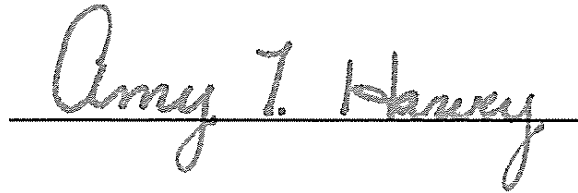


**I, Amy T. Harvey, Deputy Town Clerk of the Town of Chapel Hill, North Carolina, hereby certify that the attached is a true and correct copy of (2022-11-02/R-2) adopted by the Chapel Hill Town Council on November 02, 2022.**

**This the 3rd day of November 2022.**

  
\_\_\_\_\_

**Amy T. Harvey  
Deputy Town Clerk**



**A RESOLUTION APPROVING THE PUBLIC TRANSPORTATION AGENCY SAFETY PLAN (PTASP) FOR CHAPEL HILL TRANSIT (2022-11-02/R-2)**

WHEREAS, the Federal Transit Administration (FTA) published the Public Transportation Agency Safety Plan (PTASP) Final Rule (49 CFR Part 673), which requires certain operators of public transportation systems that receive federal funds under FTA's Urbanized Area Formula Grants to develop safety plans and included processes and procures to implement Safety Management Systems (SMS); and

WHEREAS, the PTASP must include safety performance targets and transit operators must certify they have a safety plan in place meeting the requirements of the rule by December 31, 2022; and

WHEREAS, the PTASP for Chapel Hill Transit was written to comply with FTA requirements and to support Chapel Hill Transit's objective of providing transportation services responsive to the needs of residents of the Towns of Chapel Hill and Carrboro and visitors to the University of North Carolina at Chapel Hill; and

WHEREAS, Chapel Hill Transit developed the PTASP to integrate safety into all operations and services; and

WHEREAS, Chapel Hill Transit will use the procedures contained in the PTASP to continue to improve the safety and security of operations and services.

NOW, THEREFORE, BE IT RESOLVED by the Council of the Town of Chapel Hill that the Council hereby approves the attached Public Transportation Agency Safety Plan (PTASP) for Chapel Hill Transit as provided in the November 2, 2022 meeting materials.

This the 2<sup>nd</sup> day of November, 2022.

Public Transportation Agency Safety Plan

# Town of Chapel Hill Transit



August 2022

## Table of Contents

Section 1. Transit Agency Information.....	5
General Information .....	5
Section 2. Plan Development, Approval, and Updates .....	6
Section 3. Safety Performance Targets.....	7
Section 4. Safety Management Policy.....	9
Safety Management Policy Statement .....	9
Safety Management Policy Communication.....	12
Authorities, Accountabilities, and Responsibilities.....	12
Accountable Executive (AE): .....	12
Chief Safety Officer (CSO) .....	13
Roll of Staff to Develop and Manage Safety Management Systems (SMS).....	13
Accountable Executive .....	13
Chief Safety Officer (CSO) .....	14
Supervisors.....	14
Employees.....	14
Key Staff .....	14
Employee Safety Reporting Program (ESRP) .....	14
Immediate Action Required .....	16
Delayed Action Required .....	16
Role of Supervisor .....	16
CHT Responsibility.....	17
Section 5. Safety Risk Management.....	17
Safety Hazard Identification.....	17
Personnel .....	18
Assets .....	18
System.....	18
Hazard Identification Procedure.....	19
Safety Risk Assessment .....	19
Safety Risk Mitigation .....	22
Section 6. Safety Assurance .....	23
Performance Monitoring and Measurement .....	23
Maintenance.....	25

Maintenance Standards and Procedures.....	25
Operator Inspections .....	25
Daily Servicing and Inspections.....	25
Mileage-Based Maintenance Inspections.....	25
Operations .....	26
Facility Monitoring.....	26
Frequency.....	26
Reporting.....	26
Hazard Resolution .....	26
Follow-up .....	26
Documentation .....	26
Route/Operations Safety .....	27
Safety Events.....	27
Collision and Incident Reporting Process.....	27
Notification .....	27
At-Scene Procedures.....	27
Investigation.....	28
Collision Review Process.....	28
Hazard Resolution .....	29
Follow-up .....	29
Internal Reporting.....	29
Documentation .....	29
Performance Measures.....	30
Maintenance .....	30
Operations .....	30
Safety .....	30
Section 7. Safety Promotion .....	31
Operator Selection.....	32
Hiring Practices .....	<b>Error! Bookmark not defined.</b>
Training .....	<b>Error! Bookmark not defined.</b>
Initial Bus Operator Training.....	<b>Error! Bookmark not defined.</b>
System Modification Design Review and Approval .....	<b>Error! Bookmark not defined.</b>
General Process .....	<b>Error! Bookmark not defined.</b>

Modification Design Review .....	<b>Error! Bookmark not defined.</b>
Modification Design Approval.....	<b>Error! Bookmark not defined.</b>
Monitoring .....	<b>Error! Bookmark not defined.</b>
Documentation .....	<b>Error! Bookmark not defined.</b>
Routes .....	<b>Error! Bookmark not defined.</b>
Section 8. Definitions of Terms Used in the Safety Plan.....	33
Section 9. Commonly Used Acronyms .....	35
Section 10. Additional Information.....	36
Appendix .....	37

## Section 1. Transit Agency Information

### General Information

Town of Chapel Hill Transit

Accountable Executive: Brian Litchfield

405 Martin Luther King Jr Blvd.

Chapel Hill, NC 27514

Chief Safety Officer: Mark Lowry

919-968-2743

chtransit@townofchapelhill.org

### Modes of Service:

FTA Funding Sources: FTA Section 5307, 5339a, 5339b, 5339c, 5310

### Modes of Service Directly Provided:

Bus (MB)     Demand Response (DR)


CHT does provide transit services on behalf of another transit agency or entity (GoTriangle).

The primary mission of Chapel Hill Transit (CHT) is to provide safe, convenient, affordable, reliable, and responsive public transportation services to residents and visitors of the Chapel Hill, Carrboro, and University of North Carolina communities; to be accessible, efficiently operated and supportive of a healthy environment and a sustainable local economy; and to connect and coordinate with other transportation means in the Research Triangle area providing an alternative for local and regional travel.

CHT is made up of three divisions including the Administrative Division, the Operations Division and the Maintenance Division. Duties of the Operations division of CHT include fixed-route bus services and EZ Rider paratransit service for the mobility-challenged in the communities of Chapel Hill, Carrboro and the University of North Carolina. In addition, CHT operates the Tar Heel Express, a park and ride shuttle service for special events.

<p>The Agency Safety Plan addresses all applicable requirements and standards as set forth in FTA's Public Transportation Safety Program and the National Public Transportation Safety Plan.</p>
--

## Section 2. Plan Development, Approval, and Updates

<b>Name of Entity That Drafted This Plan</b>	Chapel Hill Transit		
<b>Signature by the Accountable Executive</b>	<b>Signature of Accountable Executive</b>	<b>Date of Signature</b>	
		11/17/20	
<b>Approval by the Board of Directors or an Equivalent Authority</b>	<b>Name of Individual/Entity That Approved This Plan</b>	<b>Date of Approval</b>	
	Public Transportation Committee	11/17/20	
	<b>Relevant Documentation (title and location)</b>		
	A copy of the minutes from the November 2020 Public Transportation Committee meeting, approving the Agency Safety Plan, is maintained by the Chief Safety Officer.		
<b>Certification of Compliance</b>	<b>Name of Individual/Entity That Certified This Plan</b>	<b>Date of Certification</b>	
	<b>Relevant Documentation (title and location)</b>		
<b>Version Number and Updates</b>			
<i>Record the complete history of successive versions of this plan.</i>			
<b>Version Number</b>	<b>Section/Pages Affected</b>	<b>Reason for Change</b>	<b>Date Issued</b>
1	All	Initial Agency Safety Plan	12/1/2020
2	System Reliability	Updated target numbers	4/21/2021
3	All	Updated to reflect changes with Bipartisan Infrastructure Law (49 U.S.C 5329(d))	8/1/2022
<b>Annual Review and Update of the Public Transportation Agency Safety Plan</b>			



*Describe the process and timeline for conducting an annual review and update of the Public Transportation Agency Safety Plan.*

CHT's Public Transportation Agency Safety Plan also referred to as Agency Safety Plan, will be jointly reviewed and updated in cooperation with the employee Safety Council in July of each year. The Safety Council will review and approve any changes, sign the revised Agency Safety Plan (ASP), and forward to the CHT's Public Transit Committee for final review and approval.

Along with annual updates, CHT may update the plan if CHT:

- Determines its approach to mitigating safety deficiencies is ineffective;
- Makes significant changes to service delivery;
- Introduces new processes or procedures that may impact safety;
- Changes or re-prioritizes resources available to support Safety Management Systems (SMS) and the Public Transportation Agency Safety Plan (PTASP);
- Changes are made to facilities, equipment or rolling stock with a potential to safety;
- Significant changes to CHT's organizational structure. Revisions will be submitted to CHT's Safety Council and Public Transit Committee. Upon adoption by the Council, revisions will be communicated to CHT's staff.

