

Delaware Transit Corporation

# Agency Safety Plan

December 2022



**DART**  
Moving Forward



# AGENCY SAFETY PLAN

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## ACKNOWLEDGEMENTS

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Phil Grazela	Deputy Chief Safety and Security Officer
Jim Karschner	Safety and Security Officer

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## EXECUTIVE SUMMARY

In July 2018, the Federal Transit Administration (FTA) published its Final Rule on the Federal requirements for the Public Transit Agency Safety Plan (ASP) for all agencies that receive federal funding under FTA's Urbanized Area Formula Grants. As a recipient of federal funds, the Delaware Transit Corporation (DTC), which provides public transit services for the State of Delaware under the operating name of DART is required to prepare an ASP. The ASP includes the development of procedures and processes for the implementation of a Safety Management System to ensure public transit systems operate safely.

With the passing of the Bi-Partisan Infrastructure Bill the FTA established new ASP rules requiring all transit agencies to update their existing ASP's. The new requirements include an expanded risk reduction program and public health guidelines. Key to new requirements was the establishment of a Safety and Security Committee that represents an equal balance of labor and management personnel. The committee had the responsibility of developing the new requirements and ultimately approving the 2022 ASP update. The committee will continue as a key partner in the oversight of implementation of the ASP and introducing safety and security recommendations. The document represents the Safety and Security Committee's approval of the 2022 ASP.

### **ASP Responsibility**

DTC's Chief Safety and Security Officer is responsible for the development and implementation of the ASP. DTC's Deputy Chief Operating Officer, Support Services is the Accountable Executive that was designated by DTC for the development and implementation of the 2018 Transit Asset Management Plan and will continue in that position for this plan. The Chief Safety and Security Officer will be supported by the ASP Team, comprised of the following DTC departments:

- Safety and Security
- Performance Management
- Human Resources
- Office of Innovation
- Customer Service
- Finance
- Operations and Maintenance
- Transit Technology Support Services

### **ASP Requirements**

The FTA requires transit agencies to complete the following five ASP reporting requirements:

1. Safety Performance Targets
2. Safety Management Policy
3. Risk Management
4. Safety Assurance
5. Safety Promotion

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## **Safety Performance Targets**

DTC has established performance targets to assess the safety health of the transit agency. The performance targets set a desired/acceptable metric to be accomplished over a specific period of time. Safety performance targets are acceptable and implemented by all DTC stakeholders and are consistent with the Delaware Department of Transportation (DelDOT) and FTA safety measures. Additional details on specific safety performance metrics and targets are included in Section 3 of this plan.

## **Risk Reduction Program**

DTC's Risk Reduction program identified effective measures for reducing, if possible, eliminating assaults on DTC personnel and reducing visibility impairments that could impact safe operation of the vehicle. The new measures are included with this 2022 ASP update and include investigation of operator protective barrier, regular de-escalation training, and ensure technological devices do not impede field of view. Refer to Section 4 of this report for a full description of the Risk Reduction program.

## **Public Health**

Public transit agencies endured many challenges during the pandemic of being able to continue to provide service while providing protections for its employees and customers. Transit agencies need to react and adapt to the changing infection control guidelines for frontline employees. To ensure that agencies can be proactive when faced with a public health challenge DTC has established public health protection guidelines and measures to protect the continued health and wellbeing of DTC employees.

## **Safety Management Policy**

Per FTA ASP requirements, transit agencies receiving federal funds are required to develop a Safety Management System Plan (SMS) that defines systematic procedures, practices and policies for managing risks and hazards. DTC has developed a policy that includes the processes, and procedures for implementing a SMS. Safety is one of the core principles of DTC we have established policy and management procedures that target all levels of management, all DTC employees includes contractors to be held accountable for operating at the upmost level of safety performance. The success of the SMS is establishing a Safety Culture that is top-down and recognized as the responsibility of each DTC employee. Key to the success of the SMS is having Safety Reporting procedures in place to provide unencumbered, confidential reporting of safety concerns.

## **Safety Risk Management**

DTC defines a hazard as any real or potential condition or set of conditions, internal or external to the transit system, when activated could result in injury, death, or damage to or loss of facilities, rolling stock, equipment, infrastructure, or damage to the environment. To mitigate these hazards or potential conditions, DTC has developed a safety risk management process to identify and assess potential hazards. DTC's risk management system assesses the level of risk, determines corrective action and documents the hazard and its associated risks. This risk assessment approach is based on the MIL-STD-882 that is a qualitative calculation used to determine risk by evaluating the hazard severity and hazard probability. Once a hazard or risk is identified a corrective action plan is prepared. Regardless of the severity of the

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risk or hazard, all hazards are reported to DTC's Office of Safety and Security and logged for corrective action monitoring.

## **Safety Assurance**

DTC's Office of Safety and Security is responsible for ensuring mitigations developed under the Safety Risk Management process are implemented and adhered to in an appropriate, effective manner. This Safety Assurance process also ensures that DTC's SMS is effective and meeting its safety objectives and performance goals. DTC implements its Safety Assurance program through active monitoring of operations, safety reporting systems, workplace observations, inspections, audits and other safety activities. To implement effective Safety Assurance measures DTC has established a number of committees to ensure its effectiveness:

- Accident Review Committee
- Executive Safety Committee
- Safety and Security Review Committee

An effective employee safety reporting program is essential to the Safety Assurance function.

## **Safety Promotion**

DTC's Safety Promotion program is focused on the most effective measures to communicate and disseminate safety information and to ensure a strong safety culture. Safety Promotion measures include an established safety culture, safety training, lessons learned, reporting systems and recommendations based on Safety Performance metrics. The intent of Safety Promotion is to foster a positive safety culture in which DTC employees receive ongoing training and updates of safety progress; feel comfortable reporting safety issues or concerns; understand why safety is important; and how staff actions or inactions impact safety.

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## APPENDICES

Abbreviations and Acronyms

Safety and Security Committee 2022 PTASP Approval

## 1. TRANSIT AGENCY INFORMATION

In 2018, the Federal Transit Administration (FTA) issued the Public Transportation Agency Safety Plan (PTASP) which required all public transportation providers who receive capital and operating funds to develop safety plans. This rule applies to all recipients under FTA’s Urbanized Area Formula Program (49 U.S.C 5307), State of Good Repair Grants (49 U.S.C. 5337), and Buses and Bus Facilities Program (49 U.S.C 5339). The PTASP is the guidance to develop a safety management system and policies, safety performance goals, employee reporting program, safety assurance and promotion programs, and safety risk management. One key element of the PTASP is developing a process and timeline for annual reviews and updates to the agency safety plan. As a recipient of federal funds to support the provision of public transportation, as defined in the FTA PTASP Final Rule the Delaware Transit Corporation is required to prepare a PTASP. This document will describe how the agency will develop and implement a PTASP (hereinafter referred to as “Agency Safety Plan (ASP)”) in compliance with FTA requirements.

### 1.1. OVERVIEW OF DELAWARE TRANSIT CORPORATION



The Delaware Transit Corporation (DTC) is an operating division of the Delaware Department of Transportation (DelDOT) that provides statewide public transportation services in Delaware. DTC provides fixed-route, intercounty, and seasonal bus services for over 60 bus routes statewide, with paratransit services for persons with disabilities. Bus services provided are defined as directly operated and purchased transportation services for fixed-route and paratransit services. At the time this ASP was prepared, DTC operates 261 fixed route and 300 paratransit buses among

their statewide services. Directly operated services include fixed route, intercounty, microtransit, and paratransit services. Purchased bus transportation services supplement directly operated paratransit services, flex-route and operates as seasonal bus resort services. Purchased bus transit services are provided under contract with First Transit Services. Under the agreement, First Transit Services must comply with all DTC safety performance goals, reporting, and policies as defined by DTC. All rolling stock used in provision of bus purchased transportation services is provided by DTC. DTC also offers commuter rail service under contract with the Southeastern Pennsylvania Transportation Authority (SEPTA), which manages all operation, maintenance, and storage of the commuter rail vehicles. DTC does not provide transit services on the behalf of another transit agency or entity.

The safety and security of its employees and passengers is the number one priority for DTC. When providing public transportation, there is nothing more important than ensuring a safe and secure environment for its customers and employees. DTC’s commitment to safety is a fundamental measurement of their success where safety is part of every decision-making process. The Chief Safety and Security Officer is authorized by the Chief Executive Officer (CEO) to develop, implement, and administer a comprehensive safety program. The Chief Safety and Security Officer has the authority to investigate or inspect any operation or activity deemed potentially unsafe and is also empowered to immediately

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suspend or stop any activity or service that poses an immediate hazard or threat to the safety of the public. The Accountable Executive and Chief Safety and Security Officer are authorized by the CEO to implement the ASP program.

## 1.2. TRANSIT AGENCY ADDRESS INFORMATION

DTC provides operations, maintenance and bus storage at five geographically located facilities to optimize operating efficiency to minimize non-revenue operations. Administrative services are located at two locations. The mailing address for this ASP for DTC is:

Delaware Transit Corporation  
900 Public Safety Boulevard  
Dover, DE 19901

## 2. PLAN DEVELOPMENT, APPROVAL, AND UPDATES

The development of this ASP was led by the Chief Safety and Security Officer for DTC supported under the direction of the CEO and DTC Executive Leadership Team. The Chief Safety and Security Officer convened a DTC Agency Safety Plan Stakeholder Committee, comprised of key staff to support the development and implementation of the ASP. The DTC ASP Stakeholder Committee includes the following DTC departments:

- Safety and Security
- Office of Performance Management
- Human Resources
- Office of Innovation
- Customer Experience Office
- Customer Service
- Finance
- Risk Management
- Transit Technology and Support Services
- Operations
- Maintenance



Following completion and execution of this initial ASP, the DTC ASP Stakeholder Committee, under the direction of the Chief Safety and Security Officer, will meet each quarter during the fiscal year to assess the performance and compliance goals established in this ASP. The DTC ASP Stakeholder Committee will also determine if any revisions to the ASP will be required, where applicable. Required revisions/updates will be completed following the completion of each fiscal year. All revisions of the ASP will be recorded in the revision history below and include the author, date revision was approved, and version and revision numbers. Additional information and details are included in Section 4 of this plan.

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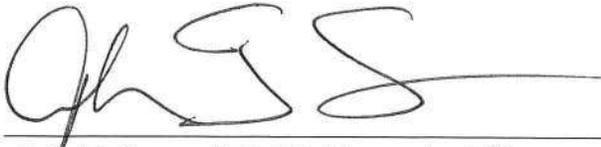
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Table 2-1: ASP Revision History

Last Modified By:	Date:	Version/Revision Number
Sean Finerty, WSO-CSSD	3/15/2021	Version 1/Rev0
Safety & Security Committee	12/15/22	Version 2/Rev0

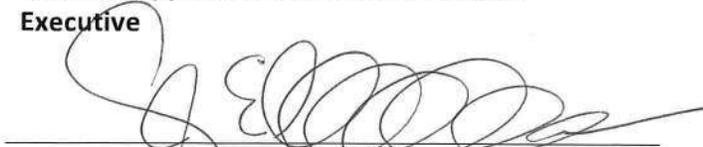
DTC is in compliance with all regulations and requirements as defined by the Final Rule adopted in July 2019 and the required 2022 updates per the Bi-Partisan Infrastructure requirements for the FTA Public Transit Agency Safety Plan. The following DTC signatures acknowledge the completion and the Safety and Security Committee's approval of this updated ASP, effective December 31, 2022.

