COTPA
Central Oklahoma Transportation and Parking Authority

MEETING AGENDA

SPECIAL MEETING OF THE TRANSPORTATION COMMITTEE

Time: **10:00 a.m.**
Date: **December 3, 2020**
Location: **420 W. Main St., Oklahoma City, OK**
10th Floor Large Conference Room

COMMITTEE MEMBERS:

Bernard L. Semtner, III, Chairperson
James Cooper, Trustee
Chris Kauffman, Trustee
Bernard L. Semtner, Trustee
Robert Ruiz, Trustee
Laura Johnson, Surrogate Trustee

It is the policy of COTPA to ensure communication with participants and members of the public with disabilities are as effective as communications with others. Anyone with a disability that would like to participate in the meeting but requires an accommodation, modification of policies/procedures, auxiliary aid or service, or an alternate format of the agenda/information provided at the meeting, please contact the Trust Specialist at 405-297-2824 within 48 hours (not including weekends or holidays) of scheduled meeting. Individuals utilizing TTY/TDD technology for telephone communication should utilize the free "711 Relay Oklahoma" service by dialing 711 to assist you in contacting Ms. Newman. The Authority will consider the choice of auxiliary aid or service requested by the individual with a disability.

TRANSPORTATION COMMITTEE AGENDA
December 3, 2020
10:00 a.m.
SPECIAL MEETING

1. **Call to Order**

2. **Discuss and/or Recommend Approval of Public Transportation Agency Safety Plan, Version 1, December 2020 (Attachment "A"), for Oklahoma City Bus Operations and Authorize Implementation of the Safety Management System.**

3. **Palomar Program Presentation**

4. **Adjournment**

Public Meeting Guidelines During Covid-19 Pandemic

Masks are required at all City facilities and meeting locations. Masks are required during public meetings by citizens and staff. Meeting facilities will be set up to follow social distancing guidelines. Please do not sit in seats that are blocked off.

Cadets will conduct temperature checks, provide wrist bands, and masks to public participants upon entrance to the City facility. Signs will be posted outside the facility, stating "Masks are Required". The meeting room will be sanitized prior to and immediately following the meeting.

Meeting attendees will be required to sign a log for contact tracing purposes. Wipes and hand sanitizers will be provided.

CENTRAL OKLAHOMA TRANSPORTATION & PARKING AUTHORITY

COTPA Transportation
Committee Agenda
Item No. 2.
12/3/2020

TO: Chairman and Board of Trustees

FROM: Administrator

Discuss and/or Recommend Approval of Public Transportation Agency Safety Plan, Version 1, December 2020 (Attachment "A"), for bus operations and authorize implementation of the Safety Management System.

Background:
On July 19, 2019, the Federal Transportation Administration (FTA) adopted 49 CFR 673, establishing the principle and methods of Safety Management System. In §673.11, FTA's Public Transportation Agency Safety Plan (PTASP) rule specifies that, "A transit agency must, within one calendar year after July 19, 2019, establish a Public Transportation Agency Safety Plan that meets the requirements of this part." In response to the COVID-19 public health emergency, the FTA then issued a Notice of Enforcement Discretion effectively extending the PTASP compliance deadline from July 20, 2020 to December 31, 2020. FTA specifies that a transit agency Safety Management System must be appropriately scaled to the size, scope and complexity of the transit agency and include the following elements:

- Safety Management Policy
- Safety Risk Management
- Safety Assurance
- Safety Promotion

Staff is presenting the Public Transportation Agency Safety Plan, Version 1, for the bus operations, for the Board's consideration.

Previous Action:
Resolution adopted by COTPA approving Public Transportation Agency Safety Plan for Streetcar, Version 2, on June 5, 2020 (Item No. VI. E.)

Resolution adopted by COTPA approving Public Transportation Agency Safety Plan for Streetcar, Version 1, on October 18, 2020 (Item No. VI. A.)

LFR:
Safety and Service

Recommendation: COTPA adopt resolution.

Review	Public Transportation and Parking Department and Municipal Counselor's Office

Jason Ferbrache
Administrator

EMBARK Public Transportation Agency Safety Plan for Bus Operation

Version 1, issued 12/04/20

1. Transit Agency Information

Transit Agency Name	Central Oklahoma Transportation and Parking Authority (COTPA dba EMBARK)			
Transit Agency Address	2000 S. May Ave., Oklahoma City, OK 73108			
Name and Title of Accountable Executive	Jason Ferbrache Accountable Executive			
Name of Chief Safety Officer or SMS Executive	Eugene S. Fritz, Chief Safety Officer/SMS Executive			
Mode(s) of Service Covered by This Plan	Mass transit buses and Paratransit		**List All FTA Funding Types (e.g., 5307, 5310, 5311)**	5307, 5339
Mode(s) of Service Provided by the Transit Agency (Directly operated or contracted service)	Mass transit fixed route buses and Paratransit - EMBARK directly provides service and maintenance for operations and uses agency employees to supply the necessary labor to operate the revenue vehicles Streetcar and Ferries - A private transportation contractor provides operations and maintenance services			
Does the agency provide transit services on behalf of another transit agency or entity?	Yes ☒	No ☐	**Description of Arrangement(s)**	Provides fixed route and paratransit bus operations for City of Norman, OK (previously CART)
Name and Address of Transit Agency(ies) or Entity(ies) for Which Service Is Provided	City of Norman 510 Chesapeake Street Norman, OK 73072			

2. Plan Development, Approval, and Updates

Name of Entity That Drafted This Plan	Eugene S. Fritz, EMBARK Chief Safety Officer	
Signature by the Accountable Executive	**Signature of Accountable Executive**	**Date of Signature**
	Jason Ferbrache, Accountable Executive	
Approval by the Board of Directors or an Equivalent Authority	**Name of Individual/Entity That Approved This Plan**	**Date of Approval**
	Relevant Documentation (title and location)	
	N/A	
Certification of Compliance	**Name of Individual/Entity That Certified This Plan**	**Date of Certification**
	Not Applicable	N/A
	Relevant Documentation (title and location)	
	N/A	

Version Number and Updates

Record the complete history of successive versions of this plan.

Version Number	Section/Pages Affected	Reason for Change	Date Issued
1	N/A	Initial Document	

Annual Review and Update of the Public Transportation Agency Safety Plan

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

The EMBARK Accountable Executive has delegated responsibility for the development, implementation, and management of the Public Transportation Agency Safety Plan (PTASP) to the EMBARK Chief Safety Officer (CSO) who is responsible for the coordination of the EMBARK safety program and initiative efforts to improve the overall safety of transit customers, the public and employees.

In addition, where it is determined that unsafe conditions or practices present an immediate and serious hazard, the EMBARK CSO, or designee, has the authority to order such conditions corrected or practices halted.

The PTASP is reviewed at least annually to ensure the plan remains current and effective. New routes or extensions, significant changes to the operational practices, or other events may be cause for a review at any time. The focus of the review is to:

- Evaluate current safety tasks and initiatives for appropriateness,
- Refine and improve task descriptions and activities,
- Identify new tasks and initiatives which may be required,
- Define organizational responsibility for accomplishing safety related tasks, and
- Incorporate organizational, operational, or legislative changes.

The EMBARK CSO is responsible for the PTASP review process. The review is conducted in consultation with departments affected by the PTASP. Whether or not EMBARK determines that changes are needed to the PTASP, the current plan will be reviewed each year.

Revisions are coordinated and led by the EMBARK CSO acting under the authority of the EMBARK Accountable Executive. Recommended revisions to the PTASP are submitted to the appropriate managers for concurrence and reviewed and approved by the Safety Department. Revisions will be sent to the EMBARK Accountable Executive for approval and the final PTASP will be sent to the COTPA Board review and approval.

EMBARK will coordinate with the State (ODOT) and MPO (ACOG) in the selection of ODOT's and ACOG's safety performance targets to the maximum extent practicable.

