TRANSIT, STREET & GARAGE

AGENDA

DATE: July 27th, 2022
LOCATION: Street Department Conference Room
TIME: 3:00pm

1. CALL TO ORDER

2. ATTENDANCE

   a) Introduction of Members

3. ADOPTION OF MINUTES - June 2022

4. DEPARTMENT REPORTS

   a) Transit Report
   Ridership Report for June 2022
   Financial Report for
   Transit Update

   b) Street Report
   Department Report -Orville Sykes

1. Storm Debris Pickup - 254 total pickups
2. 89 work orders completed so far in July
3. 45 employees received CPR certification

Transportation 2020 Update - Chris Cowan

1. 48/13 Sidewalk bid awarded
2. Sidewalk update

   c) Garage Report
   Department Report - Bill Lee

1. Monthly Fuel Report

5. COMMITTEE ACTION
   a) PTASP and FY 2023
6. CITY COUNCIL ACTION

7. NEW BUSINESS

8. PUBLIC COMMENTS (3 individuals 5 minutes each unless waived by Chair)

9. ADJOURNMENT

Transportation Committee Meeting Minutes
Wednesday, June 22nd at 3:00pm
Street Department Conference Room

Members Present:
Wanda Smith, Chairperson
Joe Shakeenab, Councilman
Trisha Butler, Councilperson

Members Absent:
Vondell Richmond, Councilman
Amber Marquis, Councilperson

Transit
Arthur Bing, Interim Director
Lori Wallis, Financial Director
Veronica Williams, Administrative Support Specialist
Katina Wade-George, Grounds & Facilities Maintenance Supervisor

Street
Chris Cowan, Senior Engineering Manager
Bonny Blyzes, Administrative Support Supervisor
Jerome Henderson, Engineer
Billy Page, Equipment Operations Supervisor

Garage
Bill Lee, Director
Stacey Burney, Administrative Support Technician

Internal Audit
Charlie DeHarde

CALL TO ORDER:

June 22, 2022 at 3:00p.m… Transportation, Street & Garage Committee (TSG) meeting was called to order by Chairperson Wanda Smith. The members in attendance were Trish Butler and Joe Shakeenab. Members not in attendance were Amber Marquis and Vondell Richmond.

Chairperson Wanda Smith entertained a motion for approval for the May 25, 2022 Transportation, Street and Garage minutes. All were in favor and the minutes were approved.

TRANSPORTATION

Departmental Report:

RIDERSHIP REPORT:

Mr. Arthur Bing went over the Ridership report for May 2022. CTS had 37,436 passengers, 6,306 senior citizens, 169 wheelchairs, 625 bicycles and 2,855 on paratransit. The total for CTS for the FY 2021-22 is 424,531 passengers. Chairperson Wanda Smith asked, "Mr. Bing was that an increase or is this steady?" Mr. Bing stated, "The ridership is holding steady, but since Covid we are carrying half of what we were carrying. In 2019 we carried over 800,000 for the year, but we may just carry over 500,000 this year. But on another note we had our 35th Anniversary. We carried 1900 passengers, the highest count this year, but we served over 300 hotdogs" Chairperson Wanda Smith asked if there were any more questions there were none.

FINANCIAL REPORT:

Lori Wallis went over the Financial Report for the month of April 2022. CTS revenues were over budget year to date $137,717.27 and expensive under budget $474,672.82 total year to date.CTS is under budget year to date $612,390.09 and the bulk of that is wages and fuel. If you were not here late meeting we typically around April we amend our budget to send the local back to local to appropriate for the next year. But this year all of our funds left will be federal and state grant funds so there were no local funds so we didn't amend our budget. Chairperson Wanda Smith asked if there were any other questions and there were none.

TRANSIT UPDATES:

Mr. Arthur Bing told the TSG (Transit, Street and Garage) Committee that Ms. Veronica Williams will no longer be his Administrative Support Specialist. She will be CTS 'new Operations Supervisor.

COMMITTEE ACTION REQUIRED:

No action required

STREET DEPARTMENT

Departmental Report:

DEPARTMENTAL REPORT - Chris Cowan

We will be conducting a storm debris pickup from June 21-July 5 to accommodate citizens with the clean up of fallen limbs/branches from the wind storm on June 17th.
We have been working additional hours to remove trees from the roads and surrounding areas to promote safe road travel.
We closed 215 work orders so far for the month of June. The mosquito control contract bid was awarded to VDCI and that contract will begin July 1, 2022.
We have implemented additional safety measures to prevent heat related illness for our employees including safety training, cooling rags, earlier shifts (as permitted) water, gatorade and extra breaks as needed.
Billy Page discussed the mowing/right-of-way crew and the mowing they do throughout the city. We are in the process of creating a map on our website to disclose mowing locations each week.
Jerome Henderson spoke about the process for the request of speed hump installation and the required criteria to be met for installation.
TRANSPORTATION 2020 UPDATE - Chris Cowan
The sidewalk project on 48/13 has gone out for bid and a contract will be secured by mid July. There was a pre-construction meeting this week.
We are finalizing the sidewalk contract for Jordan Rd and N. Senseney, which is expected to move forward fairly quickly.
Maps that illustrated the expansion of Needmore to 5 lanes were viewed and discussed.

Committee Action Required:

No action required

GARAGE DEPARTMENT

Departmental Report: Bill Lee

CITY GARAGE REPORT:

Bill Lee gave department report for May 2022. The total number of work orders was 354. Total work order hours was 808.55. Total parts cost was $44,312.10. Total tire cost

was $13,944.81. Outside work was $3,732.86. Fuel purchases onsite were 36,697 gallons of unleaded and 9,954 gallons of diesel. At last delivery on 5-25-22 unleaded fuel cost was $4.16. It increased from 3.42 on 4-27-22. At last delivery on 5-24-22 diesel fuel cost was $4.45 per gallon. It increased from $3.97 on 4-22-22. Wanda Smith said she had gotten complaints from constituents about police vehicles idling too much. Bill Lee said he would email the chief and sergeants about the city's idling policy. Joe Shakeenab asked if the garage had any issues getting fuel. Bill Lee told him he doesn't let fuel levels get too low to begin with, and when it is bid out it is done at 7:00 AM so the order is in first thing. Only one or two times was the tanker out or almost out when it got to the garage to deliver the fuel.

Committee Action Required:

No action required

Adjournment:

Chairperson Date

Clarksville Transit System June 2022 Ridership Report

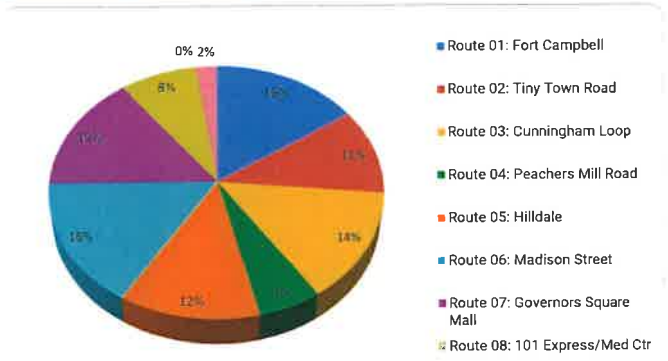
DATE	DAY	FIXED ROUTE	DEMAND RESPONSE	SPECIAL SERVICE	SYSTEM
01-Jun-22	Wed	1,904	125	0	2,029
02-Jun-22	Thu	1,513	112	0	1,625
03-Jun-22	Fri	1,669	170	0	1,839
04-Jun-22	Sat	1,365	83	0	1,448
06-Jun-22	Mon	1,409	119	0	1,528
07-Jun-22	Tue	1,455	129	0	1,584
08-Jun-22	Wed	1,429	140	0	1,569
09-Jun-22	Thu	1,487	133	0	1,620
10-Jun-22	Fri	1,522	134	0	1,656
11-Jun-22	Sat	1,388	66	0	1,454
13-Jun-22	Mon	1,561	109	0	1,670
14-Jun-22	Tue	1,453	117	0	1,570
15-Jun-22	Wed	1,471	121	0	1,592
16-Jun-22	Thu	1,490	121	0	1,611
17-Jun-22	Fri	1,392	131	0	1,523
18-Jun-22	Sat	1,437	67	863	2,367
20-Jun-22	Mon	1,400	91	0	1,491
21-Jun-22	Tue	1,697	117	0	1,814
22-Jun-22	Wed	1,481	139	0	1,620
23-Jun-22	Thu	1,469	111	0	1,580
24-Jun-22	Fri	1,486	118	0	1,604
25-Jun-22	Sat	1,381	68	0	1,449
27-Jun-22	Mon	1,589	119	0	1,708
28-Jun-22	Tue	1,516	114	0	1,630
29-Jun-22	Wed	1,476	164	0	1,640
30-Jun-22	Thu	1,483	94	0	1,577
Totals		38,923	3,012	863	42,798