  
\_\_\_\_\_  
**John T. Sisson, DTC Chief Executive Officer**

12/15/2022  
Date

  
\_\_\_\_\_  
**Michael Neal, DTC Deputy Chief Operating Officer, Support Services & Accountable Executive**

12/15/2022  
Date

  
\_\_\_\_\_  
**Sean Finerty, WSO-CSSD, DTC Chief Safety and Security Officer, ASP Preparer**

12-15-22  
Date

  
\_\_\_\_\_  
**Harold W. Myers, DTC Fixed Route Operations, Safety and Security Committee Chairperson**

15 DEC 22  
Date

\*Signatures of all Safety and Security Committee Members approval of the 2022 PTASP are included in the Appendix Section

### 3. SAFETY PERFORMANCE TARGETS

Developing safety performance targets are a means of assessing the safety performance and safety health of a transit agency. These targets are used to summarize the current position, and the direction and rate of progress towards a particular safety goal or objective. By comparing the values of each metric over time, the agency will know whether their performance has improved, deteriorated, or remained static.

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A safety performance target is the specification of an acceptable/desired level of a particular metric to be accomplished either by a definite future date or over a specified period of time. Safety performance targets should be measurable, acceptable to all stakeholders, and be consistent with those set by the FTA and DelDOT. For example, an acceptable format of an agency’s safety performance target could be to “reduce the rate of fatalities by 10% by the year end of 2020.”

Although safety performance targets represent an acceptable level of safety, their specification does not replace any legal, regulatory, or other established requirements, nor does it relieve the transit agency from its obligations to the passengers, employees and general public regarding safety.

The CEO and DTC Leadership Team have established the safety performance targets listed below. Safety risk control measures will be evaluated to assess their effectiveness in achieving the targets. Poor performance will be assessed to determine what additional measures are required to achieve the targets.



A safety or security event is an incident occurring on transit right-of-way infrastructure, at a transit revenue facility, at a transit maintenance facility, during a transit related maintenance activity or involving transit revenue vehicles that involves one or more of the following:

- A fatality confirmed within 30 days of the event
- An injury requiring immediate removal from the scene by ambulance for one or more person(s)
- Property damage equal to or exceeding \$25,000
- Collisions involving transit revenue vehicles that require towing away from the scene for a transit roadway vehicle or other non-transit roadway vehicles

Safety performance targets are applicable to all administrative, operation, maintenance and contractual related revenue and non-revenue related activities.

### 3.1. Fatalities – Maintain at 0%

Preventing the number of fatalities is a top priority for DTC. As an agency, DTC personnel must try to understand the factors involved in each fatality to prevent further occurrences. Measuring the number of fatalities over vehicle revenue miles, by mode, provides a fatality rate from which to assess future performance. The fixed route and paratransit total include the total number of fatalities that have occurred during the fiscal year. The rate for both fixed route and paratransit is 100,000 vehicle revenue miles.

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## 3.1.1. FIXED ROUTE

- a. Total – The total number of fatalities which have occurred during the fiscal year
- b. Rate per 100,000 vehicle revenue miles

## 3.1.2. PARATRANSIT

- a. Total – The total number of fatalities which have occurred during the fiscal year
- b. Rate per 100,000 vehicle revenue miles

## 3.2. Injuries – Reduce by 10%

Injuries occur much more frequently than fatalities and are due to a variety of reasons. Analyzing the factors that relate to injuries is a significant step in developing actions to prevent future injuries. Measuring the number of injuries, by mode, over vehicle revenue miles provides an injury rate from which to assess future performance.

### 3.2.1. FIXED ROUTE

- a. Total – The total number of injuries which have occurred during the fiscal year
- b. Rate per 100,000 vehicle revenue miles

### 3.2.2. PARATRANSIT

- a. Total – The total number of injuries which have occurred during the fiscal year
- b. Rate per 100,000 vehicle revenue miles

## 3.3. Safety Events – Reduce by 10%

Safety events (e.g., fires, collisions, wheelchair tips/flips, etc.) captures all reported safety events regardless of fault 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 damages 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.

### 3.3.1. FIXED ROUTE

- a. Total – The total number of safety events which have occurred during the fiscal year
- b. Rate per 100,000 vehicle revenue miles

### 3.3.2. PARATRANSIT

- a. Total – The total number of safety events which have occurred during the fiscal year.
- b. Rate per 100,000 vehicle revenue miles

### 3.4. System Reliability – Increase by 10%

System reliability expresses the relationship between safety and asset condition. The rate of vehicle failures in service, defined as the mean distance between major mechanical failures, is measured as revenue miles operated divided by the number of major mechanical failures. This is a measure of how well the DTC fleet of transit vehicles is maintained and operated.



A major mechanical failure, as defined by the FTA, is a failure of some mechanical element of the revenue vehicle NOT caused by a collision, natural disaster, or vandalism and prevents the vehicle from either completing or starting a scheduled revenue trip, **for 24 hours or more**, because the actual movement is either restricted, disabled, or due to safety concerns. Examples of major bus mechanical failures include the breakdown of the brakes, doors, engine cooling systems, steering systems, axles, suspension systems, wheelchair lifts, and HVAC systems.

#### 3.4.1. FIXED ROUTE

Vehicle revenue miles divided by the number of major mechanical failures

#### 3.4.2. PARATRANSIT

Vehicle revenue miles divided by the number of major mechanical failures

### 3.5. System Results

**Table 3-1** shows a compilation of DTC’s system results based on a three-year average for calendar years 2020, 2021 and 2022 for developing a system baseline for meeting safety performance targets.

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**Table 3-1: Three-Year Average System Results for DTC**

	<b>FIXED ROUTE</b>	<b>PARATRANSIT</b>
Vehicle Miles	<b>8,518,626</b>	<b>6,544,790</b>
<b>Fatalities</b>		
Total	<b>0</b>	<b>0</b>
Rate	$(0.0 \times 100,000 / 8,518,626) = 0.0$ fatalities per 100,000 vehicle revenue miles	$(0.0 \times 100,000 / 6,544,790) = 0.0$ fatalities per 100,000 vehicle revenue miles
<b>Injuries</b>		
Total	<b>59</b>	<b>16</b>
Rate	$(59 \times 100,000 / 8,518,626) = 0.69$ injuries per 100,000 vehicle revenue miles	$(16 \times 100,000 / 6,544,790) = 0.19$ injuries per 100,000 vehicle revenue miles
<b>Safety Events</b>		
Total	<b>26</b>	<b>9</b>
Rate	$(26 \times 100,000 / 8,518,626) = 0.31$ safety events per 100,000 vehicle revenue miles	$(9 \times 100,000 / 6,544,790) = 0.11$ safety events per 100,000 vehicle revenue miles
<b>System Reliability</b>		
Total MMFs	<b>1,742</b>	<b>221</b>
Rate	$(8,518,626 / 1,742) = 4,894$ MDBF	$(6,544,790 / 221) = 29,614$ MDBF

*MDBF: Mean Distance Between Major Mechanical Failures (in miles)*

### 3.6. Safety Performance Target Coordination

Following approval of the ASP, DTC’s Chief Safety and Security Officer will share the document with the DelDOT and the Wilmington Area Planning Council (WILMAPCO) the MPO for region. Accordingly, any revisions to future documents will be shared with the agencies above

**Table 3-2: Performance Targets Transmitted to State DOT and MPO**

<b>Action</b>	<b>Agency</b>	<b>Agency Contact</b>	<b>Date Transmitted</b>
<b>Targets Transmitted to State</b>	Delaware Department of Transportation	TRAMS	
<b>Targets Transmitted to Metropolitan Planning Organization</b>	<b>MPO Organization</b>	<b>MPO Contact</b>	
	Wilmington Area Planning Council (WILMAPCO)	Executive Director	
	Dover/Kent MPO	Executive Director	

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## 4. RISK REDUCTION PROGRAM

DTC's Risk Reduction Program is an approach that provides processes and procedures that can help direct and control its operations in a way that enhances safety to ensure a safe and secure transit environment for its customers and employees. Under a risk reduction program an agency identifies and analyzes hazards and develops strategies to mitigate, if not eliminate those risks. DTC's Safety Management System and Safety Risk Management Plan, Section 6.1 and Section 7 of this report outlines agencywide risk adverse strategies. This 2022 update includes two areas of heightened concern for enhancement of the risk reduction program: transit worker assaults and reduction of incidents due to vehicle visibility impairments. DTC's Safety and Security Committee has developed a series of approaches to address these concerns.

### 4.1. Transit Worker Assaults

The National Transit Database (NTD) defines an assault as "an unlawful attack by one person on another." DTC defines an assault as "an overt physical or verbal threat by a passenger that prevents or adversely affects the safety of the operator." Under Title 11 of the Delaware Criminal Code it is a 2<sup>nd</sup> Degree Class D Felony "If a person recklessly or intentionally causes physical injury to a law enforcement officer, volunteer firefighter, full-time firefighter, EMT, paramedic, fire police officer, Fire Marshall, correctional officer, sheriff, deputy sheriff, public transit operator, hospital security or constable, code enforcement officer who is acting in the lawful performance of duty. It is a 1<sup>st</sup> degree class B felony if a person causes serious physical injury, disfigurement or risk of death to a public transit operator.

There is consensus among those in the transit community that violence against public transit operators has increased, particularly with the complicated challenges of public transit operations during the COVID Pandemic. Bus operators have always been especially vulnerable to assaults since they interact with the public daily. To reduce, if not eliminate and to protect transit worker from assaults DTC's Safety and Security Committee has developed the following measures:

- Investigate the use of a protective barrier that will prevent the intrusion of the operator compartments from physical, verbal or fluid assaults on all revenue vehicles.
  - Barrier type should provide universal fit on all models of DTC's revenue vehicles.
  - Barrier type should be reviewed and accepted by DTC, administration, maintenance and operations personnel.
- Expand de-escalation training and include refresher training during regularly scheduled safety training and toolbox talks.
- Provide audio and printed materials on buses and at transit centers warning against operator assaults.
- Continued coordination with State, County and local police for response support.
- Encourage all bus operators to report assaults.

## 4.2. Reduction of Visibility Impairments

The nature of providing transit services requires the skillful driving of the bus operator to negotiate among the pedestrian and vehicular activities. A bus operator needs to be keenly aware of activities around the bus to avoid pedestrian and vehicular incidents. To ensure the operator has a clear view of the surroundings it is important that there are no visual impairments that could impact the bus operators view. The basic structural components of a bus can create blind spots that impedes the operators view particularly during turning movements. Some agencies have limited a particular turning movement due to this concern.

DTC has installed audible waring devices to detect pedestrian activity in proximity to the bus to prevent any pedestrian incidents. Technological advances have led to additional devices being placed within the operator compartment that create a visual impairment. The Safety and Security Committee has developed the following risk reduction steps for visual impairments.

- Ensure all operators have a clear field of vision from all sides of the bus at all times.
- Ensure location of devices such as Mobile Data Terminals (MTD), cameras, monitors, etc., do not impede field of vision from the seated position for all bus operators.
  - Devices should not block access to any dashboard controls or safety devices.
- Establish program with Operations and Maintenance to review location of new or existing devices.

