, via the assessment performed in conjunction with the MIL-STD-882E matrix, an emergency session of the RSC will be instituted. All hazards that have risen to the level of undesirable trigger immediate committee level attention. Once an RSC session convenes the members are briefed on the hazard and the hazard is re-assessed for validity. RSC general agreements include actions to mitigate hazards and are documented in the workflow system. Hazards that require policy modifications or expenditures that rise to capital expenditure level are forwarded to the DART Executive Roundtable Review Team Committee level for mitigation.

The DART Executive Roundtable Review Team Committee is briefed by the Director of Operations Safety providing insight on all hazards aged beyond ninety days or that may require executive level mitigation efforts.

If a hazard resolution requires an immediate mitigation due to an undesirable risk assessment, then an emergency session of the ERRTC is also convened. The purpose of this elevation is to allow for succinct, informed decisions at the agency's senior executive level where immediate decisions of policy and resource allocations are ratified.

Hazard Severity is a measurement of the worst credible outcome that can result from human error, environmental conditions, design inadequacies, subsystem or component failure, or malfunction and procedural deficiencies. Within 24 hours of Hazard submittal, the Safety Program Manager completes an initial Hazard Analysis. For hazards that are identified during non-business days, an initial hazard rating will be done within 24 hours beginning the next business day. The Safety Program Manager will assign one of four severity categories. The severity categories are included in **Table 5** below.

Table 5: Hazard Severity Table

Category	Description	Description
1	Catastrophic	Death, system loss, or severe environmental damage.
2	Critical	Severe injury, severe occupational illness, major system or environmental damage.
3	Marginal	Minor injury, minor occupational illness, or minor system or environmental damage.
4	Negligible	Less than minor injury, occupational illness, or less than minor system or environmental damage.

Hazard Probability is derived from research, analysis, and evaluation of safety data. The probability categories are included in **Table 6** below:

Table 6: Hazard Probability Table

Level	Description	Specific Individual Item	Fleet or Inventory
A	Frequent	Likely to occur frequently.	Continuously experienced
B	Probable	Likely to occur several times in the life of an item.	Will occur frequently
C	Occasional	Likely to occur sometime in the life of an item.	Will occur several times
D	Remote	Unlikely but possible to occur in the life of an item.	Unlikely but can reasonably be expected to occur
E	Improbable	So unlikely, it can be assumed occurrence may not be experienced	Unlikely to occur, but possible

After assessing the severity and probability of a hazard and the corresponding potential consequences, the Safety Program Manager assigns a **Hazard Risk Index (HRI)** rating, included in **Table 7** below, and prioritizes hazards based on safety risk:

Table 7: Hazard Risk Index Matrix

Frequency		Severity			
		1 Catastrophic	2 Critical	3 Marginal	4 Negligible
A	Frequent	1/A	2/A	3/A	4/A
B	Probable	1/B	2/B	3/B	4/B
C	Occasional	1/C	2/C	3/C	4/C
D	Remote	1/D	2/D	3/D	4/D
E	Improbable	1/E	2/E	3/E	4/E

Based on the completion of the analysis and classification of the Hazard Risk Index, DART utilizes the **Hazard Resolution**, in **Table 8** to assist with identification of acceptance criteria:

Table 8: Hazard Resolution Table

Severity/Frequency	Resolution
1/A, 1/B, 1/C, 2/A, 2/B, 3/A	Unacceptable
1/D, 2/C, 2/D, 3/B, 3/C	Acceptable with ERRTC review
1/E, 2/E, 3/D, 3/E, 4/A, 4/B	Acceptable with BSC/RSC review.
4/C, 4/D, 4/E	Acceptable without review.

Safety critical hazards that have been identified must be controlled or eliminated so that the hazard does not continue to pose a danger. The controls may be done in a temporary manner until a long-term mitigation has been implemented. Dependent on the risk ranking of the hazards' likelihood and severity, a multi-departmental team may be established to analyze and control these risks/hazards. The teams will be comprised of the following personnel:

- Subject matter experts (SMEs) for the system
- Front-line personnel and supervisors
- All levels of labor
- SSO Agency participation is encouraged
- Safety staff, as support.

2.1.3 Hazard Risk Mitigation

Hazard Risk Mitigation starts with the employee's immediate Supervisor/Manager who then collaborates with the appropriate department(s) to determine what steps are needed to eliminate or mitigate the hazard to an acceptable level. Once the hazard is resolved, Operations Safety will reevaluate the risk utilizing MILSTD 882E to determine if the risk has been reduced to an acceptable level. Prior to closure of the Hazard ID, a summary documenting the steps that led to the risk reduction is added to the workflow.

If the elimination/mitigation cannot be handled by the employee's immediate supervisor/Manager, the supervisor/Manager will collaborate with the appropriate personnel required to mitigate the hazard *i.e.*, *Operations Safety, Subject Matter Experts (SME), Departmental Leaders etc.* to determine a required course of action. In the event the elimination/mitigation of the hazard cannot be resolved, Operations Safety (Safety Program Manager) will escalate the Hazard to RSC who then assesses the hazard and determines the appropriate course of action.

It is important to note, however, that a combination of several or all of the following may be used, depending on the nature and extent of the hazard:

- Design for minimum risk
- Incorporate the use of safety devices
- Provide warning devices
- Implement special safety procedures and conduct training

Designing for Minimum Risk attempts to eliminate hazards during the design process. If an identified hazard cannot be eliminated, its associated risk will be reduced to an acceptable level through design selection. This may be constrained by time, money, manpower, or other limitations. If the hazard cannot be eliminated or its risk controlled to an acceptable level through design, Safety Devices will be used to reduce risk to an acceptable level.

If neither design nor safety features or devices can reduce the risk to an acceptable level, Warning Devices are used to detect the condition and to produce a warning signal to alert individuals to the hazard. Warning signals and their operation shall be designed to minimize the probability of individuals reacting incorrectly to the signals and shall be standardized and similar.

Lastly, if the hazard cannot be eliminated or its associated risk adequately controlled through design, safety features/devices such as personal protective equipment (PPE) or warning devices, approved procedures and training must be implemented and used to reduce the risk.

2.2 TxDOT SSO PTASP Review

TxDOT will review and evaluate each PTASP for compliance with 49 CFR Part 673, the TxDOT Program Standard, and the National Public Transportation Safety Plan. At the time the PTASP is submitted for initial approval and for subsequent updates, if requested DART will submit referenced materials and supporting procedures to document each required element. Examples of referenced materials and supporting procedures include, but are not limited to: standard operating procedures; training plans; rule books and bulletins; hazard management plans; maintenance rules and procedures; emergency response plans and agreements; and compliance programs. On-site meetings and teleconferences may be conducted to address issues identified during the review of the PTASP. The PTASP and supporting procedures shall be submitted by email or via a method specified by TxDOT.

PTASP Review Sequence and Approval

- TxDOT will acknowledge receipt of a PTASP submission within 10 days.
- TxDOT will complete the PTASP review and provide review comments, including areas requiring revisions, to DART within 30 days of PTASP receipt.
- TxDOT and DART will reach a mutually agreeable date for the resubmission of PTASPs that require revisions. Upon receipt of requested revisions, the process will continue.
- Upon approval, TxDOT will send an approval letter via email to the Accountable Executive and the Chief Safety Officer.



Annual PTASP Review

No later than September 1st each year, DART shall conduct a review of its PTASP and notify TxDOT via email if the PTASP is current or requires an update. If DART determines the PTASP must be updated, the notification shall summarize the areas requiring an update and the anticipated date the revised PTASP will be submitted to TxDOT. The revised PTASP must be approved by DART no later than December 31st and submitted to TxDOT no later than January 31st.

To ensure the on-going role in the oversight of the rail transit agency's HMP, DART uses a hazard identification workflow system that reflects the consolidation of information in the hazard management process. This workflow system is maintained by the Director of Operations Safety. The hazard identification workflow system contains all hazards identified through the various methods applied and is available for all employees the review through DART's intranet (InfoStation). Monthly Safety Committee Minutes are submitted to TxDOT SSO upon request. TxDOT SSO reviews the minutes and hazard activity and forwards any questions or requests to the CSO.

In addition, DART conducts meetings with TxDOT SSO upon request and maintains electronic contact on a regular basis. During application of the HMP, for any hazard identified as an "unacceptable hazardous condition", the safety section notifies the TxDOT SSO designated point-of-contact within 24 hours using the SSO Tracker System. The appropriate safety committee, led by Operations Safety, investigates each hazard and forwards each finding to TxDOT SSO for review and comment at the end of the investigation via the SSO Tracker System. Any CAPs developed because of the investigation are forwarded for approval. Once TxDOT SSO approves the RTA's CAP request, mitigation begins. TxDOT SSO retains the authority to request a status briefing on any unacceptable hazardous condition investigation.