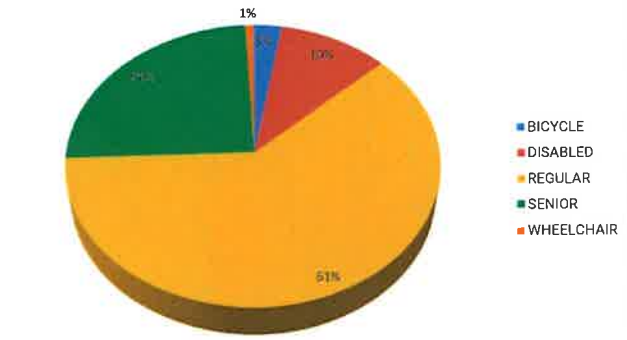
Fixed Route	June 2022
Daily Average	1,497
M-F Average	1,516
Saturday Average	1,393
Total Weekday (M-F)	33,352
Total Weekend (Sat)	5,571
Fixed Route Total	38,923
Special Service	863
Senior Citizens	6,537
Disabled	2,778
Wheelchairs	209
Bicycles	713
Children Under Age of 4	324
Operating Days	26

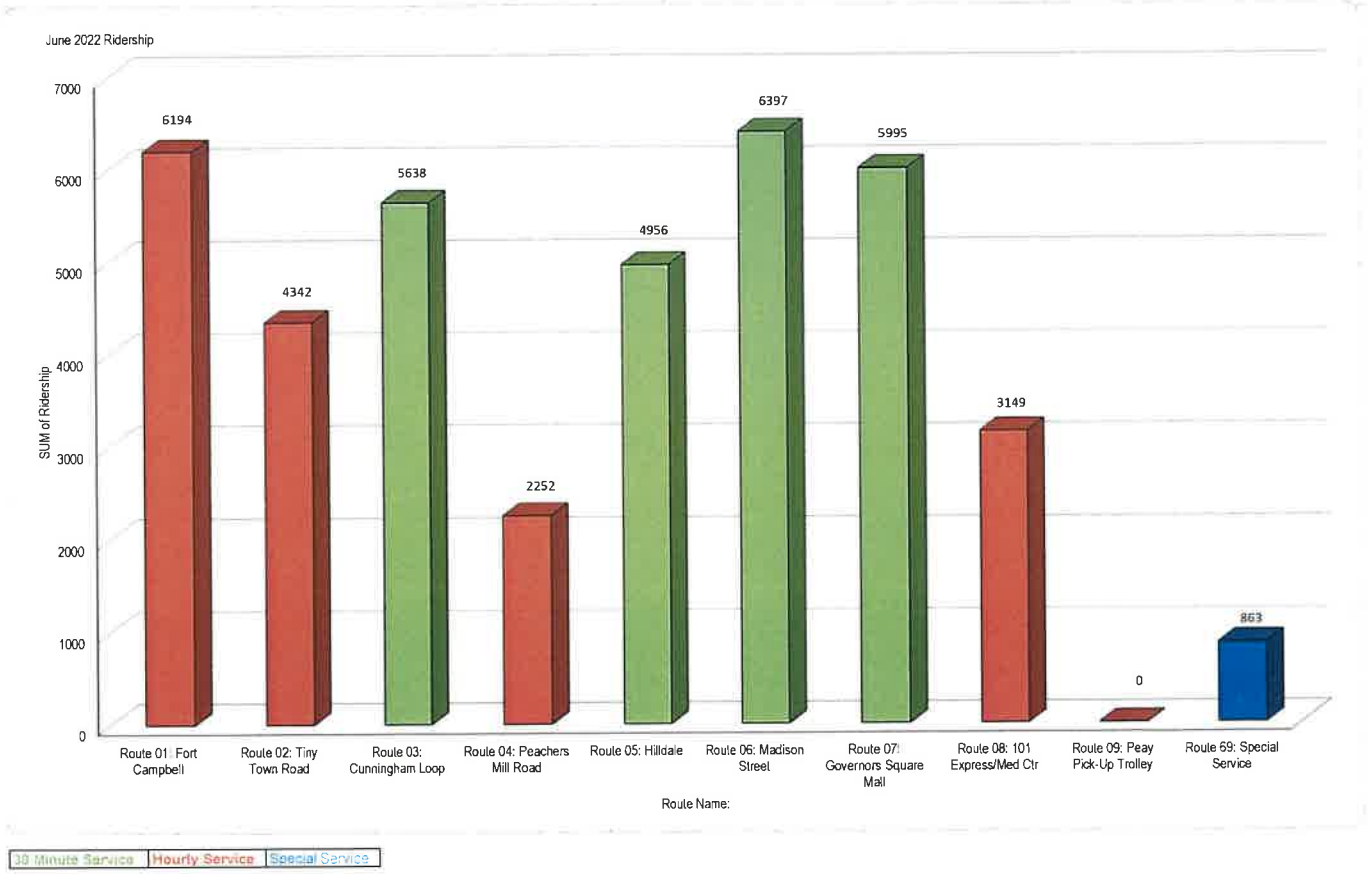
Demand Response (DR)	June 2022
DR Average (M-F)	124
DR Average (Sat)	71
DR Total (M-F)	2,728
DR Total (Sat)	284
DR Total	3,012

FY 2022 Ridership	467,329

DATE	DAY	FIXED ROUTE	PEAY PICKU P	TOTAL
01-Jun-22	Wed	20	0	20
02-Jun-22	Thu	64	0	64
03-Jun-22	Fri	67	0	67
04-Jun-22	Sat	18	0	18
06-Jun-22	Mon	53	0	53
07-Jun-22	Tue	81	0	81
08-Jun-22	Wed	66	0	66
09-Jun-22	Thu	65	0	65
10-Jun-22	Fri	76	0	76
11-Jun-22	Sat	19	0	19
13-Jun-22	Mon	73	0	73
14-Jun-22	Tue	85	0	85
15-Jun-22	Wed	70	0	70
16-Jun-22	Thu	72	0	72
17-Jun-22	Fri	79	0	79
18-Jun-22	Sat	13	0	13
20-Jun-22	Mon	64	0	64
21-Jun-22	Tue	70	0	70
22-Jun-22	Wed	53	0	53
23-Jun-22	Thu	71	0	71
24-Jun-22	Fri	75	0	75
25-Jun-22	Sat	17	0	17
27-Jun-22	Mon	85	0	85
28-Jun-22	Tue	87	0	87
29-Jun-22	Wed	65	0	65
30-Jun-22	Thu	63	0	63
Totals		1571	0	1571







T/S/G Committee Meeting

City Garage Monthly Report

June 2022

City Wide Vehicle Expense Totals:

Requisitions turned into Finance Department:

Total number of Work Orders: 377

Total number of Work Order hours: 774.05

Total Parts Cost: $ 86,085.12

Total Tire Cost: $ 16,584.77

Total Aims Unit Cost: $ 0.00

Total Labor Cost Billed to Gas & Water: $ 323.40

Outside Work: $ 4,155.07

City Wide Gas and Diesel **Totals Price** from **Fuel Master Onsite**: Unleaded: $ 118,989.66
Diesel: $ 38,248.88
Total: $ 157,238.54

City Wide Gas and Diesel **Total Gallons** from **Fuel Master Onsite**: Unleaded: 34,390.04
Diesel: 9,023.08
Total: 43,413.12

Citywide Gas and Diesel **Total Price** from **Wex Offsite**: Unleaded: $ 43,84.43
Diesel: $ 35,294.92
Totals: $ 79,136.35