### Section 3. Safety Performance Targets

**Safety Performance Targets** Specify performance targets based on the safety performance measures established under the National Public Transportation Safety Plan.  
*The following targets were developed based on the transit safety data collected by Chapel Hill Transit from the last three years and anticipated service level changes.*

Mode of Service	Fatalities (Total)	Fatalities (Rate) per 100k VRM	Injuries (Total)	Injuries (Rate) per 100k VRM	Safety Events (Total)	Safety Events (Rate) per 100k VRM	System Reliability
Fixed Route (MB)	0	0	0	0	0	0	25,000
Demand Response/ Paratransit (DR)	0	0	0	0	2.34	0.60	50,000

**Safety Performance Target Coordination**

*Describe the coordination with the State and Metropolitan Planning Organization(s) (MPO) in the selection of State and MPO safety performance targets.*

CHT shares safety performance targets with North Carolina Department of Transportation (NCDOT) and Durham Chapel Hill Carrboro (DCHC) Metropolitan Planning Organization annually as part of our continued coordination of transit data. This data also includes Transit Asset Management Plan updates and anticipated capital replacement schedules. CHT will coordinate, to the maximum extent practicable, with NCDOT and DCHC MPO to support the selection of State and MPO transit safety performance targets.

<b>Targets Transmitted to the State</b>	<b>State Entity Name</b>	<b>Date Targets Transmitted</b>
	North Carolina Department of Transportation	7/15/2022
<b>Targets Transmitted to the Metropolitan Planning Organization(s)</b>	<b>Metropolitan Planning Organization Name</b>	<b>Date Targets Transmitted</b>
	Durham Chapel Hill Carrboro Metropolitan Planning Organization	7/15/2022

## Section 4. Safety Management Policy

### Safety Management Policy Statement

Chapel Hill Transit (CHT) strives to provide safe, reliable, comfortable, and innovative transportation options to every member of the community. The Public Transportation Agency Safety Plan (PTASP) has been developed to integrate safety into all CHT system operations. By using the procedures contained in the PTASP, CHT can continue to improve the safety and security of CHT's operation and services.

This PTASP describes the policies, procedures, and requirements to be followed by management, maintenance, and operations personnel to provide a safe environment for CHT employees, customers, and the general public. The goal of this program is to eliminate the human and fiscal cost of avoidable personal injury and vehicle collisions.

Each department has a responsibility under the PTASP. The Director, Managers and Supervisors shall provide the continuing support necessary to achieve the PTASP objectives. A key to the success of this effort is for employees to be aware that they are accountable for safely performing the requirements of their position. The success of the program also depends on all employees actively identifying potential hazards and making a commitment to the safety of others.

CHT must be aware that decisions and actions often affect the safety of those in other operations. By following the processes described in the PTASP, CHT will continue to improve performance and the safety of the system while creating a culture of safety.

CHT's commitment is to:

- **Support** the management of safety through the provision of appropriate resources that 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 to results as the attention to the results of the other management systems of the organization;
- **Integrate** the management of safety among the primary responsibilities of all managers and employees;
- **Clearly define** for all staff, managers, and employees alike, their accountabilities and responsibilities for the delivery of the organization's safety performance and the performance of CHT's safety management system;
- ◆ **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--to eliminate or mitigate the safety risks of the consequences of hazards resulting from CHT operations or activities to a point which is consistent with an acceptable level of safety performance;
- **Ensure** that no action will be taken against any employee who discloses a safety concern through the employee safety reporting program, unless disclosure indicates, beyond any

reasonable doubt, an illegal act, gross negligence, or a deliberate or willful disregard of regulations or procedures;

- **Comply** with, and wherever possible exceed, legislative and regulatory requirements and standards;
- **Ensure** that sufficient skilled and trained human resources are available to implement safety management processes;
- **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;
- **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 delivered, meeting established safety performance standards.

CHT's Goals for Safety are established as follows:

- In collaboration with the town and university partners, CHT will design, construct, test, and operate a transportation system that achieves an optimum level of safety, exceeding the safety performance of other transit systems of a similar size in the United States.
- Identify and evaluate, then eliminate or control hazards to employees, customers, and the public.
- Meet or exceed all government and industry occupational health and safety standards and practices.
- Maximize the safety of future operations by affecting the design and procurement processes.

The objectives of the PTASP are the means to achieving its goals. They also provide a method of evaluating the effectiveness of CHT's safety efforts. The PTASP objectives are:

- Integrate safety management and hazard control practices within each CHT department.
- Assign responsibilities for developing, updating, complying with, and enforcing safety policies, procedures, and requirements.
- Verify compliance with CHT safety policies, procedures, and requirements through performance evaluations, collision/incident trends, and internal audits.

- Investigate all collisions/incidents, including identifying and documenting the causes for the purpose of implementing corrective action to prevent a recurrence.
- Increase investigation and systematic documentation of near misses.
- Identify, analyze and resolve safety hazards in a timely manner.
- Minimize system modifications during the operational phase by establishing and utilizing safety controls at system design and procurement phases.
- Ensure that system modifications do not create new hazards.
- Train employees and supervisors on the safety components of their job functions.

CHT takes these commitments seriously as the lives of CHT customers, employees and the general public depend on CHT's ability to operate in a culture of safety.



---

Accountable Executive

11/17/20

---

Date

## Safety Management Policy Communication

CHT realizes the importance of ensuring its employees and customers are aware of CHT safety management policies and procedures to effectively manage the system's day to day operations. To do this, CHT relies on several forms of effective communication.

**Employees:** CHT is constantly evaluating existing policies and procedures to verify their effectiveness. To do this, CHT seeks input from all staff, Town Department of Public Works and Human Resources Department, to determine if change is necessary based on trends, data analysis, operational changes or new assets. Several methods are used to communicate the Safety Management Policy Statement and/or procedure changes, including:

- ◆ Employee memorandum or policy change notice
- ◆ Bulletin board notices
- ◆ Transit Employee Forum
- ◆ Departmental meetings
- ◆ Monthly safety meetings

CHT includes a training element for safety management policies impacting safety or service delivery and is conducted before the policy effective date. New policies and procedures are incorporated into orientation training for new employees as well.

Depending on the importance of the policy or procedure change, an acknowledgement signature is required of each employee verifying their understanding of the change.

**Customers:** If a customer policy is changed or added, CHT and its Community Outreach Manager (COM) will notify customers through the following methods:

- ◆ Notice posted on vehicle and facilities including effective date and who to contact for more information
- ◆ Changes to digital customer guidance including schedules and ride guides as appropriate
- ◆ Public Meetings
- ◆ Social Media
- ◆ Any services impacted by policies changes will include outreach as required by Federal Guidance
- ◆ Customer service representatives informing customers scheduling demand response rides

## Authorities, Accountabilities, and Responsibilities

As mentioned in the Safety Policy Statement, the ultimate authority for the success of this PTASP falls to the Accountable Executive (AE), the Chief Safety Officer(CSO), administration and management team, as well as employees fulfilling their commitment to safety on a day-to-day basis support the AE.

**Accountable Executive (AE):** The Accountable Executive will determine, based on feedback from senior staff, the level of Safety Management System (SMS) principals to maintain to ensure a safe work environment, rider experience and community safety. CHT's AE is committed to providing employees

with the tools and training needed to be successful and safe in their roles with CHT. The AE will continually strive to create a culture of safety among the employees, and CHT expects each employee to play a role in maintaining a safe workplace.

CHT's AE is accountable for ensuring that the agency's SMS is effectively implemented throughout the agency's public transportation system. The AE is accountable for ensuring action is taken, as necessary, to address substandard performance in the agency's SMS. He may delegate specific responsibilities, but the ultimate accountability for the transit agency's safety performance cannot be delegated and always rests with the AE.

The current AE, Brian Litchfield, is also the Transit Director and has ultimate responsibility for carrying out the Public Transportation Agency Safety Plan of a public transportation agency; responsibility for carrying out the agency's Transit Asset Management Plan; and control or direction over the human and capital resources needed to develop and maintain both the agency's Public Transportation Agency Safety Plan, in accordance with 49 U.S.C. § 5329(d), and the agency's Transit Asset Management Plan in accordance with 49 U.S.C. § 5326.

**Chief Safety Officer (CSO):** CHT has concluded one CSO will be sufficient to manage the day to day adherence to this Plan and, while in this role, report directly to the AE. As CSO, this individual will monitor safety and security throughout the organization. All departments have been notified of the CSO's role and the established reporting requirements relating to safety-related matters. The CSO has been adequately trained for this role and has the authority and responsibility for day-to-day implementation and operation of CHT's SMS. Along with CSO responsibilities, the CSO is also the Director of Safety and Emergency Management.