## 5. PUBLIC HEALTH

### 5.1. Protections from Exposure to Infectious Diseases

During the COVID Pandemic public transit agencies were challenged with being able to provide a public service while ensuring the safety and health of all transit employees. As front-line workers transit employees interact daily with the public within a confined environment. DTC adapted to the changing regulatory guidance and disinfection procedures to protect employees while continuing public transit services to the community. Recognizing the reactive and adaptive response necessary during the pandemic DTC Safety and Security Committee understands the importance of a program framework for providing ongoing protections and proactive response during any future public health events.

- As a baseline, continue to follow the Center for Disease Control (CDC) guidelines for front line workers.
  - Follow any additional guidelines specific to public transit employees from USDOT, FTA, and/or DelDOT.
- Ensure bus and facility cleaning staff follow DTC specific cleaning procedures with OSHA approved hospital grade disinfectants.
  - Establish regular schedule for OSHA approved fogging of buses.

- Follow standard operating procedures for addressing any blood borne pathogens
  - OSHA Blood Borne Pathogen Regulations 29 CFR 1910.1030.
- Ensure hand sanitizer dispensers are regularly checked and available for use by all employees.
- Ensure protective masks are available for employee use.

## 6. SAFETY MANAGEMENT POLICY

### 6.1. Safety Management Systems (SMS) Policy Statement

**Delaware Transit Corporation (DTC), the operator of DART First State fixed route and paratransit transit services,** has developed its Safety Management Policy to reflect the changes required by the FTA and the requirements of the PTASP's Final Rule. The ASP requires certain operators of public transportation systems that receive federal funds to develop safety plans that include the processes and procedures necessary for implementing a Safety DART Stat: DTC Operating Statistics Database Safety Management System. Among other requirements, the rule calls on agencies to report their Safety Management Policy and processes for safety risk management, safety assurance, and safety promotion.

#### **Background and History:**

*Safety Management System (SMS)* is 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. SMS is about applying resources to risk and is based on ensuring that a transit agency has the organizational infrastructure to support decision-making at all levels regarding the assignment of resources. Some key parts of SMS include:

- Defined roles and responsibilities;
- Strong executive safety leadership;
- Formal safety accountabilities and communication;
- Effective policies and procedures; and
- Active employee involvement.

The management of safety is one of DTC's core business functions.

The DTC is committed to developing, implementing, maintaining, and constantly improving processes to ensure that all our transit service delivery activities take place under a balanced allocation of organizational resources, aimed at achieving the highest level of safety performance and meeting established standards. All levels of management and all employees, including contractors, are accountable for the delivery of this utmost level of safety performance, starting with the Executives, Managers, Supervisors, employees, and contractors.

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As part of its commitment to safety, DTC will:

- **Support** the management of safety with appropriate resources, which will result in an organizational culture that fosters safe practices, encourages effective employee safety reporting and communication, and actively manages safety with the same attention as those applied to the other management systems of the organization;
- **Integrate** the management of safety as a prime responsibility of all managers and employees (including contractors);
- **Clearly define** for all staff, managers, employees and contractors alike, their accountabilities and responsibilities for the delivery of the organization's safety performance and the performance of our safety management system;
- **Establish and identify** a Chief Safety and Security Officer and define the roles and responsibilities;
- **Establish and identify** a SMS Implementation Team made up of key staff members to ensure SMS principles are being addressed;
- **Establish and operate** hazard identification and analysis and safety risk evaluation activities, including an employee safety reporting program as a fundamental source for safety concerns and hazard identification, in order to eliminate or mitigate the safety risks of the consequences of hazards resulting from our operations or activities to a point which is consistent with our acceptable level of safety performance;
- **Ensure** that no retaliatory action is taken against any employee who discloses a safety concern through the employee safety reporting program;
- **Comply** with, and whenever possible, exceed legislative and regulatory requirements and standards;
- **Ensure** that sufficient skilled and trained staff are available to implement safety management processes;
- **Establish** program to **protect** DTC bus operators from assaults.
- **Ensure** there are no visibility impairments that would impact the safe operation of a revenue vehicle.
- **Establish** public health safety program to **protect** DTC staff from infectious diseases.
- **Ensure** that all staff are provided with adequate and appropriate safety-related information and training, are competent in safety management matters, and are allocated only tasks commensurate with their skills;

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- **Establish and measure** safety performance against realistic and data-driven safety performance indicators and safety performance targets;
- **Continually improve** safety performance through management processes that ensure that appropriate safety management action is taken and is effective; and,
- **Ensure** externally supplied systems and services to support operations are provided to meet internal safety performance standards, regulatory requirements and industry best practices.

### SAFETY CULTURE

DTC believes safety promotion is critical to the success of SMS by ensuring that the entire organization fully understands and trusts the SMS policies, procedures, and structure. It involves establishing a culture that recognizes safety as a core value, training employees in safety principles, and allowing open communications of safety issues.

Positive safety culture must be generated from the top-down. The actions, attitudes, and decisions at the policy-making level must demonstrate a genuine commitment to safety. Safety must be recognized as the responsibility of each employee with the ultimate responsibility for safety resting with the CEO and DTC. Employees must trust that they will have management support for decisions made in the interest of safety while recognizing that intentional breaches of safety will not be tolerated.

### SAFETY REPORTING

DTC is committed to the safest transit operating standards possible. To achieve this, it is imperative that DTC have uninhibited reporting of all incidents and occurrences which may compromise the safe conduct of our operations. To this end, every employee and contract service provider is responsible for the communication of any information that may affect the integrity of transit safety. Such communication must be completely free of any form of reprisal.

#### 6.2. Safety Goals and Objectives

The following safety goals and objectives form the basis for specific elements of the DTC's Safety Program.

##### 6.2.1. SAFETY GOALS

- Develop and maintain safe industrial work habits.
- Maintain all vehicles in good working condition.
- Foster a general safety awareness among all employees.
- Establish program accountability through systematic and objective reporting, investigation, and corrective actions.
- Establish an accident and injury free work environment.

## 6.2.2. SAFETY OBJECTIVES

Provide the safest possible work environment for all employees and personnel on DTC property.

- Reduce or eliminate equipment factors or failures as a contributor to vehicle accidents or personal injury.
- Conduct regular inspections of shop and office areas, noting major housekeeping or work habit deficiencies.
- Monitor equipment, tools, office machinery, and ancillary safety devices (fire extinguishers, eyewashes, smoke detectors, welding helmets, respirators, etc.) to ensure that they are in good working condition.
- Adhere to Occupational Safety and Health Administration (OSHA) General Industry Safety and Health Standards (29 CFR 1910) and any subsequent revisions or updates that may be provided.
- Periodically evaluate and update the safety plan, goals, objectives, and procedures.

Ensure that all vehicles and equipment are maintained in a manner to provide for their safest possible operation.

- Monitor preventive maintenance program to include a review of inspections and follow-up work orders.
- Monitor and enforce pre-trip vehicle inspection procedures.
- Monitor ancillary safety equipment (fire extinguishers, reflecting triangles, and two-way radios) on all vehicles.
- Monitor operator-reported, safety-related equipment malfunctions and corrective actions by Maintenance sections in each District.
- Ensure operators of revenue vehicles are fully knowledgeable of all safety devices installed on the vehicles.
- Provide permanent, clear, and concise safety instructions on how to operate all major maintenance equipment at all workstations.
- Post appropriate safety and warning notices in all industrial, administrative and operational areas.

Establish a proactive awareness of potentially dangerous or hazardous situations.

- Implement actions and procedures to safeguard persons and property.
- Display and maintain current (and seasonal) safety messages in appropriate administrative and industrial areas.
- Identify dangerous or potentially hazardous conditions, operations, or practices.

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- Encourage and recognize employee suggestions for improving safety procedures and work habits.
- Conduct weekly “Toolbox Talks” to review and promote safety
- Administer Safety Award programs to recognize employees.
- Conduct semi-annual review of the Safety Program and amend as necessary through a pre-determined formal procedure.
- Establish appropriate procedures to eliminate hazards and minimize risk.

Identify factors that could result in and/or contribute to accidents and injuries. Establish proactive programs to reduce or eliminate factors that contribute to accidents and injuries.

- Prohibit use of any cellular telephone and/or related accessory while operating a revenue or non-revenue vehicle.
- Implement appropriate training programs for all new hires and current employees designated for re-training.
- Actively seek out and participate in industry sponsored workshops, seminars, etc.
- Develop and institute Safety orientation and Training Programs for all employees.
- Develop and distribute safety educational and publicity material.
- Establish processes for employees to identify and report safety concerns.

Protect personnel and property by eliminating or reducing potentially dangerous or hazardous actions and situations.

- Reduce employee injury rate.
- Reduce passenger injury rate.
- Reduce the number of all incidents.
- All employees who operate revenue and non-revenue vehicles will be required to successfully complete the appropriate DTC Driver Training course(s).
- Conduct annual refresher training for 100% of operators of DTC revenue and non-revenue vehicles.
- Conduct Driver Improvement Program for 100% of operators of DTC revenue and non-revenue vehicles identified as needing improvement in specific areas.
- Identify and correct or eliminate stops or routings with records of excessive accidents or high accident potential.

### 6.3. System Description

The history of multi-modal public transport in Delaware dates to the late 1800s when the Wilmington City Railroad Company operated horse-drawn trolleys in the City of Wilmington. The Delaware Coach Company operated trackless trolleys from 1938 until 1958 when the trolleys were replaced by buses operating until the late 1960's. Other privately-owned services operated in different areas of the State

In 1971, DelDOT became the governing agency of Delaware Administration for Regional Transit (DART), providing service in the greater Wilmington region. In 1990 additional public transit services began operating in Dover as Central Delaware Transit (CDT) and in the resort area as Delaware Resort Transit (DRT) under the former Delaware Transit Authority. Paratransit services were provided under the Delaware Administration for Specialized Transportation (DAST). Finally, in 1994, DTC was formed to operate and manage DART,



CDT, DRT, DAST as well as the Delaware Railroad Administration (DRA) and the Commuter Services Administration all as one under the operating name of "DART First State" providing statewide public transit services.

DTC's mission is "to design and provide the highest quality public transportation services that satisfy the needs of the customer and community." DTC aspires to be a premier transportation organization with accessible facilities and interconnected services incorporating state-of-the-art technologies. A well-trained workforce, clear communication, and beneficial working partnerships enable DTC to meet customer needs in an affordable, safe, and efficient manner.

With an annual systemwide ridership of over 9.6 million trips, DTC operates statewide fixed route and paratransit bus services including seasonal resort service, with over 60 bus routes and 561 buses at the time this ASP was prepared. Service operates seven days a week with a number of varying service spans and headways.

DTC is continually motivated to provide a public transit system that offers reliable, safe, accessible, and convenient service through safe vehicles and facilities, with an ongoing commitment to preserving and continual improvement in the quality and quantity of transit service.

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## 6.4. Definitions

**Accident** – An event that involves any of the following: a loss of life; a report of a serious injury; a collision of public transportation vehicles; or an evacuation for life safety reasons.

**Accident Review Committee (ARC)** – The ARC is an effective management tool to minimize injuries and protect property. The ARC is to systematically identify the root cause or causes of an employee injury, vehicle collision, equipment damage, or any other qualifying event, and to recommend the appropriate corrective actions.