The timeline for the annual review of the PTASP is as follows:

Task	Duration	Target Date
If PTASP is not updated:		
CSO notifies Accountable Executive that no update is necessary.	---	Dec 1
If notified no update is necessary, the Accountable Executive accepts or rejects the CSO's determination and notifies the CSO.	30 days	Dec 31
If PTASP is updated:		
If PTASP is updated, CSO completes annual review for previous calendar year and submits revised PTASP to Accountable Executive.	---	Dec 31
If Accountable Executive is notified update is necessary, approves PTASP or requests additional information.	30 days	Jan 31
CSO submits additional information and revised PTASP to Accountable Executive.	60 days	Mar 31
Accountable Executive reviews additional information and approves revised PTASP.	30 days	Apr 30

Notify State (ODOT) and MPO (ACOG) that no change has been made to PTASP OR Transmit updated PTASP to State (ODOT) and MPO (ACOG)	30 days	May 30

Whether the PTASP is updated or not, in accordance with § 673.13, EMBARK's PTASP must be in compliance at all times with 49 Code of Federal Regulations (CFR) Parts 674, 673, 672, 670, 630, and 625 and is consistent with the Federal Transit Administration's (FTA) regulations for implementing a PTASP, Public Transportation Safety Program and the National Public Transportation Safety Plan.

3. Safety Performance Targets*

Mode of Transit Service	Fatalities/ Year	Fatality Rate/ Year	Injuries/ Year	Injury Rate/ Year	Safety Events/ Year	Safety Event Rate/ Year	System Reliability/ Year
Mass Buses	0	0.00	20	.63	65	2.06	21,000 miles
Paratransit	0	0.00	5	.85	21	3.55	25,000 miles

***Rates are calculated per 100,000 vehicle revenue miles and are evaluated over fiscal years (ex FY2021 = 7/1/20-6/30/21)**

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.

Targets are not required to be transmitted to the State. Targets will be transmitted the MPO (Association of Central Oklahoma Governments – ACOG)) once PTASP has been approved by COTPA Board.

Targets Transmitted to the State	**State Entity Name**	**Date Targets Transmitted**
	N/A	
Targets Transmitted to the Metropolitan Planning Organization(s)	**Metropolitan Planning Organization Name**	**Date Targets Transmitted**
	ACOG	

4. Safety Management Policy

Safety Management Policy Statement

Include the written statement of safety management policy, incorporating safety objectives.

EMBARK is to be an effective participant in the continuing development of a high-quality, livable environment in the City of Oklahoma City by: enhancing mobility, supporting economic development and delivering safe, reliable, clean, cost-effective transit service. “Be Safe” is one of four core values of EMBARK. EMBARK is committed to developing, implementing, maintaining, and constantly improving processes to ensure that all our transit service delivery and maintenance activities take place under a balanced allocation of organizational resources, aimed at achieving the highest level of safety performance and meeting established standards. Process improvement will be achieved in various ways with the regular, ongoing audit of key elements within the Public Transportation Agency Safety Plan serving as the most formal approach.

All levels of management and all employees are accountable for the delivery of this highest level of safety performance, starting with the Accountable Executive. The Accountable Executive may delegate specific responsibilities, but the ultimate accountability for EMBARK’s safety performance cannot be delegated and always rests with the Accountable Executive.

Goals, Objectives and Performance Targets

EMBARK will develop, implement and maintain a written PTASP that:

GOAL	OBJECTIVE(S)	PERFORMANCE MEASURE(S)	PEFORMANCE TARGET(S)	RESPONSIBILITY
1. 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, uses that reporting and communication as a fundamental source for safety concerns and hazard identification, and actively manages safety with the same attention to results as the attention to the results of the other management systems of the organization	**1A**. Ensure employee reporting system is in place and **1B**. Employees are trained on employee reporting procedure	**1A**. % of safety concerns reported are responded to within the designated amount of time outlined in the **SA-SOP-100.11 Self-Reporting.** **1B**. % of employee training completed on **SA-SOP-100.11 Self-Reporting.**	**1A**. 100% within designated amount of time **1B**. 100% of employees trained	Chief Safety Officer Bus Operations Manager Facilities and Maintenance Manager

2. Integrate the management of safety among the primary responsibilities of all managers and employees	**2A**. Integrate appropriate SMS training based on employee class (executive, technical, front line) **2B**. Add safety performance measures and goals to performance evaluations	**2A**. % of personnel receiving SMS training **2B**. % of Performance evaluations that have safety in them	**2A**. 100% **2B**. 100%	Chief Safety Officer HR Manager
3. Establish and operate hazard identification and analysis and safety risk evaluation activities to eliminate or mitigate the safety risks of the consequences of hazards resulting from our operations or activities to a point which is consistent with our acceptable level of safety performance	**3A**. Train appropriate personnel on hazard management plan by department **3B**. Complete baseline risk assessment and **3C**. Upkeep of hazard log	**3A**. % of personnel trained on hazard management **3B**. % of baseline risk assessments completed, **3C**. % of all departmental hazard logs reviewed at least monthly	**3A**. 100% **3B**. 100% **3C**. 100%	Chief Safety Officer Department Heads
4. Ensure that sufficiently skilled and trained personnel are available to implement safety management process	**4.** Ensure that all personnel obtain sufficient Safety and SMS Training (See Section 7: Safety Promotion)	**4.** % of personnel that have obtained sufficient Safety and SMS Training. (See Section 7: Safety Promotion)	**4.** 100%	Accountable Executive Chief Safety Officer

5. Establish and measure our safety performance against realistic and data-driven safety performance indicators and safety performance targets	**5A**. Establish performance targets and review monthly against targets **5B**. Trend all collected data to ensure performance and future performance projections are remaining within targets	**5A/B**. % of performance targets and trend data reviewed at monthly SSOC meetings	**5A/B.** 100% review rate at SSOC meetings	Chief Safety Officer
6. Continually improve our safety performance through management processes that ensure that appropriate safety management action is taken and is effective	**6A**. Develop and implement Assurance Log **6B**. Review safety risk mitigations to ensure effective implementation	**6A**. % of SSOC meetings where assurance log was reviewed **6B**. % of safety risk mitigations that are reviewed to ensure effective implementation	**6A**. 100% review rate at SSOC meetings **6B**. 100%	Chief Safety Officer

Safety Management Policy Communication

Describe how the safety management policy is communicated throughout the agency's organization. Include dates where applicable.

EMBARK's safety management policy will be communicated via meetings and posted on bulletin boards by the Chief Safety Officer to Executive Leaders. Each Leader is then responsible for distributing/communicating the policy to their respective departments/divisions.

Authorities, Accountabilities, and Responsibilities

Describe the authorities, accountabilities, and responsibilities of the following individuals for the development and management of the transit agency's Safety Management System (SMS).

Accountable Executive	The Accountable Executive is responsible for ensuring that EMBARK's SMS is effectively implemented throughout the EMBARK's public transportation system. The Accountable Executive is accountable for ensuring action is taken, as necessary, to address substandard performance in EMBARK's SMS. The Accountable Executive may delegate specific responsibilities, but the ultimate accountability for EMBARK's safety performance cannot be delegated and always rests with the Accountable Executive. (**also see Accountable Executive in Definitions**). The Accountable Executive's accountabilities and responsibilities include: • Controls and directs human and capital resources needed to develop and maintain the ASP and SMS.