3.0 Safety Assurance

Safety Component 3 of the ASP outlines the Safety Assurance (SA) processes used by DART to implement, review and quantify the organization's adherence to applicable rules, regulations and standards. These SA processes provide DART and its executive leadership with a means of assessing if DART is meeting its safety objectives and performance goals. As part of the annual review of the ASP, DART assesses the effectiveness of its safety risk controls, Management of Change, and the continual improvement of DART's SMS. Results of this annual review are used to update the DART ASP Section V. *Safety Goals and Objectives* as needed.

3.1 Safety Performance Monitoring / Safety Data Acquisition and Analysis

DART's Safety staff is responsible for obtaining the data required to identify, assess, mitigate and follow-up on safety related issues from the following sources:

- Hazard Identification System – Everyone
- Daily Operation Logs – Transportation
- Maintenance Department Documentation – Maintenance
- Field Supervisor Reports – Transportation and Maintenance
- Safety Reports – Operations Safety
- Workers Compensation Data – Risk Management Division
- Police Reports – DART Police
- Customer Service complaints and safety-related suggestions – Customer Service
- Internal Audits – Audited Department
- Information and data received from FTA, TxDOT SSOA, and other oversight authorities
- DART Board of Directors – President & Chief Executive Officer, Deputy Director, Office of Board Support

Safety accepts data in multiple formats comprising information from audits, word of mouth, email, Hazard IDs, accident and incident reports, letters and customer concerns.

For every accident and incident, DART collects data and enters it into the RMIS database managed by the Risk Management Department. DART's IT Department has full access to the server. The DART IT Department downloads the data in a spreadsheet format and sends it to the Operations Safety Data Compliance Section for further analysis. Depending on the output requested, this section analyzes data daily, weekly or monthly highlighting trends and extracting meaningful data for internal and external clients.

The Business Analyst assigned to Operations Safety analyzes data for relevance and each record has been classified for preventability and severity. If the record is missing information the analyst must contact appropriate personnel to ensure each data set is complete. Once the data is complete and accurate, the Business Analyst prepares multiple reports for internal and external agency use. The summary of reports are as follows:

- Details of Accidents and Incidents are compiled monthly by accident type and tabulated and categorized on the preventability of an event. Each report is distributed for the monthly DART Executive Roundtable Review Team Committee Meeting and quarterly for Division Level Measurement reports. The reports include information on accidents per 100,000 miles in comparison to the previous year's data and with the not-to-exceed goal.
- Summary of Accidents and Incidents by Type and Preventability for Key Performance Indicators (KPI). This report is prepared weekly, monthly or/and upon request.
- Reporting of relevant data to the National Transit Database (NTD) based on the requirements outlined by the NTD Safety and Security Reporting Guide. This report is generated by the Operations Safety Compliance Section monthly for NTD reporting and one annual report is created each January and that must be certified by the CEO.
- Monthly reporting of shared corridor Accident and Incident data to the Federal Railroad Administration (FRA) based on FRA reporting guidelines.
- Monthly Executive Summary Report of Accidents and Incidents for Senior Management Review.
- Reports are forwarded to each Safety Program Manager who will coordinate with Division level personnel to develop strategies to address unfavorable trends or deficiencies. If the trend or deficiency cannot be addressed at the site level a hazard ID could be initiated for further tracking and trending purposes.

Internal Reports are distributed both electronically and as hard copies to the Senior Management, the ERRTC, the Finance Department and to Human Resources. External Reports, such as those made to the NTD website, are submitted through the website or electronically based on the external organizations' reporting guidelines.

3.1.1 Corrective Action Plans (CAP)

DART Operations Safety is responsible for maintaining and tracking the corrective actions and subsequent statuses that are identified from hazard identification, accidents, incidents or internal and external review findings. A Corrective Action Plan (CAP) Log is used by DART to compile and track this information. DART is currently utilizing a commercial database software package as the means for documentation of the CAP log. Details regarding DART's CAP program can be found in **Appendix I**.

3.1.2 Facilities and Equipment Inspection

The Sr. Manager of Fleet Services and his/her designee(s) assign inspections to personnel based on the Facilities Preventive Maintenance Inspection (PMI) Manual. Facilities, systems, rolling stock and equipment all have different intervals at which inspections and preventive procedures must occur. The purpose of the PMI Manual is to provide personnel with information necessary to perform each PMI.

While performing the PMI inspection, personnel document deficiencies that require repair, adjustment, or that warrant replacement. Workorders that are contained in the MAXIMO/SPEAR asset management program capture each assignment resulting from an inspection. It is the responsibility of the shop manager and or shift supervisor to schedule repairs of the defects found during the PMI as well as log any safety concerns/hazards identified in the course of the PMI inspection process within the MAXIMO/SPEAR asset management program. The Senior Manager of Fleet Services or his/her designee coordinates facilities inspections to document compliance with local, state and federal regulations.

3.1.2.1 *Regular Inspection and Testing*

Various inspections are conducted according to pre-determined schedules as shown in **Appendix J**, and repairs are completed as conditions require. For DART's rolling stock equipment, some PMIs are mileage based while others are based on time in service (i.e., 90-day, 180-day, etc.). Procedures to be used are outlined in the PMI Manuals and within published Work Instructions, Standard Campaign Bulletins, Standard Practice Bulletins and Standard Operating Procedures. Inspection results are documented and entered into a work order in the Maintenance Management System (MAXIMO/SPEAR).

For Hazards detected during regular inspection and testing a workflow will be initiated via the internal hazard reporting system. The hazard will be reviewed and tracked by Operations Safety and assigned to the appropriate committee for identification, analysis, and mitigation solutions. Applying these procedures increases the probability of eliminating or reducing hazards while documenting their existence for tracking purposes. The inspection guides indicate the steps to be performed to complete proper preventive maintenance inspections of DART owned facilities or assets.

Example Inspection Information

<i>Inspection Intervals</i>	<i>Standard Practice Bulletins / Work Instructions</i>
Weekly; Monthly; Quarterly; and Bi-Annual	Work instructions and or Standard Practice Bulletins (SPB) shall be used to supplement or supersede information in this manual on an interim basis. As this manual is revised, information affecting preventive maintenance inspections will be incorporated and the SPB will become obsolete

3.1.2.2 *Checklists*

Checklists for specific inspection reports reside in the Maintenance Department and can be accessed electronically. The MAXIMO/SPEAR Computer Program tracks and manages inventory, training records, preventive maintenance, running repair, and other activities pertinent to Maintenance.

3.1.2.3 *Coordination with Hazard Management*

If replacement or repair of a facility or equipment does not mitigate the hazard, the Hazard Management process, as prescribed by DART's SRM requirements must be implemented (See *SMS Component 2*).

3.1.3 **Maintenance Audits and Inspection**

An effective and efficient maintenance program helps to reduce risk to the overall DART system, including employees, passengers, emergency responders, and the general public. The DART maintenance program also helps to ensure that safe and reliable public transportation is provided while reducing the need for updates or equipment replacement, which may require additional funding.

3.1.3.1 *Vehicle Maintenance and Inspection Program*

All DART LRT Operators have a responsibility to perform a *Pre-Trip Inspection* of their vehicle prior to entering revenue service. Any issues that are noted by the LRT Operator are required to be documented on a pre-trip inspection form and reported to maintenance or a supervisor. If a condition is noted that the Operator feels would make the LRV unsafe for service, the condition must be reported to the control center. This frequency of inspections allows abnormal conditions to be identified early on before they become catastrophic.

The DART LRT Maintenance Program for *Regular Inspection and Testing* is based on inspections that conform to the manufacturers' guidelines. They are typically based on miles of operation or time in service. Each inspection cycle has a separate inspection manual defining the mileage points at which inspections are to be completed. In addition to regular maintenance and repair, some components are programmed for change-out on a multi-year schedule. **Table 9** identifies the type and frequency of inspections for light rail vehicles.

Table 9: Vehicle Maintenance

<i>Type</i>	<i>Frequency</i>	<i>Conducted by</i>	<i>Reason</i>
Pre-Trip	Daily	LRV Operator	Daily review of vehicle condition to identify issues that may be hazardous to DART Operations.
Mileage Based*	10,000 miles of operation	LRT Vehicle Maintenance	Preventative Maintenance of LRV based on manufacturer recommendations and maintenance manual.
	20,000 miles of operation		
	60,000 miles of operation		
Post-Accident	Post-Accident	LRT Vehicle Maintenance	To assess any damage as the result of an accident / incident; use for revenue service based on degree of damage found

*Checklists for each level of inspection in the vehicle Maintenance Department can be accessed electronically, via the MAXIMO/SPEAR Computer Program. This program tracks and manages all preventative maintenance, running repair and other activities pertinent to vehicle maintenance.

