
SYSTEM SAFETY PROGRAM PLAN



Florida Department of Transportation
District 5



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Rev C	Project Team	01/20/14	SunRail
Rev D	Project Team	03/12/14	Phase 1 FDOT
Rev E	Project Team	03/28/14	Phase 1 Comments Follow- Up - FDOT
Rev F	Project Team	04/07/14	Added reporting information



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DEFINITIONS AND ACRONYMS

Amtrak – National Railroad Passenger Corporation. Class 1 Common Carrier railroad.

APTA – American Public Transportation Association.

Accident/Incident – An unplanned occurrence, which could have or did result in personal injury and/or property damage.

BT AME – Bombardier Transportation Americas (Region in which Bombardier resides).

CDO – Central Dispatching Office

CFR – Code of Federal Regulations.

DO – Director of Operations

Emergency – An event or condition that requires an immediate, active response to prevent, mitigate, and/or control threats to life and property.

EOP – Emergency Operating Procedures.

EPA – Environmental Protection Agency.

FDEP – Florida Department of Environmental Protection.

FRA – Federal Railroad Administration.

FTA – Federal Transit Administration.

Hazard – A condition or situation that may have the potential to cause personal injury or property damage.

Hazard Identification/Resolution Process – Bombardier’s process addressing the identification, evaluation, and resolution of hazards.

HSE – Health, Safety and Environment.

MAXIMO – Asset management software that provides asset lifecycle and maintenance management for all asset types on a single platform

NTSB – National Transportation Safety Board – An independent federal agency of the US DOT that investigates and analyzes major transportation accidents (railroads, aviation, highway, marine, etc.) and prepares a public report on its findings, conclusions, and recommendations.

OCC – SunRail Commuter Service Communication Center now referred to as the building where the Central Dispatching Office is located.

OEM – Original Equipment Manufacturer

OSHA – Occupational Safety and Health Administration – A federal agency within the United States Department of Labor responsible for establishing and enforcing standards



for the exposure of workers to safety hazards or other harmful materials that they may encounter in the work environment, as well as other matters that may affect the safety and health of workers.

QMP – Qualified Maintenance Person.

Risk – The potential harm that may arise from some present process or from some future event. It is often mapped to the probability of some event, which is seen as undesirable. Usually the probability of that event and some assessment of its expected harm must be combined into a believable scenario (an outcome) which combines the set of risk, regret and reward probabilities into an expected value for that outcome.

SDS – Safety Data Sheet.

SSCC – Safety and Security Communications Coordinator, located within SunRail Commuter Service Control Center which is now referred to as the Central Dispatching Office.

SSPP – System Safety Program Plan

SunRail – The name of the commuter rail service

System Safety – The application of operating, technical, and management techniques and principles to the safety aspects of a system throughout its life cycle to reduce hazards to the lowest practical level through the most effective use of the available resources.

System – A set or group of interacting, interrelated or interdependent elements or parts that are organized and integrated to form a collective unity or a unified whole to achieve a common objective.




1.0 POLICY STATEMENT AND AUTHORITY

It is the mission of the Florida Department of Transportation (FDOT) as owner of SunRail commuter service, to provide and support, with dignity and respect, operations and services that are safe, customer focused, appealing, reliable and efficient. Safety is FDOT's primary concern in fulfilling this mission and is, therefore, wholly committed to the effective design, implementation and administration of a comprehensive and fully integrated system safety program for SunRail commuter service.

The System Safety Program Plan (SSPP) has been developed to describe the operational and maintenance characteristics of the system, and to define the specific safety requirements, as regulated by the Federal Railroad Administration FRA and FDOT Central Office as the State Safety Oversight (SSO) agency in accordance with Section 341.061, of Florida Statutes. This SSPP establishes mechanisms for identifying and addressing hazards associated with operations and services, and provides a means of ensuring that proposed system modifications are implemented with thorough evaluation of their potential effect on safety. This SSPP is developed in compliance with rule 14-15.017.

The FDOT Passenger Rail Operations Manager for SunRail is ultimately responsible for safety and security of the system. The FDOT Passenger Rail Operations Manager holds the ultimate responsibility for the day-to-day safety of SunRail Commuter Service. Success of the SSPP depends on the involvement of all stakeholder personnel and departments in the safety program. Subsequently, all personnel are responsible and accountable for fulfilling and complying with the safety requirements of their positions and all leadership are responsible and accountable for enforcing the safety requirements pertaining to their employees.

The SSPP is reviewed annually and revised as necessary, with input, as applicable, by all stakeholders to ensure it remains accurate, effective, and consistent with SunRail goals and objectives, as well as compliant with current State, Federal, and local regulations and industry guidelines. Revisions of the SSPP are submitted to the FDOT Passenger Rail Operations Manager for review and acceptance.


Edward R. Connolly II
D5 FDOT Passenger Rail Operations Manager

April 14, 2014

Date



2.0 PURPOSE:

System safety is a combination of management and systems engineering practices applied to the evaluation and reduction of risk in a system and its operation focused towards identifying hazards, determining underlying hazard causes, developing engineering or management controls to eliminate or control hazard consequences, and verifying that the controls are adequate and in place. This critical work is done with consideration given to the constraints of operational effectiveness, time and cost.

The SSPP communicates the safety philosophy, safety responsibilities, activities and capabilities, means of implementation and specific safety goals and objectives of SunRail Commuter Service Safety Program. The plan further provides the guidance, methods, responsibilities and procedures to create and maintain a safe and secure environment for employees, passengers and the general public for SunRail Commuter Service.

The SSPP has been written in accordance with the guidelines specified in the American Public Transportation Association (APTA) Manual for the Development of System Safety Program Plans, in accordance with Section 341.061, of Florida Statutes and in compliance with rule 14-15.017. The SSPP has also been written, in part, to compliment the responsible contractors' corporate Health, Safety and Environmental (HSE) policies and functions as an operating document.

a) **Purpose of the System Safety Program Plan**

The primary purpose of the SSPP is to establish formal mechanisms to enhance system safety by:

- Administering a system-wide safety program and process whereby hazards associated with the operation of the system are identified and analyzed so that preventive actions may be implemented to eliminate, control or reduce their effects;
- Providing a framework for implementing contractors' policies and procedures and the achievement of related goals and objectives that can be measured, audited, and evaluated to determine the effectiveness of system safety program and hazard management activities.
- Satisfying applicable Federal (FRA, FTA, EPA, NTSB), State (FDEP, SSO and FDOT) and Local regulations and Tenant Railroad Agreements' requirements and identifying the relationships and responsibilities of these parties.

The SSPP establishes safety responsibilities and ensures that tasks are assigned, monitored, documented and audited in an organized and useful manner as follows:

- Includes all departments involved in the operation and maintenance of SunRail Commuter Service.



- Applies to all activities that involve the design, construction, testing, operations and equipment maintenance.
- Charges each manager, department and office with responsibility and accountability for the SSPP implementation, enforcement and success.
- Requires communication, integration, and cooperation among all managers, departments and offices relative to matters of safety.
- Encompasses all fixed facilities, vehicles and employee activities and applies to all who come in contact with SunRail Commuter Service.

This SSPP will serve as the main reference document in which all the relevant safety policies, procedures and responsibilities that are necessary to achieve SunRail safety goals will be contained.

b) Scope of the System Safety Program Plan

The scope of the SSPP applies to the management activities performed during SunRail Commuter Service and maintenance of the rail corridor that affect SunRail Commuter Service elements (fixed facilities, equipment, signals and communications) and the personnel. All employees and contractors are responsible for the implementation and success of the system safety program and are, therefore, required to adhere to safe work practices during the administration of their duties and when on FDOT property. Relevant documents such as rulebooks, standard operating procedures, policies, plans, programs, etc., are referenced where appropriate in the SSPP and should be reviewed to achieve a complete understanding of employee safety related responsibilities.



3.0 GOALS

The ultimate goal of the system safety program is to achieve the highest level of safety for all SunRail customers, employees/contractors, and the general public. This is accomplished through the identification, elimination, reduction, and/or control of hazards and their risks through established requirements, roles and responsibilities, and lines of authority for safety management that provide ownership, accountability and assurance for system safety.

Through the development, establishment, implementation and continual re-evaluation of the SSPP, SunRail, through its managers, employees, and contractors, expects to maintain the highest level of safety for employees, contractors, customers, and all others who are impacted by the commuter rail operation.

Specific goals of the System Safety Program include:

- Empowering employees and contractors to identify, eliminate, minimize, and/or control hazards and their associated risks;
- Fostering the development of a system wide safety program and safety culture;
- Promoting a high level of safety awareness among all employees, management and personnel;
- Making safety a management and work performance leading indicator in the same way as productivity and work quality;
- Assisting in creating a level of safety throughout SunRail Commuter Service that exceeds that of other commuter rail properties;
- Developing a process that enhances the safety of future operations through the design and procurement process.

SunRail will implement this SSPP with the overall goal of achieving and maintaining a level of safety comparable to or better than other U.S. commuter rail operations. This goal will be determined by using comparative safety data gathered from FRA Reportable Rail Equipment Accidents/Incidents; FRA Employee Injury/Illness Records; any other appropriate comparative safety data. Safety performance within the operation, including the frequency, severity and follow-up action taken with regard to employee and contractor non-compliance with railroad safety and operating rules and procedures, will be closely monitored by management.

Additionally program audits and reviews will be established and conducted to ensure compliance and success of safety leading indicators.

See Appendix H for System Safety Goals and Objectives for SunRail Commuter Service.



4.0 OBJECTIVES

Objectives are the quantifiable working elements of the System Safety Program that provide a means for achieving SSPP goals and as a method of measuring the effectiveness of safety efforts. Each year, specific safety program objectives are developed for the operation and maintenance of SunRail Commuter Service. Once developed, objectives are assigned to specific to all personnel for implementation. These individuals are held accountable for attaining their assigned objectives through appraisal systems, and through this process, become active participants in, and owners of, the system safety program. The objectives in support of the System Safety Program and the continuous improvement of it are included in the business objectives and incorporated in team members PMP's (Performance Management Program)

Specific objectives of the System Safety Program include:

- Establishing safety policies, procedures, and requirements, and coordinating these program elements with employee responsibilities to integrate safety into all processes, decision making, and operations;
- Establishing processes for verifying adherence to safety policies, procedures, and requirements and documenting system compliance with these program elements;
- Complying with Federal, State, and local regulations and requirements;
- Thoroughly investigating accidents/incidents including property damage, injuries and near misses;
- Identifying, analyzing, and resolving all hazards in a timely manner; and
- Thoroughly evaluating and verifying the operational readiness of new systems and the safety implications of all proposed system modifications prior to implementation to assure that the modifications do not create new hazards.

All personnel are responsible and accountable for fulfilling and complying with the safety requirements of their positions and for supporting the implementation of program objectives. All leadership is responsible and accountable for enforcing the safety requirements pertaining to their employees and activities. All employees are encouraged to identify and report hazards or potential hazards to their direct supervisor, according to the appropriate chain of command.

Where an immediate and serious hazard exists, leadership has the authority and responsibility to order hazardous conditions corrected or hazardous practices halted.



5.0 SYSTEM DESCRIPTION/ORGANIZATION STRUCTURE

a) **System Description**

FDOT, in cooperation with the Central Florida Regional Transportation Authority (LYNX), METROPLAN Orlando, and Volusia, Seminole, Orange, Osceola Counties and the City of Orlando, is operating SunRail commuter service in the four-county corridor that extends north and south of Orlando, Florida.

The twelve (12) SunRail stations are located at DeBary, Sanford, Lake Mary, Longwood, Altamonte Springs, Maitland, Winter Park Amtrak, Florida Hospital Health Village, LYNX Central Station, Church Street, Orlando Amtrak, and Sand Lake Road. Park-and-ride facilities are provided at all stations except Florida Hospital, LYNX Central Station, Orlando Amtrak, Winter Park and Church Street.

SunRail Commuter Service plan will provide 30-minute bi-directional service during morning and evening peak periods, and 120 to 150 -minute bi-directional service in the mid-day, Monday through Friday using a fleet of push-pull diesel locomotives, coaches, and cab cars.

Until such time as the SunRail commuter service is transferred to a successor agency FDOT will be solely responsible for the development, design, engineering, preconstruction activities, construction and installation of all fixed facilities, procurement of rolling stock and other personal property, operation (including train dispatching), and maintenance of railroad corridor and SunRail. FDOT, as landowner, will manage, direct, and control the occupation, use, and access to the Corridor in a manner consistent with freight and passenger rail services. For the first seven years after the Revenue Service Date, FDOT commits to the management, maintenance, dispatch, and operation of SunRail. After the seven years, FDOT will transition the operations and management of SunRail commuter service to the Central Florida Commuter Rail as defined in the Interlocal Agreements. FDOT has elected to contract out the operations and maintenance services to Bombardier, the signal maintenance services to Herzog, and the heavy maintenance services to Amtrak. To oversee the contracts, FDOT has contracted with consultants to perform the SunRail oversight. The contracts for the operations and maintenance services and the oversight have been procured to transfer to the Central Florida Commuter Rail Commission have the seven years of operations.