CHT's CSO will be responsible for the following:

- ◆ Developing and maintaining SMS documentation;
- ◆ Directing hazard identification and safety risk assessment;
- ◆ Managing updates to the Agency Safety Plan (ASP) in coordination with the Transit Safety Council;
- ◆ Monitoring safety risk mitigation activities;
- ◆ Providing periodic reports on safety performance;
- ◆ Briefing the Accountable Executive and Public Transportation Committee on SMS implementation progress;
- ◆ Coordinating Safety Council meetings;
- ◆ Planning safety management training; and
- ◆ Coordinating with Town and Regional Emergency Management staff.

## Roll of Staff to Develop and Manage Safety Management Systems (SMS)

### Accountable Executive

The Accountable Executive (AE), who also serves as Transit Director, will work with the Chief Safety Officer (CSO) and Administrative staff to adjust the PTASP as needed based on staff feedback, trends, and data analysis. The AE is vested with the primary responsibility for the activities of the transit system and overall safety performance. The AE fulfills these responsibilities by providing the resources

necessary to achieve PTASP goals and objectives by exercising the approval authority for system modifications as warranted. The AE also sets the agenda and facilitates the cooperative decision making of the management team.

### Chief Safety Officer (CSO)

For purposes of managing the SMS and PTASP, the CSO will report directly to the AE to determine strategy, policy, and goals for maintaining safety and security for passengers, employees, and the general public. The CSO will monitor day to day operations and work with staff to identify and mitigate risk through evaluation, feedback, and data analysis.

### Supervisors

Supervisors are responsible for the safety performance of all personnel and equipment under their supervision. They are responsible for the initial investigation of all collisions and incidents, and for reporting these collisions and incidents to the Human Resources, Risk Management and Operations Division

### Employees

All CHT personnel are responsible for performing their work safely and for following established safety-related rules, procedures, and work practices. This includes reporting all collisions, incidents, and hazards to their supervisor per established requirements for the protection of themselves, co-workers, customers, facilities, and equipment.

### Key Staff

CHT staff will be responsible for maintaining high standards of safety, customer service, and security. The Employee Safety Reporting Program (ESRP) will define the employees' role to identify and mitigate risk through open communication to superiors including the CSO and AE. Administrative staff will be instrumental in ensuring action is taken to reduce risk and the whole system is continuously monitored to ensure actions are effective and appropriate.

CHT staff will be involved with updates, modifications and implementation of the PTASP. Each staff member brings a valued perspective to the development of policies and procedures he or she will be expected to implement. Every opportunity will be given for employees and customers to provide input to increasing safety at CHT. Those opportunities include monthly safety meetings, annual employee meetings and training, department meetings, customer and employee surveys, customer feedback through customer service department and an open-door policy with access to all management staff.

### Employee Safety Reporting Program (ESRP)

As stated in the [Safety Management Policy Statement](#), CHT is determined to provide a safe working environment for its employees, customers and the general public. To ensure success, CHT has developed an ESRP to enable employees to report any risk or perceived risk to a supervisor, CSO, or member of administration.

All hazards reported through the Employee Safety Reporting Program go straight to the CSO for review, assessment, investigation, mitigation and follow-up. If the hazard directly impacts the working relationship between two or more employees, the CSO will ensure no retaliation or hostile work environment will take place. CHT will ensure that no action will be taken against any employee who



discloses a safety concern through the respective Employee Safety Reporting Program unless the employee engaged in the following:

- ◆ Willful participation in illegal activity, such as assault or theft;
- ◆ Gross negligence, such as knowingly utilizing heavy equipment for purposes other than intended such that people or property are put at risk; or
- ◆ Deliberate or willful disregard of regulations or procedures, such as reporting to work under the influence of controlled substances

The ESRP allows each employee to report detailed information and observations whether they are a driver in service, maintenance staff, or other on-duty employee. This program dovetails with other methods currently in place to proactively identify hazards or threats. Those methods include but are not limited to the following:

- ◆ Pre/Post Trip Inspections
- ◆ Preventive Maintenance Inspections
- ◆ Employee Evaluations
- ◆ Visual Hazard Reporting
- ◆ Facility Maintenance Plan
- ◆ Service Evaluation and Planning Program
- ◆ Training Program
- ◆ Rider and Public Complaint/Compliment Process
- ◆ Safety and Department Meetings
- ◆ Incident/Collision Policies
- ◆ Safety Council

CHT's Employee Safety Reporting Program encourages employees who identify safety concerns in their day-to-day duties to report them to supervisors, CSO and senior management in good faith without fear of retribution. There are many ways employees can report safety conditions:

- ◆ Report conditions directly to the dispatcher, who will add them to the daily Operations Log.
- ◆ Report conditions anonymously via locked comment box in the driver area.
- ◆ Report conditions directly to any supervisor, manager, or director.

Examples of information typically reported include:

- ◆ Safety concerns in the operating environment (for example, county or town road conditions or the condition of facilities or vehicles);
- ◆ Policies and procedures that are not working as intended (for example, insufficient time to complete pre-trip inspection);
- ◆ Events that senior managers might not otherwise know about (for example, near misses, employee harassment); and
- ◆ Information about why a safety event occurred (for example, radio communication challenges).

CHT has developed an Incident Report Form used to identify and provide information about hazards observed by CHT employees while on-duty. The three-page form identifies vital information to assist employees in determining an action to mitigate the threat or hazard. This form is not meant to replace

collision forms currently being used, but instead used in conjunction with the collision forms. It is proactive reporting method to identify a perceived threat or hazard, potentially endangering employees, customers or the general public. The form serves a dual role as an incident, illness, and near miss report. The form is located in Appendix of this Plan.

Effective December 31, 2020 all CHT employees will receive one hour of training on the procedures associated with the Incident Report Form. The training will cover the following areas:

- ◆ Locations of blank Incident Report Form;
- ◆ When to use an Incident Report Form;
- ◆ Capturing critical information on the form;
- ◆ Notification process depending on the hazard;
- ◆ Proper assessment of the reported hazard;
- ◆ Levels of likelihood of repeat;
- ◆ Supervisor and CSO role in completing the form; and
- ◆ Follow-up process to determine effectiveness of mitigation.

The following process is used as part of the ESRP.

#### Immediate Action Required

If an employee has identified a hazard which is perceived to be a risk to the employee, fellow employees, passengers, or the public, the hazard must be reported immediately to the on-duty supervisor/dispatcher. Once reported, the employee or volunteer must determine if immediate action is necessary to prevent additional risk. If immediate action is required, the employee will communicate the risk of no action to the supervisor before taking action if time allows. Once action has been taken to mitigate the potential harm to the employee, customers, or property, employee will notify a supervisor of the results of actions taken. Once time allows, the employee will complete the Incident Reporting Form with complete information and give to the supervisor on duty.

#### Delayed Action Required

Once a hazard has been identified, the CHT employee should assess if the hazard requires immediate action to reduce the risk or if delayed action can be taken. If the employee determines delayed action is appropriate a full report must be completed using the Incident Report and submitted to the on-duty supervisor.

#### Role of Supervisor

The on-duty supervisor is responsible for advising the employee on immediate action or delayed action to mitigate a hazard. The supervisor must then review the Incident Report to ensure all information is included adding additional information from their perspective. Once the form is complete it must be reviewed by the CSO to determine action necessary, investigate root cause of hazard and follow-up.

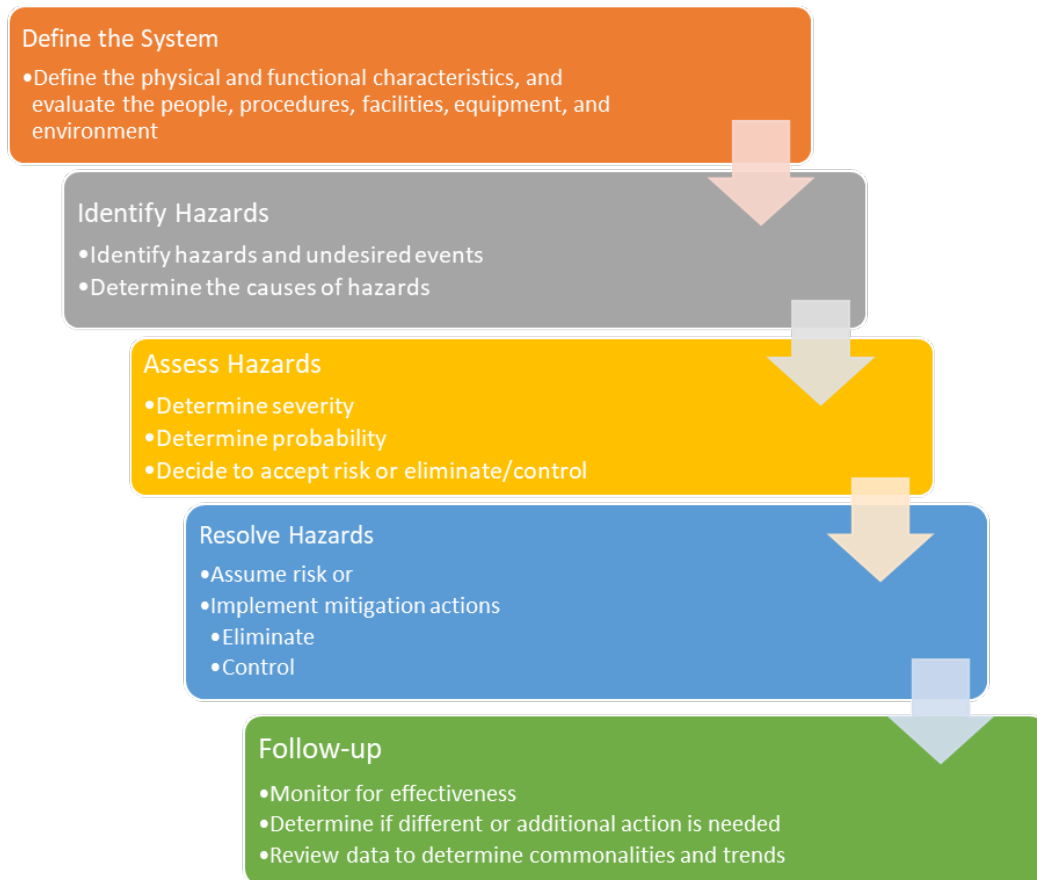
The CSO is responsible for determining the status of each hazard reported. In some cases, hazards may be identified and are not able to be resolved but actions are taken to reduce the risk of the hazard. It is CHT's goal to eliminate all identified hazards if possible. Some hazards may require continuous monitoring to ensure the hazard does not elevate to an action level.