Inspection results are documented and entered into a work order in the Maintenance Management System (MAXIMO/SPEAR) where the required repairs, including materials and labor, are captured. Noted defects are resolved at the time of discovery or upon completion of the inspection. If a safety defect is noted, the system will be locked out/tagged out as needed until the repairs are complete. Hazards detected without immediate resolution create a workflow through the internal hazard reporting system which is sent to Operations Safety and to appropriate management committees for identification, analysis, and mitigation. These procedures increase the probability of eliminating hazards while documenting their existence for tracking purposes. Section 2 of this ASP details DART’s SRM requirements.

3.1.4 Procurement

DART’s Procurement Department is responsible for obtaining the goods and services required to build and operate a safe and effective transit system. Procurement is guided by policies and procedures created to ensure uniformity in the procurement process. In many cases, accidents and hazardous conditions may be avoided during the procurement process. Selection of qualified contractors and suppliers, and careful inspection of delivered equipment and materials leads to early discovery of defective conditions, safety concerns and the elimination of resulting hazards. The procurement process is therefore administered to enhance system safety and to minimize Agency risk. The duties of the Procurement Department include:

- Enforcing DART’s Acquisition Regulations, which specify the steps required to obtain goods and services in a safe and responsible manner.

- Adhering to environmental compliance requirements relating to hazardous substance acquisition, handling, labeling, storage, disposal and record keeping. All chemicals and hazardous materials on DART property should have a current Safety Data Sheet (SDS) and be approved by Safety.
- Collaborating with applicable officials to ensure contractors meet contractual obligations and follow established procedures related to the safety of DART employees, property and the public.
- Ensuring that any procurement requests for equipment or materials for use on DART property are reviewed and approved by DART's Operations Safety prior to purchase. If Operations Safety fails to approve procedures /services/ products due to hazardous conditions, then it will require the Procurement Team to re-evaluate and seek other products/services. Procurement procedures ensure that the agency meet or exceed the requirements and minimize the potential hazards.

DART Procurement works to ensure that equipment and materials are safe for use by employees and patrons. Prior to purchase, DART must have assurance that the equipment or materials are compliant with applicable codes and standards and do not create catastrophic or critical hazards that could be detrimental to DART operations.

As part of the Implementation Phase for SMS, DART Operations Safety will work with Procurement to develop detailed processes and procedures for review of any equipment or material.

3.2 Accident / Incident Notification, Investigation and Reporting

DART collisions are reported through DART's internal agency website using the "Safety Tab and Accident Reporting Process" menu option. Accident file numbers are assigned by Risk Management and data is entered into the RMIS database. Reports, videos, photos and downloads specific to each collision can be uploaded and preserved via this database.

Collisions involving DART's LRV operations initiate the Train Control Center (TCC) to contact a pre-determined set of internal agency groups that will respond to the event. These groups include Fleet Services, Signals, Track Electrification Services (TES), Tracks, Media services, Transit Police (who contact EMS), Safety, and Transportation Field Services.

3.2.1 Accident / Incident Procedures

DART utilizes a multi-departmental / discipline approach to accident investigations with the Transit Police serving in the lead investigative role with assistance from Transportation Field Operations and Operations Safety. Transit Police investigation procedures can be found in DART's General Order Number 7.61, provided in **Appendix K**. The DART Transit Police report summarizes the investigation, presenting facts related to the accident, and opinions and observations of the investigating officer. Departmental investigation procedures are included in **Table 10** below:

Table 10: Department Investigation Procedures

	Procedure Number	Procedure Title
Maintenance	NPA-0016	Post-Accident Vehicle/System Impound/Quarantine Investigation Procedure
	NPA-0029	Accident/Incident Investigation and Reporting
Transportation	104.02	Accident/Incident Investigation
	104.05	On-Scene Coordinator
	101.09	Common Corridor Emergencies
Operations Safety	NPS-3329	Rail Accident Investigation

Copies of the above referenced procedures are located in **Appendix K**.

If necessary, Operations Safety may conduct an additional investigation to ascertain the circumstances surrounding an accident. The primary focus of Operations Safety’s investigation is to determine cause in order to prevent reoccurrence. This additional investigation combines data from several sources including Police reports, Operator and Field Supervisor statements, and LRV downloads and video footage, and assembles the accident file into one centralized location. Information from all sources allows Operations Safety to determine and validate their own conclusions as to the preventability or non-preventable nature of the event based on the entire composition of the file. The Operations Safety investigation identifies cause(s) and recommended corrective actions to eliminate identified hazards and deficiencies. These events are entered into the SSO Tracker to record events that could potentially reoccur and cause unintended consequences.

Based on the complexity of the accident or incident, an extended final report may be written and submitted to the appropriate safety committee and department head for review and concurrence. The results of investigations, coupled with the supporting documentation, are also used by DART to fulfill the Safety Data and Acquisition element of SMS (see ASP section 3.1.1).

DART’s *Internal Notification Procedure* for accidents and incidents is carried out through the ReadyOps text message system. Text message notification levels increase with the severity of the event. If a critical responder does not acknowledge notification, supplemental notifications by phone are initiated at the discretion of Dispatch or Train Control.

Table 11: ReadyOp® Notification Groups

Groupings		Type of Notifications
ReadyOp Groupings	Red Signal	Red signal violations
	Senior Management	To be sent out if any Operators or Supervisors are transported to a medical facility.
	Train 1	Service interruptions of 10 minutes or greater or any delay exceeding 3 minutes in the tunnel.
	Train 2	Any incident resulting in passenger delays of 10 minutes or more and requires a response from "System Personnel" (TES, Track, Signals).
	Train 3	Any and all accidents and incidents resulting in passenger delays in excess of 30 minutes, or which result in damage, personal injury, or could attract media attention. Any code yellow regardless of severity unless serious injuries occur. Passenger(s) stuck in elevator/inclinorator.
	Train 4	Any incident/accident-causing major property damage, severe personal injury, results in the shutdown of rail services, or at the discretion of the Vice President of Transportation.

The Train Control Center (TCC) shall notify government entities of Light Rail Transit (LRT) accidents and incidents meeting reporting thresholds mandated by the TxDOT Program Standard. TCC will notify Operations Safety and SSOA via the State mandated reporting platform. TCC notifies Operations Safety via landline to verify if each event is FTA reportable. In the event the accident meets FTA accident reporting thresholds, the Director of Operations Safety will forward the report to the FTA within 2 hours. The National Transportation Safety Board (NTSB) is notified within two (2) hours of:

- A passenger or employee fatality.
- Two or more injuries to employees or passengers requiring admission to a hospital.
- Evacuation on the mainline.
- Fatality at a rail crossing.
- Substantial Damage meeting the FTA/SSO reporting threshold, as defined by the National Transit Database (NTD) criteria.

NTSB is also notified within four (4) hours when damage to a passenger train or railroad or non-railroad property is \$25,000 or more.

Federal Railroad Administration (FRA) notification is required via the Train Control Center (TCC) when a shared corridor emergency event highlighted in SOP publication *101.09 Common Corridor Emergencies* occurs. All LRT collisions with pedestrians in a shared corridor are reportable to the FRA within 30 days of occurrence. This notification is provided by Operations Safety.



Notification and Reporting of Accidents, Incidents, and Occurrences

Accidents	
DART notifies the TxDOT SSOA Program Manager and FTA within two hours if:	
<p>Human Factors:</p> <ul style="list-style-type: none"> a. Fatality (occurring at the scene or within 30 days following the accident) b. One or more persons suffering serious injury (Serious injury means any injury which: (1) Requires hospitalization for more than 48 hours, commencing within 7 days from the date of the injury was received; (2) results in a fracture of any bone (except simple fractures of fingers, toes, or nose); (3) causes severe hemorrhages, nerve, muscle, or tendon damage; (4) involves any internal organ; or (5) involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.) c. A personal injury that is not a serious injury d. One of more injuries requiring medical transportation away from the event. 	<p>Property Damage:</p> <p>Property damage resulting from a collision involving a rail transit vehicle; or any derailment of a rail transit vehicle</p>
<p>Types of events (examples):</p> <ul style="list-style-type: none"> ▪ A collision between a rail transit vehicle and another rail transit vehicle ▪ A collision at a grade crossing resulting in serious injury or fatality ▪ A collision with a person resulting in serious injury or fatality ▪ A collision with an object resulting in serious injury or fatality ▪ A runaway train. ▪ Evacuation due to life safety reasons. ▪ A derailment (mainline or yard). ▪ Fires resulting in a serious injury or fatality. 	
<p>DART Actions include:</p> <ul style="list-style-type: none"> ▪ DART to notify SSOA and FTA within 2 hours; Investigation required. Notification to FTA will be submitted to: TOC-01@dot.gov / 202-366-1863 (email preferred) ▪ DART to report to FTA within 30 days via the National Transit Database (NTD). ▪ DART to record for SMS Analysis. 	