	• Designates an adequately trained Chief Safety Officer who is a direct report. • Assumes ultimate responsibility for carrying out EMBARK's PTASP and SMS. • Maintains responsibility for carrying out the agency's Transit Asset Management Plan. • Ensures adequate resources are available for hazard mitigations.
Chief Safety Officer or SMS Executive	The Chief Safety Officer is appointed by the Accountable Executive and is also the SMS Implementation Manager and has the responsibility for day-to-day implementation and operation of EMBARK's SMS and ensuring that all safety policies and procedures are being followed with the EMBARK departments and that all hazards are mitigated to lowest level feasible. Reports directly to EMBARK's Accountable Executive. (**also see Chief Safety Officer in Definitions**). The CSO's accountabilities and responsibilities include: • Develops EMBARK's PTASP and SMS policies and procedures. • Ensures and oversees day-to-day implementation and operation of EMBARK's SMS. • Chairs EMBARK's Safety and Security Operations Committee (SSOC) • Advises the Accountable Executive on SMS progress and status. • Identifies substandard performance in EMBARK's SMS and develops corrective action plans for approval by the Accountable Executive. • Ensures EMBARK policies are consistent with EMBARK's safety objectives. • Provides Safety Risk Management (SRM) expertise and support for other EMBARK personnel who conduct and oversee Safety Assurance activities.
Agency Leadership and Senior Management	Senior Leaders are the champions of safety. They promote safety within their respective departments/ divisions and ensure all safety policies and procedures are being followed within their departments. The EMBARK Senior Leaders are the following positions: • Human Resource Manager • Bus Operations Manager • Facilities and Maintenance Manager • Marketing Manager • IT Manager • Customer Service Manager

	• Administrative Manager • Finance Manager Senior Leaders have the following authorities, accountabilities, and responsibilities: • Complete training on SMS and EMBARK's PTASP elements. • Oversee day-to-day operations of the SMS in their departments. • Modify policies in their departments consistent with implementation of the SMS, as necessary. • Provide subject matter expertise to support implementation of SMS.
Key Staff	Key Staff are the frontline for safety. They have direct eyes and ears of the employees. They promote safety to ensure all policies and procedures are being followed. Key Staff also obtains feedback from the employees and is the first line of any safety issues that may arise. The Key Staff's accountabilities and responsibilities include: • Champion safety within their departments • Report safety hazards and make suggestions to improve safety

Table 4-1 identifies the overall PTASP requirements with primary responsibility, oversight and support roles designated.

TABLE 4-1: SAFETY TASKS/ACTIVITIES

							City								
SAFETY TASKS / ACTIVITIES	**Operations Manager**	**Operations Supervisors**	**Operators**	**Facilities and Maintenance Manager**	**Maintenance Supervisors**	**Maintenance Techs**	**Capital Projects**	**Accountable Executive**	**Chief Safety Officer**	**Contracts & Procurement**	**HR Manager**	**Finance Manager**	**IT Manager**	**Customer Service Manager**	**Marketing Manager**
Program Review and Updates	X	S		X	S		S	O	X	S	S	S	S	S	S
Implementation of SMS and PTASP	X	S	S	X	X	S		O	X	X	X	X	X	X	X
Emergency Preparedness & Response Plan/ Procedures	X	X	X	X	X	X		O	X	S	S	S	S	S	X
Recordkeeping	X	X	X	X	X	X	X	O	X	X	X	X	X	X	X

							City								
SAFETY TASKS / ACTIVITIES	**Operations Manager**	**Operations Supervisors**	**Operators**	**Facilities and Maintenance Manager**	**Maintenance Supervisors**	**Maintenance Techs**	**Capital Projects**	**Accountable Executive**	**Chief Safety Officer**	**Contracts & Procurement**	**HR Manager**	**Finance Manager**	**IT Manager**	**Customer Service Manager**	**Marketing Manager**
EMBARK Safety Management Policy	S			S	S			O	X	X	X	X	X	X	X
Goal, Objectives, Authority and Performance Targets	X	X	S	X	X	S	S	O	X	S	S	S	S	S	S
Employee Reporting	O	X	X	O	X	X	X	O	O	X	O	X	X	X	X
Safety Management Structure	S	S		S	S			O	X	S	S	S	S	S	S
Safety Risk Management	X	X	X	X	X	X	S	O	X	X	X	X	X	X	X
Safety Data Acquisition	X	X	X	X	X	X	X	O	X	X	X	X	X	X	X
Accident Notification, Investigation and Reporting	X	X	X	X	X	X		O	O		S			S	
Safety Certification Process	X	X	S	X	X	S	S	O	X						
System Extensions/ Modifications	X	X	S	X	X	S	S	O	X	S					
Internal Safety and Security Reviews	X	S	S	X	S	S		O	X	X	X	X	X	X	X
Rules Compliance	X	X	S	X	X	S		O	O	X	X	X	X	X	X
System, Facilities & Equipment Inspections	O	X	S	O	X	X		O	O						
Maintenance Audits & Inspections				X	S	S		O	O						
Configuration Management	X	X	S	X	X	S	S	O	O	S	X	X	X	X	X
Procurement		S		O	X	S	S	O	O	X	S	X	S	S	S
Training & Certification Program	X	X	S	X	X	S		O	O	X	X	X	X	X	X
Employee & Contractor Safety	X	X	S	X	X	S		O	O	X	X	X	X	X	X
Compliance with Local, State and Federal Safety Requirements	X	X	X	X	X	X	X	O	O	X	X	X	X	X	X
Hazardous Materials Program	S	X	S	X	X	S		O	O	S					
Drug & Alcohol Program	S	S	S	S	S	S	X	O	O	S	X	S	S	S	S

X = PRIMARY, S = SUPPORTING, O = OVERSIGHT

Employee Safety Reporting Program

Describe the process and protections for employees to report safety conditions to senior management. Describe employee behaviors that may result in disciplinary action (and therefore, are excluded from protection).

Employee Reporting

All employees are encouraged to self-report and report any safety issues, concerns or hazards. The Self-Reporting **SA-SOP-100.11-Self Reporting** establishes the process to be followed when any EMBARK employee reports an ***unintentional*** safety violation. The sole purpose of this process is to encourage employees to bring ***unintentional*** safety violations to the attention of Management without being deemed as offenses. This allows such violations to be used as means of collecting information and to be referred to in future training and instruction in order to prevent their recurrence. EMBARK further 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.

For EMBARK and City employees, the City has a Code of Conduct and Ethics Policy that contains guidelines governing the general behavior and responsibilities expected of all City employees. It also contains a Whistleblower Policy stating that an employee who reports a suspected incident of fraud or illegality, a safety, health or security concern, or assists in an investigation shall be protected from retaliation, whistleblowing does not protect the employee from disciplinary action for his/her involvement if found to be in violation of this policy.

Open-Door Policy

At EMBARK we value our employees as they are our number one asset. We recognize that employees may have ideas or suggestions for improving the work environment or a complaint about the workplace. We feel the most beneficial way to communicate with our employees is with a face to face discussion. Every employee is encouraged and empowered to reach out to their manager's. Our open-door policy extends to our contractor and vendors. Employees can also use **EMBARKOK.Com/HRhelp** to schedule an appointment to meet with a Human Resources representative, if needed.

Employee Reporting Portals

EMBARKOK.Com/BESafe

Our employees can also report any safety issues through a special portal set-up for safety reporting. They can do this at home or use the computers we set-up for employee use. This reporting method allows for reporting to be anonymous.

Human Resources

Any supervisor or employee desiring to file a discrimination or harassment complaint may do so by any of the following options:

1) Call (405) 297-2485;
2) E-mail: OKC4ethics@okc.gov;
3) Visit: https://embarkok.com/EEOReport;
4) Report to a Supervisor, Manager, or EEO Officer (HR Manager)

City of Oklahoma City Safety Hotline

The City of Oklahoma City Risk Management Department has set up a confidential reporting hotline. (405) 235-SAFE.

Accident and Injury Reporting

All accidents are to be reported and reviewed regardless of fault, amount of damage, or injury. Any employee involved in a COTPA vehicle accident or incident must verbally notify the Operations on-duty dispatcher immediately. The employee will remain at the scene of any accident involving property damage or bodily injury until so instructed by a supervisor to leave. Further, all accidents and incidents must be reported in writing to COTPA within twenty-four (24) hours, Saturdays, Sundays and holidays excluded. All employees involved in vehicular accidents or incidents occurring on a bus must report such accident

or incident in writing to the Human Resource Department or immediate supervisor within twenty-four (24) hours, Saturdays, Sundays, and Holidays excluded.