Citywide Gas and Diesel **Total Gallons** from **Wex Offsite**: Unleaded: 9,509.32
Diesel: 6,247.65
Total: 15,756.97

Fuel Purchases Onsite: **Deliveries**: Unleaded 39,907 total gallons
Diesel 10,811 total gallons

Fuel Cost Unleaded: $4.39 per gallon (last delivery on 6/29/2022) INCREASE OF 6% FROM $4.16 AS OF MAY 25th

Fuel Cost Diesel: $4.61 per gallon (last delivery on 6/24/2022) INCREASE OF 3.5% FROM $4.45 AS OF MAY 24th

Garage Vehicle Repair Totals: $0.00

Garage Fuel Use Totals: 185.35 Gallons fuel, total cost $186.49

Bill Lee
Fleet Manager

Tennessee Department of Transportation

Clarksville Transit System

Agency Safety Plan
(ASP)

430 Boillin Lane, Clarksville, TN 37040

July 2022

Revision History

Date	Revision	Description of Revision
TBD	0	Initial draft issuance
20200608	1	Post agency assessments changes complete…2020 Performance Targets updates complete
20210708	2	TAC Suggestions added and 2021 Performance Targets updates complete
2022/07/05	3	FY2023 Performance Target updated. Safety Committee & Sub-Committee Section added. Personnel and Title Changes made.

Agency Safety Plan Approvals[1]

Prepared by: _____ _____
NAME Date
CTS Grants Analyst

Approved by: _____ _____
NAME Date
(Board of Directors/City Council/City Commissioner)

Approved by: _____ _____
NAME Date
TDOT Multimodal Director

[1] This signature page provides State (TDOT) approval of the PTASP and all addenda. Refer the Participating Agency Addenda for each agency's approval of the PTASP and their agency-specific addenda.

Table of Contents

The mission of the Tennessee Department of Transportation (TDOT) is to provide a safe and reliable transportation system for people, goods and services that supports economic prosperity in Tennessee. TDOT's Office of Public Transportation carries out this mission by providing both financial and technical assistance to transit agencies and projects in the state. This joint Agency Safety Plan (ASP) is the result of a collaborative effort between TDOT and the participating Tennessee public transportation agencies that opted in for coverage under the joint plan instead of writing their own ASP.

The 11 small public transportation operators for which this ASP has been prepared are:

- Bristol Tennessee Transit
- Clarksville Transit System
- SETHRA - Cleveland Urban Area Transit System
- East Tennessee Human Resource Agency
- First Tennessee Human Resource Agency
- Jackson Transit Agency
- Johnson City Transit
- Kingsport Area Transit Service
- Knox County Community Action Committee Transit
- Knoxville Area Transit
- City of Murfreesboro Transportation Department

TDOT certifies that this ASP meets the requirements of 49 CFR Part 673 and that all agencies covered under this joint ASP will have completed any remaining documentation required in Addendums 1-11 not later than the July 20, 2020, the federal deadline for Public Transportation Agency Safety Plan certification. TDOT will continue to support the participating agencies as they work beyond the ASP deadline to continue maturing SMS throughout their organizations.

Suzanne Carlson

TDOT Multimodal Director

June 8, 2020

1. The Clarksville Transit System

1.1. Agency Profile

The Clarksville Transit System (CTS) services the Clarksville, Tennessee area Monday through Saturday. The main administration & maintenance facility is located at 430 Boillin Lane, Clarksville, TN 37040. The CTS transit center used by the public is located at 200 Legion Street, Clarksville, TN, 37040. The CTS' service area is approximately 109 square miles, with a population of more than 150,000. Our service area is comprised of three major business districts and trip generators. Downtown Clarksville is home to many human service organizations and almost all government buildings and services. Approximately seven miles to the north is the Ft. Campbell military instillation and the north Clarksville business district. Between six and eight miles to the east is the Saint Bethlehem business district (St. B). St. B, as it is known locally, is home of Clarksville's only mall and the majority of retail and dining establishments. The Clarksville Transit System does not provide service on the behalf of any other transit agency.

1.2. Modes of Transportation

CTS provides fixed route bus service, as well as paratransit service. The fixed route service utilizes thirty-foot buses that have the capability to seat twenty-plus passengers. The CTS Paratransit service, otherwise known as "The Lift," provides transit service to the disabled and elderly that are unable to utilize the CTS fixed route system. This service uses high roof ADA accessible vans, and ADA accessible Cutaway vehicles. Both the fixed route, and paratransit services are directly operated by the Clarksville Transit System.

1.3. CTS funding types

CTS primarily receives 5307 Urbanized Area formula funding, but also uses 5339 Bus and Bus Facility funding, and 5303 Metropolitan & Statewide Planning funding. CTS has applied, and received, funding from competitive 5310 Enhanced Mobility funding opportunities to replace rolling stock for "The Lift" service it offers.

1.4. CTS Review

The Clarksville Transit System will hold meetings to discuss its agency safety plan at least quarterly each year. CTS will also hold an additional meeting at the beginning of each year to review the agency's performance targets for the previous year, how to set the goals for the upcoming year, and any additional changes that can be made to create a better plan of safety for CTS. Once all updates are decided on, the updated plan will be provided to the Accountable Executive for CTS to be signed off on.

2. Safety Management System Overview

2.1. SMS Introduction

Safety Management Systems (SMS) is a formal, top-down, organization-wide approach to managing safety risk and assuring the effectiveness of safety risk mitigation. SMS includes systematic and proactive procedures, practices, and policies for managing risks and hazards. By bringing employees together from all levels of the agency to manage risk, SMS helps agencies detect and address safety problems earlier, share and analyze data more effectively, and measure safety performance more precisely.

Four main components make up SMS:

- **Safety Management Policy** (Section 3) is a transit agency's documented commitment to safety. The policy defines the transit agency's safety objectives and the safety accountabilities and responsibilities of its employees.

- **Safety Risk Management** (Section 4) is the process for identifying hazards and analyzing, assessing, and mitigating safety risk.
- **Safety Assurance** (Section 5) is the processes that ensures the implementation and effectiveness of safety risk mitigation and ensures that the agency meets or exceeds its safety objectives through the collection, analysis, and assessment of safety data.
- **Safety Promotion** (Section 6) is a combination of safety training and communication applied to the agency's transportation system to support SMS.

Refer to Appendix A for Definitions of terms used in this plan and refer to Appendix B for Acronyms and Abbreviations used in this plan. Refer to the Participating Agency Addenda for agency-specific information to supplement the joint Agency Safety Plan (ASP).

2.2. Goal, Objectives, and Purpose

2.2.1. Goal

The overarching goal of this ASP is to enhance all aspects of safety within the participating public transportation agencies by guiding effective and proactive management of safety risks in their systems and prioritizing capital investments using performance-based planning.

2.2.2. Objective

The objective of this ASP is to establish processes and procedures to support the implementation of SMS that meets Federal Transit Administration (FTA)-mandated requirements under the PTASP Final Rule (49 CFR Part 673).

2.2.3. Purpose

The Tennessee Department of Transportation (TDOT) ASP formalizes the SMS principles and strategies for demonstrating Safety Management Policy, Safety Risk Management, Safety Assurance and Safety Promotion through all operation and maintenance activities. The ASP defines the process for identifying, evaluating, and resolving hazards associated with operations of a bus system involved in revenue service. This process helps achieve the highest practical level of operational safety for the riding public, employees, and anyone encountering the System.

2.3. Applicability and Scope

Recipients and sub-recipients of FTA Urbanized Area Formula Grant Program funds under 49 U.S.C. § 5307 are required to comply with the PTASP Final Rule[2]. TDOT sponsored this ASP for sub-recipient agencies to opt in for coverage under it or to opt out and develop their own ASP. The following Tennessee public transportation agencies (hereinafter collectively referred to "Participating Agencies") opted to meet their PTASP requirements under 49 CFR Part 673 through participation in the TDOT ASP:

- Bristol Tennessee Transit
- Clarksville Transit System
- Cleveland Urban Area Transit System
- East Tennessee Human Resource Agency
- First Tennessee Human Resource Agency
- Jackson Transit Agency
- Johnson City Transit

[2] FTA deferred the applicability of the PTASP requirements for small operators who receive funds through FTA's Formula Grants for the Enhanced Mobility of Seniors and Individuals with Disabilities Program under 49 U.S.C. § 5310 and for Formula Grants for Rural Areas Program under 49 U.S.C. § 5311.