Incidents	
DART will Report to FTA (NTD) within 30 days:	
Human Factors: <ul style="list-style-type: none"> a. A personal injury that is not a serious injury b. One or more injuries requiring medical transportation away from the event 	Property Damage: Non-collision-related damage to equipment, rolling stock, or infrastructure that disrupts the operations of a transit agency
Types of events (examples): <ul style="list-style-type: none"> ▪ Evacuation of a train into the right-of-way or onto adjacent track; or customer self- evacuation ▪ Certain low-speed collisions involving a rail transit vehicle that result in a non-serious injury or property damage ▪ Damage to catenary or third-rail equipment that disrupts transit operations ▪ Fires that result in a non-serious injury or property damage ▪ A train stopping due to an obstruction in the tracks/ “hard stops” ▪ Most hazardous material spills. 	
DART Actions include: <ul style="list-style-type: none"> ▪ DART to report to FTA within 30 days via the National Transit Database (NTD). ▪ DART to record for SMS Analysis. 	
Occurrences	
DART will record data and make available for SSO and/or FTA review	
Human Factors: <ul style="list-style-type: none"> ▪ No personal injury 	Property Damage: Non-collision-related damage to equipment, rolling stock, or infrastructure that does not disrupt the operations of a transit agency
Types of events (examples): <ul style="list-style-type: none"> ▪ Close Calls/Near Misses ▪ Safety rule violations. ▪ Violations of safety policies. ▪ Damage to catenary or third-rail equipment that do not disrupt operations. ▪ Vandalism or theft. 	
DART Actions include: DART will collect, track and analyze data on Occurrences to reduce the likelihood of recurrence and inform the practice of SMS. Based on the complexity of the accident or incident, an extended final report may be written and submitted to the appropriate safety committee and department head for review and concurrence.	

The coordination between DART and TxDOT SSO occurs frequently. TxDOT maintains an oversight role in ensuring that Corrective Action Plans are timely and clarifying concerns that may arise from accident investigations. Operations Safety maintains a monthly conference call with TxDOT ensuring that oversight information is transparent. DART develops a CAP when results of an investigation indicate a hazard that affects property or individuals. TxDOT must review and approve all proposed corrective actions before the DART implements the CAP. An exception is made for immediate or emergency corrective actions that must be taken to ensure immediate safety, provided that TxDOT is notified within 48 hours of implementation. The CAP identifies:

- The hazard or deficiency
- Required actions
- DART department(s) responsible for implementing corrective actions
- Scheduled completion dates for implementation

TxDOT SSO notifies DART of its approval or rejection of the CAP within 30 days of receipt. In the event of a rejection, DART submits a revised CAP within 10 days following notification of the rejection. In the event of a dispute concerning TxDOT's decision, DART may submit an application for administrative review within 30 days after receipt of TxDOT's decision. Applications for administrative review are submitted to:

Texas Department of Transportation
Director, Public Transportation Division
125 E 11th Street
Austin, Texas 78701-2483

If DART does not provide sufficient information to evaluate the application, the application will be denied. TxDOT's decision to grant or deny the application is final.

In instances where coordination with the NTSB is needed for investigation, DART and TxDOT shall review the NTSB findings and recommendations to determine if a CAP should be developed by DART. If a CAP is required by either the NTSB or TxDOT, DART shall develop the CAP following the process detailed herein.

3.2.2 Accident / Incident Investigation

It is the responsibility of DART Operations Safety to ensure that all accidents and near misses are thoroughly investigated. Depending on the nature and severity of the accident, a multi-disciplinary team may be needed to conduct a thorough investigation. This team may include representatives from various departments including Transit Police, Traction Power, Train Control

/ Signaling, LRV Maintenance, Track, Operations, etc. Upon completion of any investigation, DART Operations Safety is required to notify TxDOT SSO of any CAP identified as a result of the investigation.

The primary purpose of accident / incident investigations is to determine the cause and contributing factors to the accident / incident so that necessary action(s) can be taken to prevent reoccurrence of a similar events. Accident causation is assessed using DART's SRM process as described in *SMS Component 2* of the ASP to help qualify possible hazards.

If TxDOT SSO elects to conduct its own investigation of an accident or incident, DART will assist by providing necessary documentation, including access to records or reports, access to staff and personnel involved in the accident / incident, available radio transcripts and video footage, test results, and by coordinating schedules to allow TxDOT SSO to complete interviews and on-site investigation activities. In instances where TxDOT SSO elects to conduct its own investigation, DART may also elect to conduct its own internal investigation.

DART conducts investigations using the accident / incident investigation procedures included in **Appendix K**. At the conclusion of the investigation, DART submits a final report for TxDOT's formal review and acceptance. If TxDOT SSO identifies a discrepancy with the report, to include findings, TxDOT SSO will reject the report and formally notify DART of the report deficiencies and request that DART review, revise and resubmit the final report. Throughout the entire process, DART provides TxDOT with status reports regarding the investigation and subsequent report.

3.3 Management of Change

Proper configuration management helps to assure that changes and modifications made to any systems, facilities, equipment, operations, and rules and procedures are thoroughly assessed, planned and evaluated to determine their probable impacts on the system and to assure new hazards will not be introduced. This process is managed through a multi-disciplinary approach of DART departments. Configuration changes that may have an impact to the safe operation of the system will be thoroughly evaluated by Operations Safety staff utilizing DART's safety risk management process to include the use of MIL-STD 882E in the change management process.

The process of identifying and resolving hazards in the system is based on the U.S. Military Standard MIL-STD-882E and involves:

1. Hazard Identification
2. Hazard Risk Assessment
3. Hazard Risk Mitigation
4. Follow-up on Risk Mitigation effectiveness to include necessary Corrective Action Plans (CAPs) (see **Appendix I**)

Safety critical hazards that have been identified must be controlled or eliminated so that the hazard does not continue to pose a danger. The controls may be done in a temporary manner until a long-term mitigation has been implemented. Dependent on the risk ranking of the hazards' likelihood and severity, a multi-departmental team may be established to analyze and control these risks/hazards that the configuration change may have created. The teams will be comprised of the following personnel:

- Subject matter experts (SMEs) for the system
- Front-line personnel and supervisors
- All levels of labor
- SSO Agency participation is encouraged
- Safety staff, as support.

3.3.1 Configuration Management

System safety changes are submitted to the Appropriate DART Engineering Staff/Department for evaluation, which uses a change-management processes that includes evaluation, testing, recommendations, and document control of the proposed system safety change. DART's Operations Engineering department handles most Operational needs through the processes summarized in the following section. Growth Regional Development (GRD)/Rail program Development (RPD) resources handle the configuration management for the DART Capital Program. GRD/RPD resources supports OE staff as needed depending on scope and complexity of the projects.

DART Operations Engineering Configuration Management Process(s)

Once a proposed change is received, DART OE staff:

- Evaluate the proposed change(s) for safety improvement using the Failure Modes, Effects and Criticality Analysis process model (or another similar hazard analysis).
- Test new or modified equipment in the field.
- Prepare a post-testing report outlining findings and opinions on the effectiveness of the proposed change. This report is provided to the appropriate safety committee or department management.

Upon completion of evaluation, testing and recommendation development, Appropriate DART Engineering Staff/Department submits the report to others within the DART organization for review and comment. The following occurs prior to a change being implemented:

- The relevant safety committee or department management reviews the report and decides whether to proceed with the change.
- Upon approval to proceed, a Standard Campaign Bulletin is produced specifying the change and how it is to be implemented, and this information is communicated to all departments impacted by the change.

GRD/RPD Configuration Management Process(s)

GRD/RPD has established Change Control Procedures (CCP) to manage contract and design changes on capital projects managed by GRD/RPD. These processes are document in the current approved Change Control Procedures manual. The CCP establishes a Design Change Board (DCB) to review and approve project design changes. After a design is baselined all design changes are processed through the Design Review Board for approval. Operations Engineering sometimes utilizes the DCB forum to help with configuration management when scope and complexity of a change requires it. DART has also established Design review procedures (DRP) as well as Document Control Procedures (DCP) to manage records for the capital programs.