5. Safety Risk Management

Safety Risk Management Process

Describe the Safety Risk Management process, including:

- *Safety Hazard Identification: The methods or processes to identify hazards and consequences of the hazards.*
- *Safety Risk Assessment: The methods or processes to assess the safety risks associated with identified safety hazards.*
- *Safety Risk Mitigation: The methods or processes to identify mitigations or strategies necessary as a result of safety risk assessment.*

System safety is the application of hazard management techniques to a system to achieve an optimum level of safety throughout all phases of the system's life cycle. The methodology provides a systematic means of identifying, analyzing, assessing and resolving the cause(s) of accidents/incidents within the transit system as well as those outside the system that could impact the safety of the system. The application of hazard identification methods during a transit system's life cycle phases and to all system elements will permit the timely identification, elimination, minimization or control of hazards. The products of this methodology provide management with appropriate information relative to hazard probability and severity. This information may include the identification of hazards and faults, the probable causes and effects, and recommended resolution actions.

Whether the analysis is conducted formally or informally, this methodology is the underlying rationale to the implementation of recommended resolution actions of identified hazards.

The methods for formal hazard identification, assessment, resolution, system safety activities trend analysis, failure reporting and accident rate analysis are discussed in this section. A variety of strategies are used to identify, evaluate, and resolve safety hazards for EMBARK.

5.1 Safety Hazard Identification

The objective of hazard identification activities is to define those conditions and faults that have the potential for causing an incident. Where reasonably feasible, all employees are charged with the responsibility of identifying and reporting conditions that have potential to cause accidents/incidents, injuries, or other losses.

5.2 Historical Data

EMBARK will collect, document and perform trend analysis for accidents/incidents as they occur. This analysis may be compared to industry peer data, if available, and if deemed necessary.

5.3 Facility Inspections

EMBARK facilities will undergo a complete inspection at least quarterly to ensure the compliance of our safety system and to ensure a safe workplace is provided. Inspection reports are issued which list the hazards and the safety or health problems found during the inspection.

5.4 Accident/Incident Investigations and Data

Incident reports, accident reports, illness/injury reports, daily operations summaries, audits, results from drills or exercises with emergency responders, and customer service inquiries are other methods of hazard identification. The EMBARK Chief Safety Officer reviews these resources on a monthly basis.

Corrective actions are taken either exclusively by the EMBARK Chief Safety Officer or are deferred to the SEC for further review.

5.5 Ad hoc Hazard Reporting

It is the responsibility of all EMBARK employees, contractors, and vendors to report hazardous conditions to their supervisor and complete an incident form in a timely manner. Supervisors are responsible for reviewing the submitted form.

Hazards that are deemed, by the division, to be an immediate threat to safety are immediately addressed by the division head, so the hazard is mitigated immediately. The safety division is available for any guidance to mitigate the hazard.

5.6 Oversight Authorities

Data and information provided by oversight authorities, including FTA, will be considered as a source for hazard identification.

5.7 Safety Risk Assessment

The FTA defines a hazard in 49 CFR 673.5 as "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." There are many sources within EMBARK to support hazard identification, including the reporting of safety concerns by employees. A hazard holds potential that, when triggered, results in a consequence(s) that may cause harm or damage. The severity of the potential consequence(s) may range from negligible to catastrophic, depending on the nature of the hazard and the particular operational conditions.

A consequence is an effect of a hazard involving 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.[1] A consequence may result when the hazard's potential is triggered or acted upon. Within the Safety Risk Management process, EMBARK analyzes an identified hazard to understand its potential consequences and assesses how often a potential consequence could occur (likelihood) and its harm or damage (severity). This assessment, or categorization, results in an understanding of the safety risk associated with the hazard and helps management decide if action is needed to address the safety risk.

The consequence categorization system is used to determine the acceptability of assuming a risk associated with a potential consequence, the necessity of implementing corrective measures to eliminate or reduce the potential consequence, or a combination of both. System safety, cost, schedule, probability of occurrence, mitigating factors, potential losses and impact on publicly perceived safety are considered in the analysis.

Consequence categorization involves classification of the consequence in terms of severity and likelihood. EMBARK has established the following system safety criteria guidelines for determining hazard severity and likelihood:

5.8 Consequence Severity

The categories of consequences as defined by EMBARK are as follows:

SEVERITY OF CONSEQUENCE

DEFINITION CATEGORY	MEANING	VALUE
Fatality(ies)	2 or more fatalities	1

[1] https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/regulations-and-guidance/safety/public-transportation-agency-safety-program/133521/ptasp-safety-risk-management_0.pdf

Catastrophic	Could result in the following: substantial system loss >$4M.	2
Critical	Could result in one or more of the following: serious injury or system damage ≥$50K and ≤$4M.	3
Marginal	Could result in one or more of the following: non-serious injury or system damage >$1500 and <$50K.	4
Negligible	Could result in one or more of the following: no injury or system damage >$1 and ≤$1,500.	5

5.8.1 Consequence Likelihood

The quantified probability, or likelihood, that the potential consequence(s) of a hazard will occur, taking into account existing mitigations, during the planned life expectancy of the system element, sub-system or component can be described qualitatively, in potential occurrences per unit of time, Events, population, items, or activity. EMBARK has established a standard for likelihood of potential consequence(s), shown in **Table 5-1**. This standard likelihood of potential consequence(s) occurrence is broken down into three criteria for each likelihood level to account for type of data, process cycles, and life cycles:

- Rate-based Likelihood Criteria leverage available agency or industry data in their definition to establish rates of likelihood. For example, an agency may choose to assess how often a particular consequence occurs per a certain measure of vehicle revenue miles, unlinked passenger trips, or specific infrastructure elements related to the hazard and its unique potential consequences, such as the number of passenger train door cycles per month. Another commonly used sample for assessing likelihood is operating hours or the number of hours during which an agency provides service over a specific time period, such as 500 operating hours per month or 60,000 operating hours per year.
- Process Cycle-based Likelihood Criteria define likelihood by the number of occurrences in relation to the number of times a specific process is completed, such as the series of steps associated with stopping at a station or performing a specific maintenance activity such as inspection of streetcar wheels for critical measurements.
- Life Cycle-based Likelihood Criteria define likelihood based on the life cycle of a component, vehicle, sub-system, system, or infrastructure element. The various milestone phases for such assets include planning, design, operations, maintenance, and disposal. Such life cycles typically use a range of time periods, such as 15, 25, or 30 years, depending on the nature of the hazard and its potential consequences.

LIKELIHOOD OF POTENTIAL CONSEQUENCE(S) OCCURRENCE

QUALITATIVE DEFINITION	LIKELIHOOD CRITERIA*	MEANING	LIKELIHOOD LEVEL
Frequent	***Likely to Occur more than once a/every:***		
	RB	Daily (Fixed and Plus)	**A**
	RB	537 Operating Hours (Fixed)	
	RB	17,032 Vehicle Miles - Mean Time Between Events (Fixed)	
	RB	8,498 Unlinked Trips (Fixed)	
	RB	8,516 Vehicle Miles (Fixed)	
	RB	117 Operating Hours (Plus)	

	RB	3,924 Vehicle Miles - Mean Time Between Events (Plus)	
	RB	165 Unlinked Trips (Plus)	
	RB	1,962 Vehicle Miles (Plus)	
	PC	≥ 25% of instances in a process (Fixed and Plus)	
	LC	≥ Once a month < year throughout critical infrastructure life cycle (Fixed and Plus)	
Probable	***Likely to Occur more than once a/every:***		
	RB	Weekly (Fixed and Plus)	**B**
	RB	3,759 Operating Hours (Fixed)	
	RB	119,224 Vehicle Miles- Mean Time Between Events (Fixed)	
	RB	59,486 Unlinked Trips (Fixed)	
	RB	59,612 Vehicle Revenue Miles (Fixed)	
	RB	820 Operating Hours (Plus)	
	RB	27,468 Vehicle Miles - Mean Time Between Events (Plus)	
	RB	1,155 Unlinked Trips (Plus)	
	RB	13,734 Vehicle Revenue Miles (Plus)	
	PC	≥15% <25% of instances in a process (Fixed and Plus)	
	LC	≥ once a year <3 years throughout critical infrastructure life cycle (Fixed and Plus)	
Occasional	***Likely to Occur more than once a/every:***		
	RB	Monthly (Fixed and Plus)	**C**
	RB	16,110 Operating Hours (Fixed)	
	RB	510,944 Vehicle Miles- Mean Time Between Events (Fixed)	
	RB	254,940 Unlinked Trips (Fixed)	
	RB	255,472 Vehicle Revenue Miles (Fixed)	
	RB	3,510 Operating Hours (Plus)	
	RB	117,702 Vehicle Miles - Mean Time Between Events (Plus)	
	RB	4,950 Unlinked Trips (Plus)	
	RB	58,851 Vehicle Revenue Miles (Plus)	
	PC	≥10% <15% of instances in a process (Fixed and Plus)	
	LC	≥3 years <6 years throughout critical infrastructure life cycle (Fixed and Plus)	
Remote	***Likely to Occur more than once a/every:***		
	RB	≥6 months to <6 years (Fixed and Plus)	**D**
	RB	≥96,660 <1,159,920 Operating Hours (Fixed)	
	RB	≥3,065,664 <36,787,968 Vehicle Miles - Mean Time Between Events (Fixed)	
	RB	≥1,529,640 <18,355,680 Unlinked Trips (Fixed)	
	RB	≥1,532,832 <18,393,984 Vehicle Revenue Miles (Fixed)	
	RB	≥21,060 <252,720 Operating Hours (Plus)	