**Accountable Executive** – A single, identifiable person who has ultimate responsibility for carrying out the ASP 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 ASP, 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 and who meets all requirements in §673.5 and §673.23(d)(1) .

**Assaults** – DTC defines an assault as “an overt physical or verbal threat by a passenger that prevents or adversely affects the safety of the operator.” Under Title 11 of the Delaware Criminal Code it is a 2<sup>nd</sup> Degree Class D Felony “If a person recklessly or intentionally causes physical injury to a law enforcement officer, volunteer firefighter, full-time firefighter, EMT, paramedic, fire police officer, Fire Marshall, correctional officer, sheriff, deputy sheriff, public transit operator, hospital security or constable, code enforcement officer who is acting in the lawful performance of duty. It is a 1<sup>st</sup> degree class B felony if a person causes serious physical injury, disfigurement or risk of death to a public transit operator.

**Chief Safety and Security Officer** – An adequately trained individual who has responsibility for safety and security and reports directly to a transit agency's CEO, general manager, president, or equivalent officer. A Chief Safety and Security Officer may not serve in other operational or maintenance capacities, unless the Chief Safety and Security Officer is employed by a transit agency that is a small public transportation provider, or a public transportation provider that does not operate a rail fixed guideway public transportation system.

**Equivalent Authority** – An entity such as DelDOT 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** – Any Accident, Incident, or Occurrence on the transit right-of-way or infrastructure; at a transit revenue facility; at a transit maintenance facility; during a transit-related maintenance activity; or involving a transit revenue vehicle that results in one or more of the following conditions:

- A fatality confirmed within 30 days of the event
- An injury to one or more persons requiring immediate medical attention away from the scene
- Property damage equal to or exceeding \$25,000
- Collisions involving transit revenue vehicles that require a tow away from the scene for a transit roadway vehicle or other non-transit roadway vehicle.

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**Fatality** – A death or suicide confirmed within 30 days of a reported incident. Does not include deaths in or on transit property that are the result of an illness or other natural causes.

**FTA** – The Federal Transit Administration, an operating administration within the United States Department of Transportation.

**Hazard** – 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 public transportation system; or damage to the environment.

**Hazard identification** – Hazards identified through a systematic analysis process that includes system hardware and software, system interfaces (including human interfaces), and the intended use or application of the operational environment.

**Incident** – 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 transit agency.

**Injury** – Any damage or harm to persons as a result of an event that requires immediate medical attention away from the scene.

**Investigation** – 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** – The plan to improve the safety of all public transportation systems that receive Federal financial assistance under 49 U.S.C. Chapter 53.

**Occurrence** – An event without any personal injury in which any damage to facilities, equipment, rolling stock, or infrastructure does not disrupt the operations of a transit agency.

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

**Performance measure** – A quantifiable indicator of performance or condition that is used to establish targets and to assess progress toward meeting the established targets.

**Performance target** – A quantifiable level of performance or condition, expressed as a value for the measure to be achieved within a time period required by the FTA.

**Public Transportation Agency Safety Plan** – The documented comprehensive agency safety plan for a transit agency that is required by 49 U.S.C. 5329 and 49 CFR part 673.

**Public Health Emergency** – An event impacting the provision of public transit services while ensuring provisions are in place for protecting staff from infectious diseases.

**Risk** – The composite of predicted severity and likelihood of the potential effect of a hazard.

**Risk Mitigation** – A method or methods to eliminate or reduce the effects of hazards.

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**Safety Assurance** – The 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 Management Policy** – A transit agency's documented commitment to safety, which defines the transit agency's safety objectives and the accountabilities and responsibilities of its employees regarding safety.

**Safety Management System (SMS)** – 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.

**SMS Executive** – The Chief Safety Officer or an equivalent.

**Safety Performance Target** – A Performance Target related to safety management activities. (See Performance Target, above.)

**Safety Promotion** – 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** – 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** – A process within a transit agency's ASP for identifying hazards and analyzing, assessing, and mitigating safety risk.

**Safety and Security Committee** – Represents an equal balance of DTC's frontline and management representatives with the responsibility of identifying potential safety deficiencies, risk-based mitigation strategies for purposes of continued safety improvement and commitment. The committee is ultimately responsible for the approval of this safety plan and any future updates.

**Serious Injury** – Any injury which: (1) Requires hospitalization for more than 48 hours, commencing within 7 days from the date of the injury; (2) Results in a fracture of any bone (except simple fractures of fingers, toes, or noses); (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.

**State of Good Repair** – The condition in which a capital asset can operate at a full level of performance.

**Transit agency** – An operator of a public transportation system.

**Transit Asset Management Plan** – 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.

**Visibility Impairment** – an object, device or structure that impedes the view of safe of operation of a revenue vehicle

## 6.5. Confidential Employee Reporting Program

DTC's Confidential Employee Reporting Program is a proactive and systematic approach to managing safety which provides an avenue for the communication of safety concerns without the fear of retaliation. DTC employees are the key resource to the success of our SMS. All DTC employees are encouraged to report any accidents, incidents, hazardous conditions or behaviors as soon as possible. DTC employees can enhance the workplace by utilizing the Confidential Employee Reporting Program to share important safety information.

## 6.6. Organizational Accountabilities and Safety Responsibilities

### 6.6.1. CHIEF EXECUTIVE OFFICER

The CEO is ultimately responsible for ensuring DTC's commitment to safety. This responsibility includes, but is not limited to:

- Promulgating the safety policy for DTC;
- Signing this ASP and when required presents the document to the Delaware Department of Transportation for their concurrence;
- Delegating to the Chief Safety and Security Officer the responsibility and authority for implementation of the DTC ASP;
- Incorporating safety awareness into all management decision-making activities;
- Recommending and approving the financial resources needed to ensure the safety of the DTC customers;
- Maintaining within DTC an awareness of the need for safety of DTC customers, employees, and the members of the public;
- Continuously reviewing, monitoring, and addressing safety issues; and
- Funding training and education for DTC employees are needed to ensure the safety of our customers and employees.
- Accepts safety risks associated with hazards and takes action to mitigate those hazards both known and unforeseen.

### 6.6.2. ACCOUNTABLE EXECUTIVE

The Accountable Executive at DTC is the Deputy Chief Operating Officer, Support Services with the ultimate authority and responsibility for executing DTC's ASP and TAM Plans. This responsibility includes, but is not limited to:

- Ensures staffing and capital asset resources are available for the implementation and monitoring of DTC's SMS, ASP and TAM Plans.
- Monitors status of adhering to performance objectives and actions needed if objectives are not met.
- Designates DTC's Chief Safety and Security Officer to have direct communication with CEO, but understands the Accountable Executive assumes ultimate responsibility for ASP.
- Ensures DTC's ASP, SMS and TAM are effectively implemented throughout the system

### 6.6.3. SAFETY & SECURITY

The Chief Safety and Security Officer for DTC reports to the Chief Financial Officer (**Figure 4-1**) and manages the Safety and Security Office of six (6) people, including the Assistant Safety and Security Manager, as shown on the organizational chart in **Figure 4-2**. The Chief Safety and Security Officer acts at the discretion of the CEO and is the primary point of contact with state and federal safety regulatory agencies. This responsibility includes, but is not limited to:

- Designated by Accountable Executive to
- Conducting monthly inspections of work areas, housekeeping, work habits or building maintenance, and noting discrepancies which may constitute a safety hazard;
- Conducting accident investigations;
- Identifying Safety Training requirements and conducting or participating in on-going safety training programs in a timely manner;
- Ensuring correction of safety hazards is accomplished;
- Ensuring that transit route plans contain proper turning ratio, sufficient distances for departing and entering traffic, and appropriate lengths for bus stops based on speed of traffic, volume of buses, and quantity of passengers;
- Coordinating placement of bus stops with DTC Development, Facilities and Operations to ensure safe pedestrian access to and from bus stops, and to minimize conflict with traffic flow;
- Making recommendations to the Planning and Facilities sections of DTC for revisions that will improve safety of bus movements and pedestrian access to and from bus stops;
- To the greatest extent possible, ensuring that the design construction of our bus stops is compliant with current Architectural and Transportation Barriers Control Commission Regulations;
- Identifying hazardous or potentially hazardous service locations and recommending corrective actions;

- Coordinating with the police and other emergency response organizations to represent the interest of DTC in injury or property loss situations;
- Communicating emergency situations to DTC's Marketing Section and monitoring/coordinating response actions as required;
- Coordinating the requirements of the Americans with Disabilities Act (ADA); and
- Coordinate placement of bus stops with DTC Safety and Security Office, Facilities Section and Operations Department to ensure safe pedestrian access to and from bus stops and to minimize conflict with traffic flow.

### 6.6.4. OPERATIONS & MAINTENANCE

The Operations Division includes Bus Transportation and Bus Support Services up to and including the Chief Operating Officer. Because maintenance plays such a critical role ensuring that each bus is roadworthy and, more specifically, that the critical safety equipment on each bus is in good working condition during revenue service; the safety responsibilities include:

- Investigating accidents and collecting data to assist with identifying causes and eliminate hazards;
- Ensuring that employees have the training and equipment to perform their jobs safely;
- Enforcing safety rules;
- Conducting monthly safety meetings and disseminating safety materials and information to employees;
- Issuing personal protective equipment (PPE) and ensuring its proper fit and use;
- Training personnel in safe operations of the bus and safe standard operating procedures, and ensuring that operating staff attend required OSHA training;
- Ensuring that quality control is reflected in all equipment maintenance activities;
- Participating in emergency preparedness exercises;
- Working with the Chief Safety and Security Officer and establishing safety goals and objectives for the department;
- Correcting unsafe conditions and practices;
- Involving safety in design and construction of new buses, facilities, bus stops and equipment;
- Establishing an Emergency Operations Plan for unplanned events such as weather or pandemics
- Maintaining current operating rules and procedures and disseminating these to employees, as appropriate;

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- Incorporating bus operator safety considerations in the development of new bus specifications and bus schedules;
- Establishing and maintaining a configuration management process; and
- Investigating incidents and accidents and preparing and forwarding a report to the Safety Department.

### 6.6.5. FINANCE

The Chief Financial Officer reports to the CEO of DTC. Safety responsibilities include identifying and managing the fiscal resources necessary to support DTC in the accomplishment of its safety goals and objectives, as well as other tasks directed by the CEO. The Chief Financial Officer is also responsible managing Safety and Security and Risk Management departments.