Operating Territory

The detail of the operating territory is as follows:

SunRail generally parallels the I-4 corridor, extending through Volusia, Seminole, Orange and Osceola Counties, including the City of Orlando. The railway predominantly complies with FRA Class IV track standards, with the exception of some sections of Class II and III track, enabling a maximum track speed of 79 mph. There are 146 highway-rail grade crossings along the corridor. CSX retains freight operating rights over this territory; Amtrak retains intercity passenger rights, including the Auto Train terminating at Sanford on the Aloma Spur and two trains each way between New York and Miami. Florida Central Railroad (FCEN) has freight interchange rights to operate between Orlando at MP A789.99 and Taft Yard at MP A798.

SunRail has a Centralized Traffic Control (CTC) signal system and additional universal crossovers equipped with dual control power operated switches under the control of a train dispatcher located within the OCC in Sanford. The CTC system is supplemented by a wayside Automatic Block Signal (ABS) system designed to be fail-safe.

SunRail Central Dispatching Office (CDO) is located within the OCC building at 801 SunRail Drive, Sanford, Florida.

Figure 1 – SunRail Commuter Service Map

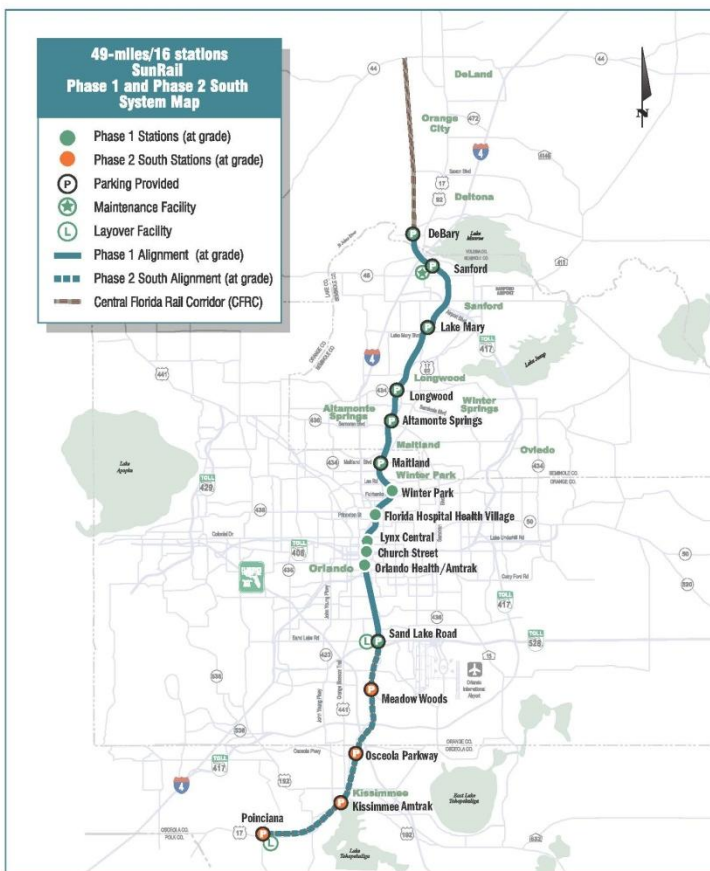
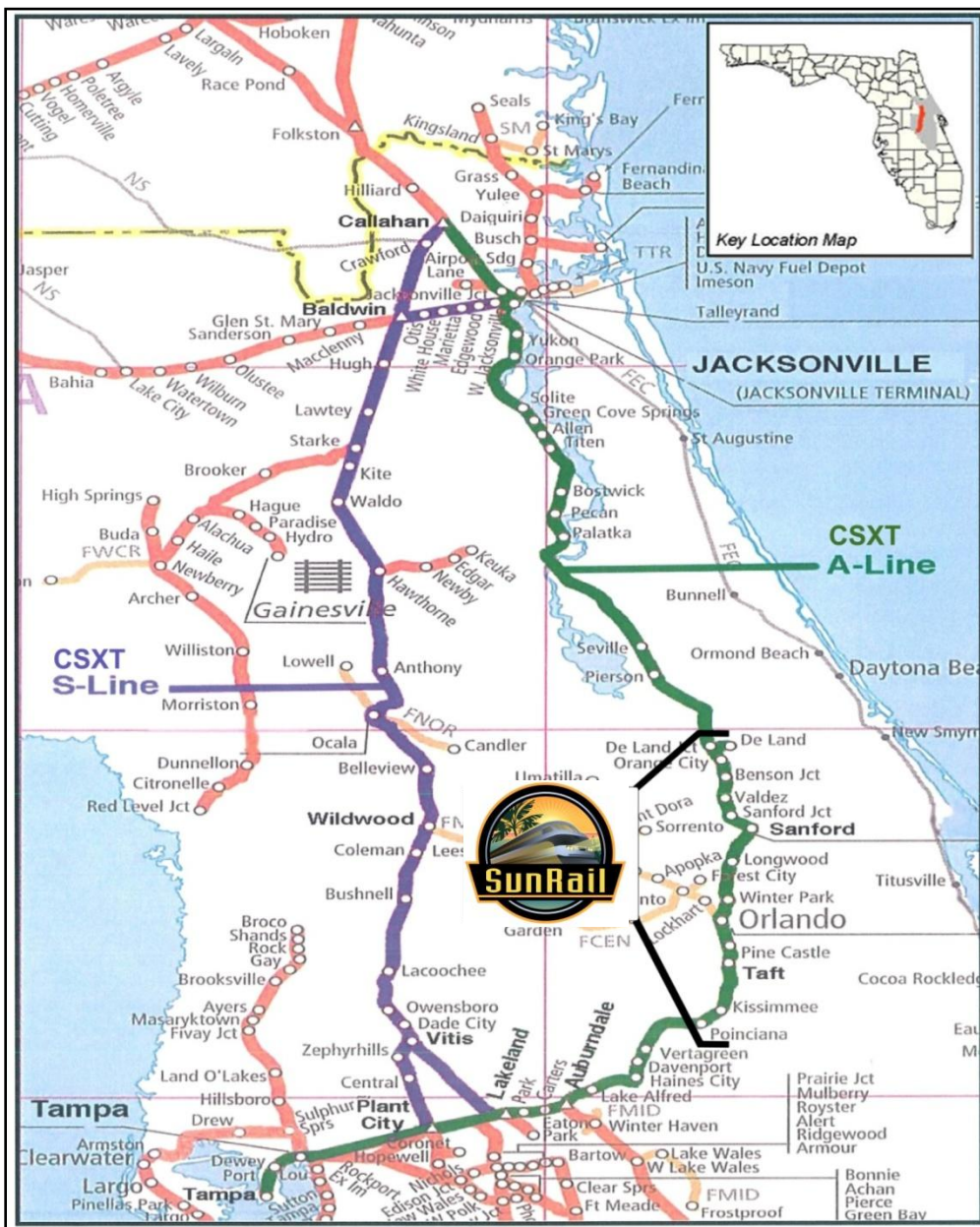


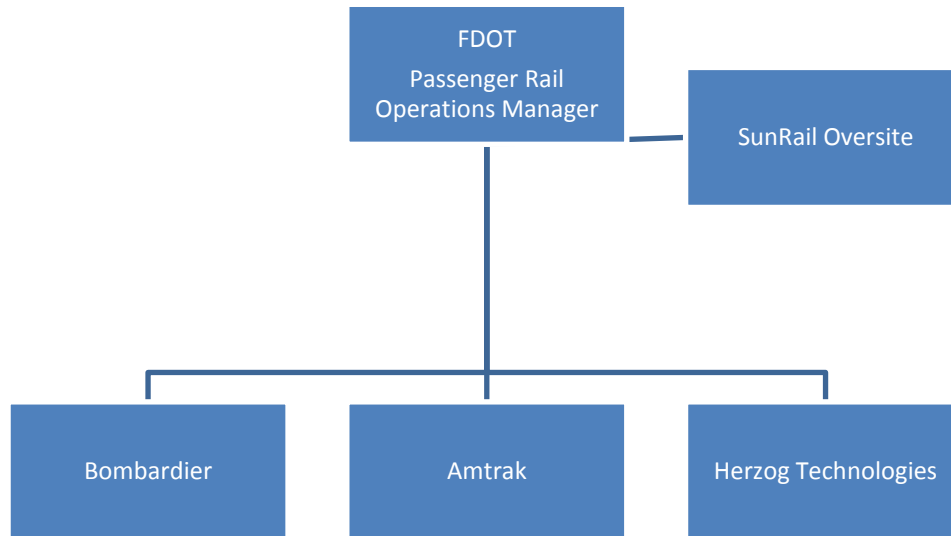


Figure 2 – SunRail Regional Location Map





b) SunRail Commuter Service Structure



c) Key Roles for SunRail Commuter Service

Passenger Rail Operations Manager (FDOT)

This position reports directly to SunRail CEO. The Passenger Rail Operations Manager serves as FDOT’s primary representative.

- Provides oversight of day-to-day operations of SunRail commuter service provided by the O&M Contractor and Signal Maintenance Contractors to ensure compliance with service standards and budgets, including oversight of all contracted services.
- Provides communication and coordination with Federal Agencies, SunRail Contractors and tenant railroads

Director of Operations (SunRail Oversight)

This position reports directly to the FDOT Passenger Rail Operations Manager

- Oversees operating aspects of SunRail Commuter Service including facility, track, station, signal, locomotive and passenger car testing.
- Coordinates on a daily basis with multiple contractors, sub-contractors, state partners, federal and state regulators to insure operating and safety regulatory compliance for SunRail commuter rail operations.
- Directs Operations personnel that provide operations and compliance oversight of the Operations and Maintenance (O&M) Contractor and Signal Maintenance Contractor.



- Notifies applicable Federal, State, local agencies of accidents/incidents or other emergency conditions that occur on SunRail Commuter Service

SunRail Safety and Security Manager (SunRail Oversight)

This position reports to the Director of Operations.

- Responsible for the safety and security certification in accordance with FTA's criteria and chairs the Safety and Security Certification Committee (SSCC) for approval of all Certifiable Items Lists.
- Ensures that hazards are identified, assessed and resolved to an acceptable risk and chairs the Safety and Security Committee (SSC) on maintenance and construction safety and security issues, and seeks resolution by the Committee based on established risk acceptance criteria.
- Serves as the Rail Security Coordinator, providing a primary, single point contact at the corporate level for receiving communications and inquiries from TSA concerning threat information or security procedures, coordinating responses with appropriate law enforcement and emergency response agencies.
- Supervises railroad incident investigations
- Provides oversight and guidance to the O&M Contractor and Signal Maintenance Contractor on all aspects of safety and security.

Operations Manager (SunRail Oversight)

This position reports to the Director of Operations.

- Functions as the daily operations coordinator with tenant railroads
- Responsible for the documentation and reporting of crew performance related to operational rules, customer service as well as safety and security.
- Provides oversight to all testing programs, observations and proficiency analysis.
- Assists with the review of documents provided by the O&M Contractor, such as crew assignments, ridership data, on time performance and other operational data.
- Ensures compliance with operational rules and FRA regulations and facilitates quarterly efficiency testing
- Coordinates with tenant railroads regarding service disruptions.

Maintenance Manager, Rolling Stock (SunRail Oversight)

This positions reports to the Director of Operations.

- Serves in a technical oversight function to ensure that the railcars and locomotive maintenance standards and inspections requirements are being properly provided by both Amtrak and the O&M Contractor's maintenance forces.
- Coordinates assigned activities with the various contractors for testing, commissioning and acceptance of the rail vehicles.



- Ensures that both Amtrak and the O&M Contractors' maintenance crews are responsive to requests for cleanliness and repairs and that these functions are provided in a cost effective and timely manner.

Manager of Signal and Communications, (SunRail Oversight)

This position reports to the Director of Operations.

- Responsible for general oversight and coordination of the contractor and construction personnel involved with the inspection, testing and maintenance of all signal equipment.
- Ensures all dispatch and communications equipment is operational 24 hours a day,
- seven days per week.

Public Information Officer (SunRail Oversight)

- Provides information to both the public and public agencies during all phases of the Project.
- The information interface for FDOT during all incidents that occur on SunRail.
- Participates with Operation Lifesaver outreach activities .
- Provide education to local community groups, development of collateral materials, presentations, videos and other outreach tools.