- Kingsport Area Transit Service
- Knox County Community Action Committee Transit
- Knoxville Area Transit
- City of Murfreesboro Transportation Department

This ASP meets all the requirements under 49 CFR part 673 and encompasses the equipment, facilities, plans, procedures, operation and maintenance as they relate to a bus system. The ASP is scaled to the size, scope, and complexity of the Participating Agencies.

2.4. ASP Review and Updates

The TDOT ASP will be reviewed at least annually and updated as necessary to ensure that it remains current and consistent with FTA guidance and industry best practice. TDOT will initiate and coordinate the ASP annual review, in coordination with the participating agencies. Additionally, when a significant change occurs within TDOT or the participating agencies, TDOT will coordinate with the Participating Agencies to consider if any updates to the ASP are needed. The ASP will also be updated as necessary following any ASP audit to ensure the SMS remains current and applicable. If revised, the ASP will be re-issued to all ASP recipients. TDOT is responsible for updating the ASP in partnership with the applicable transportation agencies.

3. Safety Management Policy

3.1. TDOT ASP Safety Management Policy Statement

The participating Tennessee public transportation agencies covered by this Agency Safety Plan (ASP) recognize management of safety as a core agency function and are dedicated to planning, designing, constructing, operating and maintaining transportation systems that optimize the safety of passengers, employees, consultants, contractors, emergency responders, and the public.

Accountability for safety begins with the Accountable Executive and permeates all levels of employees. The following safety objectives reflect the agencies' overarching safety goals and demonstrate commitment to establishing, implementing, and continually improving Safety Management Systems (SMS):

- Integrate safety management into the primary responsibilities of all employees;
- Support safety management through the allocation of resources and promotion of a safety culture that facilitates safe practices and effective employee safety reporting and communication;
- Define roles and responsibilities for all employees that contribute to safety performance and SMS;
- Implement risk-based hazard management consistent with risk acceptance levels;
- Operate an employee safety reporting program that ensures no action will be taken against any employee who discloses a safety concern unless disclosure indicates beyond reasonable doubt an illegal act, gross negligence, or a deliberate disregard of regulations or procedures;
- Comply with or exceed legislative and regulatory requirements and industry standards;
- Ensure systems and services that support operations meet or exceed agency safety standards;
- Provide safety information and training to ensure all employees are competent in safety management for tasks allocated to them;
- Establish and measure safety performance against data-driven safety performance targets; and
- Continually improve safety performance and implementation of SMS.

By applying SMS as outlined above and detailed in this ASP, the participating Tennessee public transportation agencies are committed to making safety the top priority of all agency operations.

3.2. Safety Accountabilities and Responsibilities

Under SMS, identified positions have specific responsibilities under SMS. Refer to the Participating Agency Addenda for a matrix under each Participating Agency that names the specific agency position(s) and committee(s) responsible for each role described below.

3.2.1. Accountable Executive

The Accountable Executive is a single, identifiable person who has ultimate responsibility and accountability for implementing and maintaining the agency's SMS and ASP. This is the same person responsible for carrying out the agency's Transit Asset Management (TAM) Plan. The Accountable Executive has control or direction over the human and capital resources needed to develop and maintain both the agency's ASP and TAM Plan. The Accountable Executive is also responsible for ensuring action is taken, as necessary, to address substandard performance in the agency's SMS. This individual is the primary decision-maker who is ultimately responsible for both safety and TAM.

3.2.2. Chief Safety Officer (or SMS Executive)

The Chief Safety Officer, or SMS Executive, can also be Accountable Executive. This person will have adequate training to take responsibility for safety and act as the SMS Executive. The Chief Safety Officer has the authority and responsibility for day-to-day implementation and operation of the agency's SMS and must have a direct line of reporting to their Accountable Executive. Participating Agencies may designate a Chief Safety Officer who serves in other operational or maintenance capacities[3].

3.2.3. All Employees

In addition to the Accountable Executive and/or Chief Safety Officer, each transit agency has identified those with authority and responsibility for day-to-day implementation and operation of the agency's SMS.

All agency employees are responsible for safety. Each employee is required to work safely, correct unsafe behavior, identify and report safety hazards, and abstain from performing any task that the person feels could injure themselves or others.

3.2.4. Safety Committee(s)

Some agencies have safety committees and others incorporate safety into other activities to ensure that the system is operated and maintained in a safe manner. The Safety Committee can support SMS by informing and assuring agency management of safety issues affecting the agency and addressing safety issues assigned to it by the agency's executive management.

3.3. Integration with Public Safety and Emergency Management

There are several internal and external programs that may affect safety management. Refer to Participating Agency Addenda for agency-specific integration of programs and a list of the plans and procedures that support the transit agency's public safety and emergency management activities.

3.4. Safety Performance Targets

The transit agencies have established targets that represent a quantifiable, measurable safety performance or condition. The transit agencies will regularly monitor the performance of their system to ensure they are meeting their targets and improving safety outcomes. At least annually, when reviewing and updating their ASP, the transit agencies will evaluate their safety performance to determine whether they should change their safety performance targets. Agency safety performance targets are categorized below by safety performance measures:

- **Performance Measure: Fatalities** – Total number of reportable[4] fatalities and rate per total unlinked passenger trips, by mode.
- **Performance Measure: Injuries** – Total number of reportable injuries and rate per total unlinked passenger trips, by mode.
- **Performance Measure: Safety Events** – Total number of reportable events and rate per total vehicle miles, by mode.
- **Performance Measure: System Reliability** – Mean distance between failures, by mode.

[3] A Chief Safety Officer may only serve in other operational or maintenance capacities if they are employed by a transit agency that is a small public transportation provider as defined CFR Part 673, or a public transportation provider that does not operate a rail fixed guideway public transportation system.

[4] The thresholds for "reportable" fatalities, injuries, and events are defined in the National Transit Database Safety and Security Reporting Manual, available at https://www.transit.dot.gov/ntd/2019-ntd-safety-and-security-policy-manual.

Refer to Participating Agency Addenda for safety performance targets specific to each Participating Agency, as applicable.

TDOT will coordinate with the Participating Agencies to make the safety performance targets available to the state's Metropolitan Planning Organizations (MPOs), as applicable, to aid in the planning process. To the extent possible, TDOT will facilitate coordination with the MPOs for setting safety performance targets. MPOs that represent the participating agencies include:

Bristol MPO
Clarksville MPO
Cleveland MPO
Jackson MPO
Johnson City MPO
Kingsport MTPO
Knoxville TPO
Nashville MPO

3.5. SMS Documentation and Records

At all times, the transit agency will maintain documents that set forth in this ASP, including those related to the implementation of its SMS and result from SMS processes and activities. The transit agency will maintain documents that are included in whole, or by reference, that describe the programs, policies, and procedures that the agency uses to carry out its ASP. These documents will be made available upon request by the FTA or other federal entity. The transit agency will maintain these documents for a minimum of three years after they are created.

3.6. Employee Safety Reporting

Each transit agency will establish and implement an employee safety reporting program that allows employees and contractors to report safety conditions or hazards to senior management, which describes the protections for employees who report safety conditions or hazards, and which describes employee behaviors that may result in disciplinary action.

Refer to the Participating Agency Addenda for agency-specific employee safety reporting program descriptions.

4. Safety Risk Management

4.1. Introduction

This chapter provides detail on Safety Risk Management (SRM). SRM includes the activities that a public transportation agency undertakes to control the probability or severity of the potential consequence of hazards. Major SRM sub-components include Hazard Identification and Analysis and Safety Risk Evaluation and Mitigation. Figure 1 below summarizes the six basic steps of SRM.

Figure 1. Safety Risk Management Process

1. DEFINE THE SYSTEM or ASSET

- Define the physical and functional characteristics and understand and evaluate the people, procedures, facilities, equipment, and environment.