### 6.6.6. HUMAN RESOURCES

The Chief Human Resources Officer reports to the CEO of DTC. Safety responsibilities include, but are not limited to:

- Administering the Drug and Alcohol Program;
- Administering pre-employment and fit-for-duty physicals and the Medical Monitoring Program;
- Recruiting and selecting employees who will have safe attitudes and the ability to perform their duties safely;
- Planning and administering New Employee Orientation; and
- Training new and current bus operators in safe bus operations.
- Partnering with Safety and Security to establish a driver training program for all DTC employees and its contractors

Figure 6-1: Delaware Transit Corporation Organizational Chart

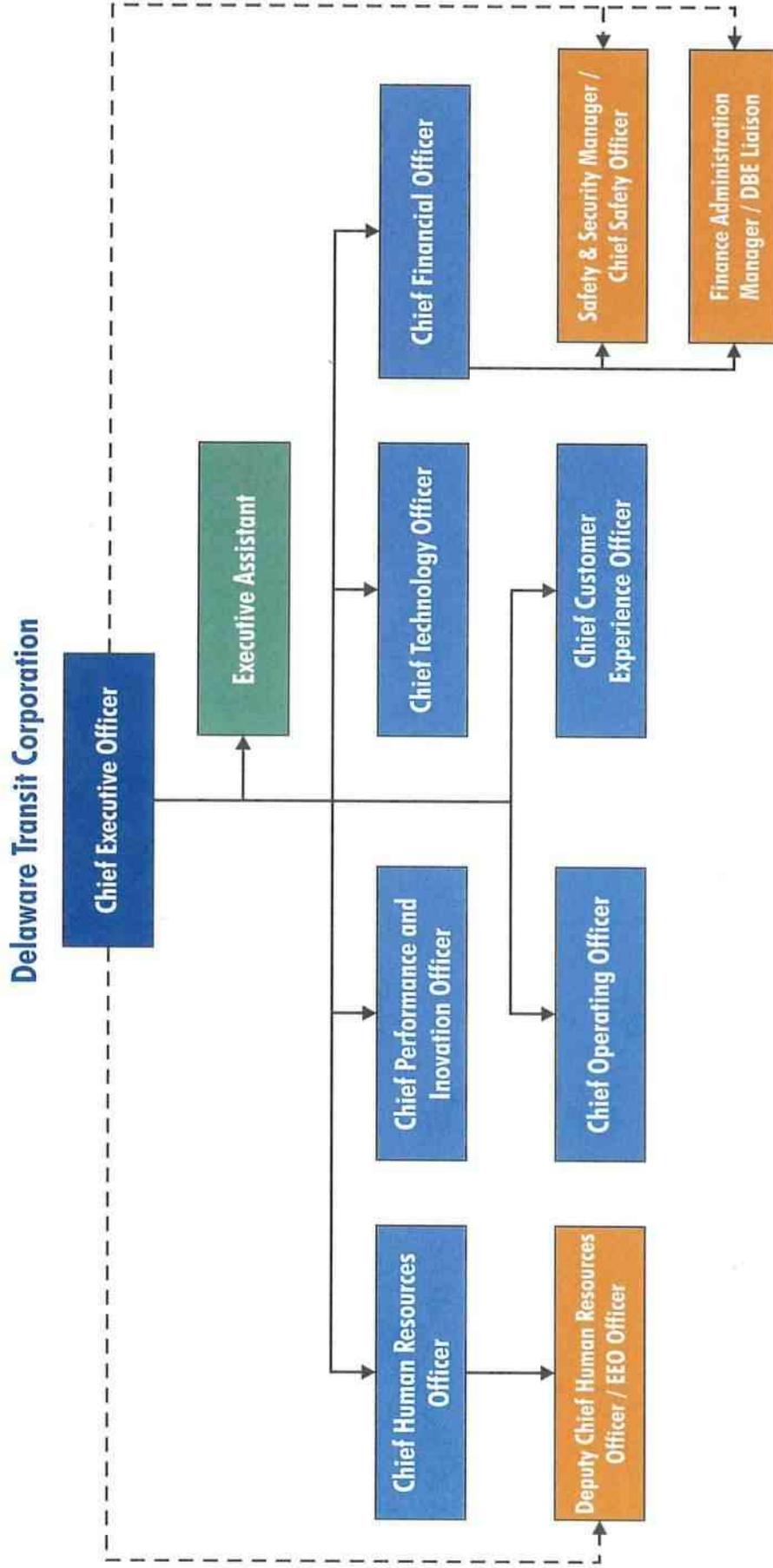
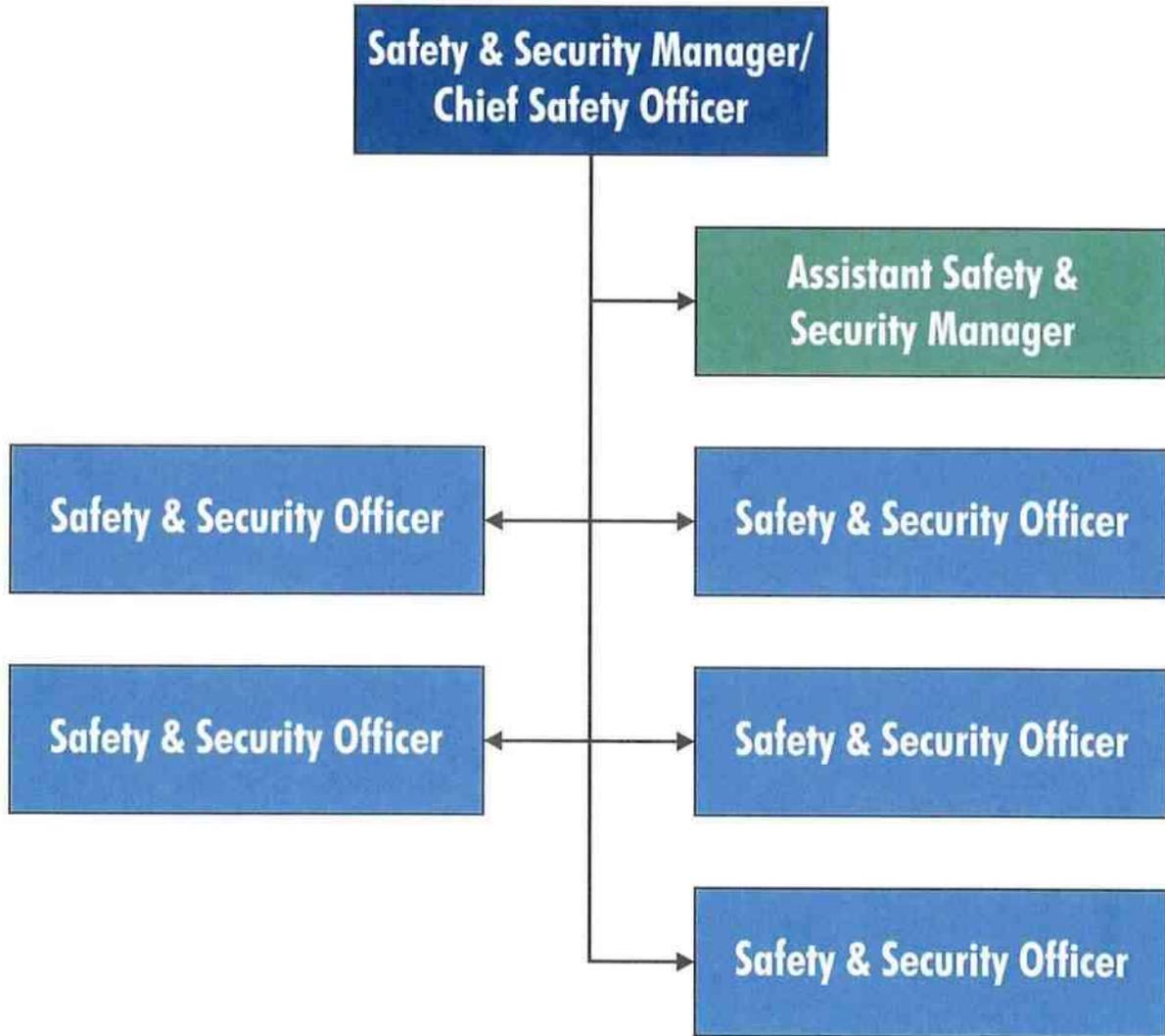


Figure 6-2: Safety and Security Organizational Chart  
**Finance – Safety and Security**



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### 6.6.7. CUSTOMER EXPERIENCE

The Chief Customer Experience Officer reports to the CEO of DTC. Safety responsibilities include ensuring that all safety and security hazards reported by DTC customers and the general public are submitted to the Safety and Security Office for investigation and mitigation, as well as other tasks directed by the CEO.

### 6.6.8. RISK MANAGEMENT

The Risk Manager reports to the Chief Finance Officer. Safety responsibilities include ensuring the preservation of all human and physical assets of DTC for successful and safe continuation of its operations. To ensure minimal risk and loss the department is responsible for developing risk management policies, procedures and implementation plans.

### 6.6.9. PERFORMANCE & INNOVATION MANAGEMENT

With the assistance of Chief Performance Officer and the Chief Human Resources Officer, the Safety and Security Office will establish:

- A performance management system with clear performance expectations through which employees can easily understand what is expected of their jobs. This will allow management to reinforce employee accountability to meet their goals and evaluate their performance.
- Lead the efforts to innovate and develop new transportation alternatives which includes, but is not limited to, Mobility as a Service, Mobility on Demand, Connective and Autonomous Vehicles, and Mileage Based User Fees. Safety responsibilities include developing/using emerging and innovative technologies to expand quality, promote safety and enhance the customer's transit experience.

### 6.6.10. TRANSIT TECHNOLOGIES & SUPPORT SERVICES

This department provides design and engineering oversight of all new systems. Safety responsibilities include, but are not limited to:

- Involving the Safety and Security Office and Operations in design and engineering of new systems; and
- Establishing and maintaining a configuration management process via a Configuration and Change Control Management Plan that incorporates system safety items.

### 6.6.11. CIVIL RIGHTS

The Director of Civil Rights, Equal Employment Opportunity Officer and Disadvantaged Business Enterprise Liaison Officer reports to the CEO of DTC. Safety responsibilities include furthering the safety goals and objectives of the DTC through regulatory safety compliance and the interpretation of all federal and state safety laws and regulations.

### 6.7. Designation of the Chief Safety and Security Officer

The Chief Executive Officer has designated the Chief Safety and Security Officer as the individual responsible for the development and implementation of the ASP. The Chief Safety and Security Officer acts at the discretion of the CEO and has the authority and responsibility for the day-to-day implementation and operation of the agency's SMS. The Chief Safety and Security Officer is also the primary point of contact with state and federal safety regulatory agencies.

### 6.8. Document Control & Revision Procedures

This section establishes the frequency and method for periodic review of the ASP and describes the process by which updates, corrections, and modifications to the ASP are implemented. The Safety and Security Office will coordinate the review and revision process of the ASP for DTC. The ASP will be reviewed and updated, as appropriate, to reflect changes in the bus system, equipment, facilities, or organization. DTC's Safety and Security Committee will evaluate proposed changes and, if warranted, submit proposed changes to the Chief Safety and Security Officer. No proposed changes to the ASP will be made unless approved by the Safety and Security Committee. The Chief Safety and Security Officer ensures that the review and revision process is conducted annually. Also, the Chief Safety and Security Officer may implement modifications to the ASP on an ongoing basis. For urgent safety issues, the Chief Safety and Security Officer may immediately implement modifications to the ASP to maximize the level of safety in the system and develop appropriate procedures to carry out the modifications. The Chief Safety and Security Officer will notify the Safety and Security Committee of any modifications due to urgent safety issues.

## 7. SAFETY RISK MANAGEMENT

Hazard management is the formal process to identify, assess, and mitigate hazards associated with the design, construction, testing, startup and operation of DTC to ensure the safety of the passengers, employees, and general public. Existing mitigations are taken into account when performing a safety risk assessment. All identified hazards are categorized by severity and probability (likelihood) of occurrence, assessed for potential impact and mitigated by design, policies/procedures, warning devices, or other methods until these hazards fall within the prescribed level of acceptable risk to the DTC.