	RB	≥706,212 <8,474,544 Vehicle Miles- Mean Time Between Events (Plus)	
	RB	≥29,700 <356,400 Unlinked Trips (Plus)	
	RB	≥353,106 <4,237,272 Vehicle Revenue Miles (Plus)	
	PC	≥5% <10% of instances in a process (Fixed and Plus)	
	LC	≥6 <12 years throughout critical infrastructure life cycle (Fixed and Plus)	
Improbable	***Likely to Occur more than once a/every:***		
	RB	≥6 years (Fixed and Plus)	**E**
	RB	≥1,159,920 Operating Hours (Fixed)	
	RB	≥36,787,968 Vehicle Miles- Mean Time Between Events (Fixed)	
	RB	≥18,355,680 Unlinked Trips (Fixed)	
	RB	≥18,393,984 Vehicle Revenue Miles (Fixed)	
	RB	≥252,720 Operating Hours (Plus)	
	RB	≥8,474,544 Vehicle Miles - Mean Time Between Events (Plus)	
	RB	≥356,400 Unlinked Trips (Plus)	
	RB	≥4,237,272 Vehicle Revenue Miles (Plus)	
	PC	<5% of instances in a process (Fixed and Plus)	
	LC	≥12 years throughout critical infrastructure life cycle (Fixed and Plus)	
Eliminated	***Will not occur***		**F**

*__RB__= Rate-based Likelihood Criteria; **PC**=Process Cycle-based Likelihood Criteria; **LC**=Life Cycle-based Likelihood Criteria

5.8.2 Safety Risk Assessment Matrix

To determine what action to take to correct or to document acceptance of identified consequences hazards, a system of determining the level of risk involved has been adopted. The **Safety Risk Assessment Matrix** shown in **Table 5-2** and the resulting **Safety Risk Tolerability Index** in **Table 5-3** provide a structure for a systematic approach to:

- Assessing the likelihood and severity of the consequences of identified hazards;
- Determining if the safety risk is acceptable with existing mitigations or if additional action is needed; and
- Prioritizing hazards based on the safety risk of their potential consequences. This will enable management to properly understand the amount of risk involved by accepting the hazard relative to what it will cost (schedule, dollars, operations, etc.) to reduce the hazard to an acceptable level.

TABLE 5-2: SAFETY RISK ASSESSMENT INDEX

LIKELIHOOD	SEVERITY				
	1 FATALITY(IES)	2 CATASTROPHIC	3 CRITICAL	4 MARGINAL	5 NEGLIGIBLE
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
F (ELIMINATED)	1F	2F	3F	4F	5F

TABLE 5-3: SAFETY RISK TOLERABILITY INDEX

"Tolerability" based on identified severity and likelihood.	
1A,1B,1C,2A,2B,3A	Unacceptable under the existing circumstances.
1D,2C,2D,3B,3C,4A,4B	Undesirable
1E,2E,3D,3E,4C,5A,5B	Acceptable with review
4D,4E,5C,5D,5E	Acceptable without review
1F,2F,3F,4F,5F	Eliminated

- Unacceptable Hazardous Conditions: A condition that may endanger human life or property. This condition cannot remain as is and must be mitigated. Unacceptable hazard conditions are reported to Department Manager and CSO for immediate review and approval regarding mitigations. A hazards and mitigations follow up review is conducted by the SSOC.
- Undesirable: The hazard should be mitigated, if at all possible, within fiscal constraints. However, it may be mitigated at a later time. Undesirable hazards and mitigations are reviewed by the SSOC.
- Acceptable with Review: The system safety function must determine the risk associated with not mitigating the hazard. The SSOC reviews the hazards and determines if it will accept the risk.
- Acceptable without Review: The hazard can remain.
- Hazard Eliminated: Hazard has been mitigated to the point it has been eliminated.

5.8.3 Hazard Consequence Assessment

A Hazard Consequence Assessment (**Table 5-4**) will be completed for each potential consequence assessed. EMBARK and each department maintain separate logs.

TABLE 5-4: HAZARD CONSEQUENCE ASSESSMENT

EMBARK SAFETY HAZARD CONSEQUENCE ASSESSMENT					
HAZARD IDENTIFICATION				INITIAL SAFETY RISK RATING	
Hazard #	Description	Location	All Potential Consequence(s)	Analysis Date	Safety Risk Index

5.9 Safety Risk Monitoring and Mitigation Log

In addition to the **Hazard Consequence Assessment Log**, a **Safety Risk Monitoring and Mitigation Log** will also be created. The Log provides information to support the actual status as well as the effectiveness of the implemented safety risk mitigations. It includes:

- The safety risk mitigation monitoring parameters (safety performance indicator(s) and target(s)),
- Associated timeframe,
- Monitoring activities, and
- The responsibilities for monitoring.

The **Safety Risk Monitoring and Mitigation Log** is updated every time a safety risk assessment results in the identification of needed safety risk mitigations. It will also be updated to reflect any changes in monitoring parameters for a safety risk mitigation, when the timelines for safety risk mitigation are not met or a safety risk mitigation is modified, and/or when responsibilities for monitoring of a safety risk mitigation change. EMBARK and each department maintain separate logs.

5.10 Safety Risk Mitigation / Review

The Safety Division is the principal body for assessing and resolving identified hazards within EMBARK's Fixed Route and Paratransit Bus System. However, hazards related to capital projects are reviewed by EMBARK's Accountable Executive, the EMBARK Chief Safety Officer, the design engineer and the Safety and Security Certification Committee (SSCC). Once a project goes into revenue service, the Safety and Security Operations Committee (SSOC) will replace the SSCC. If a formal assessment is conducted by the SSCC or SSOC, the Risk Assessment Index is used to assist the decision-making process in determining whether a hazard should be eliminated, controlled, or accepted in terms of severity and probability. This provides a basis for logical management decision making. Any mitigations that cannot be agreed upon are elevated to review by the SEC. All unacceptable hazards, Events, and associated corrective action plans, monitoring and mitigation are reviewed monthly by the SSOC in accordance with EM-SOP-600.8 Safety and Security Operations Committee**.**

As hazards are identified, there is an order of precedence in the hazard control process. Various means are employed to reduce the risk to an acceptable level, including:

a) Elimination or minimization of the risk through design change. If possible, the hazard will be eliminated through design change. If an identified hazard cannot be eliminated, the hazard will be reduced to an acceptable level, as defined by the Risk Assessment Index, through design selection.

b) Incorporation of Safety Devices. If identified hazards cannot be eliminated or their associated risk adequately reduced through design selection, that risk is reduced to an acceptable level through the use of fixed, automatic, or other protective safety design features or devices

c) Warning Devices. When neither design nor safety devices can effectively eliminate identified hazards or adequately reduce associated risk, warning devices are used to detect the condition and to produce a timely warning signal to alert personnel of hazard. These warning systems are standardized within like types of systems to minimize the probability of incorrect personnel reaction to the signals.

d) Use of Administrative Controls. Where it is impractical to eliminate hazards through design selection or adequately reduce the associated risk with safety and warning devices, procedures and training are used. Tasks and activities that are determined to be critical require certification of personnel proficiency.

e) Use of Personal Protective Equipment (PPE). If the hazard cannot be eliminated or adequately controlled with administrative controls, personal protective equipment may be needed. Training on the proper use of equipment is required prior to employees being placed in an environment requiring such equipment.