General Manager (Bombardier)

The General Manager leads all operational and maintenance matters, including those related to system safety, pertaining to SunRail, and functions as the main point of contact for Bombardier.

The General Manager is responsible for the following:

- Ensures the adequacy of safety plans and procedures, including their enforcement across Bombardier;
- Assures that the proper resources are in place to support the System Safety Program Plan and all associated safety activities and programs;
- Monitors compliance with applicable safety standards during operations and maintenance activities;
- Provides proper classification of hazardous conditions and locations, and the development and implementation of hazard controls;
- Provides contingency and emergency response planning for abnormal and emergency conditions;
- Ensures that the facilities and equipment are maintained, inspected, tested and operated in a safe manner;
- Manages on-going operation and maintenance activities to correct any adverse rail safety issues;



Chief Transportation Officer (Bombardier)

The Chief Transportation Officer is responsible for overseeing the day-to-day operations and management, including overseeing and managing the work assignments and performance of the Road Foreman/Trainmasters.

The Chief Transportation Officer is responsible for:

- Providing safety leadership and enforcing all safety rules and procedures;
- Reporting all emergency and abnormal operating conditions to the General Manager, and other personnel, through the appropriate chain of command;
- Coordinating with Amtrak/CSX Transportation Officers on the coordination of emergency operating procedures and coordinating emergency response activities with emergency responders as necessary to safely resolve emergency and abnormal events;
- Ensuring train crews are available, fit for duty and compliant with all requirements;
- Monitoring Customer Service standards and protocols;
- Participating in emergency drills, training, and exercises; and
- Maintaining records of all employee training and certifications.

Safety and Security Manager (Bombardier)

Acts as a resource for the operations, maintenance, and support personnel of Bombardier and is responsible for supporting senior management and employees to ensure that safety program requirements are met and program objectives are implemented. The General Manager has charged and delegated the necessary authority for the management and implementation of the SSPP to the Safety and Security Manager. This authority is specifically shared with all employees and contractors.

The Safety and Security Manager has the authority and responsibility to:

- Conduct accident/incident investigations and ensure completeness and accuracy;
- Conduct internal safety reviews and inspections in accordance with the Internal Safety Review Process;
- Participate in design reviews of system expansions and new equipment procurements;
- Perform hazard analysis of system modifications to determine potential hazards that may be created as a result of the system modification, and supporting the development of mitigating and controlling factors to address such hazards;
- Report unacceptable hazardous conditions to the General Manager immediately and submit a monthly report of all ranked hazards and corrective actions to FDOT Passenger Rail Operations Manager for review;



- Develop corrective action plans that result from accident/incident investigations, hazard analysis, and safety reviews and audits, and track corrective actions through implementation to ensure all identified deficiencies are adequately eliminated or controlled and ensure that the corrective actions are completed and the final reports with the corrective actions are submitted to the FDOT Passenger Rail Operations Manager;
- Support and provide oversight of Safety Committee meetings as necessary;
- Ensure the General Manager and FDOT Passenger Rail Operations Manager are immediately notified of imminent danger hazards or other problems are identified as they arise; and
- Conduct table-top drills and full-scale emergency exercises with SunRail personnel and external First Responder agencies.
- Completion of an annual internal audit
- Auditing of rail operations and maintenance activities for compliance with Department, Federal, and State requirements

Mechanical Manager (Bombardier)

The Mechanical Manager is responsible for overseeing SunRail rolling stock and facility maintenance activities. The Mechanical Manager provides safety leadership and is responsible for enforcing all safety rules and procedures. This individual leads the effort to ensure safe and reliable equipment is provided in an efficient manner.

In addition, the Mechanical Manager is responsible for:

- Ensuring that all employees are properly trained and capable of fulfilling their duties;
- Ensuring that employees receive additional training, such as specific safety training for the operation of specialized machinery and equipment, as necessary;
- Ensuring that safety procedures are developed for any new equipment that is acquired;
- Assuring all rolling stock is maintained in accordance with all applicable FRA, APTA and other Federal, State, and local regulatory requirements;
- Maintaining records of all maintenance activities performed;
- Maintaining records of all employee training and certifications;
- Coordinating emergency response activities with the Chief Transportation Officer, providing personnel and equipment as necessary to return the system to normal operation;
- Participating in emergency drills, training and exercises;



Mechanical Manager (Amtrak)

- The Mechanical Manager is responsible for ensuring heavy repairs and inspections on SunRail rolling stock are performed timely, accurately and safely.

Signal Maintenance Manager (Herzog)

The Signal Maintenance Manager is the contact for all functions related to Signal Maintenance and has oversight responsibility for all Herzog personnel engaged in SunRail activities.

The Signal Maintenance Manager is responsible for:

- Overall signal issues, including crew scheduling, Hours of Service compliance, Operational Rules Compliance & Testing, and Safety/Regulatory Training.
- The development of internal safety rules and procedures and for the operational implementation of the SSPP.
- Accident prevention and the identification and correction of hazards in their specific areas of responsibility. In instances where corrective action extends beyond the resources or authority of the manager involved, they will promptly pursue resolution of the matter through the FDOT Passenger Rail Operations Manager

Chief Engineer (Bombardier)

The Chief Engineer is responsible for managing the day-to-day maintenance activities of the system including oversight of the work assignments performed by personnel and contractors.

- Managing all maintenance related activities at SunRail stations to assure safe, clean, fully functional facilities for ridership;
- Assuring the implementation of safety procedures for any new facility equipment that is acquired;
- Performing inspections of facilities and facility equipment to determine if further action is needed; and
- Assuring all SunRail maintenance facilities & equipment are maintained in accordance with all applicable FRA, FTA and other Federal, State, and local regulations and requirements.

Road Foreman Engines/Trainmasters (Bombardier)

Road Foreman Engines/Trainmasters oversee the daily and special SunRail passenger operations and coordinate their activities with Amtrak/CSX as required. The Road Foreman Engines/Trainmaster manages the day-to-day activities of the operating activities of SunRail commuter services. In addition, they enable objective decision-



making by evaluating operating conditions and circumstances on an on-going basis for better planning of the train service and work to efficiently normalize the train service during disruptions. Road Foreman Engines/Trainmasters assist in the implementation of alternative operating plans and procedures during abnormal and emergency conditions, and notify and coordinate response activities with emergency responders. All Road Foreman Engines/Trainmasters are appropriately trained and certified according to the appropriate FRA regulations.

Additional responsibilities of Road Foreman Engines/Trainmasters include:

- Observing and following SunRail performance standards, rules, and safety procedures;
- Proficiency & compliance testing;
- Reporting emergency and abnormal operating conditions to the General Manager;
- Reporting hazards and potential hazards to the General Manager to eliminate or control the hazards in a timely manner; and
- Participating in emergency drills, training, and exercises.

Locomotive Engineers (Bombardier)

Locomotive Engineers are responsible for the safe operation of their trains in accordance with the Operating Rules, and for observing performance standards and operating procedures. All locomotive engineers meet the Qualification and Certification of Locomotive Engineers requirements (49 CFR Part 240) to operate over the territory in which the train will move.

Locomotive Engineers are also responsible for:

- Following all train dispatcher instructions;
- Reporting all emergency and abnormal operating conditions to the OCC;
- Working with the Conductor to provide safe and secure service to passengers during normal and emergency operations;
- Proficiency & compliance testing;
- Assuring they remain trained and certified in accordance with FRA regulations; and
- Participate in drills and training exercises.

Conductors (Bombardier)

Conductors are responsible for the safe operation of their trains in accordance with the Operating Rules and for observing performance standards and operating procedures. All conductors must meet the Qualification and Certification of Conductors requirements (49 CFR Part 242).

Conductor duties include:

- Working with the Locomotive Engineer to provide safe and secure service to passengers during normal and emergency operations;



- Reporting all emergency and abnormal operating conditions to the OCC if the Locomotive Engineer is unable to do so;
- Assuring they remain trained and certified in accordance with FRA regulations; and
- Participating in drills and training exercises.

Mechanical Maintenance Personnel (Bombardier)

Maintenance employees are trained in accordance with 49 CFR Part 238.109 Training, Qualification and Designation Program for Maintenance Personnel. Maintenance Personnel are also trained in preventative maintenance. Additionally, they are responsible for observing all performance standards, rules and safety procedures.

Maintenance of Way Crews (Bombardier)

Maintenance of Way crews are trained using the latest techniques and equipment available to keep the railroad operating reliably and safely. A great deal of time and effort is spent performing preventative maintenance including ballasting, tamping, tie or rail replacement, switch maintenance, and performing mandated rail inspections. All maintenance of way crews are trained and certified according to the appropriate FRA regulations including those pertaining to Roadway Worker Protection (49 CFR Part 214), and are responsible for observing all performance standards, rules and safety procedures.

Signal Maintenance Crews (Herzog)

The Signal Maintenance Crews are trained using the latest techniques and equipment available to keep the railroad operating reliably and safely. The Signal Maintenance crews are trained and certified according to the appropriate FRA regulations including those pertaining to Roadway Worker Protection (49 CFR Part 214), and are responsible for observing all performance standards, rules and safety procedures.



d) Safety Committees

Contractors will participate in safety committee meetings. Employee representation is determined either by selection and/or nomination to the role. Participants are selected by, Signal Manager and Bombardier General Manager based on their roles and involvement in the organization. All committees will have a joint labor and management co-chair to lead the meetings and committees. External guests may be requested to attend meetings based on specific topics or actions requiring their support.

The purpose of Safety Committee meetings is to identify and discuss the following:

- Identify safety related concerns and develop preventive measures that will improve safety within the respective department. All recommendations or corrective actions that have been made are formally documented within the safety committee minutes. The Safety and Security Manager is responsible for overseeing effectiveness of the safety committee meetings and for ensuring that the safety committee follows all recommendations or corrective actions up until closure.
- Promote safety awareness and employee involvement through incentive programs, safety communication programs, and recognition of safety accomplishments.
- Solicit feedback and suggestions from all employees.

Executive Safety and Security Committee

The scope of the Executive Safety Committee encompasses the entire SunRail organization. The Executive Safety and Security Committee is responsible for formal reviews of safety concerns, which cannot be satisfactorily resolved by individual departments because of cost or authority. The Executive Safety Committee develops procedures necessary to formulate meaningful resolutions to unsafe conditions and safety concerns. At a minimum, the committee conducts meetings every quarter, as required, to address urgent system safety matters. The Executive Safety Committee has the authority to request, as applicable, employees to provide information that could improve the safety of the system.

The FDOT District 5 Secretary will chair the Committee.

The Executive Safety Committee consists of the following members:

- FDOT District 5 Secretary
- Director of Transportation Operations
- FDOT Passenger Rail Operations Manager
- CFCRT Project Manager
- SunRail Safety and Security Manager
- FDOT District 5 Safety & Health Manager



- O&M General Manager
 - Signal Maintenance Manager
- Resources:
- SunRail Director of Operations
 - PMC Consultant Project Manager
 - Project CEI Senior Project Engineer
 - Design Consultant Project Manager

The Committee and its members have the authority to designate other attendees as necessary to ensure that adequate representation is available for the conduct of meetings.

Fire Life Safety Committee

The scope of the Fire Life Safety Committee is to review any safety concerns regarding SunRail system, review any safety incidents that have developed since the last meeting of the Committee, review any changes of SunRail systems that are of particular interest to local Emergency Responder Groups, and discuss any standard operating procedures enacted by SunRail system that affect Emergency Responder Groups.

The committee conducts meetings every quarter, or as needed, to address system safety matters.

The Safety and Security Manager will chair the Committee.

The Fire, Life Safety Committee consists of the following members:

- Safety & Security Manager/Rail Security Coordinator
- FDOT District 5 Safety & Health Manager
- O&M Safety Manager
- Signal Maintenance Manager
- Local Emergency Responder Groups (Fire/EMS/ Law Enforcement)



SSPP Dissemination

The SSPP is distributed and available to all contract employees and management initially and every year after it is reviewed and updated. At a minimum the following personnel will receive a copy of the plan:

- FDOT Passenger Rail Operations Manager
- Oversight Personnel
- Director of Operations
- Operations Manager;
- General Manager;
- Chief Transportation Officer;
- Chief Engineer
- Mechanical Manager;
- Safety and Security Manager
- Manager of Signal Maintenance



6.0 SYSTEM SAFETY PROGRAM PLAN CONTROL AND UPDATE

The SSPP is reviewed in its entirety annually as required by the FDOT Safety and Security Oversight Program Standard 1.1.4 and updated as necessary. The annual review is performed no later than the anniversary date of the current approved version.