### 7.1. Safety Hazard Identification

DTC defines a hazard as any real or potential condition or set of conditions, internal or external to the system or system operations, which when activated, can cause injury, illness, death, damage to or loss of facilities, equipment, rolling stock, infrastructure, or damage to the environment. DTC is responsible for ensuring that all its divisions, personnel, and contractors use acceptable hazard identification, assessment, and mitigation processes.

The hazard identification process applies to all operations and services of the DTC, with special emphasis placed on the initial stages of the design process for new equipment and new start projects. The hazard

identification process is also applied before implementing modifications of existing facilities, systems or rolling stock.

## 7.1.1. METHODS OF HAZARD IDENTIFICATION

Many methods can be used to identify hazards. These methods include, but are not limited to:

- Conducting system inspections, audits, and regulatory inspections;
- Evaluating reported hazards received from employees, passengers, customers, and contractors;
- Reviewing incidents and system failure reports and conducting in-depth investigations to identify causes; and
- Conducting inductive and deductive hazard identification.

While identifying every hazard within a system is virtually impossible, the implementation of one or all these methods can greatly increase DTC's ability to identify and thereby eliminate or control hazards to acceptable levels of risk. DTC has established a formal process for identifying the likelihood and severity of the consequences of a hazard and will use any or all of the identification techniques when they are most applicable.

During day-to-day operations, it is the responsibility of all DTC personnel and departments, as well as all contractor personnel, to identify and report the severity and consequences of a hazard or potential hazards they encounter while performing the duties of their jobs while on DTC property or while operating DTC equipment. It is the responsibility of personnel and departments to secure the hazard area until it can be properly controlled or eliminated. Identified hazards shall be reported immediately to the DTC Office of Safety and Security.

Hazards may either be reported to the DTC safety committees or through the Employee Safety Hazard Hotline at 302-576-6246. Employees using this system will receive instructions via voice message on how to report their concerns. Employees can also report hazards via email. The email address of the Employee Safety Hazard reporting portal is: [DelDOT DTC Safety Security Hotline@delaware.gov](mailto:DelDOT_DTC_Safety_Security_Hotline@delaware.gov) or employees can simply enter "Safety" in the Global State email directory.

It should be noted that it is the responsibility of the employee and his/her direct supervisor to formally document the consequence or severity of a hazard or safety concern. All reports are investigated, and hazards and deficiencies are mitigated according to the guidelines provided in this section.

### a. Inductive Hazard Identification and Analysis

A more extensive method of hazard identification is the inductive hazard identification process, which consists of an analysis of system components to identify their respective failure modes and the effects they have on the total system. This process assumes the failure of single elements or events and, through analysis, determines the potential consequential effects on the system or subsystem. Methods of inductive hazard identification and analysis are as follows:

i. *Preliminary Hazard Analysis (PHA)*

PHAs are typically the initial hazard analysis technique used during the system or subsystem design phase. A PHA is used to identify safety critical areas within the system, identify and roughly evaluate hazards, and begin to consider safety design criteria. The PHA establishes the basis for the safety criteria in design, equipment, and performance specifications and can also be used in the subsequent Subsystem Hazard Analysis.

ii. *Subsystem Hazard Analysis (SHA)*

SHA is an expansion of the PHA, identifying design hazards in components and subsystems of a major system. SHA determines the functional relationships between the components and equipment based solely on safety considerations. SHA also identifies all components and equipment in which a functional failure could result in a hazardous condition or accidental loss.

iii. *Detailed System Hazard Analysis (DSHA)*

DSHA is generally a combination of two or more inductive analyses. DSHA is used to display the logical or sequential analytic techniques for identifying and correcting hazards from early in the design phase through the integrated equipment or pre-revenue testing phase.

iv. *Operating Hazard Analysis (OHA)*

OHA is performed to determine all applicable operational safety requirements for personnel, procedures, and equipment throughout all phases of the system life cycle. Engineering data, procedures, and instructions developed from other safety analyses, including the engineering design and initial test programs, are all used to support this analysis. OHA is used most frequently for investigations of catastrophic and critical accidents that result from human error rather than equipment failure. It involves four major determinations including the cause, effect, risk assessment, and control. This analysis utilizes past history and data from other transit properties to define the cause and effect.

**b. Deductive Hazard Identification and Analysis**

The deductive hazard identification process involves defining an undesired effect (i.e., collision, fire, derailment, etc.) and then deducing the possible conditions or system component faults (or combinations of) that are necessary to cause the undesired effect. Fault Tree Analysis is an example of the deductive hazard identification and analysis process. It is used principally for identifying sequential and concurrent states and events, which are casually or conditionally required to support and generate a specific effect. These effects are structured so that they lead to a specific outcome(s). Fault Tree Analysis is more rigorous than inductive methods in terms of the amount of data required and the complexity of causes, conditions, and effects. Fault Tree Analysis permits analysis of all environments, faults, occurrences, and their combinations that could cause and/or contribute to the occurrence of a defined undesired event.

Historical transit incident experience is often a reliable source of information to aid both the inductive and deductive processes. It is also important to note that regardless of how a department becomes aware of a hazard, it is responsible for documenting the hazard and monitoring the progress of the hazard resolution until it is eliminated or controlled.

## 7.2. Safety Risk Assessment

Risk is a subjective evaluation of the relative failure potential of a system or component and can be defined as the possibility of incurring a physical or personal loss or injury. Once hazards have been identified, they must be evaluated to determine the level of risk or associated impact they may have on the system. Generally, the greater the probability of a hazard to cause injury or loss, the greater the risk, and subsequently, the greater the need to mitigate the hazard. The severity of the consequences the hazard may present must also be taken into consideration when evaluating the level of risk associated with the hazard. Like probability, as the severity of the hazard consequences increases, so will the level of risk, and therefore, so will the need to mitigate the hazard.



DTC has adopted a system to assess levels of risk and to determine what action(s) must be taken to assess, correct, and document hazards and their associated risks. This risk assessment system is based on MIL-STD-882 which is a qualitative calculation based largely on subjective judgments used to determine the risk associated with each hazard and thus the urgency for implementing corrective measures to eliminate or reduce risk to a level of acceptability. The risk assessment system meets FTA guidelines and has been incorporated into formal system safety analysis. This enables DTC decision-makers to understand the amount of risk involved in accepting a hazard in relation to the cost (schedule, dollars, operations, etc.) to reduce the hazard to an acceptable level.

Risk assessment has two steps: evaluating hazard severity (categorizing the hazard) and evaluating hazard probability. The factors considered in this analysis include, but may not be limited to, system safety, impact to project schedule, and the impact on the public's perception of safety on the system in the community.

### 7.2.1. HAZARD SEVERITY

Hazard severity is a subjective determination of the worst case that could be anticipated to result from human error, design inadequacies, component failure, or malfunction. Each level of severity is attributed both physical description (i.e., fatality, injury, property damage, etc.) and monetary value. The levels of severity are as follows:

**a. Category 1, Catastrophic**

Could result in one or more of the following: multiple deaths, permanent total disability, irreversible significant environmental impact, or monetary loss equal to or exceeding \$10 million.

**b. Category 2, Critical**

Could result in one or more of the following: death, permanent partial disability, injuries, or occupational illnesses that may result in the hospitalization of at least three personnel; reversible significant environmental impact; or a monetary loss exceeding \$1,000,000 but less than \$10 million.

**c. Category 3, Marginal**

Could result in one or more of the following: injury or occupational illness resulting in one or more lost workday(s), reversible moderate environmental impact, or a monetary loss equal to or exceeding \$100,000 but less than \$1,000,000.

**d. Category 4, Negligible**

Could result in one or more of the following: injury or occupational illness not resulting in a lost workday, minimal environmental impact, or a monetary loss less than \$100,000.

## 7.2.2. HAZARD PROBABILITY (LIKELIHOOD)

A hazard probability or likelihood may be derived from the analysis of the transit system's operating experience, evaluation of the transit agency's safety data, or from historical safety data from other transit systems. The probability levels are defined as follows:

**a. A = Frequent**

Likely to occur often in the life of an item. Continuously experienced. Potential consequence may be experienced more than once in 500 operating hours.

**b. B = Probable**

Will occur several times in the life of an item. Will occur frequently. Potential consequence may be experienced once between 500 and 6,000 operating hours.

**c. C = Occasional**

Likely to occur sometime in the life of an item. Will occur several times. Potential consequence may be experienced once between 6,000 and 60,000 operating hours.

**d. D = Remote**

Unlikely, but possible to occur in the life of an item. Unlikely but can be reasonably expected to occur. Potential consequence may be experienced once between 60,000 and 180,000 operating hours.

**e. E = Improbable**

So unlikely, it can be assumed occurrences may not be experienced in the life of an item. Unlikely to occur, but possible.

A hazard holds the potential that, when initiated, may result in a consequence that could cause harm or damage. The identified threat may be minor or catastrophic, depending on the nature of the hazard.

For example, ice on the road during winter is a hazard to bus transit operations. It is a condition with several potential consequences, including collisions, rollovers, and buses unintentionally leaving the roadway involving fatalities, injuries, and the destruction of property. The risk of encountering ice on the road has a composite of both severity and probability. Per the Risk Assessment Matrix shown below, the hazard is determined to be 1B and the probability of occurring and severity of the damage, the risk is classified as HIGH as shown in **Figure 5-1**.

**Figure 7-1: Risk Assessment Matrix**

<b>Risk Assessment Matrix</b>				
<b>Likelihood/ Severity</b>	<b>Catastrophic (1)</b>	<b>Critical (2)</b>	<b>Marginal (3)</b>	<b>Negligible (4)</b>
<b>Frequent (A)</b>	HIGH	HIGH	HIGH	MEDIUM
<b>Probable (B)</b>	HIGH	HIGH	MEDIUM	MEDIUM
<b>Occasional (C)</b>	HIGH	MEDIUM	MEDIUM	LOW
<b>Remote (D)</b>	MEDIUM	MEDIUM	LOW	LOW
<b>Improbable (E)</b>	LOW	LOW	LOW	LOW

Once a hazard has been assessed and a hazard probability has been identified, a corrective action will need to be taken to mitigate the severity of the hazard as shown in **Figure 5.2**. In the example above, since the hazard severity was assessed to a HIGH probability, this condition is considered unacceptable, and action must be taken to mitigate or eliminate the hazard.

**Figure 7-2: Safety Risk Index**

<b>Safety Risk Index</b>	<b>Criteria by Index</b>
HIGH	<u>Unacceptable – Action Required:</u> Safety risk must be mitigated or eliminated.
MEDIUM	<u>Undesirable – Management Decision:</u> Executive management must decide whether to accept safety risk with monitoring or require additional action.
LOW	<u>Acceptable with Review:</u> Safety risk is acceptable pending management review.

## 7.3. Safety Risk Mitigation

Hazard mitigation is the corrective action taken in response to the hazard identification and risk assessment process. Both time and resource restrictions can affect the level of mitigation that can be accomplished. When possible, the department in which the hazard exists, works with the Office of Safety and Security to develop and implement an approved corrective action plan. The corrective actions are then tracked by both the Office of Safety and Security and the applicable department until the hazard is either eliminated or controlled.