All incident reports will be documented and integrated into current performance measures and the Condition Assessment Index, located in the Appendix. The CSO will track each hazard/incident to completion and recommend policy or procedural changes if needed as a result of the hazard mitigation.

#### CHT Responsibility

CHT takes every incident report seriously and investigates each one to determine if it's an isolated case, or emerging trend requiring evaluation of policies, procedures, training or service modifications.

The following process chart illustrates the steps taken as part of the hazard identification process through the ESRP.



## Section 5. Safety Risk Management

CHT provides training to all personnel in the identification of hazards and security threats while also providing tools to enable personnel to report these risks. The Safety Risk Management process will utilize hazard identification, hazard assessment, and hazard mitigation methods and processes to ensure an awareness of hazards and the implementation of step or eliminate and/or control the hazards.

#### Safety Hazard Identification:

Hazard and security threats are identified through different methods of monitoring the system. This includes system, employee and asset assessments conducted daily and on incremental basis.

Additionally, CHT communicates with peers across the state, FTA and NCDOT to identify common hazards impacting multiple systems. CHT conducts the following routine and random evaluations of the system in the following departments:

#### Personnel

Each CHT employee is evaluated twice a year to ensure they are performing their job to the expectations of the Agency. As part of their on-boarding process the employee is provided up to 240 hours of classroom and behind-the-wheel training and tools to perform their job. Employees will be in probationary status for the first six (6) months of employment. During the six (6) month period, the employee is evaluated at least twice to determine if they are properly prepared to perform their job.

Additional employee evaluations are conducted by the Training Department throughout the year through spot-checks and one-hour surveillance video reviews. The video evaluations are conducted daily with 40-50 operator clips reviewed a month. If through spot-checks, video reviews or annual evaluation it is determined the employee's performance does not meet expectations or training standards, remedial training will be provided, and additional evaluations will take place to ensure remedial training was effective. CHT provides coaching as the first alternative to operator deficiencies identified through the evaluation process. Depending on the deficiency, disciplinary action may be taken.

#### Assets

Rolling stock, facilities and equipment are monitored through a vigorous preventive maintenance plan aimed at identifying hazards and deficiencies as part of daily and scheduled inspections. Operations and Maintenance Departments coordinate the preventive maintenance program including daily Vehicle Inspection Reports (VIR)s, incremental, and annual inspections. Maintenance inspection records are kept in electronic and paper file systems, as well as documented in CHT's asset database, Dossier.

CHT updates the FTA required Transit Asset Management (TAM) Plan annually with data relevant to each asset to include a condition assessment, miles (with rolling stock and non-revenue vehicles) and age as to whether the asset is in a State of Good Repair (SGR). The TAM Plan allows CHT management to plan asset replacement or rehabilitation for future years.

#### System

As part of CHT's safety management system monitoring, the agency uses service evaluations when planning, spot-checking or responding to a safety event. New routes are strategically developed with safety being the first priority and passenger access second. CHT route planners plan and test all routes before activating the route for revenue service. All routes are reviewed periodically to determine if environmental hazards may exist requiring modification to the route, schedule or vehicle.

All front-line staff have been trained to note any changes to service which may be considered a hazard or security threat and through the ESRP and Incident Report Process, notify their supervisors immediately or upon return to CHT depending on the severity of the hazard. Supervisors review route and demand response performance to identify anomalies in performance due to possible hazards. Trapeze software produces performance reports to allow supervisors the ability to focus on routes or manifests performing poorly and investigate the cause.

## Hazard Identification Procedure

Any employee seeing something through inspection or observation they deem to be a hazard are instructed to immediately report that hazard to the on-duty supervisor regardless of the perceived level of threat. Depending on the situation, either the on-duty supervisor or the employee will complete an Incident Report Form and submit it to the CSO.

If the hazard requires immediate mitigation, the employee will be instructed on steps to take to reduce the risk which may or may not alleviate the risk completely. Additional actions may be taken once the immediate risk mitigation has been taken. Some hazards may not pose an immediate risk but are still reported and the CSO will be responsible for risk assessment, investigation and mitigation strategy.

In some cases, a passenger or member of the general public may call CHT with a complaint about a front-line employee which may rise to the level of hazardous behavior or actions. CHT currently documents all customer complaints/compliments and takes appropriate action to investigate any complaints. Complaints deemed hazardous will trigger immediate action by on-duty supervisors. Customer Service Representatives (CSR's) receiving information relative to safety concerns, will either through direct contact or email, notify the COM and/or the CSO

Incident Report Forms will be located on all vehicles along with standard safety kits for collision reporting, with all CSR's, Dispatch, Operations, and Maintenance Departments. A copy of the form is located in the Appendix.

The Incident Report Form will require the employee to briefly describe the hazard noting date, time of day, location, and other pertinent information. The form includes a section for the CSO or immediate supervisor to document immediate action taken to reduce risk, a risk assessment chart prioritizing the risk, determination of the potential for repeating, and a section for additional follow-up action. All forms will be processed by the CSO and summarized periodically for trend analysis and included in safety performance measures. A monthly summary or index of all safety events will be produced using a spreadsheet program and available for weekly management safety meetings and monthly safety committee meetings.

### 49 CFR part 673.5

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

## Safety Risk Assessment

CHT assesses safety risk associated with identified safety hazards using its safety risk assessment process. This includes an assessment of the likelihood and severity of the consequences of hazards, including existing mitigations, and prioritizing hazards based on safety risk.

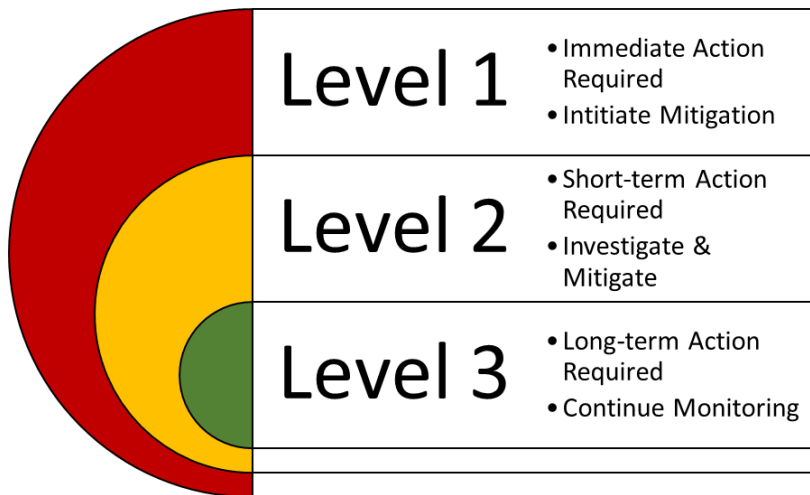
All CHT staff have been provided with training appropriate for their positions within the organization. CHT expects its employees to respond to hazards or threats with professional judgement as sometimes there might not be time to contact a supervisor to prevent a safety event. In cases where the hazard can be reported without immediate risk, the employee will make an initial assessment of the risk as part of their report.

Once received by the CSO, the initial risk assessment may be amended requiring immediate, short, or long-term response using the following scale.

**Level 1 - Immediate:** A deficiency, threat or hazard requiring immediate attention to mitigate risk either temporarily until further action can be taken or complete mitigation.

**Level 2 - Short Term:** Action is needed within seven days to mitigate an identified deficiency, threat or hazard. The deficiency, threat or hazard does not pose immediate danger but if no action is taken could elevate to an Immediate level risk.