5.11 Tracking

Each department will track their hazards.

5.12 Coordination with Federal Transit Administration (FTA) via National Transit Database (NTD)

To ensure an ongoing role in the oversight of EMBARK's hazard management process, EMBARK will establish a Hazard Tracking Log which reflects the consolidation of information in the hazard management process. The Hazard Tracking Log, as shown in **Figure 5-1**, will contain all hazards identified through the various methods applied by EMBARK and will be submitted annually to FTA's designated point-of-contact monthly.

EMBARK will report monthly safety events through the NTD portal for S&S 40 and S&S 50 requirements.

HAZARD TRACKING LOG

Hazard Tracking Log											
Hazard Number	**Date of Hazard ID**	**Hazard Desc**	**Hazard Descrip/ Conseq**	**Origin of Hazard**	**Hazard Analysis Result**	**Immed/ Perm Mitigation**	**Post Hazard Analysis**	**Resp Party**	**Proposed Due Date**	**Hazard Resolution Verification/ Follow-up Activities**	**Date Hazard Closed**

- Hazard Number: the number assigned to the hazard by the Safety Department.
- Date of Hazard Identification: the date the hazard was identified by the Safety Department.
- Hazard Description: a brief narrative summary of the hazard – what it is; where it is located; what elements it is comprised of; etc.
- Hazard Description/Consequence: a brief narrative of the effects, results or outcome of the hazard
- Origin of Hazard: indicates the mechanism used to identify the hazard, i.e., operator report, near-miss, accident investigation, results of internal safety or security audit, rules compliance or training program, maintenance failure, facility or vehicle inspection, trend analysis, formal hazard analysis, etc.
- Hazard Analysis Result: the hazard severity and hazard frequency ratings initially assigned to hazard by the OMC or EMBARK.
- Immediate Mitigation (if needed): immediate actions that are taken to address the hazard
- Proposed Permanent Hazard Resolution: the actions recommended by the FTA/NTSB/TSA to address the hazard and to bring it into a level of risk acceptable to management.
- Post Hazard Analysis: the hazard severity and hazard frequency ratings assigned to hazard by the Safety Department or EMBARK after the hazard resolution/mitigation is implemented.
- Hazard Resolution Verification/Follow-up Activities: The method to mitigate the hazard and any associated follow-up activities.
- Date Hazard Closed: the date the hazard was closed.
- Responsible Party: person or department responsible for resolving the hazard.

6. Safety Assurance

Safety Performance Monitoring and Measurement

Describe activities to monitor the system for compliance with procedures for operations and maintenance.

6.0 RULES COMPLIANCE

6.1 General

All EMBARK employees and subcontractors are responsible for the prevention of accidents, identification of hazards, and resolution of such hazards. See **SOPs 200.16: Ride Check** and **500.23 Maintenance Rule Compliance**. Reports of all accidents, incidents, deficiencies and defects will be maintained by the Manager of the appropriate department.

6.2 Responsibilities

EMBARK is assigned the responsibility for the safe operation of all bus operations. Responsibilities include:

- Preparation and implementation of safe operating policies, plans, rules and procedures that are contained in the SOPs, Plans and observance of other governing documents.
- Required policies, plans, rules and procedures for safe operation and maintenance are developed by EMBARK. The SOPs and Plans will be reviewed annually with review and modification dated accordingly. EMBARK SOPs and Rules may be revised to reflect changes in operating conditions.
- Personnel are annually re-trained or re-certified in accordance with their job classification.
- Employees are provided copies of safety and emergency rules, procedures, and policies that affect them.
- Monitoring adherence to safety-related operating and maintenance policies, plans, rules and procedures through periodic in-service evaluations. All deficiencies are reported, in written form, to the Department Managers for review, re-instruction, or re-training. All hazards identified will be entered on the Hazard Tracking Log until mitigated. Hazard monitoring and tracking will be in accordance with EMBARK's Hazard Management Plan.
- When necessary, performance coaching or reinstruction training for Supervisors is performed by the Department Managers, or designee. Supervisors are expected to comply with all EMBARK requirements and rules, SOPs, and enforcement thereof, as they apply to the management of EMBARK's service and the management of personnel.
- Personnel, whose safety record requires follow-up, additional training or discipline, including discharge, are identified through maintenance of records, which indicate safety violations of rules and procedures.

The Maintenance Department will be required to develop a preventive maintenance schedule, for each system hardware element, which is designed to maintain system safety. Reported deficiencies and defects in equipment and facilities are corrected and monitored to ensure satisfactory resolution. Only equipment known to be free of safety-related defects will be placed into service.

Describe activities to monitor operations to identify any safety risk mitigations that may be ineffective, inappropriate, or were not implemented as intended.

An Assurance Log is created so that once a hazard has been closed or a temporary mitigation has been implemented, the effectiveness of the mitigation can be verified. The type of mitigation used will determine the type of monitoring used to verify the effectiveness of the mitigation. Methods used will include but limited to: Inspections, observations, and interviews.

Safety Risk Monitoring and Mitigation Log

In addition to the **Hazard Consequence Assessment Log**, a **Safety Risk Monitoring and Mitigation Log** will also be created. The Log provides information to support the actual status as well as the effectiveness of the implemented safety risk mitigations. It includes:

- The safety risk mitigation monitoring parameters (safety performance indicator(s) and target(s)),
- Associated timeframe,
- Monitoring activities, and
- The responsibilities for monitoring.

The **Safety Risk Monitoring and Mitigation Log** is updated every time a safety risk assessment results in the identification of needed safety risk mitigations. It will also be updated to reflect any changes in monitoring parameters for a safety risk mitigation, when the timelines for safety risk mitigation are not met or a safety risk mitigation is modified, and/or when responsibilities for monitoring of a safety risk mitigation change. EMBARK and each department maintain separate logs.

Describe activities to conduct investigations of safety events to identify causal factors.

Refer to **SA-SOP-700.01 Event Investigation Procedures**

Describe activities to monitor information reported through internal safety reporting programs.

6.3 SAFETY DATA ACQUISITION

6.3.1 Roles and Responsibilities

EMBARK has the primary responsibility to monitor the safety performance of bus operations. Safety data is collected and analyzed to determine if safety performance meets established safety goals, under the direction of the Accountable Executive, in accordance with the processed identified in **Section 5. Safety Risk Management**, to address safety deficiencies identified during a safety performance assessment. This data includes injuries to passengers, EMBARK personnel, the public; potentially hazardous equipment failures; unacceptable hazardous conditions, and rules and procedure violations. A closed-loop reporting system for identifying and monitoring safety-related items has been established. To close out each incident, safety verification activities and results are reviewed and approved by EMBARK's Safety Division.

6.3.2 Data Acquisition

The EMBARK CSO is responsible for collecting and reporting information regarding accidents, incidents, occurrences and hazardous conditions in accordance with applicable State and Federal regulations. Information regarding accidents, incidents, occurrences, hazardous conditions and operations are obtained from several different reporting mechanisms. These include but are not limited to:

- Accident/ Injury Reports,
- Incident Reports,
- Employee Hazard /Security /Self Reporting forms
- Suggestion Box
- Supervisor Discussions with Employees
- Employee Injury Report
- Supervisor Safety Tests and Observations
- Supervisor Ride Checks
- Shop Safety Inspections

- Bus Stop Safety Inspections
- Maintenance Rules Compliance Checks
- Daily Pre-Trip Inspection Forms
- Customer Service Log
- Information provided by oversight authorities, including the FTA.