In all cases, DTC strives to first eliminate the hazard, if possible, and to then reduce its risks if it cannot be eliminated. If the risk cannot be eliminated or reduced, DTC management representatives such as DTC's CEO, having the required authority, may choose to accept the risk. In these cases, care is taken to ensure compliance with all applicable rules, procedures, policies, and regulatory requirements. DTC's CEO documents his/her decision and notifies all affected parties.

The primary methods of resolving a hazard can be categorized as either engineering or management controls. Engineering controls are changes that are made to the system to eliminate hazards or mitigate their risks. An example of an engineering control may be building a separate storage facility for hazardous chemicals or installing a protective barrier around rotating machinery.

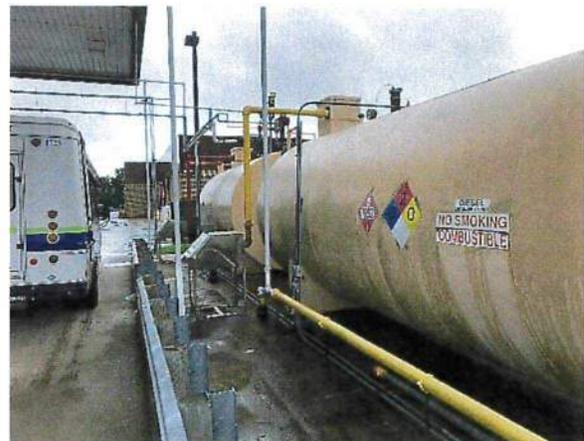
Management controls are changes made to the organization itself. An example of a management control may be posting signs or changing procedures to limit employee exposure to the hazard.

When possible, the following order of precedence is used by DTC to eliminate or control hazards and their associated risks. It is important to note; however, that a combination of several or all the following may be used depending on the nature and extent of the hazard:

**Design for Minimum Risk.** Design will attempt to eliminate hazards. 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.

**Incorporate Safety Devices.** If the hazard cannot be eliminated and its risk cannot be controlled to an acceptable level, safety design features or devices will be used to reduce risk to an acceptable level.

**Provide Warning Devices.** If the design, safety features, and devices cannot reduce the risk to an acceptable level, warning devices shall be used to detect the condition to produce an adequate 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.



**Develop Special Procedures and Training.** If the hazard cannot be eliminated through design or its associated risk adequately controlled through design selection, safety features/devices such as personal protective equipment (PPE) or warning devices will be used, followed by approved procedures and training. This is considered the least effective method of hazard mitigation.

Regardless of the type of control used to eliminate the hazard or reduce its risk, DTC reevaluates the control method after its implementation to determine and verify its effectiveness. In all cases, if the hazard has been eliminated or controlled, or if the Office of Safety and Security or a management representative deems that the risk is acceptable, he/she shall document this decision and notify all affected parties.

### 7.4. Corrective Action Plans

Regardless of the method of identification, all hazards identified and reported to the DTC Office of Safety and Security are entered into the corrective action monitoring log. The corrective action monitoring log is used to collect pertinent information regarding the hazard, including its source, location, time of identification, categorization, corrective actions taken and/or recommended, and status. All hazards entered into the corrective action monitoring log are tracked through to resolution. The corrective action monitoring log is also used to perform trend analysis, enabling the identification and resolution of potential system-wide hazards or deficiencies.

## 8. SAFETY ASSURANCE

Safety assurance confirms that mitigations are implemented, adhered to, appropriate, effective, and sufficient in addressing the potential consequences of identified hazards. Mitigations developed under the Safety Risk Management process are transferred to the DTC Safety and Security Officers responsible for reviewing the data to determine if (1) the mitigations are effective, and (2) that no new risks have been introduced through implementation of the mitigations. Safety Assurance also ensures that the Safety Management System is effective in meeting its safety objectives and safety performance targets. DTC assures its safety objectives are met through the collection and analysis of safety data, including the tracking of safety risk mitigations.

DTC implements its Safety Assurance process through the active monitoring of operations, safety reporting systems, routine workplace observations, inspections, audits, and other activities that are designed to support safety oversight and performance monitoring. An effective employee safety reporting program is essential to the Safety Assurance function.

Safety Assurance also helps to evaluate whether an anticipated change may affect the safety of operations. If an anticipated change is determined to introduce safety risks into the system, Safety Risk Management activities are to be conducted to minimize the safety risks associated with the change.

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## 8.1. Safety Performance Monitoring and Measurement

Safety performance monitoring and measurement generates data and information which DTC management evaluates to determine if its implemented safety risk mitigations are appropriate and effective. DTC management also verifies how well the agency and its contractors' safety performance is in line with the established safety objectives and safety performance targets. Safety performance monitoring does not focus on monitoring individuals, but instead, monitors the safety performance of a transit agency itself through routine monitoring of operations and maintenance activities.

Examples of safety performance monitoring activities for DTC and its contractors may include, but is not limited to, the following items:

- Monitoring the employee safety reporting program;
- Monitoring service delivery activities through field observations;
- Monitoring operational and maintenance data;
- Conducting safety surveys, audits, studies, reviews, inspections, and investigations; and
- Evaluating data and information from external agencies and/or our transit peers.
- Evaluating required safety performance report logs submitted by DTC contractors

## 8.2. Safety Committees

DTC has implemented multiple safety committees to review and evaluate safety-related processes, activities, and issues.

### 8.2.1. ACCIDENT REVIEW COMMITTEE (ARC)

The ARC was established for all employees who operate vehicles and equipment, and who may incur injuries while performing job-related tasks. The ARC is a safety tool designed to help protect the interests of all DTC employees and customers. The primary purpose of the ARC is accident prevention. Most accidents result from a chain of events that usually include one or more unsafe acts or conditions. The goal is to prevent accidents by identifying and eliminating all unsafe acts and conditions.

ARC members are appointed by the CEO and represent the following departments of the DTC: Office of Safety and Security Manager or designee (Chair); Operations (2 persons); Training Specialist; Local 842 (2 persons); and the Risk Manager.

### 8.2.2. EXECUTIVE SAFETY COMMITTEE

The Executive Safety Committee is comprised of key staff and has the capability to employ multiple disciplines at DTC while having access to higher level budgeted solutions.

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### 8.2.3. SAFETY & SECURITY REVIEW COMMITTEE (SSRC)

The purpose of the SSRC is to organize a meeting with management, employees, and employee representatives to achieve and maintain a safe and healthful workplace. The SSRC is responsible for safety and security program reviews, injury reviews, and the review of employee concerns.

### 8.2.4. SAFETY & SECURITY COMMITTEE

The Safety and Security Committee is an equal balance of DTC's frontline and management employees that provides oversight, guidance, and approval of DTC's ASP. The responsibilities include identifying potential safety deficiencies, risk-based mitigation strategies, and recommendations for purposes of continued safety improvement and commitment. The committee is ultimately responsible for the approval of this ASP and any future updates.

## 8.3. Bus Facilities Assessments/Inspections

Inspections of facilities are necessary to ensure DTC remains capable of fulfilling its mission of providing safe, reliable, and efficient services to its passengers. Routine inspections of DTC's facilities are performed by DTC's operations and maintenance staff on a regular basis. The Office of Safety and Security may also conduct general assessments and inspections of the transit system.

The primary purpose of performing facility inspections is to identify hazards, program deficiencies, and system risks within DTC's operations and services. The inspection process functions as a component of DTC's Safety Risk Management Program. All findings are documented, evaluated, and prioritized for closure in accordance with the Safety Risk Management Program.

## 8.4. Bus Maintenance Assessments/Inspections

Not only can an effective maintenance program reduce the vehicle and equipment replacement costs associated with DTC operations and services, but it also aids in fulfilling DTC's mission of providing safe, reliable, and efficient service. Applying the Safety Risk Management Program and inspection processes to DTC's maintenance activities is critical in ensuring the effectiveness of the maintenance program.

Periodic inspections of the maintenance facilities, equipment, tools, shop chemicals and work practices may be conducted by the Office of Safety and Security. These inspections are conducted utilizing the department's maintenance procedures, policies, and practices. The information gathered through assessments and inspections is used to identify hazards and system risks. Once identified, the trends, hazards, and system risks can be analyzed according to the Safety Risk Management Program and eliminated or controlled appropriately.

## 8.5. Bus Rules and Procedures Review

DTC's operations and services are continually growing and changing in response to passenger and system needs. These changes directly impact how DTC operates and maintains its systems, equipment, and facilities. It is therefore essential that all operating and maintenance rules and procedures remain accurate and up-to-date so that the DTC can continue to provide safe and reliable service to its customers.

Operations is responsible for annually reviewing and revising, as needed, the applicable operating and maintenance rules and procedures.

Rules and procedures are also reviewed and revised when the following occurs:

- Incident investigations determine the need for a change;
- In response to system modifications or changes including new system and equipment procurements;
- In response to changing federal, state and local regulations and requirements; and
- When findings are generated through the Safety Risk Management Program or assessments performed by external agencies such as DelDOT and FTA.

The reviews are performed to ensure existing safety requirements are met; to verify that proposed changes do not create new hazards or present additional risks to the system; to assure the effectiveness of existing safety controls will not be reduced; and risks to personnel, passengers, contractors, equipment, facilities, and other properties or the environment will not be increased.

Rules and procedures subject to the review process include vehicle operator rulebooks and Standard Operating Procedures; training materials and programs; and human resources policies and procedures.

The information gathered through assessments and reviews is used to identify hazards and system risks. Once identified, the trends, hazards, and system risks can be analyzed according to the Safety Risk Management Program and eliminated or controlled appropriately.

### 8.6. System Modification Design Review and Approval Process

System modification refers to new bus specifications, new facility construction, remodeling of existing facilities, or changes in facility equipment or machinery. System modification is the result of any change to the transportation system, equipment and facilities. This process is applicable to new procurement, as-built drawings or schematics, training on maintenance and/or operations associated with this endeavor, certification of any operational rules, agreements and maintenance and repair/training manuals that the modification may encompass.

### 8.7. Management of Change

Change may introduce new hazards and safety risk into transit operations. Therefore, agencies should establish the criteria that define when a change must be evaluated through the Safety Risk Management process. If a proposed or identified change meets or triggers those criteria, the agency uses Safety Risk Management to review existing mitigations to determine if they are enough or if new mitigations are necessary. It is important that a transit agency leverage its field monitoring activities (under the Safety Performance Monitoring and Measurement sub-component) to support the identification of changes in a system that may not be planned.

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Changes with safety performance impacts can result from many sources. Examples of change may include, but is not limited to, the following items:

- Regulatory requirements;
- Audit results;
- Metropolitan Planning Organization requirements;
- Service environment;
- New technology;
- New processes or procedures;
- Converting to new products (e.g., parts or chemicals); and
- New employee contracts.

## 8.8. Continuous Improvement

Evaluation of the ASP is necessary to ensure that it effectively and efficiently allows DTC to meet its safety objectives and performance targets. DTC will leverage the data and information gathered while conducting safety performance monitoring to address any identified weaknesses in ASP's organizational layout, processes, and resources, in a timely manner, and complete an annual review of the overall safety performance.

If DTC, identifies any deficiencies during the safety performance assessment, DTC will develop and implement, at the discretion of the Accountable Executive, a plan to correct the identified safety deficiencies.