**Level 3 - Long Term:** A deficiency, threat or hazard has been identified but does not pose a threat currently but could at a later time. Continued monitoring and awareness are required.



Additionally, the supervisor on-duty or the CSO will conduct an additional risk assessment to determine the level and timeline of mitigation response using the below Risk Assessment Matrix. The matrix allows the CHT to further define the initial assessment as well as modify mitigation strategies as appropriate. In some cases, complete risk removal may not be achieved, but reduced to the point of safe operation with routine monitoring of the risk.

The Risk Assessment Matrix includes four levels of consequence severity and five levels of likelihood of the risk/hazard repeating. For example, broken glass at a bus stop shelter may be the result of an

isolated incident with a “Occasional” chance of repeating, but the consequence of not mitigating the broken glass may have “Critical” level of severity if not mitigated resulting in a “Medium” level of response. Initial mitigation actions might include sending a notice to all passengers through web and social media outlets indicating the stop is closed until further notice; place safety tape around the stop; instruct all drivers on the route of the hazard; remove all remnants of broken glass. Additional actions would be to schedule glass repairs or shelter replacement.

The CSO in coordination with staff will investigate each identified hazard, assess the risk, and take appropriate action to mitigate the risk. Additional mitigation may be needed based on follow-up monitoring to the action taken.

<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

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

## Safety Risk Mitigation

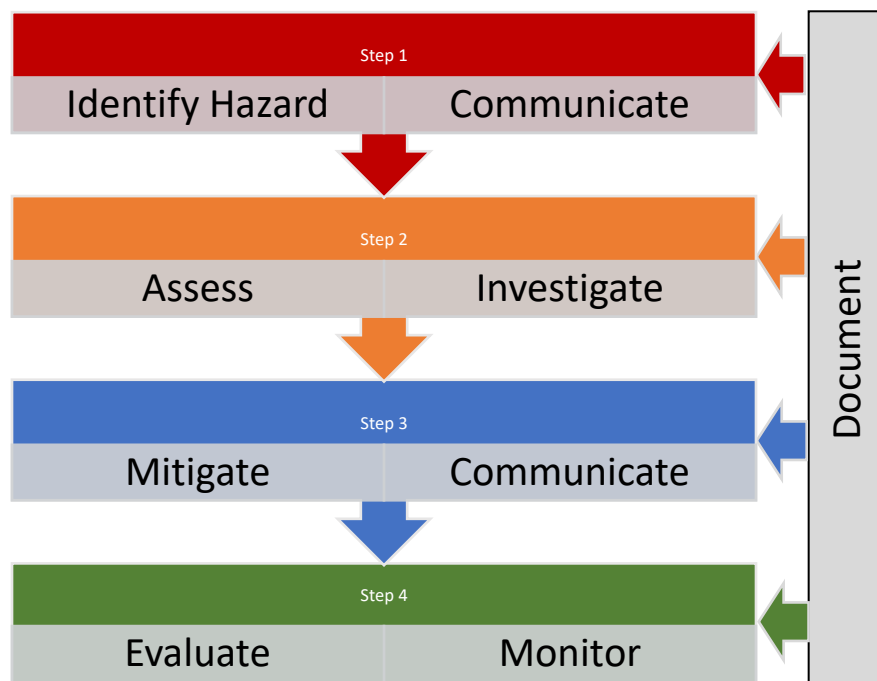
CHT's Accountable Executive and Chief Safety Officer review current methods of safety risk mitigation and establish methods or procedures to mitigate or eliminate safety risk associated with specific hazards based on recommendations from the Safety Council.

CHT can reduce safety risk by reducing the likelihood and/or severity of potential consequences of hazards. In response to all identified and assessed hazards, CHT will take steps to mitigate the hazard and reduce or eliminate the risk to employees, customers, and public. Mitigation strategies will be dependent on results of investigation into the elements contributing to the risks. The investigation may include more than one department and may include interviews outside of the transit system with subject matter experts.

Actions to mitigate risk will include all employees, customers, and public who may be impacted by either the hazard or the actions to reduce or alleviate the risk. CHT will communicate actions to appropriate staff through methods appropriate based on risk assessment. In some cases, immediate communication through two-way communications (dispatch system, text burst, email, or web alert) may be necessary. In other cases, bulletin board notices or memorandum posting may be appropriate.

Once a risk mitigation strategy has been implemented CHT will monitor the actions to determine if full mitigation is possible and if not, is additional action necessary to alleviate the risk or is stepped up monitoring necessary. Some risks may not be completely mitigated but awareness to the risk is a top priority.

All actions taken to mitigate risk will be responsibility of the CSO, documented and linked to the initial deficiency, threat, or hazard identification step.





## Section 6. Safety Assurance

### Performance Monitoring and Measurement

Safety performance monitoring and measurement involves the continual monitoring of the transit agency's activities to understand safety performance. Through these efforts, CHT can determine whether it is meeting its safety objectives and Safety Performance Targets (SPTs), as well as the extent to which it is effectively implementing Safety Management Systems (SMS).

CHT is constantly striving to maintain the highest level of safety through its monitoring methods to include adherence to policies and procedures, safety and maintenance plans, system and employee evaluation processes. These methods allow CHT to determine the need to make changes to improve policies, employee training and service delivery.

CHT has many processes in place to monitor its entire transit system for compliance with operations and maintenance procedures, including:

- Safety audits,
- Informal inspections;
- Regular review of onboard camera footage to assess drivers and specific incidents,
- Investigation of safety occurrences,
- Safety review prior to the launch or modification of any facet of service,
- Daily data gathering and monitoring of data related to the delivery of service, and
- Regular vehicle inspections and preventative maintenance.

Results from the above processes are compared against recent performance trends quarterly and annually by the CSO to determine where action needs to be taken.

The CSO will monitor operations daily through observation, data analysis, communication and safety updates to identify mitigation strategies that may be ineffective. If mitigation actions are found to be ineffective, additional strategies will be developed through key and impacted staff feedback. In some cases, mitigation may not completely eliminate the safety risk or hazard but may allow for safe operation with regular monitoring.

To ensure compliance with and sufficiency of operations and maintenance procedures, CHT carries out the following activities:

- **Ride-Along Evaluations:** A ride-along provides an opportunity for one-on-one interaction between CHT Operators and CHT Supervisors and Behind-the-Wheel trainers. During these evaluations, CHT supervisors and trainers perform firsthand observations of the Operator's driving habits and provide immediate verbal and written feedback. A ride-along is designed to uncover and point out unsafe practices, and give positive reinforcement for safe driving practices. A ride-along can occur as a reactive measure (post-event rides or rides initiated in response to customer complaints or documented violations of safety rules) or proactively, such as when the Operator is learning a new bus route or receiving other types of Operator refresher

instruction. The results of a ride-along are documented in Operator's employee and training folders.

- **Verification of Transit Training Compliance:** Bus Operator Training staff are responsible for ensuring bus operators comply with training requirements. Accordingly, Bus Training personnel are responsible for notifying Operators of available classes scheduled throughout the year so that they can complete the required refresher training annually or as needed.
- **Random Observations:** Transit Service Supervisors and Trainers may conduct observations of Bus Operators for compliance with traffic laws, CHT operating rules, and procedures. Any observed rule violations will be documented and submitted to the Transit Operations Division Manager or Manager of Safety, Security and Training.
- **Behavior-Based Safety Observations:** Managers or safety personnel observe employees performing their assigned tasks and evaluate their actions based on CHT's safety policies and procedures and task-specific processes or procedures, if applicable. After each session, the manager or safety personnel discusses what they observed with the employee and discuss any unsafe or potentially unsafe actions they may have observed. Sessions focus on constructively and positively reinforcing safe actions, gaining employee commitment to identify and avoid unsafe actions, and encouraging two-way communication about safety-related concerns. The manager or safety personnel performing the observations immediately addresses and acts on any observed life threatening and unsafe behaviors. Any CHT employee can stop an unsafe act.
- **Vehicle and Facility Inspections and Records Reviews:** Trained personnel from the maintenance and facility department conduct and document monthly safety inspections at the maintenance and operations facilities for vehicles and infrastructure. These personnel also perform records reviews and trend analyses regarding vehicle and facility inspection results to focus follow-up activities. Results are documented on standard CHT departmental forms.
- **Video Monitoring:** CHT's onboard monitoring system allows management staff the opportunity to review video footage on buses. When an event on a bus takes place, the supervisor, safety personnel, and trainers can request video footage download once the vehicle returns to the main base through the recording system. Operations and Safety staff review video events as needed to ensure timely coaching, retraining, or discipline for unsafe acts.
- **Supervisor Observation:** Supervisors conduct monthly Supervisor Video Observations to identify unsafe operator driving behavior before having an event. Coachable events are addressed one-on-one with operators by supervisors and training personnel. Coachable events are electronically documented in the Safety Department's folders. Additionally, supervisors review recordings when operators self-report non-compliance with safety rules or as a result of other employee reports. Operations staff also notify the Manager of Fleet Maintenance of any events that related to the Maintenance Department for coaching, retraining, and/or discipline.