6.3.3 Data Analysis

Tracking of hazard-related data is used to identify trends. These trends are further analyzed and/or investigated to determine causal factors. This is accomplished by interviews with personnel in the affected department(s) and analysis of pertinent documentation. Identified hazards are submitted with corrective action recommendations or a request for corrective action development.

6.3.4 Reports

The report will be prepared by each department and submitted to the EMBARK CSO and Operation Manager who will review and approve.

The City of Oklahoma City uses a software program called Origami. After the investigation has been completed the supervisor will enter the information in the Origami System. Origami then sends out an email set up for EMBARK (TS-Incidents). The email group is for all key personnel that would be involved in incidents.

Management of Change (Not Required for Small Public Transportation Providers)

Describe the process for identifying and assessing changes that may introduce new hazards or impact safety performance.

As with any transit agency – change is required. Whether it is a change of organizational structure, operational changes, or equipment changes. To ensure safe operations of our system and to provide a safe work environment for our employees, vendors, contractors, and patrons we have **SA-SOP-101.01 Configuration Management** and **EM-SOP-100.01 Document Control and Approval**.

6.4 New Routes, Facilities, Bus Stops and Equipment

Formal hazard assessments are conducted during the preliminary engineering phase of each new bus system addition, new capital project or system modification. Preliminary Hazard Assessments (PHAs) and Threat and Vulnerability Assessments (TVAs) are conducted by EMBARK's Safety Division and/or contracted project engineering groups. The purpose of the assessments are to:

- Identify and evaluate the effects of hazardous or threatening conditions on personnel, equipment, and the public,
- Determine the severity and probability of occurrence of hazards and threats,
- Define and evaluate countermeasures to eliminate or mitigate identified hazards and threats,
- Provide timely notification to designated personnel responsible for resolving undesired hazards and threats, and
- Document the safety and security concepts incorporated and used during design and provide the basis for developing procedures to complement the design's safety and security concepts, or to resolve the hazard or threat if the design did not provide resolution.

6.5 Scenario Development and Review

EMBARK's Safety Division and/or contractors and designers provide a starting point for identifying the types of undesirable events that may occur. Hazardous scenarios outline potential situations and equipment malfunctions which can produce undesirable events for EMBARK. The scenarios are intended to represent real-world events and are derived from anticipated, current, or past experiences of related

projects. Post scenario reviews with EMBARK, or assigned project engineering groups, will be conducted to document and mitigate the hazards identified from any scenarios performed.

6.6 System Modifications

Contractors or department heads are responsible for getting approval from EMBARK's Safety Division for any changes to existing systems. Modifications or changes will be disseminated through Orders, Special Instructions or Memorandums.

6.7 Orders and Special Instructions

Operations personnel will be informed of changes or modifications through either Orders or Special Instructions. Permanent modifications or changes that are determined to need certification by the SSCC/SSOC will be written into the Recertification program (SSCP) and be accepted as a normal condition of operation.

6.8 Memorandum

Any modifications must be approved by the Chief Safety Officer before distributed.

6.9 Tracking

The Safety Division is responsible of ensuring that any hazards associated with system modifications of any kind are worked into the Hazard Management Process. Any accepted risks associated with system changes will be tracked from the outset.

6.10 Configuration Management (CM)

There are two fundamental purposes of configuration management (CM):

1. Establish system integrity
2. Maintain system integrity

To an individual who designs, develops, operates, or maintains complex transportation management systems (TMSs), the definition of integrity is well understood: • A system with integrity is one in which all components are well defined and documented.

- A system with integrity is one in which a working baseline is always available to implement and provide transportation management services.
- A system with integrity is one that can be readily integrated with other regional intelligent transportation systems (ITS).
- A system with integrity is one with a high degree of traceability – allowing one to easily identify how system functions are provided technically.

Please see document **SA-SOP-101.01 Configuration Management** for EMBARK's complete CM plan and **EM-SOP-100.01 Document Control and Approval**.

Continuous Improvement (Not Required for Small Public Transportation Providers)

Describe the process for assessing safety performance. Describe the process for developing and carrying out plans to address identified safety deficiencies.

See Section 6.3 SAFETY DATA ACQUISITION

7. Safety Promotion

Competencies and Training

Describe the safety training program for all agency employees and contractors directly responsible for safety.

Training
Training is a powerful influence and motivator in workplace safety. Training should be both on-the-job and specific and should supply both knowledge and motivation.

1. New Employee Orientation

- All new employees receive training in Alcohol and Substance Abuse, Blood Borne Pathogens, ADA, Fire Safety, Ergonomics, Hazard Communication, System Security, Severe Weather, and Avoiding Slips, Trips and Falls. All new Maintenance employees also receive training in Hazard Communication, Personal Protective Equipment, Right to Know, Fire Extinguishers, Lock-Out Tag Out, Spill Cleanup, and Forklift Safety.
- Our trainers are certified with the Transportation Safety Institute (TSI).
- All new Bus Operators receive extensive training in bus maneuvering, customer relations and emergency procedures using U.S. Department of Transportation (USDOT) guidelines provided through the TSI.
- EMBARK complies with Americans with Disability (ADA) rules and regulations and all Operators are fully trained in the use of wheelchair lifts on the buses and the restraining of mobility devices. All Operators receive sensitivity training concerning issues dealing with the elderly, disabled, and special needs passengers.
- All bus operators who successfully complete the Bus Operator Training Class receive a certificate from TSI.

2. Instructions and Training
All management employees have the responsibility to instruct new employees along the following lines:

- General rules and regulations that apply specifically to his/her department.
- The hazards of a job, such as mechanical hazards, lifting or handling heavy objects, eye hazards, and personal protective equipment. The Safety and Training Department is responsible for the Occupational Safety and Health Act (OSHA) compliance training.
- The details of the job and any special precautions needed.
- Foremen/supervisors monitor the performance of all new employees and potential unsafe conditions. Any unsafe conditions are communicated to the Safety and Training Department for investigation and corrective action.

3. Quarterly Training
All employees receive quarterly training on various topics depending on trends and industry recommendations. Topics include: Blood Borne Pathogens, Hazard Communication, Traffic Laws, De-Escalation, Reduce Fare Cards, Stop Announcement Requirements, Customer Service, and Drug and Alcohol Awareness refresher. We also review video of previous incidents or accidents so we can prevent them from happening again. Once a year depending on the weather, we do refresher hands-on training for: mobility device securement, mirror stations, rock and roll, and bike racks.

4. Executive Leadership/Key Staff Training
Refer to Safety and SMS Required Training Table.

5. Safety Messages

Each week safety messages are created based on trends or seasonal conditions. The maintenance department reviews these with their employees every day. For the bus operations they are placed in placards and put on tables in the bus operator's area for them to read.

6. Safety Pep Rallies

Quarterly Pep Rallies are held to remind all employees of safety. Each quarter a theme is selected and each division puts their spin on it for how the safety topic relates to their division.

7. Refresher Training

Refresher training may be required as a result of feedback from the following:

a. Ride Checks
b. Customer Complaints
c. Events

8. Safety Management System (SMS) Training

EMBARK has designated the personnel listed in the following table as needing SMS and safety training. All listed personnel must complete the associated training identified in the table.

SAFETY AND SMS REQUIRED TRAINING

		Training Required																							
		EMBARK SMS Training	SMS Awareness	SMS Assurance	Bloodborne Pathogens	HazCom	EAP	Fire Extinguisher	Drug and Alcohol	New Bus Op Training	PPE	LOTO	TSA: Human Trafficking, Suspicious Package, Active Threat	Electrical Hazards	Slips, Trips and Falls	Signage Safety	Machine Guarding	Fuel Islands	Hand Tools	Respirator Requirements	Forklift	Bus Barrier	Event Investigation	CPR/AED
Position	Bus Operators	X			X	X	X	X	X	X	X	X	X		X							X		X
	Operator Supervisors		X	X	X	X	X	X	X	X	X	X	X		X								X	X
	Maintenance Techs	X			X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X
	Maintenance Supervisors		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X
	Admin		X	X	X	X	X	X	X		X		X											X
	Senior Leadership		X	X	X	X	X	X	X		X		X											X

Safety Communication *Describe processes and activities to communicate safety and safety performance information throughout the organization.*
1. **Quarterly Training –** Employees are updated with company news and feedback during quarterly training. 2. **Posted on Bulletin Boards –** Company news and updates are posted on bulletin boards. 3. Additionally, all methods of safety reporting listed in **Section 7. Safety Promotion** provide the means to give employees feedback regarding hazards and safety risks identified.