3.3.1.1 Documentation

Operations Document Control (ODC) maintains documentation on the configuration of DART-controlled assets. ODC maintains the configuration management procedures, drawings, and specifications.

DART OE performs post-accident equipment assessments to identify the cause of the accident and to document whether changes are needed to maintain compliance with equipment and facility safety requirements.

Engineering Document Control (EDC) maintains the project information for the Capital program(s) under GRD/RPD. At the closeout of a project, EDC transmits all project documentation to ODC for continued maintenance of drawings and other asset changes after turnover. GRD/RPD assists ODC with updates of drawings as needed.

3.3.2 System Modification Overview

DART uses a standard process(s) for ensuring safety concerns are addressed when modifications must be made to existing systems, facilities, or equipment. No safety-related system modifications may be initiated without use of this process. System safety modifications may be proposed as the result of:

- A response to an identified hazard for mitigation.
- The desire or need to update technology.
- Discontinued manufacture of presently used equipment.
- Remodeling of facilities.
- Equipment design or materials improvement.
- Aesthetic modifications intended to make equipment or locations more attractive.
- Changes in the operating environment.

Proposed modifications to the operating system must be submitted to the Maintenance Technical Services Division for evaluation, testing, recommendations and document control. Once the proposed modification is received, the Maintenance Technical Services Division:

- Evaluates the proposed modification using the Failure, Modes, Effects, and Criticality Assessment model (or another similar hazard analysis model). The modified or new equipment is tested, and findings reported to management.
- Develops a report of findings from analysis and testing.
- Submits test report to appropriate Safety Committee and Senior Management for review.

Prior to a modification being implemented, the following occurs:

- Safety Committee and Senior Management reviews the report and determines whether to proceed with the modification.
- If the decision to proceed is made, the proposal and the Maintenance Technical Services' assessment is forwarded to the affected department head(s) for approval.
- Upon approval by the department, a Standard Campaign Bulletin is issued, describing the change and how it should be implemented.

DART's Capital programs utilized its established System Safety and Security Program (SSSP) as well as the Safety and Security certification Plan (SSCP) to manage system modifications, more detail on these programs can be found in the current approved SSSP and SSCP documents.

3.4 Safety and Security Certification Process

Safety and Security Certification for DART projects is conducted where safety and security certification is required. Growth Regional Development (GRD) has established the GRD Safety and Security Certification Plan (SSCP) to meet this need. The GRD SSCP is scalable and flexible to meet the needs of any DART project requiring safety and security certification to support compliance with this Public Transportation Agency Safety Plan (PTASP).

The GRD SSCP can apply to all DART projects that require Safety and Security Certification. It can be applied to all modes of transportation including Light Rail, Streetcar, Commuter Rail, and Bus as needed. The SSCP processes are critical in the design, re-design and configuration management of DART's transit systems.

The GRD SSCP uses concepts and methodologies for safety and security certification as prescribed in the Federal Transit Administration (FTA) *Handbook for Transit Safety and Security Certification*. The SSCP is formatted and structured in a manner specifically appropriate (scalable and flexible) for DART's projects.

Safety and Security Certification provides proactive tools and analyses which identify potential safety issues and ensures hazards are mitigated. Safety and Security Certification also supports improved integration of operational considerations into project designs, which can offer the following benefits:

- Improved functionality of system design
- Promotion of effective and efficient use of resources
- Reduction in work arounds and change orders during construction
- Reduction in hazards in operations and maintenance services
- In certain instances, this activity can reduce the need for retrofitting to correct hazards after the system is operational.

The benefits of this process are significant, enhancing not only operational safety and security, but also the functionality of the design and the efficiency of any project turnover to operations and maintenance personnel.

For DART projects outside of DART's Capital Program, the level of certification is determined based on the nature and complexity of the project. The SSCP provides a structured process that is scalable and flexible to meet the need for any project that is modifying the operational environment. The DART Director of Systems Safety (DSS) assists DART Operations Safety and other DART project owners with safety and Security certification activities as needed.

DART Capital Program Safety and Security Certification Process

The DART Director of Systems Safety is responsible for the safety and security certification activities for capital projects under the GRD/Rail Programs Development (RPD). DART's Capital projects follow the safety and security process ten (10) step process as identified in FTA's "Handbook for Transit Safety and Security Certification". The ten (10) step process is as follows:

- Step 1: Identify Certifiable Elements
- Step 2: Develop Safety and Security Design Criteria
- Step 3: Develop and Complete Design Criteria Conformance Checklist
- Step 4: Perform Construction Specification Conformance
- Step 5: Identify Additional Safety and Security Test Requirements
- Step 6: Perform Testing and Validation in Support of the SSC Program
- Step 7: Manage Integrated Tests for the SSC Program
- Step 8: Manage "Open Items" in the SSC Program
- Step 9: Verify Operational Readiness
- Step 10: Conduct Final Determination of Project Readiness and Issue Safety and Security Certification



Completing these ten (10) steps ensures that established safety and security requirements are achieved, and the capital project is safe for revenue service to begin. This is accomplished through the use of a structured process that establishes safety and security design requirements based on hazard and vulnerability analysis, applicable codes, standards, and criteria.

The Certification Review Committee (CRC) is responsible for overseeing the identification, evaluation, and resolution of safety hazards and security threats and vulnerabilities for the Capital Program. The CRC is made up of representatives from Rail Program Development, Engineering, Operations Safety, Commuter Rail, Emergency Management, DART Police as well as supported by other subject matter experts as required. The CRC reviews hazard analyses and reports. The CRC also serves as a subcommittee to DART Executive Roundtable Review Team Committee (ERRTC) for other DART Projects that need safety and security certification input. More detail about the CRC responsibilities can be found in the current approved SSCP document.

A Fire Life Safety Committee (FLSC) is also established for Capital projects. The FLSC is made up of the local Authorities Having Jurisdiction (AHJ) as well as other authorizes as required by the capital projects. The purpose of the FLSC is to review requirements that are critical to fire and life safety and security and obtain concurrence from local authorities having jurisdiction (AHJ). This ensures proposed designs meet code requirements and comply with the National Fire Protection Association (NFPA) as well as local fire code standards or fire life and safety and security vulnerability mitigation measures. The FLSC is also utilized for other DART projects where coordination is required. More detail about the FLSC responsibilities can be found in the current approved SSCP document.

3.5 Safety Compliance Assessment and Inspection

DART has implemented various processes to monitor compliance with its safety rules and requirements.

3.5.1 Drug and Alcohol Compliance

The Operations Safety Department administers the DOT Substance Abuse program, which complies with 49 CFR Parts 40 and 655, the Drug Free Workplace Act, and DART's Substance Abuse Policy. DART employees are required to submit to drug and alcohol tests as a condition of employment under DART's policy.

All DART employees receive at least 60 minutes of training on the effects and consequences of prohibited drug use on personal health, safety, and the work environment, and on the signs and symptoms that may indicate prohibited drug use.

Supervisors and/or other DART officials authorized to make reasonable suspicion determinations receive at least 60 minutes of training on the physical, behavioral, and performance indicators of probable drug use and at least 60 minutes of training on the physical, behavioral, speech and performance indicators of probable alcohol abuse. Mandatory personnel re-training in substance abuse is not required, however DART personnel periodically update the prohibited substances literature which is posted in common areas throughout DART facilities.

Contractors are made aware of the DART Drug and Alcohol program requirements in the language set forth in Contractor's Right of Entry Agreements, and License Agreement documents. Paragraph ten of both documents advises all Contractor employees that they are strictly prohibited from engaging in the non-prescriptive use, sale, distribution, dispensation, manufacture or transfer of controlled substances. Contractors or their employees must not possess alcohol or non-prescription drugs on DART property or other worksites, on or off duty. Employees of contractors must not report to duty or remain on duty if impaired by alcohol or drugs.

Safety Sensitive Employees, as defined by DART, include those who:

- Operate revenue vehicles.
- Maintain revenue vehicles.
- Control the movement of revenue vehicles.
- Must have a CDL to operate non-revenue vehicles.
- Carry firearms for security purposes.

Through the ***Employee Assistance Program*** (EAP), DART employees can seek assistance for drug and alcohol-related problems. Immediate discontinuation of any involvement with alcohol or drugs is an essential requisite for participation in any treatment program. Although employees are encouraged to receive help for drug and alcohol problems through participation in the EAP, they must comply with the requirements of DART's Drug and Alcohol prevention programs.