Managers of CHT's Operations and Maintenance Departments report on these activities monthly (or as needed) to the CSO. Each report documents, for the previous month, the results of:

- Rules compliance activities in the department, including coaching, retraining, or discipline for unsafe acts,
- Inspections of the department's equipment and infrastructure elements,
- Quality control and quality assurance assessments and reviews in the department, and
- Supervisor observations of activities performed in the department. Data and information are analyzed to identify trends and allow monthly and annual comparisons.

## Maintenance

**Maintenance Standards and Procedures.** Standards and procedures are included in the Town of Chapel Hill's Fleet Maintenance Plan. In general, maintenance procedures are designed to ensure that the maintenance recommendations of the manufacturer are met, maximum efficiency in performance and operation is obtained, and maximum bus life and condition are maintained. Daily bus inspections, an active Preventive Maintenance Program, contractor oversight, and careful monitoring are included in procedures to ensure the safety of buses and adequacy of the Fleet Maintenance Plan.

Maintenance personnel coordinate with CHT dispatch to develop a daily vehicle availability list based on three maintenance shifts input of vehicles out of service using a tag out system. The list is distributed to dispatch and the CSO each morning before revenue service begins. CHT maintains a vehicle spare ratio allowing last minute vehicle replacements and minimizing service disruptions. The maintenance department reviews all vehicle inspection reports and takes appropriate and timely action to correct deficiencies. In some cases, the mechanic may ride with the operator to analyze a potential problem before taking corrective action.

Maintenance equipment is inspected weekly as part of the facility inspection process. Any equipment found to be defective is tagged out and vendors are notified to schedule repairs or replacement. The Town of Chapel Hill Fleet Safety Plan (2020) provides policies and procedures for all maintenance employees. Inspection reports are submitted to the CSO each week for review.

**Operator Inspections.** All operators are required to perform a pre-trip and post-trip inspection to ensure that the vehicle is safe and in good operating condition. If any defects are noted by the operator on the inspection form, the vehicle may be repaired or taken out of service until a repair can be made. In the case of a defect that develops or is noted once a vehicle is in service, the operator is required to communicate the problem to Operations, who will then notify Maintenance. Depending on the defect, the vehicle may be replaced with a spare vehicle. Inspection forms are turned into the Operations Supervisor each day for review prior to being submitted to the Lead Mechanic or Supervisor on shift for evaluation and, if necessary, a repair can be conducted.

**Daily Servicing and Inspections.** The CHT Maintenance Department inspects and services buses used in revenue service each day. The buses are fueled and washed, all fluids are checked, tires and lugs are checked, and the vehicle is inspected for any leaks or unusual noises. The Cleaners clean the bus interiors each day and exteriors twice a week. When a defect is noted, it is reported to the Lead Mechanic or Supervisor on shift so that evaluation and, if necessary, a repair can be conducted.

**Mileage-Based Maintenance Inspections.** All buses receive preventive maintenance inspections (PMI) at designated mileage intervals. Mileages are determined by vehicle and subcomponent manufacturers and real-world experience. Oil sampling is performed periodically for both engines and transmissions. A description of the schedule and type of inspection and service performed for each bus series is included in the CHT Fleet Maintenance Plan and entered into Dossier Fleet Maintenance software.

## Operations

### Facility Monitoring

Formal facility inspections of all CHT facilities and grounds are conducted weekly by the CSO using a facility checklist. The purpose of the inspections is to identify any unsafe or unhealthy conditions which may exist, and that may require maintenance or modification. Each facility is also visually inspected for compliance with OSHA and local fire codes.

Any guests to CHT's administration facility must check in through a secured process requiring check-in and validation of visit purpose. Employees are trained on procedures for visitors in the workplace and facility access is limited through security systems.

### Frequency

The CSO conducts its safety inspections periodically. Maintenance employees look for potential hazards with equipment whenever they are using that equipment. Preventive maintenance of equipment and facilities is performed in accordance with the manufacturer's recommended practice. Hazards are also identified by analyzing work collision trends, through Incident Report Forms and Workers Comp claims submitted by employees. Incident Forms are used by employees to report safety concerns and to make safety recommendations. CHT's management team meets each Monday to discuss system performance and safety. The Safety Committee meets monthly to review safety data, mitigation strategies and review safety events for root cause analysis.

### Reporting

When deficiencies are noted during weekly inspections by the CSO, they are documented and reported to the director of the department in which the safety hazard is located. When safety hazards are noted by non-scheduled observation, they must be reported by the observer to a supervisor or CSO. Incident Report Forms are routed to the department, CSO or director best equipped to evaluate the concern and, when necessary, propose a resolution. The CSO maintains copies of all documentation of CHT's investigation policies, process, forms, checklist, activities, and results.

### Hazard Resolution

The primary purpose of facility inspections and hazard reporting is to identify conditions that could lead to collisions and losses. In view of this, it is crucial that all departments and employees be involved in the facility inspection, hazard identification and resolution process. Hazard resolution is related to the severity of the hazard and the probability and severity of a negative consequence of the hazard.

### Follow-up

Corrective action for a confirmed hazard that has been identified by any established process is the responsibility of the manager of the department area in which the hazard exists in conjunction with the CSO. This includes arranging for the services of other CHT departments or subject matter experts, as necessary, to eliminate or control the hazard.

### Documentation

Hazards that have been identified, assessed, investigated and mitigated are recorded in hard copy by the CSO. All safety events are recorded in a Safety Assessment Index for analysis and sharing with other departments and management.

All front-line personnel are responsible for monitoring safety and security as part of their respective positions. If a hazard is identified through observation or interaction with customers or the general public, it is reported to the immediate supervisor as well as following CHT's hazard reporting process.

### Route/Operations Safety

Employees can fill out an Incident Report Form or discuss suggestions for making the system/route safer. CHT encourages employees to be advocates for safety while also suggesting methods of increasing performance. Management has an open-door policy and makes clear the importance of employee feedback; positive and negative.

### Safety Events

CHT maintains documented procedures for conducting safety investigations of events (accidents, incidents, and occurrences, as defined by FTA) to find causal and contributing factors and review the existing mitigations in place at the time of the event. These procedures also reflect all traffic safety reporting and investigation requirements established by NCDOT's Department of Motor Vehicles.

### Collision and Incident Reporting Process

All collisions and loss incidents are to be investigated. CHT's safe driving standards require professional safe performance of all operators. To ensure better than average safety performance, CHT employs the Smith System Defensive Driving, guidelines to determine if a collision or onboard incident could have been prevented. All personnel operating any CHT vehicle are held to this standard.

CHT's Employee Handbook includes procedures and responsibilities for collision/incident investigation. The combined manuals establish procedures for collision notification, response, and investigation.

Transit Operations coordinates with outside law enforcement agencies or subject matter experts if they investigate an event. Administrative staff coordinates with outside insurance providers and provides support among CHT departments and independent investigation to manage CHT liability and claims.

Most collisions and incidents involving CHT are relatively minor in severity and are investigated by Operations Field Supervision or the CSO. Since most collisions involve buses, this section focuses on bus collisions. However, all non-bus collisions and incidents are also investigated.

### Notification

Bus Operators are to notify the operations system supervisor anytime an CHT vehicle might have been damaged, anytime an CHT vehicle and another vehicle come into contact, or anytime an instance occurs in where a customer may have been injured. An Operations Supervisor will be directed to the scene. Police and ambulance will be dispatched, if necessary.

### At-Scene Procedures

Bus Operators will adhere to the following procedures defined in the CHT Operating Handbook:

- ◆ Assist the injured.

- ◆ If blocking traffic, set out reflective triangles.
- ◆ Do not move the vehicle unless required to do so by an Operations Supervisor, fire or police order, or impending danger from traffic.
- ◆ Obtain names, addresses, and phone numbers of all witnesses.
- ◆ Have all customers complete courtesy cards.

Operations Supervisors and the CSO are responsible for conducting on-scene investigations of collisions and incidents. Depending on the severity and the nature of the event, various mechanisms will be used for preserving transient evidence. These may include digital photography, bus video, field sketches, interviews, and observations.

### Investigation

An attempt is made to complete the investigation of most collisions within three days. Operations Supervisors are required to complete a Collision/Incident Report. Operators are required to complete a Collision Report. The Supervisor is required to file a hard copy and attach all relevant media for use by the Operations Manager and the CSO.

A Report of Injury Form must be completed if an employee suffers an injury or illness as a result of a collision or incident.

### Collision Review Process

Collisions and Incidents are classified as Preventable or Non-Preventable.

Preventable collisions are defined as those collisions that could have been reasonably avoided if the operator had followed all defensive driving techniques as established by the Five Keys of the Smith System, and/or Transit Operations Procedures and Policies. Collision investigation is conducted by Transportation Safety Institute's Collision Investigation trained staff.