Additional events or circumstances that may prompt revision of the SSPP include:

- Services changes;
- New or retrofitted equipment, vehicles, or facilities;
- Progression towards accomplishing corrective actions or program goals and objectives;
- Organizational changes or reassignment of tasks and responsibilities;
- Changes in safety policies, goals, and/or objectives;
- Changes to state and federal regulations and requirements which impact operations and services;
- Audit findings that indicate a need for revision;
- Requests

Employees and contractors may submit proposed changes to the FDOT Passenger Rail Operations Manager who then evaluates the proposed change. If approved, the change is incorporated into the annual review and revision cycle. If there are significant system changes, which have or may have an impact on the SSPP occur outside a scheduled review period of the SSPP, these changes are reviewed and incorporated as necessary into the SSPP. No changes to the SSPP are made unless first approved by FDOT Passenger Rail Operations Manager. After the annual review of the SSPP is completed, all identified deficiencies are corrected, and all proposed changes are incorporated into the plan. Proposed changes and revisions resulting from reviews and program audits are also incorporated into the SSPP. The FDOT Passenger Rail Operations Manager reviews and approves the revised plan, providing comments/corrections, as necessary, into the final draft of the plan.

Once the revised SSPP has been approved by the FDOT Passenger Rail Operations Manager, it is returned to the contractors for distribution.



A. Strategic Program Planning and Administrative Controls

This SSPP has 23 elements to assure the system safety program remains sustainable, measurable and focuses on continuous improvement.

The program elements are consistent with APTA recommended guidelines and recognized industry standards and comply with the FDOT Safety and Security Oversight Program Standard. The 23 elements include:

1. Safety Policy Statement and Authority for the SSPP.
2. Purpose and Scope of the SSPP.
3. Goals for the SSPP.
4. Identifiable and Obtainable Objectives.
5. System Description and Organizational Structure.
6. SSPP Control & Update.
7. Safety Contract Requirements.
8. Facilities Maintenance and Inspections.
9. Vehicle Maintenance Inspections & Repair.
10. Rules and Procedures Review.
11. Training & Certification.
12. Emergency Planning and Response.
13. Workplace Safety Programs.
14. Passenger and Public Safety Programs.
15. Rail Corridor Operational Safety.
16. Environmental Management Programs.
17. Security.
18. Hazard Management Processes.
19. Accident/Incident Reporting and Investigation.
20. Safety Data Acquisition and Analysis.
21. Loss Prevention and Control.
22. System Change Management.
23. Internal Safety Management Assessment.

It is the goal of this system safety program, to create and maintain a hazard and accident free environment that operates efficiently and effectively.



b) Inter-Agency Coordination

SunRail Commuter service is provided across a diverse operating territory. In accordance with the Emergency Preparedness Plan, training is provided to emergency responders in all counties where SunRail Commuter Service is provided and to responders in adjacent jurisdictions that are near SunRail Commuter Service.

This training addresses emergency access to the passenger cars and the typical location of railroad facilities and equipment. The training also includes full-scale simulations designed to prepare for emergency situations that may occur involving SunRail Commuter Service. These full-scale exercises are performed at a minimum once per calendar year.



7.0 SAFETY CONTRACT REQUIREMENTS

Contracting for Services

SunRail will utilize outside contractors for new projects and ongoing programs. Contractors who are required to access SunRail property must meet the formal requirements of FDOT including the necessary liability insurance and workers compensation.

All contractors on SunRail property will be subject to contractual, corporate and/or regulatory oversight. All contractors with the potential of working on or around SunRail railroad tracks will require the appropriate training.



8.0 FACILITIES - TRACK MAINTENANCE - INSPECTIONS

The FDOT Passenger Rail Operations Manager holds the primary responsibility for ensuring facility and equipment inspections are performed according to established procedures and manufacturers' recommendations.

- A. The General Manager is responsible for ensuring the monitoring, auditing, inspecting and documenting compliance with these requirements. This includes operations, station and facility inspections, equipment inspections, right-of-way, track and roadbed inspections, and railroad inspection documentation and maintenance records. The Safety and Security Manager also will periodically evaluate compliance with the maintenance and inspection program. All stations, structures, facilities, switches, platforms and other equipment and property are inspected according to the schedules stated in the facilities maintenance contracts and in accordance with the manufacturer's recommendations. Items with safety related functions, such as fire extinguishers or emergency shut-offs, must be specifically identified in inspection and maintenance reports.

Inspection reports are reviewed by the General Manager and if there are safety hazards noted, a copy of the report will be forwarded to the FDOT Passenger Rail Operations Manager.

- B. The Signal Maintenance Manager is responsible for ensuring the monitoring, auditing, inspecting and documenting compliance of the signal system. The signal system is inspected and tested in accordance with FRA standards. The Signal Maintenance Manager will be responsible for coordinating emergency repairs and federally mandated inspections on Grade Crossing mechanisms and will supply reports to the FDOT Passenger Rail Operations Manager.

All Managers and Supervisors are responsible for immediately notifying their employees of any hazard identified in the workplace and for taking action to eliminate and/or control these hazards. It is the responsibility of the department in which the hazard was identified to notify all other departments and personnel that may be effected by or exposed to the hazard. It is also the responsibility of the department in which the inspection took place to implement and monitor the success of proposed recommendations and corrective actions.

All SunRail operating and maintenance facilities and equipment undergo a complete inspection at least once a year to ensure the safety and health of employees. Hazards discovered during inspections are reported and follow the hazard resolution process. Individual maintenance shops within the maintenance facilities are formally inspected on a monthly basis. These inspections are conducted using inspection forms, and include inspections to verify OSHA compliance, personal protective equipment utilization, inspections of equipment, housekeeping inspections, inspections to verify industrial hygiene practices, etc. However, informal inspections



may be conducted at any time. Inspection reports are issued that list the hazards and the safety and health problems found during the inspection. Follow-up inspections and reports are completed within 30 days and submitted to the FDOT Passenger Rail Operations Manager. Any unacceptable hazard must be reported immediately to the. The department responsible for the inspected area is required to provide a schedule of corrective actions within 30 days. Follow-up inspections and reports are made 30 to 60 days after the initial inspection.

The Facilities Maintenance Plan described the basic maintenance needs of fixed plant elements of SunRail Facilities. The plan provides for the inspection, condition monitoring, routine servicing, and preventive maintenance, overhaul, and replacement requirements for the system. This document provides for maintenance of the fixed plant, and explains the technical, operational and organizational approach required.

The Maintenance of Way Services Plan, Signals Services Plan and Inspection Test Manuals describe the basic maintenance needs for the:

- Inspection, Maintenance and Construction of Track
- Plan for Inspection of Culverts
- Special Instructions Governing Construction and Maintenance of Signals and Interlockings
- Instructions for Testing of Signal Apparatus

The goal of the Facilities Maintenance Plan is to ensure all safety, availability, and reliability requirements are met to achieve customer satisfaction and comfort. These plans ensure:

- A high degree of continuity and consistency in routine maintenance activities,
- A structured process for improving the productivity and efficiency of fixed systems functions, and
- A fulfillment of FRA, FTA, SSO and other regulatory requirements.

Categories of Maintenance

Maintenance tasks are divided into four major categories:

- Inspection and testing - activities which are performed in order to ascertain and verify the condition or readiness of equipment.
- Preventative maintenance - those maintenance activities that are performed on a schedule to ensure availability, safety or prolong the service life of facilities and equipment. Preventive maintenance activities are scheduled based on frequency of use (e.g., cycle, hours of use or pure elapsed time) and not as a result of differences observed during inspection and test.
- Corrective maintenance - these refer to demand responsive maintenance activities that are necessary because they affect operations, the safety of customers, are in response to in-service failures, or to unsatisfactory conditions which are identified during inspections and testing.
- General maintenance - those maintenance activities necessary to maintain service quality.



Types of Maintenance (Safety Critical)

While inadequate or improper maintenance on the infrastructure may potentially have safety implications, SunRail recognizes that failures or incorrect operation of certain systems may directly cause hazardous conditions. Such systems are designated as “Safety Critical Systems.”

- a. Bombardier maintains the following Safety Critical Systems:
 - Train Control
 - Track
 - Right-Of-Way (for fencing and drainage adjacent to track)

Special requirements, including standards, employee certification, documentation and quality assurance are imposed for these systems.

Equipment inspections are made in accordance with manufacturer guidelines, industry-accepted standards and practices.

Track inspections will meet or exceed the requirements of FRA Part 213 Track Safety Standards, such as:

- Walking/Riding inspections by track inspectors at least once a week;
- Ultrasonic inspection once a year; and
- Gage and other geometry measurements once each year.

Routine inspections of the below-grade structures are performed at established cycles using approved guidelines. The system elements such as train control/signaling and grade crossing equipment is inspected at established cycles based on the manufacturer guidelines and regulatory requirements. The period of these inspections may be varied based on climatic conditions and corrective maintenance demands. The frequency and results of inspections for track and facilities will be captured and monitored in Maximo.

- b. Herzog maintains the Safety Critical Signal System

They shall maintain the performance level of the Signal System to meet or exceed the FRA requirements as stated in 49 CFR Parts 234 and 236, and in accordance with the recommendations detailed in the latest version of the AREMA Signal Manual and the Maintenance of Way Service Standards. All signal related issues along SunRail, and associated systems shall be maintained by Herzog in accordance with all applicable state, and federal codes, laws and regulations as follows:

- Signal issues will be monitored and tracked to determine trends and anomalies. Such trends will be provided to FDOT Passenger Rail Operations Manager for review and further discussion monthly. Herzog will prepare corrective actions as necessary to reduce any increases in deficiencies or problem areas.



- Inspection and test cycles shall be tied to FRA regulations or Department standards, whichever is more stringent. Inspection and test dates shall be scheduled from the last inspection date. Additional testing may be required, as specified in this Signal Maintenance of Way Requirements, prior to the regulated test date.
- Levels of maintenance shall be performed per any manufacturer's recommendations and instructions to the extent that they exist or as otherwise directed herein.
- The frequency and results of inspections for all signal related issues along the Right of Way, Support Property, and associated items will be captured and monitored in RailDocs.



9.0 ROLLING STOCK MAINTENANCE INSPECTION AND REPAIR

- a. Bombardier conducts routine maintenance and inspections of SunRail's passenger equipment. The maintenance and inspection schedules are determined by SunRail requirements and are to meet or exceed all Federal and industry standards. These schedules, standards and requirements are defined in the Bombardier Maintenance of Equipment Plan. This plan includes a preventive maintenance program which has been established to reduce in-service equipment failures. In addition to all federally required inspections, all SunRail locomotives and passenger cars are safety inspected and signed off daily by Bombardier maintenance personnel.

Train crews must perform inspections for the following:

- Car body:
 - Leaning or listing to side;
 - Sagging downward;
 - Positioned improperly on truck;
 - Object dragging below;
 - Object extending from side;
 - Door insecurely attached; and
 - Broken or missing safety appliances.
- Insecure coupling;
- Overheated wheel or journal;
- Broken or extensively cracked wheels;
- Brakes that fail to release;
- Any other apparent safety hazard likely to cause an accident or casualty before the train arrives at its destination; and
- Required safety equipment on train.

Train crews must also ensure that all required brake tests are performed on all cars and locomotives. In addition, no attachment or part of a car may be hanging so low as to foul a road crossing or track structure.

Every car and locomotive in revenue service is inspected daily and in accordance with all applicable FRA regulations. In addition inspections are performed at predetermined intervals determined by FRA, OEM and SunRail Maintenance Procedures (i.e. predictive versus preventative) such as 184-day inspections on cars and 92-day inspections on locomotives.

The Mechanical Department is responsible for identifying any potential hazards with the rolling stock and for taking action to eliminate and/or control these hazards in accordance to FRA and SunRail requirements.

- b. Amtrak is contracted to conduct the following inspections and repairs on SunRail Locomotives:
 - 92 day, Annual, Bi-Annual and four (4) year Federally Mandated inspections



- Traction motor changes
- Wheel changes and truing
- Major engine repairs
- Air compressor repairs
- Major Head End Power (HEP) repairs
- Any other necessary major repair

The Amtrak Mechanical Department is responsible for identifying any potential hazards with the rolling stock and for taking action to eliminate and/or control these hazards in accordance to FRA and SunRail requirements.

Maintenance of Equipment Plan

The Maintenance of Equipment Plan is divided into five areas: daily, preventive, predictive, program, and corrective:

- Daily Maintenance – Each consist undergoes daily inspection and interior and exterior cleaning prior to release for service. The daily inspection check sheet is included in the Maintenance Plan for the Rolling Stock Maintenance.
- Preventive Maintenance – Preventive maintenance is a combination of periodic inspections and routine servicing with monthly, semi-annual, and annual intervals. Bi-annual and annual preventive maintenance is based on equipment manufacturer's recommendations.
- Predictive Maintenance – Predictive maintenance is a process of reviewing historical data of life expectancies of components and renewing component prior to failure.
- Program Maintenance – Program maintenance is primarily from equipment manufacturers, and consists of engineering changes, field modifications, seasonal programs, and overhauls.
- Corrective Maintenance – Corrective maintenance consists of troubleshooting and repairing equipment in response to a reported malfunction, failure, defect, incident, or other abnormality. These abnormalities may be reported by train crews.