3.5.2 Internal Safety Audits and Annual Review

An internal safety audit program, overseen by Operations Safety, measures the effectiveness of the ASP in achieving the overall objectives of the plan and compliance with its requirements. DART's internal safety audit program is designed to:

- Ensure safety observations are conducted by supervisory or safety staff during system maintenance, operations, and modification.
- Verify compliance with management's safety objectives as stated in Section V of the ASP.
- Ensure compliance with operating rules, regulations, standards, codes and procedures.
- Recommend corrective action plans.

3.5.2.1 Internal Rail Safety Audits

DART shall develop and implement a process for the performance of on-going internal safety reviews (ISRs). This process evaluates the PTASP implementation, effectiveness, and serves as an internal tool to ascertain if the plan or supporting documents or procedures should be updated. DART shall develop and annually submit to TxDOT, for approval, a review package which addresses the areas of the PTASP over a three-year cycle.



Following final approval of DART's ASP by TxDOT SSO, DART will develop an annual internal rail safety audit plan and schedule to address the requirements of 49 CFR Parts 672 and 673, and any revisions of the TX DOT SSO Program Standard.

The internal safety audits will be focused on the content of the ASP to include the four (4) components of DART's SMS. See **Appendix G** for a listing of DART's safety roles and responsibilities and tasks (by department) noting their primary or secondary participation. Operations Safety is responsible for scheduling the internal safety audits on an annual basis.

Additionally, the revised Internal Rail safety Audits will be designed to help DART to monitor operations and to identify any safety risk mitigations that may be ineffective, inappropriate, or that were not implemented as intended.

3.5.2.2 Annual Internal Safety Review

DART Operations Safety is responsible for ensuring that Internal Safety Reviews are conducted. As needed, a consultant may be used to augment DART Operations Safety staff with these audits. Each year, a section of the ASP and SMS will be reviewed and on a three-year rotating basis. This tool is used on an on-going basis to evaluate the effectiveness and determine if updates to the ASP are required. Sixty (60) days before the audit is scheduled, an audit schedule will be developed and provided to TxDOT to fulfill SSO notification and to gain approval. The Internal Safety Review report will be submitted within 60 days of the closeout meeting to TxDOT SSO for review and acceptance. In no case shall DART submit the ISR final report later than February 1st.

During the audit process, each ASP section being reviewed is analyzed via on-site interviews, visual observations, records reviews, inspections, measurements, testing, process reviews and documentation supporting compliance. TxDOT SSO requires several action items to be included in the annual review report noting departmental processes via a checklist to determine compliance with procedures and reporting requirements.

Findings and recommendations are summarized and submitted for approval to Operations Safety in draft form. The report is reviewed, and modifications can be requested. If no modifications are necessary, the document goes back to the contractor for finalization. Once the Internal Safety Review is complete, a report is generated for DART's President & Chief Executive Officer's signature, which affirms the completion of Internal Audit Review for that calendar year. The report includes the status of current findings, recommendations, and CAPs.

The final report is also issued to Operations Safety along with the findings which are disseminated to affected departments and to TxDOT SSO. If findings are a product of the safety review, then CAPs will be generated to mitigate these findings. Findings are tracked monthly via the CAP log until they can be verified as being fully implemented and effective. Evidence of completion of CAPs being closed is collected as a record and reported to the TxDOT SSO program. Recommendations are listed into the Hazard Identification Log at the discretion of the agency.

DART's Annual Internal Review process is subject to change as a result of changes made to the TxDOT SSO Program Standard.

3.5.3 Rules Compliance and Procedures Review

DART maintains Standard Operating Procedures (SOPs), work instructions, and rulebooks for the operation and maintenance of LRVs, buses, rights-of-way, and structures. Operating rules and procedures promote safe, efficient and timely transit operations. Rules compliance programs have been developed as structure for these initiatives.

3.5.3.1 Review of Rules and Procedures

Periodic reviews of established rules and procedures are conducted to evaluate their continued effectiveness. Safety audits the procedural documentation and is an active member on both the Bus and LRT Rules Committees, which review operations rules annually and incorporate related interim bulletins into their respective Rule Books. Operations rules for both rail and bus are subject to change and occur due to new regulations, technology changes, system expansion, new equipment, hazard identification, or other operating considerations. Both Rules Committees are responsible for:

- Reviewing Rules, SOPs and Work Instructions (WI) as needed. Changes are incorporated into rules' revisions and are recorded in Document Control. The new SOPs and WIs are available to all personnel.
- Issuing Notices to document temporary changes that will not become permanent. Bulletins document permanent changes that will be incorporated into the next edition of the Rule Book.

3.5.4 Process for Ensuring Rules Compliance

Transportation ensures rules compliance with operating rules, bulletins, and SOPs through efficiency testing. Efficiency testing is conducted monthly and assigned at the Sr. Manager level or their designees.

Transportation and Maintenance Senior Managers are responsible for assessing the effectiveness of supervision relating to the implementation of operating and maintenance rules. This function is carried out by ensuring checklists, assessments, and efficiency testing is conducted by supervisory staff, and by periodically observing supervisors as they carry these tasks." This assignment is routed to Rail Operations and Maintenance supervisory personnel. Rail Operations testing is administered to rail operators and to TCC personnel.

Efficiency testing of maintenance personnel is also a vital component of rules compliance evaluation. Maintenance testing assigns a workflow number to each individual assessment being administered following Efficiency Testing procedure as included in **Appendix L**. Upon completion, the evaluation results are updated in the workflow and reassigned back to the Sr. Manager for conformation of completion and review. The assessment results are documented in the workflow as to specifics of purpose, criteria, results, remarks, and action items, if required. If the evaluation includes deficiencies, action items or elements for hazard mitigation, appropriate measures are initiated. Identified hazards are documented via workflow to Operations Safety and the Hazard Identification protocol, if mitigation is unlikely at the Sr. Manager level.

Efficiency Testing results for Field Operations are captured via spreadsheet containing relevant data that can be sorted by occurrence, location, or rule compliance observation. Data from TCC testing are logged via an Efficiency Test Form which highlights the test being performed, personnel information, and rules assessment identification.

3.5.5 Safety Culture Assessment

Safety culture is part of an organization's overall leadership capability and has been defined as "the collection of beliefs, perceptions and values that employees share in relation to risks within an organization, such as a workplace or community."¹ The overall goal of a Safety Culture Assessment is to provide a mechanism for DART employees to identify their safety concerns, become engaged, and to ultimately provide DART management with assistance and guidance in developing programs to foster desirable safety behaviors and attitudes. Initial and ongoing engagement with employees is the best indicator and will help to determine how they perceive safety within the DART organization.

The Safety Culture assessment can be captured in two (2) distinct ways:

- Annual formal surveys.
- Informal discussions ongoing throughout the year, led by department heads and the Operations Safety team members.

As an *Annual Formal Survey*, DART will utilize an online survey tool to assist in distributing the Safety Culture Assessment to as many employees as possible. In instances where online access may be difficult for employees, DART will provide paper copies of the survey for completion.

Upon completion of the online and paper surveys, the results and any subsequent comments will be compiled into an overall report. The initial survey will help to establish a baseline for the DART organization with subsequent surveys being used to determine the effectiveness of the DART SMS and to identify any new trends or activities.

Informal Discussions will be conducted by DART Management and Safety staff through continuous engagement with employees and will use these encounters to help assess the current safety culture and concerns from the employees. These encounters can be one-on-one or through committees such as the local safety committee or joint labor management committees.

Significant information that is gathered from these informal discussions should be fed back to DART Operations Safety for inclusion to the DART safety data in order to assist with identification of trends or a precursor to a more serious incident.