2. IDENTIFY HAZARDS

- Identify hazards and incidents or undesired events
- Determine the causes of hazards

3. ASSESS HAZARDS

- Determine probability
- Determine the severity without controls
- Decide to accept risk or eliminate/control

4. RESOLVE or MITIGATE THE HAZARDS

- Assume risk or
- Implement corrective action
  - Eliminate
  - Control

5. RE-ASSESS HAZARD

- Assess mitigation or control for effectiveness
- Apply additional mitigations or controls if risk is not within acceptable levels

6. FOLLOW-UP

- Monitor for effectiveness
- Monitor for unexpected hazards

4.2. Hazard Identification and Analysis

The first step in a hazard analysis is defining the systems and sub-systems subject to hazards, followed by identifying specific physical and procedural hazards related to the identified systems and subsystems.

4.2.1. System Description

The TDOT ASP covers the public transportation systems listed in Table 1 and described further below. These Participating Agencies are a mix of fixed route and demand systems.

Table 1. Agency Descriptions

Agency	Number of Fixed Route Bus Vehicles	Number of Paratransit Vehicles	Number of routes	Annual Vehicle Revenue Miles	Annual Unlinked Trips
Bristol Tennessee Transit	6	4	6	183,071 (2017)	62,542 (2017)
Clarksville Transit System	16	10	11	1,529,584 (2018)	696387 (2018)
SETHRA - Cleveland Urban Area Transit System	7	11	5	361,330 (2017)	149,446 (2017)
East Tennessee Human Resource Agency	0	100 vans	N/A	4,475,998 (2017)	269,540 (2017)
First Tennessee Human Resource Agency	0	100+ vans	N/A	2,557,165 (2016)	163,433 (2016)
Jackson Transit Authority	13	7	11	774,480 (2017)	504,281 (2017)
Johnson City Transit	15	12	11	684,857 (2017)	668,161 (2017)
Kingsport Area Transit Service	7	6	6	323,618 (2017)	173,992 (2017)
Knox County Community Action Committee Transit		37	N/A	1,420,705 (2017)	163,593 (2017)
Knoxville Area Transit	72	25	27	3,236,168 (2019)	2,748,602 (2019)
City of Murfreesboro Transportation Department	7		7	249,111 (2017)	250,808 (2017)

Bristol Tennessee Transit

The Bristol Tennessee Transit operates six buses over six fixed routes of service from 6:15am until 6pm Monday through Friday (except city observed holidays). The Bristol Tennessee Transit also operates four vans that provide Americans with Disabilities Act (ADA) service and Job Access service.

Clarksville Transit System

The Clarksville Transit System operates eighteen buses over eleven fixed routes of service from Monday - Friday 4:40am-9pm and Saturday 6:40am to 9pm (except certain city observed holidays). The Clarksville Transit System also operates eleven vans that provide service. The mission of the Clarksville Transit System is to plan, implement, maintain and manage a public transportation system that allows for maximum mobility for the community with an emphasis on safety, quality and efficiency.

Cleveland Urban Area Transit System

Cleveland Urban Area Transit System (CUATS) is operated by the Southeast Tennessee Human Resource Agency (SETHRA). CUATS operates seven buses over five fixed routes with service from 6am - 7pm Monday through Friday (except city observed holidays). The CUATS also operates eleven vans that provide ADA service and Job Access service.

East Tennessee Human Resource Agency

East Tennessee Human Resource Agency (ETHRA) operates over 100 vans that provide ADA and Job Access services from 7am – 5:30pm Monday through Friday (except city observed holidays).

ETHRA Public Transit provides door to door transportation services with flexible schedules to meet the needs of its passengers. ETHRA's Public Transit's goal is to provide affordable, safe, dependable public transportation.

First Tennessee Human Resource Agency

First Tennessee Human Resource Agency (FTHRA) operates over six fixed routes of service from 6:15am until 6pm Monday through Friday (except city observed holidays). The Bristol Tennessee Transit also operates four vans at provide ADA service and Job Access service.

Jackson Transit Authority

The Jackson Transit Authority (JTA) operates 13 buses over 11 fixed routes of service from 6am until 10:30pm Monday through Saturday (except city observed holidays). Jackson Transit Authority also operates seven vans that provide ADA service and Job Access service.

Johnson City Transit

Johnson City Transit (JCT) operates 15 buses over 11 fixed routes of service from 6:15am until 6:15 pm Monday through Friday and 8:15am through 5:15pm Saturday (except city observed holidays). Jackson Transit Authority also operates seven vans that provide ADA service and Job Access service.

Kingsport Area Transit Services

The Kingsport Area Transit Services (KATS) operates seven buses over six fixed routes of service from 7:30am until 5:30pm Monday through Friday (except city observed holidays). Kingsport Area Transit Services also operates six vans that provide ADA service and Job Access service. The KATS bus and van service is a valuable asset to the community and the city is encouraged by its progress and growth. These services are provided to residents of the city of Kingsport with a population of over 53,000.

Knox County Community Action Committee Transit

Knox County CAC operates over 37 vans that provide ADA and Job Access services from 5am through 9pm Monday through Saturday (except city observed holidays). Limited employment transportation is provided twenty-four (24) hours a day, seven (7) days a week. Knox County CAC Transit provides accessible, demand response public transportation services to the residents of Knox County who live within Knox County outside of the City of Knoxville, to those individuals who live within the City of Knoxville outside the KAT service area, and to those city residents who are not served by the KAT fixed route system, including those who live too far from a bus stop or who's destination is not within the KAT service area.

Knoxville Area Transit

The Knoxville Area Transit (KAT) operates 72 buses over 27 fixed routes of service from 5:30am until 12:15am Monday – Friday, 7am – 12:15am on Saturdays, and 8:15am to 9:15pm on Sundays (except city observed holidays). Knoxville Area Transit (KAT) also operates 25 vans that provide paratransit service.

City of Murfreesboro Transportation Department

The City of Murfreesboro Transportation Department is responsible for the administration and operation of public transportation service (Rover) within the City of Murfreesboro. The Rover

system operates seven buses over seven fixed routes of service from 6am through 6pm Monday through Friday that serve designated bus stops. Transit service operations also include demand-response paratransit service as required by ADA and the FTA.

4.2.2. Identifying Hazards

A safety hazard is:

- Any real or potential condition that can cause personal injury or death or damage to or loss of equipment or property,
- A condition that may be a prerequisite to an accident, or
- Is a situation that has the potential to do harm.

Hazards are identified through a variety of sources, including those listed below. In addition, SMS enables every employee to identify hazards through Safety Promotion efforts and non-punitive hazard reporting, described further in Section 6.

- FTA's *Hazard Analysis Guideline for Transit Projects* (January 2000)
- Accident/incident data and experience
- Accident/incident data from other bus systems with similar characteristics
- Hazard scenarios
- Applicable industry standards
- Field assessments and surveys
- Project-specific design data and drawings, reviews, testing, and start-up activities

The following tools and techniques may be used for hazard identification and analysis:

- Preliminary Hazard Analysis (PHA)
- Operational Hazard Assessment (OHA)
- Accident/Incident Analysis
- Job Hazard Analysis (JHA)

4.3. Safety Risk Evaluation

After identifying system-specific hazards, SRM assesses safety risk by first identifying the potential to do harm in the system and then analyzing options to mitigate the hazard to an acceptable level. The process seeks to identify and define as many hazardous conditions as possible and initiate the safety risk mitigation process before those conditions or associated activities cause an accident.

4.3.1. Analyzing Risk

The methodology for analyzing safety risk has two elements: evaluating hazard severity and evaluating hazard probability. The US Department of Defense's *Standard Practice for System Safety, MIL-STD-882E*, establishes system safety criteria guidelines for determining hazard severity and probability. This ASP adapts the MIL-STD-882E Risk Assessment and Hazard Risk Index matrixes to the transit environment for use in the Participating Agencies' safety risk assessment process.

4.3.1.1. Determining Severity

Hazards are rated in terms of their effect on transit customers, employees, the public, and the operating system. Hazard severity is a subjective measure of the worst credible case consequence that results from design inadequacies, component failure or malfunction, human error, environmental conditions, or operating or maintenance practice, and procedure deficiencies. The ratings are illustrated in Figure 2. The categorization of hazards is consistent

with risk-based criteria for severity and reflects the principle that not all hazards pose an equal amount of risk.