## 9. SAFETY PROMOTION

Safety promotion is communicating and disseminating safety information to strengthen the safety culture and support integrating the ASP into all operations and activities of DTC. Safety promotion includes safety culture, safety-related lessons learned, reporting systems, recommendations based on safety metrics, and safety training. The intent of safety promotion is to foster a positive safety culture in which DTC employees receive ongoing training and updates of safety progress; feel comfortable reporting safety issues or concerns; understand why safety is important; and how staff actions or inactions impact safety. Through safety promotion, the Leadership Team broadcasts its commitment to safety and the ASP and demonstrate its commitment to the importance of safety.

### 9.1. Comprehensive Safety Training and Certification Program (New Employee, New or Special Equipment, & Recertification)

Training is a critical activity for safety promotion. It is a means for providing the skills and knowledge needed to carry out safety responsibilities. Employees and management receive information and training on safety concepts, processes, and guidance at a level that is commensurate with their job functions as they relate to the ASP.

Safety risks associated with the operation and maintenance of transit services are controlled, in part, through a training management framework. It includes a systematic process to identify competency requirements, selection of personnel, initial training activities, and assessment of qualifications. Each division can adopt this framework in determining their specific job-specific qualification requirements.

Safety and Security will partner with Human Resources to establish a proactive driver training program to reduce or eliminate factors that contribute to collisions and injuries. Drivers of DTC revenue vehicles, including fixed and paratransit vehicles, as well as maintenance operators and service supervisors will be required to successfully complete the appropriate DTC driver training course and complete annual refresher training. Drivers of DTC non-revenue vehicles including staff or administrative employees will be required to successfully complete Defensive Driver Training annually.

DTC will also conduct Driver Improvement Training for 100% of operators of both revenue and non-revenue vehicles identified as needing improvement in specific areas.

The appropriate safety training applies to each DTC employee and its contractors commensurate with their position regardless of experience.

### 9.1.1. NEW EMPLOYEE TRAINING

All newly hired DTC personnel receive training to become familiar with:

- ASP overview;
- Safety management policy;
- Safety risk management;
- Safety assurance;
- Safety promotion; and
- Employee roles and responsibilities.

### 9.1.2. SPECIFIC JOB SAFETY TRAINING

Safety specific training such as for new or special equipment is provided by the department for employees. The training includes an understanding of safety risks and controls, rules, and procedures. It is the responsibility of department managers and supervisors to ensure the training requirements are identified and fulfilled. The Office of Safety and Security coordinates with department training instructors in formulating and refining the training programs.

### 9.1.3. DELIVERY OF SAFETY TRAINING

Managers and supervisors must arrange appropriate safety training for each position. This includes both technical and non-technical training, on-the-job training, refresher, and recertification training. Trainers must be competent and qualified in the delivery of training. A Manager must maintain a complete and comprehensive training and qualification record for each employee.

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## 9.1.4. QUALIFICATIONS

Suitable qualifications of employees are maintained and revalidated in accordance with the requirements of the department and regulatory requirements.

## 9.2. Safety Communication

Effective communication of safety risks is critical and a key component of the safety culture. When reporting on the risk, the communication should:

- Raise the level of understanding of relevant issues;
- Be tailored to audience needs;
- Place the risk in the appropriate context;
- Present the risk in order of concern;
- Be respectful in tone;
- Be forthright about any limitations;
- Deal with trust and reliability; and
- Be focused on specific issues.

A positive safety culture depends on voluntary reporting. It is essential that management support and encourage reporting. Individual and organizational safety should be recognized and promoted.

The Office of Safety and Security, with assistance from the Marketing and Communications Department, will utilize multiple modes of communication to promote safety. The Safety Promotion Communication Plan will include, but will not be limited to, the following topics:

- Dissemination of safety messages, progress towards safety performance targets, and lessons learned;
- Measuring or assessing safety culture; and
- Safety culture promotion.

Safety Communication also includes the patrons of our transit system and the public.

## 9.3. Emergency Response Planning, Coordination and Training

This paragraph establishes the response process and responsibilities for the various DTC divisions, employees, and outside agencies in the event of a bus transit emergency or a community emergency to which DTC will be requested to respond and render assistance.

DTC may conduct an emergency preparedness exercise as a stand-alone exercise, in conjunction with other transportation modes, or as part of a large multi-agency exercise. All exercises are evaluated and critiqued for the benefit of DTC and the participating emergency response agencies.

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Key elements of DTC's emergency preparedness are as follows:

- Ensuring that proper notification of emergencies is implemented throughout the agency;
- Providing training programs for employees and emergency response agencies;
- Commitment to the use of the National Incident Management System and training of appropriate staff;
- Conducting emergency preparedness exercises. These exercises will include tabletop or field exercises involving DTC personnel and other external agencies;
- Participation in any community or state emergency preparedness exercise as appropriate; and
- Ensuring that necessary cooperative agreements are established.

## 9.4. Employee Occupational Safety Programs

The Office of Safety and Security is responsible for developing and implementing Employee Occupational Safety policies and programs for DTC. Employee Safety Programs include, but are not limited to:

- Housekeeping;
- Fire Safety;
- Ladders;
- Hand Tools;
- Machine Tools;
- Personal Protective Equipment; and
- Lifting.

For a complete listing of DTC's Employee Occupational Safety Programs, please see the latest version of the DTC Safety Manual.

## 9.5. Hazardous Materials Programs

The proper handling, use, and disposal of hazardous materials are important functions at DTC. Each department is responsible for obtaining and distributing current information on hazardous materials in their respective areas. This information includes technical specifications, Safety Data Sheets (SDS), instructions, and procedures. The Office of Safety and Security is to be consulted prior to any chemical procurement changes or process changes that may introduce new hazards into the work environment.

Training on hazardous chemicals will be provided whenever new hazards are introduced into the work environment or whenever hazardous chemicals will affect any of the procedures. Training will provide information on specific hazards and measures that can be taken to control or minimize the hazards. Control measures can include such strategies as engineering controls, substitution, or personal protective equipment.

## AGENCY SAFETY PLAN

*Bus Transit*



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All new procurements for a chemical, substance, or compound are sent to the Office of Safety and Security for review prior to purchase and before being brought onto DTC property.

The Office of Safety and Security is responsible for the following occupational safety and health activities related to hazardous materials:

- Overseeing and administering hazardous material inspections and monitoring;
- Maintaining the SDS database;
- Providing technical advice and expertise;
- Responding to exposure concerns and incidents;
- Performing reviews and audits of agency practice;
- Recommending PPE;
- Reviewing new procurements of hazardous materials; and
- Overseeing and auditing performance on various hazardous materials programs.

### 9.6. Drug and Alcohol Programs

DTC is committed to maintaining an alcohol and drug free workplace, to provide a safe and productive work environment, and to retain public trust and confidence in our transportation services. The purpose of the Drug and Alcohol Policy is to prevent incidents and losses resulting from alcohol and drug use. This policy also complies with the FTA's drug and alcohol regulations.

All DTC employees are covered by this policy. The use of alcoholic beverages, intoxicants, or controlled substances by any employee, while on duty or on DTC property, is strictly prohibited. Employees shall not report for duty under the influence of or use on DTC property, any drug, medication or other substance including those prescribed by a doctor, which will in any way affect their alertness, coordination, reaction, response or safety. The illegal use, possession, manufacture, distribution or the dispensing or selling of any controlled substance on or off duty, or on or off DTC property is prohibited.

### 9.7. Contractor Safety Programs

Contractors are required to comply with both DTC and Federal OSHA safety requirements. This stipulation is incorporated into all DTC contracts. Contractors are expected to have their own written safety programs to meet OSHA's requirements. The Office of Safety and Security may request a copy of the contractor's safety plan for review.

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### 9.8. Violence in the Workplace

DTC affirms its commitment to on-the-job safety and security and to reinforce the importance of the Employee Assistance Program (EAP) to counsel employees who are victims of violence, either domestic or work-related. The EAP is also available to employees who have problems with anger or loss of control. DTC maintains the right to discharge employees who engage in violence against fellow employees or customers.

DTC will take every measure to assure employees that their personal safety and security while on the job is of paramount importance.

DTC supports and encourages additional training in personal protection and safety, techniques for resolving conflict, and for defusing potentially violent situations for all employees. Every employee receives training during New Employee Orientation regarding workplace violence. Additional training can be requested through an employee's immediate supervisor.

DTC provides Workplace Violence Awareness Training to all new employees during orientations and opens the sessions to all employees.

Employees must immediately report any threats of harassment or violence by co-workers, customers or other members of the public. The DTC EAP is available as a counseling resource to those that are victims of violence, either domestic or work-related.

DTC will carry out all policies, procedures and work rules consistent with this commitment to assure both threats of violence and actual incidents of workplace violence are responded to with seriousness and resolve.

Violence against customers and all fellow employees (other than cases of lawful self-defense) is a dischargeable offense.

## 10. ADDITIONAL INFORMATION

DTC will maintain all documentation related to the implementation of programs, policies, and procedures to ensure the execution of the ASP and SMS. DTC will ensure all aforementioned documentation is coordinated with and available to its contractors, State DOT and MPO's. Upon request, all documentation will be made available to the FTA or any other agency and be maintained by DTC. Both the ASP and SMS will be considered living documents and revised documents will be prepared when any changes or updates are warranted.

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## APPENDIX

### ABBREVIATIONS & ACRONYMS

ADA	Americans with Disabilities Act
ARC	Accident Review Committee
ASP	Agency Safety Plan
CEO	Chief Executive Officer
CFR	Code of Federal Regulations
DBE	Disadvantaged Business Enterprise
DelDOT	Delaware Department of Transportation
DSHA	Detailed Subsystem Hazard Analysis
DTC	Delaware Transit Corporation
EAP	Employee Assistance Program
EEO	Equal Employment Opportunity
FTA	Federal Transit Administration
MIL-STD	Military Standard
MPO	Metropolitan Planning Organization
MDT	Mobile Data Terminals
NDT	National Transit Database
OHA	Operating Hazard Analysis
OSHA	Occupational Safety and Health Administration
PHA	Preliminary Hazard Analysis
PPE	Personal Protective Equipment
PTASP	Public Transportation Agency Safety Plan
SDS	Safety Data Sheets
SEPTA	Southeastern Pennsylvania Transportation Authority
SHA	Subsystem Hazard Analysis
SMS	Safety Management System
SSRC	Safety and Security Review Committee
TAM	Transit Asset Management Plan
TCRP	Transit Cooperative Research Program
USC	United States Code

**AGENCY SAFETY PLAN**

Bus Transit



**SAFETY and SECURITY COMMITTEE 2022 PTASP APPROVAL**

Sean Finerty, Chief Safety & Security Officer

12-15-22

Date

Harold W. Myers, Fixed-Route Operations, Committee Chair

15 DEC 22

Date

Kendall Barbour, Paratransit Operations, Union President,  
ATU Local 842

12-15-22

Date

Kenny Brosier, Service Supervisor, OPEIU Local 32

12-15-22

Date

Mike Chalmers, Maintenance Manager

12-22-22

Date

Dan Crossan, Maintenance, ATU Local 842

12-16-22

Date

Dan Lambert, Maintenance, IBEW Local 2270

12/15/22

Date

Jeff Moore, Maintenance Supervisor

12/20/22

Date

Keisha Parham, Fixed Route Operations, Recording  
Secretary, ATU Local 842

12/15/22

Date

Margaret Webb, Paratransit Operations Director

12-15-22

Date

Kelly Van Sickle, Human Resources, Labor Management

12-15-22

Date