¹ Cox, S. & Cox, T. (1991) The structure of employee attitudes to safety - a European example *Work and Stress*, 5, 93 - 106

3.6 Safety Performance Assessment

An internal safety performance assessment, overseen by Operations Safety, measures the effectiveness of the ASP in achieving the safety goals and objectives of the agency and compliance with the ASP and SSO Program Standard requirements. The primary objective of the internal safety performance assessment is to determine if the processes, procedures, and policies that have been developed through the ASP are being implemented throughout the DART Organization. Further, the assessment seeks to determine the effectiveness of the requirements set forth in the ASP and identifies whether changes in process, procedures, and/or methods are needed. Annually, the internal safety performance assessment is completed to:

- Ensure safety observations are conducted by supervisory or safety staff during system maintenance, operation, and modification.
- Review and evaluate compliance with the ASP safety objectives statement.
- Review and evaluate that ASP goals and objectives are aligned and consistent with the DART management goals and objectives.
- Review the DART management structure to assure that the most current is included in the ASP.
- Review and evaluate the DART SMS implementation program to assure that all are being completed in an appropriate and timely manner.
- Review and evaluate the SRM program to determine and assure that the processes are being implemented across the DART organization and are effective.
- Review and evaluate the change management and system modification review process to assure that safety concerns and hazards are being identified, reviewed and mitigated (as needed) and that safety is part of all reviews.
- Review and evaluate the DART safety certification program to assure its implementation and use for capital projects.
- Review and evaluate the processes being used to collect and analyze safety data and how those trends are developed and reported throughout the DART organization.
- Review and evaluate the DART accident / incident reporting and investigation process to assure that appropriate notifications are being made, in the prescribed timeframe, as well as any investigation reports or findings are appropriately assessed, mitigated and tracked through to completion.
- Review and evaluate the process to determine that emergency plans and procedures are reviewed and updated, and that coordination is conducted with external agencies.
- Review and evaluate the internal safety review process to assure that all SMS components are reviewed and that findings from these reviews are assessed, mitigated and tracked through to completion.
- Review and evaluate the facility and equipment inspections process to assure that these are being completed at the prescribed times and that any findings or significant non-conformances are assessed, mitigated and tracked through to completion.



- Review and evaluate the maintenance audits and inspections to assure proper completion based on the identified maintenance cycles and that any findings, non-conformances and trends are assessed, mitigated and tracked through to completion.
- Review and evaluate the DART training program to assure that proper training is identified and being completed for all safety sensitive employees.
- Review and evaluate the DART configuration management program to assure its being conducted and to aide in determining its effectiveness.
- Review and evaluate the DART hazardous material program and processes to assure compliance with current codes and to assess the implementation throughout the DART organization.
- Review and evaluate the DART drug and alcohol program to assure that it is implemented and in accordance with current regulations.
- Review and evaluate the DART procurement processes to assure that safety is integrated into the procurement process to review and prevent potential unsafe equipment and materials from being introduced on DART property.
- Ensure compliance with operating rules, regulations, standards, codes and procedures.
- Recommend corrective action plans.

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4.0 Safety Promotion

The purpose of DART's comprehensive safety training program is to ensure that employees, contractors, and external stakeholders (i.e., first responders) are properly equipped with the necessary knowledge and skills required to work safely while in DART's operations and facilities, and on DART properties.

DART realizes that there are a multitude of ways to promote safety throughout the organization and more importantly, throughout the community that it serves. Ongoing promotion of safety not only increases awareness but helps to foster a more conducive environment where employees and the general public feel safer and more secure.

As part of its Safety Promotion implementation plan, DART will review and consider the following ways of promoting safety:

- Use of social media such as Facebook and Twitter to send out safety alerts and proactive safety tips. Feedback from social media users can also be used to support the safety data and acquisition portion of SMS.
- Use of DART intranet, bulletin boards and work area common spaces to post safety information and alerts.
- Establishing a daily or weekly rule notice for employees as a reminder of how to work and think about safety.
- Conducting toolbox talks with DART maintenance employees regarding occupational safety rules.
- Utilizing Safety Committee members to continuously promote safety throughout their work area and also assist with providing follow-up to reporting issues.
- Development of a safety performance and recognition system that will allow DART to demonstrate employees' use of and implementation of safe work practices.

4.1 General Safety Training and Competencies

The DART Operations Training Department provides safety-specific training for DART operations. Safety rules and techniques are integrated into the task-specific training associated with each departmental discipline. Safety personnel or other qualified department instructors conduct task specific training. DART also conducts safety training for external stakeholders and contractors. All DART provided training includes the conveyance of information related to hazards, safety risks, and employee/stakeholder role and responsibilities to work safely and report safety concerns immediately.

The DART Maintenance Employee Training Program includes a comprehensive set of *Scheduled Required Courses* and *Non-Scheduled Required Courses*. These training courses are included in each maintenance employee's "**Career Plan**", inclusive of specific maintenance craft/specialty areas. Career Plans include maintenance employee upgrade requirements which detail the required training courses to permit maintenance employees to progress through the maintenance classifications. The Career Plans for maintenance employee progression are included in **Appendix M**.

4.1.1 DART Safety Training

Safety training includes:

- **New operator certification and operator re-certification.** This class is designed to provide the initial training to new light rail vehicle operating employees. The re-certification is an annual re-familiarization and testing to ensure personnel remain fluent on operational practices and procedures.
- **High rail certification and re-certification.** This class is designed to provide the initial training for operation of work trains on DART's yard and mainline tracks. The recertification is an annual re-familiarization and testing to ensure personnel remain fluent on operational practices and procedures.
- Post-incident and violation re-training
- **Light Rail Worker Protection Program (LRWPP)** is training course for DART employees and contractors who work on the light rail right-of-way or yard must complete a mandatory Light Rail Worker Protection Program (LRWPP) training course. A refresher training course is required annually thereafter. DART has identified that LRWPP training course as the Public Transportation Safety Certification Training Program (PTSCTP) refresher training for staff and contractors the agency has designated as PTSCTP participants.
- **Operation Lifesaver** is a course which helps reduce the number of light rail vehicle collisions with rubber-tired vehicles, pedestrians, and trespassers and is taught by DART employees to the public. The goal of this training is to educate the public to the hazards associated with an active rail system which will ultimately reduce deaths and injuries.

- **Quarterly Safety Training** is conducted by DART Operations Safety in January, April, July and October of each year and is mandatory for Transportation and Maintenance personnel. Operations Safety determines the topics and curriculum based on current events, recurrent training required by law, or training required by changes in safety-related laws, regulations, guidelines, DART policy, SOPs, and work instructions. Training sessions are documented through participant sign in sheets.
- **Collision Avoidance** training is provided to employees involved in preventable accidents or who have been identified as being high-risk operators. Safety notifies the employees operating division and the training section after a collision is classified as preventable. The Transportation Training Section conducts the training and maintains permanent records of the classes.
- **Defensive Driving** training is provided to DART employees. Qualified personnel in Safety and Transportation personnel are qualified to offer the National Safety Council sponsored course. Training records and documentation are maintained in the Transportation Training Section. This training is not required for rail operators.
- **Environmental and Health** training is conducted annually for compliance with Texas Commission on Environmental Quality (TCEQ), Texas Department of State Health Services (TDSHS), Environmental Protection Agency (EPA) regulations and Occupational Safety and Health Administration (OSHA) guidelines. Safety and Environmental staff are qualified to conduct this training.
- **Rail Operator training** is provided to DART employees seeking to become DART-certified LRV operators. The initial training is conducted over 11-week training period and includes both classroom and practical training experiences. All DART certified Operators are required to complete an annual 2-day re-certification class.
- **LRV Train Controller Training** is provided for all DART Controllers. Prior to this training, the employee must complete the DART LRV operator certification program. After completion of the operator certification, these employees must complete a 17-week controller training class to become certified as a Rail Operations Controller. Controllers must re-certify as a controller and rail operator on an annual basis.
- **De-escalation Training** This training course is directed under The Bipartisan Infrastructure Law and requires maintenance personnel, operations personnel, and personnel directly responsible for safety to complete de-escalation training. This training course will teach our frontline employees about techniques to defuse stressful passenger situations and raise awareness of operator assaults and to ensure their safety, as well as the safety of others. This training is required bi-annually.
- **Maintenance Safety Training** is provided to maintenance employees by Operations Safety through one-hour quarterly meetings. Light Rail Worker Protection training and toolbox meetings are held to review current SOPs and work instructions related to safety. Maintenance employees that are required to operate work trains on DART's track must also receive the high-rail certification class. In addition to the training,

they receive from Operations Safety; each month the shop supervisors will review and discuss one of the following topics:

- Power industrial truck
- Fall protection procedures
- Blood-borne pathogens and biohazard clean up procedure
- Fire and emergency evacuation safety practices
- Welding cutting and brazing safety procedures
- Hazardous communication (HAZCOM) safety procedures
- Hearing conservation
- Electrical safe work practices
- PPE safety procedures
- Lockout/tagout safety procedures
- Spill response safety procedures
- Confined space safety practices

4.1.2 External Stakeholders / First-Responder Training

As detailed in DART's ASP, Section IX and the DART Emergency Operations Plan (EOP), the Emergency Preparedness Manager works with Emergency Management Coordinators in member cities and counties to ensure there is a unified emergency response among DART's member cities. Coordination takes place through meetings, email, phone conferences or other means as determined by the Emergency Management Coordinators.

The DART Emergency Preparedness section maintains a Master Training and Exercise Plan that identifies agency and regional exercises by quarter. This plan is reviewed and updated annually.