Figure 2. Hazard Severity Definition

SEVERITY	CHARACTERISTICS			
	People	Equipment/Services	Financial	Reputational
Catastrophic 1	Several deaths and/or numerous severe injuries *(per event)*	Total loss of equipment or system interruption, requiring months to repair	Estimated loss from the incident in excess of $500,000	Ongoing media coverage, irreparable reputational damage, government intervention (weeks – months)
Critical 2	Low number of deaths and/or serious injury* *(per event)*	Significant loss of equipment or system interruption, requiring weeks to repair	Estimated loss from the incident in excess of $100,000-$499,999	Prolonged media campaign, serious reputational damage, sustained government involvement (days - weeks)
Moderate 3	Minor injury and possible serious injury *(per event)*	Some loss of equipment or system interruption, requiring seven or less days to repair	Estimated loss from the incident in excess of $10,000-$99,999	Adverse media coverage, reputational damage, government involvement
Minor 4	Possible minor injury *(per event)*	Some loss of equipment, no system interruption, less than 24 hours to repair	Estimated loss from the incident in excess of $1,000-$9,999	Local media coverage and some reputational damage
Insignificant 5	No injury	Minor damage to equipment no system interruption, no immediate repair necessary	Estimated loss from the incident is likely less than $1,000	No adverse media coverage or reputational damage

*Per 49 CFR 673, serious injury: 1) Requires hospitalization for more than 48 hours, commencing within 7 days from the date of the injury was received; 2) Results in a fracture of any bone (except simple fractures of fingers, toes, or 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.

4.3.1.2. Determining Probability

The probability that a hazard will occur during the planned life expectancy of the system element, sub-system or component is described qualitatively, in potential occurrences per unit of time, events, population, items, or activity. A qualitative hazard probability is derived from research, analysis, evaluation of safety data from the operating experience of the agency or historical safety data from similar bus systems, and from expert opinion. Figure 3 summarized the hazard probability categories.

Figure 3. Hazard Probability Categories

PROBABILITY LEVEL	SPECIFIC INDIVIDUAL ITEM	FLEET OR INVENTORY	FREQUENCY
Frequent A	Likely to occur frequently in the life of a system	Continuously experienced	> 1 event / month
Probable B	Will occur often in the life of a system	Will occur frequently in the system	> 1 event / year
Occasional C	Likely to occur sometime in the life of an item	Will occur several times	> 1 event / 10 years
Remote D	Unlikely, but possible to occur in the life of an item	Unlikely, but can be expected to occur	> 1 event / 20 years
Improbable E	So unlikely, it can be assumed occurrence may not be expected	Unlikely to occur, but possible	> 1 event / 30 years

4.3.2. Assessing Risk

Together, hazard severity and probability measure a hazard's magnitude and priority for applying the control measures. Hazards are then examined, qualified, addressed, and resolved based on the severity of a potential outcome and the likelihood that such an outcome will occur. The value derived by considering a hazard's severity and probability is the Hazard Risk Index. The resulting risk index is a measure of the acceptability or undesirability of the hazard and is applied to the Risk Assessment Index.

Assignment of a Hazard Risk Index enables agency management to properly understand the amount of risk involved by accepting the hazard relative to what it would cost (schedule, dollars, operations, etc.) to reduce the hazard to an acceptable level.

Figure 4 identifies the Hazard Risk Index based upon hazard severity and probability and outlines the criteria for further action and decision authority based upon each index category. The Hazard Risk Index is used to assist the decision-making process in determining whether a safety risk should be eliminated, controlled, or accepted. This helps prioritize hazardous conditions and focus available resources on the most serious hazards requiring resolution while effectively managing available resources.

For example, if the potential for an accident/incident reveals a Category 1 (catastrophic) occurrence with a Level A (frequent) probability, the assessed level of risk is Unacceptable and the system safety effort is directed toward eliminating the hazard or at the very least to implementing redundant hazard control measures. A Category 1 (catastrophic) or Category 2 (critical) safety risk may be tolerable if it can be demonstrated that its occurrence is highly improbable. This approach provides a basis for logical management decision-making that considers the hazard's severity and probability.

Figure 4. Hazard Risk Index

HAZARD RISK INDICES					
Frequency Or Probability	Severity Category				
	1 Catastrophic	2 Critical	3 Moderate	4 Minor	5 Insignificant
(A) Frequent	1A	2A	3A	4A	5A
(B) Probable	1B	2B	3B	4B	5B
(C) Occasional	1C	2C	3C	4C	5C
(D) Remote	1D	2D	3D	4D	5D
(E) Improbable	1E	2E	3E	4E	5E

LEGEND

Unacceptable - Cannot be accepted as is, **must** be mitigated

Undesirable - Acceptable with Executive-level signoff

Acceptable w/ Review - Acceptable Operational-level signoff

Acceptable - Can be accepted as is.

4.4. Safety Risk Mitigation

4.4.1. Treating Risk

As safety risks are identified, whether through a formal risk assessment or informally such as through employee reporting mechanisms, hazards can be resolved by deciding to either assume the risk associated with the hazard or to eliminate or control the risk. Mitigation to bring a hazard to an acceptable level of risk is applied in the following order of precedence, listed from most effective at the top of the list to least effective mitigations at the bottom:

- Avoidance
- Elimination
- Substitution
- Engineering Controls
- Warnings
- Administrative Controls such as Operations and Maintenance Procedures
- Personal Protective Equipment and Guards

4.4.2. Hazard Tracking

Once mitigations are agreed upon for identified hazards, mitigations are tracked through the agency's safety certification process to ensure all concerns raised have been addressed and mitigated properly. This hazard tracking and certification process may be done through reports, logs, worksheets and/or similar methods that allow for updating if changes occur that impact the findings of the safety analysis. The Participating Agencies use a hazard tracking worksheet in Microsoft Excel to capture and track hazards from analysis through implementation. Refer to Appendix C for a blank copy of the hazard tracking worksheet.

5. Safety Assurance

5.1. Overview

Safety assurance includes safety reviews, evaluations, audits, and inspections, as well as data tracking and analysis and investigations. Safety Assurance encompasses the processes within the transit agency's SMS that ensures the implementation and effectiveness of SRM and ensures that the agency meets or exceeds its safety objectives through the collection, analysis, and assessment of information. Each transit agency will conduct an annual review of the effectiveness of its safety risk mitigations through its safety assurance efforts.

5.2. Safety Performance Monitoring and Measurement

SMS generates data and information that senior management need to evaluate whether implemented safety risk mitigations are appropriate and effective, and how well an agency's safety performance fits with their established safety objectives and safety performance targets. Safety performance monitoring will occur through routine monitoring of operations and maintenance activities. It also includes risk monitoring to track implementation and success of mitigations and controls put in place to manage risk.

Each Participating Agency will establish audit and evaluate safety in compliance with this ASP and SMS. The programs will:

- Monitor compliance and sufficiency of procedures for operations and maintenance
- Monitor operations to identify ineffective, inappropriate, or unimplemented safety risk mitigations
- Conduct investigations of safety events to identify causal factors
- Monitor information from safety reporting systems
- Document audit outcomes
- Collect and track safety data

5.3. Management of Change

Each Agency under this ASP will re-evaluate safety when significant change occurs within the agency. These changes may include:

- New contractor providing service
- New buses brought into fleet
- New or changed routes
- Other changes that might have a safety impact.

If the change has a safety impact, risk associated with the change will be evaluated, treated and documented. If the change does not have a safety impact, no further steps will be taken.

5.4. Continuous Improvement

Each agency will evaluate their SMS program annually to identify areas of improvement and any changes that require input for the agency to grow in safety management.

6. Safety Promotion

6.1. Introduction

Agencies under this plan will utilize Safety Promotion to communicate and disseminate safety information to strengthen the safety culture. Safety Promotion includes safety lessons learned, reporting systems, recommendations based on safety metrics, and safety training. The goal is to foster a positive safety culture where employees receive ongoing training and updates of safety progress; feel comfortable reporting safety issues or concerns; and understand why safety is important and how they impact safety.