Elements of the vehicle maintenance program include preventive maintenance, corrective maintenance, routine cleaning and servicing, and major campaigns to correct component failures. Corrective maintenance will be addressed as a result of defects noted by Train Engineers and Conductors, defects found during inspection, vehicle failure in service, and accidents. In all cases, risk will be assessed and a decision made to repair immediately or log for repair during the next scheduled maintenance activity. Daily light servicing will be performed at the VSMF. Comprehensive interior cleaning will be performed at periods not to exceed 30 service days. Exterior washes will be performed at least twice a month at the Amtrak Sanford Facility following return from PM revenue service. Locomotive inspections are performed daily



by a Qualified Maintenance Person (QMP) and consist of an interior/exterior inspection, brake test, wheel/truck inspection, bell and horn operation test and engine room inspection.

Materials Control – Materials Control is the management of all components and equipment, whether inventory spares or in repair, used in support of maintenance of infrastructure and the rolling stock.

Responsibilities of material control include:

- Inventory Management,
- Warehousing and Distribution,
- Shipping and Receiving,
- Unserviceable Tagging, Disposition and Restocking,
- Planning and Purchasing,
- Warranty Enforcement, and
- Expediting.

Materials control will continuously monitor parts and equipment status and usage to identify shortages, potential shortages and optimize stocking requirements.

Other Maintenance Activities

Heavy maintenance, are performed on a program basis or as desired by SunRail. Period and scope of overhaul programs are established using equipment manufacturers' recommendations and data obtained during yearly inspections.

Failures and defects are reported by train crews and then entered into the tracking system.



10.0 RULES AND PROCEDURE REVIEW

The FDOT Passenger Rail Operations Manager will conduct an annual review of all operating procedures and practices to verify compliance, and any potential changes or modifications to these operating procedures. Any exceptions to the annual requirement for reviews must be approved by the FDOT Passenger Rail Operations Manager; any exceptions may not exceed a review period of two years. Any changes to the operating procedures and practices will be given to FDOT Passenger Rail Operations Manager for approval prior to implementation.

Monitoring Rules/Regulatory Changes

The FDOT Passenger Rail Operations Manager and contractor personnel will monitor regulatory changes by monitoring the federal register, APTA notifications and other relevant publications for applicability to SunRail operating environment. The Bombardier General Manager and Herzog Signal Maintenance Manager are responsible for ensuring that their personnel are apprised of applicable regulatory changes so that the impact can be evaluated and necessary procedural changes made to achieve compliance. Rules and procedures will be modified or developed and the training/education of employees will ensure compliance prior to the implementation of or effective date of the new rules.

Employee Safety Testing

Only personnel who are certified (successfully pass rule and procedure tests) are allowed to operate equipment. Established training/retraining standards will be reviewed on an annual basis. The review of operating rules and procedures includes:

- Identification of all internal and FRA rules utilized by SunRail contractors for conducting operations;
- Assessment of all actual practices and procedures used by SunRail and its contractors to conduct operations and determining impact of deviation from established procedures;
- Determining appropriateness of existing disciplinary standards and practices to address signal and operational rule violations;
- Reviewing employee records to determine compliance trends and other operational issues; and
- Determining deficiencies in current processes and developing recommendations to resolve these issues.



The annual review also includes an evaluation of management responsibilities relative to rules compliance and the procedures are also reviewed and revised when:

- Accident/incident investigations determine the need for a change;
- In response to system modifications or changes including new system and equipment procurements;
- In response to changing Federal, State and local regulations and requirements; and as a result of findings generated through the Internal Safety Review Program or audits performed by external agencies such as , FDOT, FTA, FRA, APTA.

The reviews are performed to ensure:

- Existing safety requirements are met;
- Proposed changes do not create new hazards or present additional risks to the system;
- The effectiveness of existing safety controls will not be reduced; and
- Risks to personnel, passengers, contractors, equipment, facilities, and other properties or the environment will not be increased.



11.0 TRAINING, CERTIFICATION & RECRUITMENT

All personnel are required to meet the training and certification requirements of the FRA and OSHA. Training must be provided initially upon hire and as required thereafter to ensure employees retain an effective understanding of all safety-related matters and procedures.

Employees whose duties require them to be qualified on the operating rules and timetable of SunRail's operations must pass required examinations and must be re-examined on the operating rules annually.

Employees will be given closed-book written examinations of the operating rules and must obtain a score of at least 85%. When reporting for the examination they must present their operating rulebook, timetable, and other instructions for inspections. Employees who fail this examination must take a second examination within 30 days but no sooner than 24 hours after the original examination. Employees who fail the examination will be immediately reported to the General Manager and will not be allowed to work in a safety sensitive position until they have successfully passed the examination. Employees who fail the second examination, or who fail to be re-examined within 30 days, will not be qualified to perform service. Training records and certifications will be maintained for all train crews and maintenance personnel. These records will be provided to the FDOT Passenger Rail Operations Manager for review upon request.

Contractor training programs are subject to audit by the FDOT Passenger Rail Operations Manager. The intent of these audits is to assure that the training and certification programs remain consistent, that proper records of course content, grading (pass/fail), and personnel file documentation are up to date. Deficiencies will be noted and reported to the FDOT Passenger Rail Operations Manager and request for corrective action will be made.

Training records are maintained by the contractor Human Resources departments and periodic auditing of the records is completed by the FDOT Passenger Rail Operations Manager.

All sub-contractors hired by SunRail contractors to perform work on or near the track or have the potential to foul the track will be trained on Roadway Worker Protection as required by 49 CFR 214 subpart C.

For training matrix see Appendix D



Recruitment Process

- Develop a profile to establish a summary of the role, key responsibilities, required qualifications and competencies.
- Post position according to strategy: Internally on Intranet and/or externally.
- Pre-screen candidates through telephone interviews and establish a short list.
- Interview candidates on the short list and identify a finalist.
- Arrange start date with candidate and hiring manager once offer is accepted.
- Send New Hire paperwork to the candidate.
- Arrange pre-employment drug screening for the candidate.
- Before employee begins their first day of work medical and background check documents must be completed.



12.0 EMERGENCY PLANNING AND RESPONSE

The FRA published 49 CFR Part 239, Passenger Train Emergency Preparedness Final Rule on May 4, 1998. The rule was established to reduce the magnitude and severity of casualties in railroad operations by ensuring that passenger railroads such as SunRail can effectively and efficiently manage passenger train emergencies. The rule prescribes minimum safety standards for the preparation, adoption, and implementation of emergency preparedness plans and emergency preparedness training. In compliance with these requirements, a Passenger Train Emergency Preparedness Plan for SunRail Commuter Service has been written that is joint with Amtrak and will be shared with FCEN, CSX and emergency response agencies. This plan will be reviewed and updated as necessary and distributed to the proper agencies.

a) **Primary Policies**

As stated in the Passenger Train Emergency Preparedness Plan, "...it is always SunRail's primary concern during all phases of operations to ensure the maximum safety of passengers as well as that of our personnel and the public. This is especially true during any type of emergency situation where we are also concerned with ensuring the safety of emergency responders that may be involved in the emergency event." Due to the large territory through which SunRail operates, it is recognized that Federal, State, local emergency and operating railroad responders may arrive at the scene of an accident/incident before /SunRail personnel. While emergency responders have primary control of rescue efforts, the operating railroad maintains control over all railroad operational aspects.

During emergencies involving SunRail Commuter Service, it is therefore the policy of SunRail to:

1. Provide the most effective and timely response to any emergency or disaster to ensure the safety of the general public, passengers, and employees.
2. Provide for the immediate needs of individuals involved in the emergency/disaster and ensure that passengers, bystanders, and employees receive appropriate care/treatment.
3. Ensure that the highest practical level of service for all passengers is maintained by providing alternate or temporary service while striving to restore normal service and equipment.
4. Coordinate with Federal, State, and local authorities to make available additional or alternate transit service as appropriate to support response efforts of these authorities.
5. Ensure that customers, the public, and the media are presented with timely, accurate, and easily understandable information including information regarding service changes, disruptions, or re-routing.
6. Ensure protection and preservation of SunRail assets.



7. Coordinate debris removal and clean-up activities with the appropriate local, State, and Federal agencies.
8. Conduct incident damage assessments to determine the resources necessary for recovery and the services that can be restored.
9. Assist in any subsequent accident/incident investigation process conducted by Federal, State, or local authorities or agencies with regulatory authority including NTSB, FRA, FTA, or other interested parties.
10. Document and maintain records of all disasters or emergencies.

b) Authority

SunRail, through its contractors has management and administrative authority of all transit and commuter transportation and is responsible for the implementation of safety, security, and emergency preparedness requirements. SunRail retains the authority to adjust services as required to maintain operations and to support response efforts during local, State, and Federal emergencies or disasters. This includes internal mobilization of personnel, resources, and additional services as deemed necessary by the Administrator or as directed by the State.

During an emergency or disaster involving properties, personnel, and/or passengers, all personnel located at the scene of the emergency are first under the authority of the On-Site Emergency Agency Representative or Incident Commander (Fire Chief, Police, Emergency Medical Services, etc.)

c) Scope of Authority

Absolute authority for all vehicle, equipment, and personnel movements during an emergency involving SunRail Commuter Service remains the responsibility of the operating railroad.

Once notified of a train emergency, train dispatchers are therefore responsible for taking immediate and appropriate actions to ensure proper response, and to minimize losses. This includes immediately notifying the appropriate emergency response organizations and providing instructions and information on the nature and extent of the emergency.

All other individuals or parties not located at the scene of the emergency, but affected by an emergency involving SunRail equipment, vehicles, facilities, other properties, personnel, and/or passengers, are under the authority and direction of their respective Managers and Supervisors.



d) Transition of Authority

For an event that occurs on the mainline the notification of emergency responders is done by the SSCC. In the event General Manager is notified directly by the train crew or outside agencies, they will notify the appropriate railroad and the FDOT Passenger Rail Operations Manager. Emergency responders are responsible for providing the appropriate fire and emergency medical response efforts necessary to control the emergency and minimize injuries and loss of life.

The senior employee on the scene and the responding fire department and emergency response personnel will work together to control the emergency and provide each other with progress reports until the emergency has ended.

e) Preparedness

To ensure optimum preparedness of all parties, notification requirements and procedures have been established for each of the affected railroads and emergency response agencies. A list containing the names and titles of personnel to be notified during an emergency involving infrastructure or SunRail Commuter Service and their respective contact numbers and other related communication requirements is maintained and kept current by the appropriate SSCC personnel.

SunRail through its contractors prepares for emergencies and disasters by establishing objectives, procedures, and resources for future emergency response efforts. This is done in part through this plan as well as through the Safety & Security Emergency Preparedness Plan, the Passenger Train Emergency Preparedness Plan and Standard Operating Procedures. While these documents may vary depending on the type of event for which they have been written, all will incorporate and address methods for event assessment, notification procedures, hazard control and incident scene security, and evacuation and emergency rescue assistance. These documents are reviewed annually or if an emergency event occurs that identify a need for a change, as well as after any emergency response effort in which they were used.

SunRail through its contractors further prepares for emergencies and disasters through frequent and proper training of personnel and by conducting tabletop exercises, emergency drills and simulations, and individual unit drills. Drills and simulations are conducted once per year and are indicative of the types of emergencies typical of SunRail Commuter Service. Tabletop drills and exercises are also conducted at least once per year. Results of simulations and drill exercises are fed back into the emergency preparedness process to ensure emergency response procedures are accurate and effective.



f) Training of Personnel

The training program, as it pertains to SunRail emergency operations, addresses dispatch territory familiarization, and the protocols governing communications. Dispatch personnel must be thoroughly familiar with the areas for which they are responsible, including all route peculiarities, methods for notifying emergency response agencies, and any other essential information. Dispatch personnel are also trained on the proper conduct to follow during the initial and subsequent stages of an emergency. Specific policies and protocols have been established to ensure that the flow of information is as accurate as possible and that dissemination is limited to only essential personnel.