System familiarization training is scheduled bi-annually for local fire departments. This training is also available out-of-cycle by request of any response organization. The DART Emergency Preparedness section has recently begun a training program in conjunction with the Dallas Fire Rescue Academy to have ALL trainees receive familiarization training on buses, light rail vehicles, and the north central tunnel.

4.1.3 Training Records Review

Training records are requested and reviewed by Safety and auditors, both internal and external, to ensure training is consistent with governmental and DART policies, procedures, regulations, SOPs, and work instructions. Training records are reviewed on an annual basis by the responsible department. Reviews of training records are conducted by external auditors every three years and by DART Operations Safety as needed. Safety training records are maintained by Operations Safety and by the affected departments.

4.1.4 Contractor Safety

Detailed requirements for contractors' safety are addressed in DART's formal Construction Safety and Security Program, included as **Appendix N**.

4.1.5 Compliance with Local, State and Federal Requirements

The Light Rail Worker Protection Program (LRWPP) establishes DART's safety standards for employees, contractors, and visitors performing duties in or adjacent to the right-of-way. DART employees and contractors must comply with the LRWPP and the DART Light Rail System Book of Operating Rules. The requirements of the LRWPP are designed to provide a safe work area free from the dangers of working in light rail system right-of-way or when fouling the track. The rules and procedures in the LRWPP govern Light Rail Workers, train operators, Train Control Center personnel, and any other persons entering DART's right-of-way and is developed to be compatible with 49 CFR 214, subpart C, Roadway Worker Protection.

DART has implemented a 4-hour and 8-hour LRWPP training course that includes initial and annual re-qualification training. Proficiency in LRWPP requires completion of course requirements and passing the exit exam with a score of 80% or better. Employees that fail to meet the proficiency standard are allowed one (1) opportunity to retake the exam. If they do not successfully pass after retaking the exam, the person must retake the class.

LRWPP course content includes the following elements:

- Dangers on the roadway, including moving trains, traction power system, and known hazardous conditions
- Tasks required of Light Rail Workers to perform their duties successfully
- Skills and knowledge necessary to perform each task as assigned
- Standards for successful completion of initial and re-qualification training
- LRWPP rules and procedures
- Lessons learned from other rail transit agencies

DART has adopted a training curriculum to teach the skills and knowledge necessary to implement the awareness/tasks required by the Agency's Light Rail Worker protection policies and procedures. **Table 12** identifies the LRWPP training hours required by job classification. Minimum requirements of the training course include:

- Policies, procedures and rules unique and specific to DART
- Methods used by DART to establish on-track protection
- Responsibilities of Light Rail Worker relative to each method of establishing on-track protection used by DART
- Personal Protective Equipment (PPE)
- Prohibited Acts and Personal Precautions while working on the right of way
- Communications between train operators, other employees on-site, and the TCC
- Characteristics of the right-of-way
- Interfacing with train or other on track equipment movements

- Highway vehicle traffic considerations
- Removal/restoration of traction power
- Responsibilities for flagger/watchmen protections of work crews
- Hand signals for trains
- Hazards
- Audibles

The DART LRWPP program can be found in **Appendix O**.

Table 12: Required LRWPP Hours for DART Employees

Job Classification	Required LRWPP Hours
WSA <i>Signals employees are required to have current FRA certification.</i>	8 Hours
Train Operators	4 Hours
Rail Supervisors	8 Hours Flagger Certification
Safety	8 Hours Flagger Certification
Rail Fleet Services	8 Hours Flagger Certification
Operation Engineering/Facility System Engineering	8 Hours
GRD/RPD	4 Hours for some, Others, 8 Hours, TBD
Procurement	4 Hours
Real Estate	4 Hours
Environmental	8 Hours
Police	4 Hours
TVM Techs	1 Hour
DART Contractors/Public Utilities Non-DART	4- or 8-Hours Flagger Certification

In the approximately 20 % of DART’s light rail system where the corridor is shared with an FRA Railroad. FRA rules always supersede DART procedures.

4.1.6 Hazardous and Regulated Materials Management and Training

DART Maintenance, Procurement, Materials Management, Operational Safety and Environmental Compliance departments are responsible for management of hazardous and regulated materials. DART maintains SOPs, work instructions, regulatory permits and plans to manage DART’s hazardous and regulated materials.

DART’s SOPs provide instruction and guidance in how to handle hazardous and regulated materials. The primary SOPs are located in **Appendix P** and include the following:

- NPG-0769 Hazardous Communication (HAZCOM) Safety Procedures
- NPS-0044 Hazardous/Regulated Waste Management
- NPS-0045 Spill Response Safety Procedures
- APG-0862 Underground Storage Tank and Bulk Fluid Management.



Spill Prevention Control and Countermeasure (SPCC) plans have been developed and implemented in accordance with 40 CFR § 112 for DART's maintenance facilities. Storm Water Pollution Prevention Plans (SWP3) have also been developed and implemented in accordance with Texas Pollution Discharge Elimination System Multi-Sector General Permit TXR050000 for DART's maintenance facilities. Both the SPCC and SWP3 provide information on materials management and how to prevent or minimize impacts to the environment. DART Maintenance *SOP NPS-0045, Spill Response Safety Procedures*, instructs personnel responding to these events.

Safety Data Sheets (SDS) provide information on material handling for each individual product used at DART facilities. In compliance with 25 TAC § 295 Subchapter, DART maintains a HAZCOM program and manages SDSs through a database located online at <https://dart.online-msds.com>. This website can be accessed from any DART computer or smart device with an internet connection. DART also maintains SDSs at each facility on "flash drives" in the event internet service is down. These flash drives are updated quarterly.

Employee training is conducted to provide instruction regarding hazardous and regulated materials management. The training is conducted either by or with the assistance of DART's Maintenance Section, Operations Safety or DART's Environmental Compliance Section. Training includes storm water compliance, spill cleanup training, petroleum management and HAZCOM training.

4.2 Safety Communication

4.2.1 Safety Performance Communication

DART's safety goals and objectives, and its safety performance targets, as detailed in the ASP, Section V and X are communicated to all employees through agency wide safety campaigns as well as utilizing DART's intranet (InfoStation) to continually promote our safety goals, objectives, and safety performance targets and to ensure that any modifications to safety goals, objectives, and safety performance targets are immediately available.

Additionally, our safety goals, objectives, and safety performance targets are promoted through quarterly safety meetings for Operations, Maintenance and Materials Management personnel. This requirement ensures that all participants receive agency information timely. Informal minute clinics are an improv group setting in common work areas that could have predetermined topics but encourage engagement from participants from the same employee base. Depending on group participation, minute clinic topics can change based on current external conditions or employee concerns. Management and front-line employee interaction enhances the success of these informal gatherings. Electronic bulletin boards are located agency wide near common work areas and provide consistent and up-to-date agency information. All DART employees are provided with agency e-mail accounts which grant communication to a specific targeted audience.

4.2.2 Communicating Safety Actions

DART's Hazard ID Workflow System is utilized to track known hazards. As detailed in ASP, Section 1.3, employees are able to monitor actions taken by DART staff/team members to address reported concerns. Additionally, DART's Department Heads are ultimately responsible for ensuring assigned employees are aware of hazards in their respective work areas; as well as updating employees on actions being taken to address subpar safety conditions (in real-time).

Responses and the actions taken are communicated to all employees via the internal organizational workflow system. Concerns once validated are assigned to the hazard identification process. The direct manager of the employee initiating the reported hazard is given the first opportunity to address the hazard and provide the employee with an update. If the concern is validated by the manager but he/she is unable to address or mitigate the item at their departmental level the employee will be notified, and the concern will then be forwarded to Operations Safety who assigns the hazard ID to the appropriate Safety Committee for resolution. Updates, decisions, and timelines of the mitigation process are input into the Hazard ID workflow system where the employee may continue to monitor the status of the Hazard ID until a resolution is reached.

5.0 Documentation of ASP and SMS Implementation Activities

DART's Vice President, CSO is responsible for maintaining the Agency's documents which set forth its ASP, including those documents related to the implementation of its SMS, and results from SMS processes and activities. The ASP and SMS documents include in whole, or by reference, the programs, policies, and procedures that DART uses to carry out its ASP. The Vice President, CSO manages these documents, incorporating the configuration management procedures detailed in DART's Document Control procedures and reviews by the DART LRT Rules Committee. All ASP and SMS documents are maintained for a minimum of three years after they are created.

For the purpose of reviews, investigations, audits, or other purposes, any ASP or SMS related documents will be made available upon request, by FTA, TxDOT State Safety Oversight Agency, and other Federal and State entities having jurisdiction.



Appendices

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