6.2. Safety Communication and Culture

6.2.1. Safety Communication

Transit agencies will communicate safety and safety performance information throughout the agency's organization that, at a minimum, conveys the TDOT safety management policy statement in Section 2.1 above; each covered agency's employee safety reporting program procedures and policies; and. information on hazards and safety risks relevant to employees' roles and responsibilities. The communication will be used to inform employees of safety actions taken in response to reports submitted through an employee safety reporting program.

The Clarksville Transit System (CTS) communicates the safety standards and its safety policy through methods that involve both people and technology. CTS provides annual training each year to all employees, and during the training, safety goals and standards are described. Videos of incidents are shown, and discussion on what could have been done differently are had in each class. CTS also sets up sign postings, and announcements on the TV in the employee day room that describe what is happening in the safety policy at any given moment. There are also safety committee and sub-committee meetings held every few months to discuss safety incidents that have happened, and what could be done to create a safer work environment. Emails to employees are also sent out by senior management that give caution on current affairs, as well as methods to stay safe.

6.2.2. Dissemination of Lessons Learned

Transit agencies will review lessons learned from incidents, accidents and reported hazards and provide feedback regarding findings. This communication is an important step in letting employees know that they are important to the agency.

6.3. Competencies and Training

Each transit agency will establish and implement a safety training program for all employees and contractors directly responsible for safety in the agency's public transportation system. The training program must include refresher training, as necessary. Safety training will also be part of new-hire training and specific job safety training. Training and competencies of all staff will be documented and tracked.

Refer to the Participating Agency Addenda for agency-specific safety training programs.

6.4. Contractor Safety (as applicable)

When contracting for services that have a safety component and/or may impact safety or assessed risk, procurement language and specification requirements will be included, as applicable. Contractors will demonstrate job-appropriate competencies and training that meet or exceed the requirements of the agency.

Appendix A – Definitions

Accident	An Event that involves any of the following: A loss of life; a report of a serious injury to a person; a collision of public transportation vehicles; a runaway train; an evacuation for life safety reasons; or any derailment of a rail transit vehicle, at any location, at any time, whatever the cause.
Accountable Executive	A single, identifiable person who has ultimate responsibility for carrying out the Agency Safety Plan of a public transportation agency; responsibility for carrying out the agency's Transit Asset Management Plan; and control or direction over the human and capital resources needed to develop and maintain both the agency's Agency Safety Plan, in accordance with 49 U.S.C. 5329(d), and the agency's Transit Asset Management Plan in accordance with 49 U.S.C. 5326.
Agency Safety Plan (ASP)	The documented comprehensive agency safety plan for a transit agency that is required by 49 U.S.C. 5329 and 49 CFR 673.
Assessment	An estimation of the size/scope of risk or quality of system or procedure.
Cause	Events that, result in a hazard or failure. Causes can occur by themselves or in combinations.
Change	To modify, alter, or make different.
Chief Safety Officer (CSO)	An adequately trained individual who has responsibility for safety and reports directly to a transit agency's chief executive officer, general manager, president, or equivalent officer. A Chief Safety Officer may not serve in other operational or maintenance capacities, unless the Chief Safety Officer is employed by a transit agency that is a small public transportation provider as defined in this part, or a public transportation provider that does not operate a rail fixed guideway public transportation system.
Configuration Management	A management process for establishing and maintaining consistency of a product's performance, functional and physical attributes with its requirements, design, and operational information throughout its life.
Control	Anything that mitigates the risk of a hazard's effects. A control is the same as a safety requirement. All controls are written in requirement language.
Effect	The effect is a description of the potential outcome or harm of the hazard if it occurs in the defined system state.
Equipment	A complete assembly, operating either independently or within a sub-system or system, that performs a specific function.
Equivalent Authority	An entity that carries out duties similar to that of a Board of Directors, for a recipient or subrecipient of FTA funds under 49 U.S.C. Chapter 53, including sufficient authority to review and approve a recipient or subrecipient's Public Transportation Agency Safety Plan.
Event	Any Accident, Incident, or Occurrence.
Hazard	Any real or potential condition that can cause injury, illness, or death to people; damage to or loss of a system, equipment, or property; or damage to the environment. A hazard is a condition that is a prerequisite to an accident or incident.

Hazard Tracking	A closed-loop means of ensuring that the requirements and mitigations associated with each hazard that has associated medium or high risk are implemented. Hazard tracking is the process of defining safety requirements, verifying implementation, and re- assessing the risk to make sure the hazard meets its risk level requirement before being accepted.
Human Factors	A multidisciplinary effort to generate and compile information about human capabilities and limitations and apply that information to equipment, systems, facilities, procedures, jobs, operations, environments, training, staffing, and personnel management for safe, comfortable, efficient and effective human performance.
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.
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.
Maintenance	Any repair, adaptation, upgrade, or modification of equipment or facilities. This includes preventive maintenance.
Mitigation	Actions taken to reduce the risk of a hazard's effects.
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.
Oversight	To validate the development of a defined system and verify compliance to a pre-defined set of standards.
Performance Measure	An expression based on a quantifiable indicator of performance or condition that is used to establish targets and to assess progress toward meeting the established targets.
Performance Target	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.
Probability	An expression of often an event is expected to occur.
Process	A set of interrelated or interacting activities which transforms inputs into outputs.
Public Transportation Agency Safety Plan (PTASP)	A safety plan based on the Safety Management System approach. The FTA's PTASP Final Rule (49 CFR Part 673) requires States and certain operators of public transportation systems that receive Federal financial assistance under 49 USC Chapter 53 to develop and implement ASPs.
Public Transportation Safety Certification Training Program	The certification training program established either for Federal and State employees, or other designated personnel, who conduct safety audits and examinations of public transportation systems, and employees of public transportation agencies directly responsible for safety oversight, established through interim provisions in accordance with 49 U.S.C. 5329(c)(2), or the program authorized by 49 U.S.C. 5329(c)(1)
Qualitative Data	Subjective data that is expressed as a measure of quality; nominal data.

Quantitative Data	Objective data expressed as a quantity, number, or amount; allows for more rational analysis and substantiation of findings.
Requirement	An essential attribute or characteristic of a system. It is a condition or capability that must be met or passed by a system to satisfy a contract, standard, specification, or other formally imposed document or need.
Reportable Event	A safety or security event occurring on 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, as defined in the National Transit Database Safety and Security Reporting Manual (2019): • A fatality confirmed within 30 days of the event • An injury requiring immediate medical attention away from the scene 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 vehicle • An evacuation for life safety reasons
Risk	The composite of predicted severity and likelihood of the potential effect of a hazard in the worst credible system state. (1) **Initial.** The composite of the severity and likelihood of a hazard considering only verified controls and documented assumptions for a given system state. It describes the risk at the preliminary or beginning stage of a proposed change, program or assessment. (2) **Residual.** The risk that remains after all control techniques have been implemented or exhausted and all controls have been verified. Only verified controls can be used to assess residual risk.
Risk Acceptance	Agreement by the appropriate management official that he/she understands the safety risk associated with the change and he/she accepts that safety risk.
Safety	Freedom from unintentional harm.
Safety Assurance	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 Culture	The product of individual and group values, attitudes, competencies, and patterns of behavior that determine commitment to, and the style and proficiency of, an organization's safety management. In addition, the four key components of a safety culture are reporting culture (encourage employees to divulge information about all hazards that they encounter), just culture (employees are held accountable for deliberate violations of the rules but are encouraged and rewarded for providing essential safety-related information), flexible culture to changing demands), and learning culture (willing to change based on safety indicators and hazards) uncovered through assessments, data, and incidents).
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 in regard to 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 safety risks to the lowest acceptable level practicable.
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 Requirement	A control written in requirements language.
Safety Risk Management (SRM)	A process within a transit agency's ASP for identifying hazards and analyzing, assessing, and mitigating safety risk. SRM is a formalized, proactive approach to system safety and applied to all changes to ensure all risks are identified and mitigated prior to the change being made. It provides a framework to ensure that once a change is made, it continues to be tracked throughout its lifecycle.
Serious Injury	Any injury which: (1) Requires hospitalization for more than 48 hours, commencing within 7 days from the date of the injury was received; (2) Results in a fracture of any bone (except simple fractures of fingers, toes, or 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.
Severity	The measure of how bad the results of an event are predicted to be. Severity is determined by the most probable outcome.
Source (of a hazard)	Any potential origin of system failure, including equipment, operating environment, human factors, human-machine interface, procedures, and external services.
State Safety Oversight Agency (SSOA)	An agency established by a State that meets the requirements and performs the functions specified by 49 U.S.C. 5329(e) and the regulations set forth in 49 CFR part 674.
System	An integrated set of constituent pieces that are combined in an operational or support environment to accomplish a defined objective. These pieces include people, equipment, information, procedures, facilities, services, and other support services.
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
Validation	The process of proving that the right system is being built, i.e., that the system requirements are unambiguous, correct, complete, and verifiable.
Verification	The process that ensures that the system requirements have been met by the design solution and the system is ready to be used in the operational environment for which it is intended.