Additional Information

Supporting Documentation *Include or reference documentation used to implement and carry out the Safety Plan that are not included elsewhere in this Plan.*
N/A

Definitions of Special Terms Used in the Safety Plan

Term	Definition
Accident	means an Event that involves any of the following: A loss of life; a report of a serious injury to a person; a collision 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. (49 CFR 673)
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. (49 CFR 673)
Chief Safety Officer (CSO)	means an adequately trained individual who has responsibility for safety and reports directly to a transit agency's chief executive officer, general manager, president, or equivalent officer. A Chief Safety Officer may not serve in other operational or maintenance capacities, unless the Chief Safety Officer is employed by a transit agency that is a small public transportation provider as defined in this part, or a public transportation provider that does not operate a rail fixed guideway public transportation system. (49 CFR 673)
Consequence	means an effect of a hazard involving 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.[2]
Corrective Action Plan (CAP)	means a plan developed by a Transit Agency that describes the actions the Transit Agency will take to minimize, control, correct, or eliminate risks and hazards, and the schedule for taking those actions. Either a State Safety Oversight Agency or FTA may require a Transit Agency to develop and carry out a corrective action plan. (49 CFR 674)
Designated Personnel	means (1) Employees and contractors identified by a recipient whose job function is directly responsible for safety oversight of the public transportation system of the public transportation agency; or (2) Employees and contractors of a State Safety Oversight Agency whose job function requires them to conduct safety audits and examinations of the rail fixed guideway public transportation systems subject to the jurisdiction of the agency. (49 CFR 672)
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. (49 CFR 673)
Event	means any Accident, Incident, or Occurrence. (49 CFR 673)
FTA	means the Federal Transit Administration, an operating administration within the United States Department of Transportation. (49 CFR 673)
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

[2] https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/regulations-and-guidance/safety/public-transportation-agency-safety-program/133521/ptasp-safety-risk-management_0.pdf

	infrastructure of a public transportation system; or damage to the environment. (49 CFR 673)
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. (49 CFR 673)
Investigation	means the process of determining the causal and contributing factors of an accident, incident, or hazard, for the purpose of preventing recurrence and mitigating risk. (49 CFR 673)
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. (49 CFR 673)
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. (49 CFR 673)
Operator	of a public transportation system means a provider of public transportation as defined under 49 U.S.C. 5302(14). (49 CFR 673)
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. (49 CFR 673)
Performance target	means a quantifiable level of performance or condition, expressed as a value for the measure, to be achieved within a time period required by the Federal Transit Administration (FTA). (49 CFR 673)
Person	means a passenger, employee, contractor, pedestrian, trespasser, or any individual on the property of a rail fixed guideway public transportation system. (49 CFR 674)
Public Transportation Agency	means an entity that provides public transportation service as defined in 49 U.S.C. 5302 and that has one or more modes of service not subject to the safety oversight requirements of another Federal agency. (49 CFR 672)
Public Transportation Agency Safety Plan (PTASP)	means the documented comprehensive agency safety plan for a transit agency that is required by 49 U.S.C. 5329 and this part. (49 CFR 673)
Recipient	means State or local governmental authority, or any other operator of a public transportation system receiving financial assistance under 49 U.S.C. chapter 53. (49 CFR 672)
Risk	means the composite of predicted severity and likelihood of the potential effect of a hazard. (49 CFR 673)
Risk mitigation	means a method or methods to eliminate or reduce the effects of hazards. (49 CFR 673)
Safety Assurance	means processes within a transit agency's Safety Management System that functions to ensure the implementation and effectiveness of safety risk mitigation, and to ensure that the transit agency meets or exceeds its safety objectives through the collection, analysis, and assessment of information. (49 CFR 673)
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. (49 CFR 673)
Safety Management System (SMS)	means the formal, top-down, organization-wide approach to managing safety risk and assuring the effectiveness of a transit agency's safety risk mitigation. SMS includes systematic procedures, practices, and policies for managing risks and hazards. (49 CFR 673)

Safety Management System (SMS) Executive	means a Chief Safety Officer or an equivalent. (49 CFR 673)
Safety Performance Target	means a Performance Target related to safety management activities. (49 CFR 673)
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. (49 CFR 673)
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. (49 CFR 673)
Safety Risk Management	means a process within a transit agency's Public Transportation Agency Safety Plan for identifying hazards and analyzing, assessing, and mitigating safety risk. (49 CFR 673)
Serious injury	means any injury which: (1) Requires hospitalization for more than 48 hours, commencing within 7 days from the date of the injury was received; (2) Results in a fracture of any bone (except simple fractures of fingers, toes, or 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. (49 CFR 673)
Small public transportation provider	means a recipient or subrecipient of Federal financial assistance under 49 U.S.C. 5307 that has one hundred (100) or fewer vehicles in peak revenue service and does not operate a rail fixed guideway public transportation system. (49 CFR 673)
State	means a State of the United States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, Guam, American Samoa, and the Virgin Islands. (49 CFR 673)
State of good repair	means the condition in which a capital asset is able to operate at a full level of performance. (49 CFR 673)
Transit agency	means an operator of a public transportation system. (49 CFR 673)
Transit Asset Management (TAM) 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. (49 CFR 673)
Vehicle	means any rolling stock used on a rail fixed guideway public transportation system, including but not limited to passenger and maintenance vehicles. (49 CFR 674)

List of Acronyms Used in the Safety Plan

Acronym	Word or Phrase
ACOG	Association of Central Oklahoma Governments
CM	Configuration Management
COTPA	Central Oklahoma Transportation and Parking Authority
CSO	Chief Safety Officer
FTA	Federal Transit Administration

MPO	Metropolitan Planning Organization
NTD	National Transit Database
OSHA	Occupational Safety and Health Administration
PHA	Preliminary Hazard Assessment
PPE	Personal Protective Equipment
PTASP	Public Transportation Agency Safety Plan
PTSCTP	Public Transportation Safety Certification Training Program
SEC	Safety Executive Committee
SMS	Safety Management System
SOP	Standard Operating Procedure
SSCC	Safety and Security Certification Committee
SSCP	Safety and Security Certification Plan
SSOC	Safety and Security Operations Committee
TSI	Transportation Safety Institute
TSSP	Transit Safety and Security Program
TVA	Threat and Vulnerability Assessment

CENTRAL OKLAHOMA TRANSPORTATION & PARKING AUTHORITY

COTPA Transportation
Committee Agenda
Item No. 3.
12/3/2020

TO: Chairman and Board of Trustees

FROM: Administrator

Palomar Program Presentation.

Background:
In late 2019, Palomar: Oklahoma City's Family Justice Center, Inc. (Palomar) reached out to COTPA requesting a partnership to develop transportation services for clients of the center. The center provides services to victims and victim's family members for domestic violence, sexual assault, human trafficking and elder abuse. A partnership with Palomar to solve transportation needs is consistent with elevating the status and use of public transportation within the community and compliments the City of Oklahoma City's commitment to Palomar.

Staff have been working with Palomar to develop an In-House service delivery program wherein transportation services would be provided to Palomar clients using COTPA's Operators. As a solution to Palomar's immediate transportation needs, the Administrator entered into an agreement with Palomar in July 2020 to provide On-Demand transportation services for their clients using COTPA's contracted service providers.

Staff will provide an overview of the program for discussion and/or recommendations by the Committee.

Previous Action:
Professional Services Agreement for On-Demand services approved by Administrator on July 6, 2020.

LFR:
Growth and Service

Recommendation: Receive presentation.

Review Public Transportation and Parking Department and Municipal Counselor's Office

Jason Ferbrache
Administrator