After reviewing all related documents and evidence, the CSO, makes a final determination of whether:

- The accident was preventable or non-preventable;
- Personnel require discipline or retraining;
- The causal factor(s) indicate(s) that a safety hazard contributed to or was present during the event; and
- The accident appears to involve underlying organizational causal factors beyond just individual employee behavior.

The CSO follows all policies, procedures, and definitions as established in the Employee Handbook. Examples of investigations may include reviews of collision and injury reports, vehicle condition reports,

witness statements, employee interviews, collision scene sketches, bus videos, physical evidence, brake test reports, training manuals, and collision site visits. Employees who are not in agreement with the CSO's determination can appeal directly to the AE by providing additional evidence and testimony. The AE may review all relevant information, interview the employee making the appeal, and confer with any available person or resource he or she considers valuable to his or her deliberation.

### Hazard Resolution

The primary purpose of the Collision Investigation process is to determine the cause(s) of collisions so that they may be prevented or mitigated in the future. To this end, it is crucial that all relevant departments be appropriately involved in the Process. A serious attempt is made to use lessons learned through the investigatory process to incorporate hazard resolutions into future procedures, designs, construction, modifications, training, and procurements.

### Follow-up

Follow-up in the form of corrective actions is the responsibility of the employee's director. The responsibility may be delegated to the employee's manager, supervisor or CSO.

Any disciplinary action will be assessed using the Employee Handbook. Disciplinary consequences for collisions may include warnings, suspensions, and discharge.

Training will be provided for all employees who have been involved in preventable collisions and incidents. CHT prefers to coach employees to understand deficiencies before using disciplinary action when possible.

### Internal Reporting

The Operations Supervisor is responsible for ensuring that all collision reports are completed and submitted to the Operations Manager for review before sending to the CSO for final determination. Once the CSO makes a final determination the report is filed with the Town's Human Resource and Risk Management Divisions. Human Resources will advise on the history of the employee if a pattern of safety events is evident. If disciplinary action is recommended by transit management it must be approved by the Town's Human Resource Department located in the transit facility. Additionally, disciplinary actions above written warnings are reviewed by the Town's legal department and Town's Deputy Town Manager.

The CSO routinely review safety data captured in employee safety reports, safety meeting minutes, customer complaints, and other safety communication channels. When necessary, the CSO ensure that the concerns are investigated or analyzed through CHT's SRM process.

The CSO also review internal and external reviews, including audits and assessments, with findings concerning CHT's safety performance, compliance with operations and maintenance procedures, or the effectiveness of safety risk mitigations.

### Documentation

Transit Operations and Human Resources and CSO maintain the collision investigation documentation.

## Performance Measures

Through a series of performance measures relative to operations, maintenance, and safety, CHT can monitor the system's safety by identifying trends and gaps in policies, procedures, training, and monitoring efforts. The following performance measures are on a daily, monthly, and quarterly basis.

### Maintenance

- ◆ **Preventive Maintenance On-time Inspection Percentage** – determines the effectiveness of the maintenance department to ensure all inspections are conducted per manufacturing and CHT mileage intervals.
- ◆ **Vehicles Removed from Revenue Service** – tracks vehicles removed from service due to a mechanical defect developed while in service requiring immediate service either on-site of failure or once returned to the facility.
- ◆ **Annual Vehicle Condition Assessment** – through annual inspection, determines on a scale of 1-5 the overall condition of the asset. This performance measure is also used in annual updates of CHT's Transit Asset Management Plan.

### Operations

- ◆ **Customer Complaints Per Month** – tracks all customer complaints to identify areas of deficiency with vehicle, driver or other CHT areas. Safety-related complaints are immediately routed to a supervisor on-duty or the CSO for investigation mitigation and response. Complaints may be a result of phone calls, website or CHT public forums.
- ◆ **On-time Performance** – serves as an indicator to issues with time management, environmental factors, scheduling, and vehicle and driver performance.
- ◆ **On-board Surveys** – conducted annually, allow CHT to receive rider feedback about bus operator performance, customer service, and vehicle safety.

### Safety

- ◆ **Safety Performance Measure: Fatalities** (total number of reportable fatalities and rate per total vehicle revenue miles by mode)
- ◆ **Safety Performance Measure: Injuries** (total number of reportable injuries and rate per total vehicle revenue miles by mode)
- ◆ **Safety Performance Measure: Safety Events** (total number of reportable events and rate per total vehicle revenue miles by mode)
- ◆ **Safety Performance Measure: System Reliability** (mean distance between major mechanical failures by mode)



## Section 7. Safety Promotion

### Competencies and Training

Safety promotion ensures that CHT employees and contractors are aware of policies and procedures related to agency operation's safety, and specifically as related to their areas of work. CHT's comprehensive safety training program applies to all CHT employees directly responsible for safety, including:

- Bus vehicle operators
- Dispatchers
- Maintenance technicians
- Managers and supervisors
- Agency Leadership and Executive Management
- Chief Safety Officer
- Safety and Training Department personnel
- Accountable Executive

Training has been developed for each designated position throughout the agency, appropriate to the position's safety-related job responsibilities and role in the SMS. This training includes instruction and testing to verify individuals in positions are adequately trained, and refresher training and recertification requirements to ensure employees remain current on the agency's policies and procedures.

Operations safety-related skill training includes the following:

- New hire bus operator classroom and hands-on skill training; Bus operator refresher training;
- Bus operator retraining (recertification or return to work);
- Skill training for bus maintenance service attendants;
- Classroom and on-the-job training for transit service supervisors at the time of external hire or internal promotion; and
- Safety event investigation training, including the Transportation Safety Institute (TSI) Fundamentals of Bus Collision Investigation and on-the-job training.

Vehicle maintenance safety-related skill training includes the following:

- Ongoing vehicle maintenance technician skill training;
- Ongoing skill training for vehicle maintenance supervisors;
- Safety event investigation training for vehicle maintenance supervisors;
- Ongoing hazardous material training for vehicle maintenance technicians and supervisors, parts room assistants; and
- Training provided by vendors.

Facility maintenance safety-related skill training includes the following:

- Ongoing facility maintenance technician skill training;
- Ongoing skill training for facility maintenance manager;
- Ongoing hazardous material training for facility maintenance technicians and manager; and
- Ongoing fire prevention training for facility maintenance technicians and manager

Following the conclusion of this training, designated personnel will complete refresher training that includes, at a minimum, one hour of safety oversight training.

## Safety Communication

In accordance with CHT's SMP statement, CHT actively encourages the open sharing of information on all safety issues throughout our organization. To ensure effective communication throughout the agency, CHT has established formal processes and approaches, including:

- Dissemination of safety and safety performance information throughout CHT's organization. The communication of safety performance information follows the top-down, agency wide model of the agency's SMS. The CSO is responsible for reporting on the agency's safety performance to the Accountable Executive. These reports may include, but not limited to, performance relative to the agency's safety performance targets, updates related to mitigation monitoring plans, and unusual events

According to guidance distributed by the CSO, leadership throughout the agency (including senior executives, directors, managers, and supervisors) is responsible for communicating safety performance information with their teams.

The Safety Department is responsible for using the safety hazards log and safety risk register to develop regular status reports on safety risk mitigations for dissemination to the SMSC for discussion.

The Safety Department also issues quarterly reports to the SMSC on CHT's safety performance and progress in meeting the safety objectives outlined in the SMP statement throughout the agency.

- Communication of information on hazards and safety risk relevant to employees' roles and responsibilities throughout the agency. As part of new-hire training, CHT distributes safety policies and procedures, included in the Work Rules and Procedures Manual, to all employees. CHT provides training on these policies and procedures and discusses them during safety talks between supervisors and bus operators and vehicle maintenance technicians. For newly emerging safety issues or safety events at the agency, CHT's CSO issues bulletins or messages to employees that are reinforced by supervisors in one-on-one or group discussions with employees. CHT's Training Department also develops materials and courses to explain the rationale behind changes to policies, procedures, and work instruction that address hazards and safety risks relevant to employees' roles and responsibilities.

The Safety Department works with CHT's executive, CSO, and management teams (representing all appropriate functions) to define specific, safety-related information that CHT needs to communicate to different employee groups. CHT also uses multiple approaches to communicate

pertinent safety information to the Board of Trustees, management, and individual employees across all CHT functions, as appropriate.

- Explaining actions taken in response to employee reporting. CHT provides targeted communications to inform employees of safety actions taken in response to reports submitted through the ESRP, such as newsletters, handouts and flyers, safety talks, updates to bulletin boards, one-on-one discussions between employees and supervisors.

The Safety Department works with each operating function to ensure that all SMS and safety communication-related activities take place as scheduled. The Safety Department also maintains documentation of communication processes and procedures and records of safety communications.

CHT's CSO is responsible for maintaining the Agency's documents, which set forth its PTASP, including those documents related to the implementation of its SMS, and results from SMS processes and activities. The ASP and SMS documents include in whole, or by reference, the programs, policies, and procedures that CHT uses to carry out its ASP. All ASP and SMS documents are maintained for a minimum of three years after they are created.