Appendix B – Acronyms and Abbreviations

ADA	Americans with Disabilities Act
CAP	Corrective Action Plan
CFR	Code of Federal Regulations
CUATS	Cleveland Urban Area Transit System (operated by SETHRA)
ETHRA	East Tennessee Human Resource Agency
FHA	Fault Hazard Analysis
FTA	Federal Transit Administration
FTHRA	First Tennessee Human Resource Agency
JHA	Job Hazard Analysis
JTA	Jackson Transit Authority
JTA	Johnson City Transit
KAT	Knoxville Area Transit
KATS	Kingsport Area Transit Services
Knox County CAC	Knox County Community Action Committee Transit
MPO	Metropolitan Planning Organization
OHA	Operational Hazard Assessment
OSHA	Occupational Safety and Health Administration
Participating Agencies	The Tennessee public transportation agencies covered by the joint PTASP
PHA	Preliminary Hazard Analysis
PM	Preventative Maintenance
PTASP	Public Transportation Agency Safety Plan
SETHRA	Southeast Tennessee Human Resource Agency
SMS	Safety Management Systems
SRM	Safety Risk Management
TAM	Transit Asset Management
TDOT	Tennessee Department of Transportation

Appendix C – Hazard Tracking Worksheet

Preliminary Hazard Analysis														
General Description			Hazard Cause / Effect			Risk Index			Corrective / Mitigation Action		Risk Index			
Reference	Overall System	Hazard	Potential Causes	Operational Effects	Safety Effects	Severity	Probability	Risk	Design Mitigations	Operational Mitigations	Resolution Severity	Resolution Probability	Resolution Risk	
Use a number to track hazard, ie Bus #1	BUS (or other system)	Trip and Fall on Bus	Wet floor	Delay of service	Minor to sever injury	3	B	3B	Slip resistant Flooring	Driver Training	3	C	3C	
			Hard breaking						Handholds placed regulary					
			Human error (standing on moving vehicle											

Participating Agency Addenda

These Participating Agency Addenda provide additional agency-specific information to supplement the joint ASP, including agency safety roles and responsibilities, safety training programs, safety reporting programs, and safety-related agency plans and procedures, as applicable. Each addendum applies only to the agency for which it is written and approved.

Addendum 1 – Clarksville Transit System

200 Legion St, Clarksville, TN 37040

ASP and Addendum 2 Approvals

Approved by: _____ _____
Veronica Williams Date
Safety Manager

Approved by: _____ _____
Arthur Bing Date
Interim Director (Accountable Executive)

Approved by: _____ _____
NAME Date
(Board of Directors/City Council/City Commissioner)

Concurrence: _____ _____
NAME Date
Director of Operations

Concurrence: _____ _____
Chris Yarbrough Date
Director of Maintenance

Concurrence: _____ _____
NAME Date
Director of Training

Concurrence: _____ _____
NAME Date
TITLE

Concurrence: _____ _____
NAME Date
TITLE

Concurrence: _____ _____
NAME Date
TITLE

Safety Roles and Responsibilities

The matrix below names the positions at Clarksville Transit System (CTS) responsible for the safety roles and responsibilities described in Section 3.2 of this ASP.

Clarksville Transit System Roles & Responsibility	Arthur Bing/Interim Director	Veronica Williams/ Transportation Operations Supervisor	Chris Yarbrough/ Equipment & Facilities Maintenance Supervisor	Scott Graves/ Grants Analyst	Troy Suggs/ Grounds & Facilities Maintenance Supervisor
Accountable Executive (AE)	A, O				
Chief Safety Officer (CSO) (SMS Implementation)	A, O	P			
Safety Management Policy	A, O	P		S	R
Safety Risk Management (Hazard ID/Mitigation)	A, O	P	S		
Safety Assurance (Audits/Inspections)	A, O	P	P		
Safety Promotion (Communication/Training)	A, O	P	P	S	S
Hazard Identification & Safety Risk Assessment	A, O	P	P	S	S
Safety Reporting & Follow-up	A, O, R	P, R		S	S
Safety Performance Targets & Measurement	A, O, P	S			
Accident Investigation	A, O	O	S		

KEY

A	Approval
O	Oversight
P	Primary
S	Secondary/Support
R	Review/Comment
N	Not Applicable/No Significant Role

Integration with Public Safety and Emergency Management

CTS participates in county wide table top emergency management drills and local first responder live action drills annually. CTS also attends all meetings of the Emergency Management Agency. CTS attends monthly meetings with the mayor, Clarksville Police and Fire, and other City divisions to discuss incidents and improvements.

Safety Performance Targets for FY2023

FY2022 Annual Vehicle Revenue Miles: 1,556,967

Rate of Fatalities per 100K VRM	Rate of Injuries Per 100K VRM	Rate of Safety Events Per 100 VRM	Miles between Major Mechanical Failures (System Reliability)
0	0.15	0.20	34,364

Hazard Identification and Tracking

Clarksville Transit accepts the hazard identification and tracking method established in the joint plan.

CTS also has a worksheet that all senior staff members fill out anytime an incident occurs. The incident is described in detail, and enables CTS to see if the contributing factors are employee related, environment related, or public related. The incident worksheet is reviewed during Safety Committee & Sub-Committee meetings, and any resolutions that come from said review are disseminated to CTS staff to create safer work practices.

As consistency begins to occur amongst incidents, the CTS Safety Committee will identify what risk mitigations are in place, and if they are still effective. If these mitigations are no longer effective, the CTS Safety Committee will work with different employee groups at CTS to decide what would be a better method of mitigation.

Safety Training Program

CTS requires training in the following safety-related areas:

- Driver training, including for new bus operators
- Safety training, recurrent and in response to specific problems
- General Emergency Plan, annual training

Employee Safety Reporting Program

Clarksville Transit has implemented a standard employee safety reporting form and anonymous collection drop box. The drop box will be checked once a week, and submissions will be investigated and dealt with accordingly. Behaviors submitted that will not be protected under this program, and may result in disciplinary action, are any behaviors that may result in injury, accidents, incidents, or any type of vehicle damage.

The CTS employee responsible for tracking and implementing all safety mitigations is the CTS Safety Manager.

CTS Safety Committee & Sub-Committee

The Clarksville Transit System has implemented a safety committee comprised of the Fixed Route Bus Supervisor, the Paratransit Supervisor, the Grants Analyst, the Grounds and Facilities Maintenance Supervisor, and the Director of CTS. This committee is to meet once every quarter, and on as needed basis for additional meetings. The meetings will be used to discuss continual safety issues, additional needed trainings, and updates to goals and objectives.

The Clarksville Transit System has also comprised and implemented a safety sub-committee. This Committee will meet once a quarter to discuss changes that have been made that involve the safety of operations, and other safety goals and objectives. This committee is comprised of a group of front-line workers, the grants analyst, and senior staff. This committee provides insight to worker goals and requests that should be raised to the safety committee for implementation.

Safety-Related Agency Documents

- Accident/Incident Reporting and Investigation – Management of the Public Safety and Security Plan
- Employee Safety Manual, 1994
- General Emergency Plan, revised May 2011
- Operations Personnel Handbook, June 2010

- Security and Emergency Preparedness Plan, August 2002
- System Safety Program Plan, May 2005