Emergency management training includes:

- Operating Territory Familiarization (i.e., types of operating environments and the hazards that can be encountered with each);
- National Incident Management System (NIMS)
- Communications Training: including internal and external communications between transit personnel, emergency response units, and the news media;
- Command Post Operations: including the organization and personnel roles and responsibilities (as stated in EOPs);
- Situational Awareness: including the procedures to be taken during different types of emergencies or disasters (as stated in EOPs);
- Coordination of Functions: including personnel responsibilities during the event (as stated in EOPs);
- Train Power Removal Procedures (as stated in EOPs and SOPs);
- Equipment Familiarization: including instruction concerning the location, function, and operation of on-board emergency equipment; Emergency Access/Egress (i.e., passenger and personnel evacuation); and Updates to Passengers, Customers, and Media.

Emergency management training for emergency responders includes:

- Operating Territory Familiarization (i.e., types of operating environments and the hazards that can be encountered with each);
- Communications Training: including communications between the DISPATCH and emergency response agencies;
- Command Post Operations (organizational and personnel roles and responsibilities);
- Situational Awareness (i.e., the procedures to be taken during different types of emergencies or disasters);
- Coordination of Functions (i.e., personnel responsibilities during the event);
- Train Power Removal Procedures;
- Equipment Familiarization: including instruction concerning the location, function, and operation of on-board emergency equipment; and



- Emergency Access/Egress (i.e., passenger and personnel evacuation).

On the job training for accident/incident stabilization and "return-to-normal" operations includes:

- Emergency Evacuation;
- Re-routing of Service;
- Passenger and Media Updates;
- Testing of Systems Affected by the Event; and
- Restoring Operations to Schedule.

All Personnel who require training are fully trained to SunRail Passenger Train Emergency Preparedness Plan



13.0 WORKPLACE SAFETY PROGRAMS

The Workplace Safety Program encompasses a wide range of occupational safety and health, injury and illness prevention, hazard communication, fire and life safety, emergency preparedness, operational safety, environmental, and security programs. The programs have been developed in accordance with Federal, State, and Local regulatory requirements, such as those of OSHA and the "Employee Right to Know" requirements. In addition, Workplace Safety Programs are certified to the OHSAS (Occupational Health Safety Assessment Series) 18001-2007. Specific Federal regulations include 29 CFR Parts 1910 (General Industry), as well as 49 CFR Parts 214 (Railroad Workplace Safety), 217 (Railroad Operating Rules), and 239 (Passenger Train Emergency Preparedness).

a) Employee Safety Program

An employee safety programs have been established by SunRail contractors to develop and communicate safety information to employees, to heighten safety awareness, and to encourage the identification and resolution of hazards.

Training presented to employees is based on and specific to employee job classification and may entail not only formal in-class training, but also on-the-job training that is overseen by a supervisor or manager. It is the responsibility of all leadership to not only oversee employee work practices and performance but to also enforce rules and procedures as well as to ensure their employees are properly trained in order to perform the duties of their job classifications in a safe and efficient manner. If and when an employee's duties change, it is the responsibility of leadership to ensure that the employee is retrained as necessary.

It is also the responsibility of all senior managers to ensure all personnel receive training regarding the hazards which may be associated with or encountered within employee work areas.

Senior managers also ensure that all employees receive training regarding the safety program and injury and illness prevention. The frequency of training varies depending upon job classification as well as job performance. Employees who violate safety rules and procedures, for example, are required to take certain forms of retraining or re-certification as part of corrective action taken as a result of the violation. Other employees, such as train crews, require retraining simply as a requirement of maintaining certifications and licenses.

An Employee Assistance Program (EAP) is available to all personnel who wish to receive counseling or aid related to a personal issue or problems they may be experiencing in the workplace, at home or elsewhere in their daily lives.



b) Contractor Safety Coordination

All contractors at SunRail must comply with applicable rules and operating procedures, regulations, and requirements of OSHA, FDOT, FRA, FTA, and as well as all other State and local regulations. These requirements include, but may not be limited to employee and passenger safety, fire and emergency response procedures, security procedures, and safe work practices related to facilities, equipment, systems, vehicles, and/or other properties. Personnel who violate site safety requirements are considered unqualified to perform the contracted services or work and as such, are denied site access.

Contractors who fail to respect safety shall have their contract terminated.

If SunRail deems the contractor/subcontractor is not complying with the safety regulations and requirements, the FDOT Passenger Rail Operations Manager:

- Notifies the Contractor in writing of the non-compliance;
- Exercises the right to issue a suspend-work order stopping all or part of the work if the Contractor fails or refuses to take corrective action to abate the noncompliance notice in the specified time; and
- Requires the removal of an employee or piece of equipment or correction of a situation that is deemed to be unsafe.

c) Fitness For Duty Programs

Drug and Alcohol Program

The use of drugs and alcohol is strictly prohibited on all SunRail property. As required by FTA and FRA regulations, SunRail and its Contractors have a substance abuse prevention policy, which applies to all personnel and sub-contractors.

The policy is current and consistent with 49 CFR Parts 219 and 40 and:

- Defines the responsibilities of personnel and what they can and will be held accountable for;
- Identifies the circumstances under which an employee may be tested for alcohol and/or drugs;
- Includes the dangerous effects of controlled substances and the consequences of violating the policy;
- Informs employees of the education and treatment program (rehabilitation program), which is available to employees requiring treatment;
- Requires that all safety sensitive employees submit to random drug and alcohol testing;
- Requires that all safety sensitive employees who have been absent from work for more than 30 calendar days submit to a drug test before returning to safety sensitive functions;



- Requires that safety sensitive employees submit to drug and alcohol testing as a result of being involved in an accident/incident. Supervisors trained in post-accident procedures will determine if an employee must submit to a post-accident drug and alcohol test; and
- As required by federal guidelines, contractors who perform safety sensitive duties create and be in compliance with a drug and alcohol testing policy.

Fatigue Program

SunRail trains are operated and maintained by contractor personnel. As such, the train crews, maintenance, and other personnel that perform work for SunRail must follow the fatigue programs.

These programs comply with the operating rules and FRA Part 228, which state that:

- Employees subject to the Federal Hours of Service Act must familiarize themselves with the Act and comply with its requirements. Employees must not exceed the maximum hours permitted by law unless authorized by the dispatcher;
- Employee who is called to report for duty before his legal rest period has expired must report that fact to the person ordering them to report; and
- Train and engine crews must notify the appropriate dispatcher or designated supervisor three hours before their legal work period expires, unless certain they will be able to complete their assignment before their legal work period expires.

Medical Monitoring Program

SunRail has a medical monitoring program consistent with its pre-employment screening and drug and alcohol testing policies. The program applies to all personnel.

These medical monitoring programs ensure that all train crews, maintenance, and support personnel remain fit and fully capable of performing their job duties. All personnel are responsible for reporting any condition not already on record which could impair their ability to perform their duties. This notification must be made immediately upon the employee receiving knowledge of the condition and is not limited to those conditions discovered during required medical examinations.

At a minimum, all personnel maintaining safety-critical positions, must undergo and pass a physical.



14.0 PASSENGER AND PUBLIC SAFETY PROGRAMS

Consistent with SunRail's mission, the safety of SunRail passengers while on properties is of utmost concern and importance. In all cases, contractors must strive to maintain all equipment and properties in a manner that minimizes, to the greatest extent possible, risk of passenger injury or damage to passenger/public property. This is done through frequent and routine system and equipment inspection and maintenance programs aimed at identifying and eliminating hazards.

To heighten passenger and public safety, at a minimum SunRail:

- Assures no work is performed in areas occupied or in use by the public unless absolutely necessary;
- Ensures, when necessary, all safety precautions and safe guards must be taken and put into place prior to the commencement of the work activity;
- Keeps sidewalks, entrances to buildings, lobbies, corridors, aisles, doors, or exits that remain in use by the public, clear of obstructions to permit safe ingress and egress of the public at all times;
- Maintains all equipment, devices, and structures so as to not pose a hazard to the public, property, or employees, and to perform their intended functions properly at all times;
- Provides sidewalk shed canopies, catch platforms, and appropriate fences when it is necessary to maintain public pedestrian traffic adjacent to the erection, demolition, or structural alternation of outside walls on any structure;
- Posts appropriate warnings, signs and other instructional safety signs where necessary;
- Controls, by use of a signalman, the movement of motorized equipment in areas where the public might be endangered; and
- Maintains public use of work areas where necessary involving sidewalks, entrances to buildings, lobbies, corridors, aisles, stairways, and vehicular roadways, by protecting the public with appropriate guardrails, barricades, temporary fences, overhead protection, temporary partitions, shields, and adequate visibility. Such protection shall guard against harmful radioactive rays or particles, flying materials, falling or moving materials and equipment, hot or poisonous materials, explosives and explosive atmospheres, flammable or toxic liquids and gases, open flames, energized electric circuits, or other harmful exposures.

In order to maximize passenger safety, all SunRail personnel, departments, and contractors, have been assigned responsibilities, as defined throughout this SSPP, as well as in employee rulebooks, operation manuals, training programs, procedures, policies, and other documents.

These responsibilities have a direct impact on passenger safety, and all personnel are therefore held accountable for their fulfillment.



SunRail strives to maximize passenger safety through passenger and public awareness programs developed and administered to heighten awareness regarding SunRail Commuter Service.

This includes SunRail's commitment to providing efficient and affordable public transportation services to:

- Heighten safety awareness with regards to these operations and services;
- Reduce the frequency of passenger injuries; and
- Emphasize the organization's commitment to safety.

Awareness programs address on-board passenger safety awareness, passenger safety awareness at stations, and passenger safety awareness in the community, and entail the distribution of safety information to the public through a variety of methods that may include:

- Newspaper, radio, and television advertisements;
- Variable message and public address systems;
- System maps;
- Special marketing campaigns;
- Presentations made to area municipalities including schools, emergency response agencies, businesses, and local governments;
- Distributing pamphlets, flyers, and brochures throughout facilities, stations, and vehicles; and
- Posting notices on SunRail website.

Passenger complaints and reported hazards are investigated and addressed to the fullest extent possible, the designated Public Information Officer, and the Safety and Security Manager.

Public Safety and Community Outreach Programs also include a Safety Education School Outreach program delivered to students, school bus operators, and crossing guards. The School Outreach program is based on the training recommendations of Operation Lifesaver, including safety on and around operating railroads.



15.0 RAIL CORRIDOR OPERATIONAL SAFETY

SunRail operates commuter trains on track shared with, or adjacent to, freight and passenger rail operations (CSX, Amtrak and FCEN). These pose a significant hazard to SunRail Commuter Service, which may be impacted directly or indirectly by emergencies involving these railroads and/or properties or vice versa.

Events such as a collision will halt rail operations and can have catastrophic consequences for the railroads. SunRail may be requested to provide emergency transportation services to and from an accident scene. In all cases, SunRail has taken the appropriate precautions to prepare and protect its personnel, passengers, and property from such occurrences.

a) **Joint Freight Operations**

In general, safety of joint freight and commuter rail operation is ensured by the rules of the controlling railroads, in conjunction and in compliance with FRA rules and procedures. These rules are applied through the rulebooks, timetables, general orders, bulletins, general notices, and train orders.

Each railroad is responsible for notifying SunRail of changes in any of the operational elements that affect the railroad's operations over territory used jointly between the freight or commuter rail operation and SunRail. SunRail also ensures that any portion of track that is shared with freight rail operations is time-separated. To ensure all parties and personnel are adequately prepared and trained to respond to emergency events involving SunRail or joint freight rail operations, SunRail invites and encourages its neighboring freight railroads and Amtrak to participate in emergency drills and simulations.

The Safety and Security Manager at the direction of the FDOT Passenger Rail Operations Manager, supports the investigation of any reports of the following conditions:

- Mishaps involving hazardous materials in SunRail service area;
- Derailments affecting SunRail passenger train operation;
- Side swipes or other damage to SunRail trains caused by other trains;
- Incidents involving SunRail Commuter Service;
- Incidents involving SunRail passengers; and
- Passengers struck by freight trains or debris.



b) Trespassing and Intrusion Programs

Many hazards exist within SunRail Commuter Service which can be exacerbated by the presence of trespassers unfamiliar with commuter rail operations. As such, trespassers not only place themselves at risk of sustaining serious injury or death, but they also place SunRail passengers and personnel at risk. Therefore, any person(s) who violates SunRail policies, rules, regulations, or who pose(s) a risk to the safety and security of SunRail Commuter Service, including its employees, passengers, vehicles, stations, facilities, and other properties, may be directed to leave the premises.

Individuals may also be directed to leave or be removed from SunRail premises if they have done any of the following:

- Committed a crime on property;
- Threatened any or contractor employee, passenger, contractor, or visitor;
- Interfered with the safe operation of SunRail Commuter Service;
- Violated policies, rules, or regulations, this includes entering onto and/or traveling along the right-of-way of SunRail Commuter Service;
- Been observed prowling around buildings, stations, facilities, parking lots or other properties without satisfactory explanation;
- Otherwise behaved in a suspicious or disorderly manner; or
- Represent a continuing threat to SunRail by having committed a serious criminal offense(s) on or off SunRail property.