For reviews, investigations, audits, or other purposes, any ASP or SMS related documents will be made available upon request by FTA, NCDOT, and other Federal and State entities having jurisdiction.

## Section 8. Additional Information

CHT will maintain documentation related to the implementation of its SMS; the programs, policies, and procedures used to carry out this ASP; and the results from its SMS processes and activities for three (3) years after creation. This documentation will be available to the Federal Transit Administration or other Federal or oversight entity upon request.

## Section 9. Definitions of Terms Used in the Safety Plan

CHT incorporates all of FTA's definitions that are in 49 CFR § 673.5 of the Public Transportation Agency Safety Plan regulation.

- **Collision** means 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** means a single, identifiable person who has ultimate responsibility for carrying out the Public Transportation Agency Safety Plan of a public transportation agency; responsibility for carrying out the agency's Transit Asset Management Plan; and control or direction over the human and capital resources needed to develop and maintain both the agency's Public Transportation Agency Safety Plan, in accordance with 49 U.S.C. 5329(d), and the agency's Transit Asset Management Plan, in accordance with 49 U.S.C. 5326.
- **Equivalent Authority** means an entity that carries out duties similar to that of a Board of Directors for a recipient or subrecipient of FTA funds under 49 U.S.C. Chapter 53, including sufficient authority to review and approve a recipient or subrecipient's Public Transportation Agency Safety Plan.
- **Event** means any Collision, Incident, or Occurrence.
- **Hazard** means any real or potential condition that can cause injury, illness, or death; damage to or loss of the facilities, equipment, rolling stock, or infrastructure of a public transportation system; or damage to the environment.
- **Incident** means an event that involves any of the following: a personal injury that is not a serious injury; one or more injuries requiring medical transport; or damage to facilities, equipment, rolling stock, or infrastructure that disrupts the operations of a transit agency.
- **Investigation** means the process of determining the causal and contributing factors of an collision, incident, or hazard, for the purpose of preventing recurrence and mitigating risk.
- **National Public Transportation Safety Plan** means the plan to improve the safety of all public transportation systems that receive Federal financial assistance under 49 U.S.C. Chapter 53.
- **Occurrence** means an Event without any personal injury in which any damage to facilities, equipment, rolling stock, or infrastructure does not disrupt the operations of a transit agency.
- **Operator** of a public transportation system means a provider of public transportation as defined under 49 U.S.C. 5302.
- **Performance measure** means an expression based on a quantifiable indicator of performance or condition that is used to establish targets and to assess progress toward meeting the established targets.
- **Performance target** means a quantifiable level of performance or condition, expressed as a value for the measure, to be achieved within a time period required by the FTA.
- **Public Transportation Agency Safety Plan (or Agency Safety Plan)** means the documented comprehensive Agency Safety Plan for a transit agency that is required by 49 U.S.C. 5329 and Part 673.
- **Risk** means the composite of predicted severity and likelihood of the potential effect of a hazard.
- **Risk mitigation** means a method or methods to eliminate or reduce the effects of hazards.

- **Safety Assurance** means processes within a transit agency's Safety Management System that function 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** means a transit agency's documented commitment to safety, which defines the transit agency's safety objectives and the accountabilities and responsibilities of its employees in regard to safety.
- **Safety Management System** means the formal, top-down, organization-wide approach to managing safety risk and assuring the effectiveness of a transit agency's safety risk mitigation. SMS includes systematic procedures, practices, and policies for managing risks and hazards.
- **Safety performance target** means a performance target related to safety management activities.
- **Safety Promotion** means a combination of training and communication of safety information to support SMS as applied to the transit agency's public transportation system.
- **Safety risk assessment** means the formal activity whereby a transit agency determines Safety Risk Management priorities by establishing the significance or value of its safety risks.
- **Safety Risk Management** means a process within a transit agency's Agency Safety Plan for identifying hazards and analyzing, assessing, and mitigating safety risk.
- **Serious injury** means any injury which: (1) Requires hospitalization for more than 48 hours, commencing within 7 days from the date when 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.
- **Transit agency** means an operator of a public transportation system.
- **Transit Asset Management Plan** means the strategic and systematic practice of procuring, operating, inspecting, maintaining, rehabilitating, and replacing transit capital assets to manage their performance, risks, and costs over their life cycles, for the purpose of providing safe, cost effective, and reliable public transportation, as required by 49 U.S.C. 5326 and 49 CFR Part 625.

## Section 10. Commonly Used Acronyms

Acronym	Word or Phrase
ADA	American's with Disabilities Act of 1990
ASP	Agency Safety Plan (also referred to as a PTASP in Part 673)
CFR	Code of Federal Regulations
CT	County Transit
ESRP	Employee Safety Reporting Program
FTA	Federal Transit Administration

NCDOT	North Carolina Department of Transportation
MPO	Metropolitan Planning Organization
Part 673	49 CFR Part 673 (Public Transportation Agency Safety Plan)
SMS	Safety Management System
SSP	System Safety Plan
U.S.C.	United States Code
VRM	Vehicle Revenue Miles

## Section 10. Additional Information

This PTASP was developed from information in other CHT documents, policies and procedures and manuals. Those documents are listed below:

- CHT Employee Handbook
- Safety and Security Plan (SSP)
- Vehicle Maintenance Plan
- Town of Chapel Hill Ordinances
- Facility Maintenance Plan
- Training Manual

## Appendix

**INCIDENT REPORTING FORM**

Reporting Employee			Report # <input style="width: 50px;" type="text"/>
Date of Report			
Time of Incident			Time Report Submitted
Location of Incident			Route/Manifest
Supervisor Notified			
(Check all that apply)			
<b>Type of Incident</b>			
Vehicle	<input type="checkbox"/>	Weather Related	<input type="checkbox"/>
Passenger	<input type="checkbox"/>	Road Condition	<input type="checkbox"/>
Facility	<input type="checkbox"/>	Security	<input type="checkbox"/>
Employee	<input type="checkbox"/>	Near Miss	<input type="checkbox"/>
<b>Description of Incident</b>			
<b>Initial Action Taken to Mitigate Incident</b>			
<b>Initial Assessment of Incident</b>			
	Level 1 - Immediate: A deficiency, threat, or hazard requiring immediate attention to mitigate risk either temporarily until further action can be taken or complete mitigation.		
	Level 2 - Short Term: Action is needed within seven days to mitigate an identified deficiency, threat, or hazard. The deficiency, threat, or hazard does not pose immediate danger, but if no action is taken could elevate to an Immediate level risk.		
	Level 3 - Long Term: A deficiency, threat or hazard has been identified but does not pose a threat currently, but could at a later time. Continued monitoring and awareness are required.		
<b>Likelihood of re-occurrence of this incident (1-10)</b>			<input style="width: 50px;" type="text"/>
Received by: _____		Date/Time _____/_____/_____	



## INCIDENT MITIGATION

Investigating Supervisor				Title		
Date of Investigation				Time		
<b>Additional Information</b>						
<b>Assessment Classification (Circle)</b>				Level 1	Level 2	Level 3
				Report #		
<b>Mitigation Action(s) Taken</b>						
Action(s) Designed to:		Eliminate		Control		(Circle one)
<b>Describe Communication of Action(s)</b>						
<b>Follow-up</b>						
Date			Contact			
<b>Status of Action Taken</b>						
Is additional action needed?		YES		NO		
<b>Additional Action Taken</b>						

## INCIDENT CLASSIFICATION

						Report #	
Category of Incident							
<b>Vehicle</b>				<b>Passenger</b>			
Mechanical				Behavior			
Performance				Weapon			
Interior				Suspended from svc.			
Exterior				Medical Emergency			
Towed				Injury			
Repaired on scene				Death			
Safety equipment				Mobility Devise			
Lift/Ramp/Securemt							
See Pre-Trip							
<b>Facility</b>				<b>Facility</b>			
Safety Equipment				Shelter			
Security Systems				Fueling			
Plumbing				Hazardous Materials			
Electrical				Fencing/Gate			
Foundation				Passenger Amenities			
Parking							
Equipment				<b>Employee</b>			
HVAC/Heat				Behavior			
Roof				Theft			
Storage				Endangering Others			
Computer/Data				Property Abuse			
Farebox/Vault				Illegal Activity			
				Chief Safety Officer Initials			

**Chapel Hill Transit Safety Risk Assessment Register**

Identification						
Hazard	Hazard Type	Identification Date	Identification Source	Analysis Date	Worst Possible, Worst Credible, or Most Common Potential Consequence(s)	Existing Mitigation(s)
Initial Safety Risk Rating			Further Mitigation Action	Revised Safety Risk Index		
Severity of Consequences	Likelihood of Consequences	Safety Risk Index	Further Mitigation Action	Revised Safety Risk Index	Revised Safety Risk Index Date	
Mitigation Owner and Implementation Date						
Department Responsible for Mitigation	Estimated Implementation Date	Contact Person				