SunRail, its personnel and Local law enforcement may be contacted at any time in order to assist in the removal of those individuals who do not abide by policies, rules, and regulations, or who pose an immediate threat to the safety and security of SunRail Commuter Service. Individuals may be arrested when the person has been warned and refused to leave the premises. Individuals may also be arrested or issued citations for second degree trespass when in areas that are properly posted "No Trespassing." Arrests may also be made when a person is detained on SunRail property and records indicate that the individual has committed previous trespass violations.

The prevention of trespassing is a portion of SunRail Operation Lifesaver program. All personnel are responsible for reporting occurrences involving trespassers on SunRail properties to dispatch, and/or their direct supervisor. Where possible, the public is made aware of trespassing restrictions via posted signs and public awareness and enforcement programs.



16.0 ENVIRONMENTAL MANAGEMENT PROGRAMS

SunRail and its contractors must comply with all applicable Federal, State and local environmental protection and management regulations. In addition, SunRail Contractor is required to institute policies and procedures addressing the safety and protection of the environment and persons who may come into contact with hazardous materials used in operating and maintaining SunRail Commuter Service. These policies and procedures must be submitted to SunRail for review and any other applicable Federal, State, and local environmental protection requirements.

The contractors environmental programs address the following:

- Storage vessel construction and maintenance;
- Alarms and signage;
- Training and emergency response;
- Personal protective equipment;
- Chemical inventory and compatibility issues;
- Waste collection and handlings;
- Established work practices; and
- Hazardous operating procedures.

All personnel whose job duties expose them to hazardous materials receive initial and periodic refresher training in hazardous materials identification, safety data sheets (SDS), personal protective equipment, proper handling and disposing of hazardous materials/wastes, confined space entry, blood borne pathogens, and emergency procedures in response to hazardous material spills. SDS's and chemical inventory lists for all products that contain or produce exposure to hazardous chemicals are maintained in accordance with the requirements of 29 CFR Part 1910.

a) **Hazardous Materials Management**

The hazardous materials management program applies to and affects all personnel that buy, store, handle, and/or use hazardous materials. It is the responsibility of these personnel and contractors to remain cognizant of the hazards and precautions associated with the hazardous materials. Fulfillment of this responsibility is accomplished through training programs, review and distribution of SDS's, review of container labeling, development of specification and procurement requirements, and development of hazardous substance lists and chemical inventories. Materials are thoroughly evaluated in accordance with Hazard Management Program prior to their purchase and use. All chemicals are verified against the contractors' Prohibited List and managed through SunRail contractors MSDS Systems. Whenever possible, other less hazardous products are evaluated and, when feasible, used in place of the original material.



All personnel who require training receive it. The training program includes discussion of the hazards presented by hazardous materials and substances, and the precautions and controls that must be taken or that are implemented to ensure safety when buying, storing, handling and/or using the materials. To facilitate the identification of training needs, site-specific hazardous substances lists are developed and maintained by each department to track the quantities and locations of hazardous substances within the department.

SDS's are requested for all liquids, pastes, adhesives, waxes, powders, greases, gases, gels, and granulated materials. SDS's are also requested for all solid materials, which may release fumes, dust, or other contaminants during a work process. Once obtained, the SDS's are maintained in each work area and remain easily accessible to all employees of the work area.

It is the responsibility of the contractors to ensure all hazardous materials are properly labeled and stored according to the requirements and recommendations of the SDS's and material labels. Emphasis is placed on ensuring incompatible materials are not stored in the same location. This requirement applies to not only the storage facilities themselves, but also to all work areas in which the materials are used. Storage locations are designed to appropriately accommodate, contain, and maintain material stability (both chemical and physical). All material containers are properly labeled regarding their contents. The label also provides appropriate hazard warnings, and the name, telephone number, and address of the manufacturer.

As part of SunRail's hazardous materials management program, there is a Spill Prevention Control and Countermeasure (SPCC) plan which addresses each of its facilities.

The plans are reviewed and revised as necessary on a triennial basis and define the measures taken at each facility to prevent and control chemical spills.

b) Hazardous Waste Management

SunRail is a generator of hazardous waste and as such, have developed and administer a hazardous waste management program that are in compliance with applicable Federal, State, and local environmental protection laws and regulations, including:

- Clean Water Act – the is classified as a small generator and is exempt from testing and monitoring regulations;
- Clean Air Act – SunRail maintains a National Pollutant Discharge Elimination Regulation permit, which is administered by the FDEP for the Environmental Protection Agency.
- Resource Conservation and Recovery Act; and
- Comprehensive Environmental Response and Compensation and Liability Act.



SunRail has established specific procedures pertaining to the disposal hazardous materials as well as specific EOPs related to hazardous material spills and/or releases. These procedures define their responsibilities when responding to emergency events involving hazardous materials as well as responsibilities for the accumulation, recycling, and disposal of these materials. Appropriate procedures are followed when handling contaminated liquid waste; spent engine fluids such as engine oil, transmission fluid, hydraulic fluid, and antifreeze; caustic waste; non-hazardous liquid waste; spent oil filters; fluorescent light tubes, batteries; and waste tires.

c) Waste Minimization and Pollution Prevention Programs

SunRail will recycle used oil, metal, batteries, and engine coolant.



17.0 SECURITY

This section is established to describe SunRail's pro-active, prevention oriented approach to security and how law enforcement actions are performed. SunRail is responsible for the implementation, revision and distribution of the System Security Plan. Additionally, SunRail will meet with outside agencies, including law enforcement, to develop plans and procedures and coordinate periodic emergency drills. The System Security Plan is a stand-alone document. The security plan shall include performance of threat and vulnerability assessments of facilities, equipment, and operations.

The security plan shall include all of the requirements outlined in the FTA Security guidelines manual.



18.0 HAZARD MANAGEMENT PROCESS

A hazard is defined as any condition or set of conditions, internal or external to the system or system operation which, when activated, can cause injury, illness, death, or damage to loss of equipment or property, or severe environmental damage. SunRail is responsible for ensuring that all of its personnel use acceptable hazard identification, analysis and resolution methods. SunRail hazard management process follows the guidelines of FDOT Safety and Security Oversight Program Standard 1.5.

The objective of the hazard identification and resolution process is to identify and define as many credible hazardous conditions as possible and to eliminate or control these hazardous conditions or associated activities prior to their causing or contributing to an accident/incident, injury, death or other major loss. This is a proactive approach, which stresses the thorough evaluation of systems and proposed modifications from a safety perspective before losses occur.

The hazard identification and resolution process applies to all operations and services of SunRail, with special emphasis placed on the initial stages of any new processes and/or prior to implementing modifications of existing facilities, systems or rolling stock.

All SunRail personnel are responsible for identifying, reporting, and, when possible, eliminating and controlling hazards that they encounter while performing their daily duties. The hazard analysis process attempts to determine the set of primary events in the hazard generation process, their likely or potential outcomes, and the impacts these outcomes will have on the system. This includes a full evaluation of the risks and priority associated with the hazard. Once this has been determined and fully evaluated, appropriate action can be taken to mitigate, control, or eliminate the hazard and its associated risks. Hazard analysis also attempts to reduce the severity of accidents/incidents by introducing protective devices and equipment, procedures, and/or forms of system modifications that reduce the amount of human and property damage in an accident/incident event.

a) Hazard Identification

During day-to-day operations, it is the responsibility of all personnel to identify and report hazards or potential hazards they encounter while performing the duties of their jobs while on property or while operating in SunRail Commuter Service, it is the responsibility of all personnel to secure the hazard area until it can be properly controlled or eliminated. Identified hazards shall be reported immediately to the appropriate management that can include a direct supervisor, department manager, dispatch and/or to the Safety and Security Manager. This information is then submitted to the FDOT Passenger Rail Operations Manager.



It is the responsibility of the employee and their direct supervisor to formally document the hazard report or safety concern. All reports are investigated and hazards and deficiencies are corrected or resolved accordingly.

Hazards or safety concerns identified by and received from passengers or the general public are normally communicated to SunRail train crews. Once received, it is the responsibility of the employee to document the hazard or concern and to notify their direct supervisor, manager, dispatch, and/or the contractor Safety and Security Manager.

b) Hazard Categorization and Risk Assessment

Risk is a subjective evaluation of the relative failure potential of a system or component and can be defined as the possibility of incurring a physical or personal loss or injury.

Once hazards have been identified, they must be evaluated to determine the level of risk or associated impact they may have on the system. Generally, the greater the probability of a hazard to cause injury or loss, the greater the risk; and subsequently the greater the need to resolve the hazard. The severity of the consequences the hazard may present must also be taken into consideration when evaluating the level of risk associated with the hazard. Like probability, as the severity of the hazard consequences increases so will the level of risk and again, so will the need to resolve the hazard.

SunRail use a system for assessing levels of risk and for determining what action(s) must be taken to correct or document the hazard risk. The Hazard Categorization and Risk Assessments are based on the expertise of experienced personnel with extensive background. MIL-STD-882D is used to determine risk and is a qualitative calculation based on largely subjective judgments used to determine the risk associated with each hazard and thus the urgency for implementing corrective measures to eliminate or reduce risk to a level of acceptability.

This enables decision-makers to understand the amount of risk involved in accepting a hazard in relation to the cost (schedule, dollars, operations, etc.) to reduce the hazard to an acceptable level.

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



i. Hazard Severity

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

Category I, Catastrophic – could result in death, permanent total disability, loss exceeding \$1 million, or irreversible severe environmental damage that violates law or regulation.

Category II, Critical – could result in permanent total disability, injuries or occupational illnesses that may result in hospitalization of 2 or more persons, loss exceeding \$200,000, but less than \$1 million, or reversible environmental damage that violates law or regulation.

Category III, Marginal – could result in injury or occupational illness resulting in one or more lost workdays, loss exceeding \$10,000, but less than \$200,000, or mitigated environmental damage without violation of law or regulation where restoration activities can be accomplished.

Category IV, Negligible – could result in injury or illness not resulting in a lost work day, loss exceeding \$2,000, but less than \$10,000, or minimal environmental damage not violating law or regulation.

ii. Hazard Probability

Hazard probability is described qualitatively in potential occurrences per units of time, miles, trips/runs, or passengers carried. A hazard probability may be derived from the analysis of transit system operating experience, evaluation of safety data, or from historical safety data from other transit systems. The probability levels are defined as follows:

A = Frequent: Likely to occur often in the life of an item, with a probability of occurrence greater than 10^{-1} in that life. Will continuously be experienced in the fleet.

B = Probable: Likely to occur several times in the life of an item, with a probability of occurrence less than 10^{-1} but greater than 10^{-2} in that life. Will occur frequently in the fleet.



C = Occasional: Likely to occur sometime in the life of an item, with a probability of occurrence less than 10^{-2} but greater than 10^{-3} in that life. Will occur several times in the life of the fleet.

D = Remote: Unlikely but possible to occur in the life of an item, with a probability of occurrence less than 10^{-3} but greater than 10^{-6} in that life. Unlikely, but can reasonably be expected to occur in the fleet.

E = Unlikely: So unlikely to occur in the lifetime of an item, it can be assumed occurrence will not be experienced, with a probability of occurrence less than 10^{-6} in that life. Unlikely to occur in the fleet, but possible.

Hazard risk classification combines the hazard severity and probability characteristics into a single hazard risk index as shown in Figure 19-1.

Figure 19–1 – Hazard Risk Index

Probability of Occurrence	<u>Severity of Occurrence</u>			
	Catastrophic	Critical	Marginal	Negligible
A Frequent	1	3	7	13
B Probable	2	5	9	16
C Occasional	4	6	11	18
D Remote	8	10	14	19
E Unlikely	12	15	17	20

Hazard risk assessment values are used in grouping individual hazards into hazard categories, which can then be used to generate specific action such as mandatory reporting of the most severe hazards to management for action. Figure 19-2 lists the hazard risk categories.

Figure 19-2 – Hazard Risk Categories

Hazard Risk Assessment Value	Priority	Hazard Risk Category	Hazard Risk Acceptance/ Approval Level
1 - 5	1	High	GM
6 – 9	2	Serious	GM
10 – 17	3	Medium	GM
18 - 20	4	Low	GM



iii. Hazard and Risk Resolution

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

In all cases, and its contractors strive to first eliminate the hazard (if possible), and to then reduce its risks if it cannot be eliminated. If the risk cannot be eliminated or reduced, or if it is impossible or impractical to eliminate the hazard, and its contractors having the required authority, may choose to accept the risk. In these cases, care is taken to ensure compliance with all applicable rules, procedures, policies, and regulatory requirements. Decisions are documented and appropriate parties are notified.

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

- Design for Minimum Risk. Design will attempt to eliminate hazards. If an identified hazard cannot be eliminated, its associated risk will be reduced to an acceptable level through design selection. This may be constrained by time, money, manpower, or other limitations.
- Incorporate Safety Devices. If the hazard cannot be eliminated or its risk controlled to an acceptable level, safety design features or devices will be used to reduce risk to an acceptable level.
- Provide Warning Devices. If neither design nor safety features nor devices can reduce the risk to an acceptable level, warning devices shall be used to detect the condition and to produce an adequate warning signal to alert individuals to the hazard. Warning signals and their operation shall be designed to minimize the probability of individuals reacting incorrectly to the signals and shall be standardized and similar.
- Develop Special Procedures and Training. If the hazard cannot be eliminated through design or its associated risk adequately controlled through design selection, safety features/devices such as personal protective equipment (PPE) or warning devices, will be used followed by approved procedures and training. This is the least effective method of hazard resolution.

If the resolution of a hazard is dependent upon action by a third party, such as the City of Orlando, a management representative from will submit a request for action to the appropriate control point or liaison with the third party. If the hazard is not being resolved in a timely manner, they will elevate the matter to a higher level of authority within their department. If they determine that the hazard cannot be resolved, or is not



being resolved in a timely manner and the risk is still considered unacceptable, they will further elevate the issue. The FDOT Passenger Rail Operations Manager is notified of all instances in which a hazard is not being resolved in a timely manner.

Regardless of the type of control used to eliminate the hazard or reduce its risk, SunRail will re-evaluate the control method after its implementation to determine and verify its effectiveness. In all cases, if the hazard has been eliminated or controlled, or if the management representative deems that the risk is acceptable, they shall document this decision and notify all affected parties.

Refer to Appendix G for SunRail Hazard Management Plan



19.0 ACCIDENT/INCIDENT REPORTING AND INVESTIGATION

For SunRail Commuter Service, all train or passenger accidents/incidents are first reported to the Dispatcher. The Operations Dispatch Center then notifies the Safety and Security Communications Coordinator who will then notify appropriate emergency response personnel and coordinate and monitor all corrective and emergency response actions required to restore normal service.

All accidents/incidents involving contractor employees will be immediately reported to the employees' supervisor.

The Supervisor will conduct formal investigations of all accidents/incidents and prepare reports for submission to the appropriate authorities. All accident/incident reports include:

- Witness statements
- Re-enactments
- Root cause analysis
- Corrective actions

Notification of an accident/incident can be made by telephone or two-way radio. SunRail contractors will follow their accident/incident investigation plans. All accidents and incidents are entered into contractor provided databases. These databases are an electronic tool used to track health and safety performance. Details of the event (date, time employee name, injury, etc.) are to be entered within 48 hours of the event occurrence.

The ODC or SSCC is informed of the following:

- All occurrences resulting in employee deaths or occupational injuries while on the job;
- Passenger, trespasser, and/or passerby deaths or reported injuries that occur on vehicles or property;
- Near misses and minor accidents/incidents which had the potential of serious injury or death; and
- All other unusual occurrences, incidents, malfunctions, hazardous conditions, near misses, etc., which may impact the safety of operations and services, personnel, or patrons.



a) Notification Thresholds

SunRail will notify FDOT within 2 hours of any safety or security event involving a rail transit vehicle or taking place on SunRail controlled property where one or more of the following occurs:

- (a) A fatality at the scene; or where an individual is confirmed dead within 30 calendar days of a transit-related incident;
- (b) Injuries requiring immediate medical attention away from the scene for two or more individuals;
- (c) Property damage to SunRail vehicles, non-SunRail vehicles, other SunRail property or facilities, and non-SunRail property that equals or exceeds \$25,000;
- (d) An evacuation due to life safety reasons;
- (e) A collision at a grade crossing;
- (f) A main-line derailment;
- (g) A collision with an individual on SunRail right of way; or
- (h) A collision between a SunRail vehicle and a second SunRail vehicle or a SunRail non-revenue vehicle.

The information provided to FDOT includes:

- Name and Job title of person reporting the incident
- Incident type (fatality, injuries, property damage, evacuation, derailment or other)
- Location, time and date
- Number of fatalities
- Number of injuries
- Type and number of rolling stock and vehicles involved
- Property damage estimate
- Whether NTSB reportable
- Whether FRA reportable
- Name of the primary SunRail person conducting the investigation
- Description of the incident

b) NTSB Notifications

SunRail will notify the NTSB within two hours by telephone of any accident involving:

- A fatality to a passenger or train crew member or serious injury to two or more passengers requiring admission to a hospital;
- Collision with another train
- The evacuation of a passenger train
- Fatality at a grade crossing

No later than four hours after an accident, any accident that results in:

- Damage of \$150,000 or more for repairs to railroad and non-railroad property.
- Damage of \$25,000 or more to a passenger train and railroad and non-railroad property.



SunRail will notify FDOT within 2 hours of an accident when SunRail has notified the NTSB of an accident within the NTSB thresholds.

c) FRA Notifications

Since SunRail shares track with a general railroad system and is subject to the Federal Railroad Administration (FRA) notification requirements, SunRail will notify FDOT within 2 hours of reporting an accident to FRA. The reporting thresholds to FRA are as follows:

- CFR violations
- Rail accidents/Incidents
- Grade crossings collisions
- Death or injury
- Occupational illness
- Damage in excess of established threshold
- Evacuation
- Derailments
- Suicides

d) **NON-REPORTABLE INJURY AND DAMAGE INVESTIGATIONS**

Accidents and incident that do not involve serious injury and/or damage usually require only an initial investigation by the Road Foremen or other Supervisor responding to the scene. The Supervisor at the scene:

- Commences an investigation
- Conducts interviews, as appropriate
- Gathers and collects the physical evidence
- Submits a report based on the information collected to the CFRC and FDOT Claims Department, if necessary.

e) **REPORTABLE ACCIDENTS/INCIDENTS**

The contractors conduct the accident investigation of all accidents/incidents reportable to FDOT, FRA and NTSB. However, personal injury and extent of damage are not the sole criteria. Any potentially unacceptable hazardous condition is investigated, as well. The contractors will:

- Lead the on-site inspection of the accident/incident scene.
- Review reports written by involved personnel.
- Conduct interviews with involved personnel and witnesses.
- Review physical evidence.
- Perform system tests, if applicable.



- Coordinate accident reconstruction activities, if applicable.
- Conduct a root cause analysis with causal factors and recommendations in accordance with State Safety Oversight Standard.

A final report with findings, conclusions, and recommendations follows these investigations. The contractor submits details of its findings to the Executive Safety and Security Committee. All information gathered is retained by FDOT in accordance with Retention Schedules. The CFRC may elect to conduct an independent investigation. All information pertaining to the investigation forwarded to the CFRC.

f) REPORTING AND COORDINATION WITH FDOT

A monthly summary report is submitted to FDOT of all incidents, which meet the reporting criteria, within 15 days from the last day of the month covered. An annual report of SunRail's safety performance will be submitted to FDOT each January 31st.

When the accident, incident, or condition involves post accident inspections, examination, or testing, FDOT may be notified so that it may participate in the investigation. A written report of each accident is sent to FDOT within 30 days of the event. Updates are sent until the investigation is complete. The report contains the following elements: identification of the most probable cause and other contributing factors, corrective action plan to prevent or mitigate recurrence, and a schedule of implementation, as appropriate.

FDOT may conduct a separate, independent investigation at its own discretion.

g) CORRECTIVE ACTION

CFRC REVIEW

The CFRC reviews all incident reports for potentially serious incidents or conditions. Additionally, when accident/incident reports and statistics show repetitive trends that result in an inability to meet or exceed the safety program goals and objectives, the CFRC initiates an investigation to determine the causal factors. The CFRC participates, with appropriate departments, to determine the required corrective actions.

FDOT REVIEW

SunRail develops a Corrective Action Plan (CAP) for submission to FDOT when:

- Results from an accident/incident investigations in which identified causal factors are determined by SunRail or FDOT as requiring corrective actions;
- Hazards or deficiencies identified from internal and external safety and security reviews performed by SunRail or FDOT.

SunRail Corrective Action Plans include:

- Identification of the hazard, deficiency, or root causes.



- The action(s) being taken by GCRTA to resolve or mitigate the hazard or deficiency
- An implementation schedule for the CAP
- The individual or department responsible for implementing the corrective action(s)
- Any other critical information deemed necessary by SunRail or FDOT.

Each CAP is submitted to FDOT for review and approval, within thirty (30) calendar days, or as agree to by FDOT.

In the event that the NTSB conducts an investigation, SunRail and FDOT will review the NTSB findings and recommendations to determine whether or not a CAP should be developed. SunRail will develop a CAP if required either by the NTSB or FDOT. SunRail will provide FDOT with the following information regarding the CAP:

- Alternative actions for implementing a CAP, if any
- Verification that the corrective action(s) has been implemented as described in CAP or that proposed alternative action(s) has been implemented
- FDOT concerning any alternative actions for implementing a CAP
- Monthly reports detailing the status of each corrective action(s) not completely implemented as detailed in the CAP

SunRail will maintain a Corrective Action Monitoring Log and will provide FDOT with monthly corrective action implementation updates. SunRail will provide written verification to FDOT when a corrective action has been fully implemented.

For full Accident and Incident Notification, Investigation & Report Preparation please refer to SunRail 225 Internal Control Plan and the contractors' procedures.



20.0 SAFETY DATA ACQUISITION/ANALYSIS

In compliance with the Federal Railroad Administration's 49 CFR (Code of Federal Regulations), Part 225, Railroad Accidents/Incidents Reporting Regulations, SunRail collects, updates, maintains and distributes data concerning accidents/incidents on the rail system. All accidents and incidents are reported to the FDOT Passenger Rail Operations Manager written accident/incident reports are submitted for review and acceptance.

Periodic analyses of accidents/incidents are conducted by the contractors to determine trends and underlying causes. This helps and its contractors enhance their efforts in reducing and preventing accidents. SunRail keeps active computerized documentation on all accidents/incidents. This information is routinely distributed to, contractor senior managers, reviewed at safety meetings and used to institute any improvements, modifications, etc., to the system. The overall objective for maintaining safety data is to identify problem areas so that procedures for prevention may be developed and implemented effectively.

The safety data is reported to the FDOT and the Federal Railroad Administration on a monthly basis or as required. All mandated federal and state reports and recommendations are kept on file in the OCC. SunRail reviews external data from other rail properties, the National Transportation Safety Board, the Federal Transit Administration and the Federal Railroad Administration. The data is used for analysis and comparison of information, which can assist in the process of hazard resolution and benchmarking.

In addition to the trailing indicators, leading indicators (preventative activities) are tracked and monitored.

Current Leading Indictors which are tracked include:

- Safety Tours by the FDOT Passenger Rail Operations Manager and his management team
- Workplace Inspections by Supervisors
- Safety Observations by employees – Safe & Unsafe Acts and Conditions
- Health and Safety Training Hours
- Operations Testing
- Risk Assessments
- Accidents/Incidents and corrective actions



21.0 LOSS PREVENTION AND CONTROL

The loss prevention and control process is first directed towards preventing accidents/incidents, and then towards managing and minimizing costs associated with accidents/incidents that do occur. The process is also directed towards minimizing other operational and maintenance costs through effective management techniques.

a) **Fire Safety Analysis**

FDOT has conducted a fire safety analysis of each type of railcar and locomotive used in its operations and services in compliance with 49 CFR Part 238.103, Fire Safety.

The fire safety analysis documents the systematic process implemented by SunRail Train Service to identify, analyze, prioritize, and resolve fire hazards that could result in passenger or employee injuries or fatalities. The fire hazard analysis results are documented in Fault Tree Analyses, Fire Hazard Analysis Worksheets, and Hazard Control and Countermeasures Verification Tracking Logs. A Fire Safety Remedial Action Plan and a draft Fire Safety Standard Operating Procedure have also been prepared to track the progress of remedial actions and to periodically evaluate the effectiveness of hazard controls and countermeasures used to reduce the potential fire risk. It must be noted that the fire safety analysis is updated whenever major changes in equipment, service, or operations occur.

The fire safety analysis included a comprehensive assessment of SunRail equipment and SunRail Commuter Service potential system hazards, and material flammability and smoke emission criteria.

The analysis also considers, as appropriate, the:

- Identification, analysis, and prioritization of the fire hazards inherent in the design of the equipment;
- Evaluation of the ventilation system to reasonably ensure that the use of the equipment does not contribute to the intensity of a fire;
- Identification of any components that pose a fire hazard due to overheating, and analysis of the benefit of overheat protection for these components;
- Identification of any unoccupied train compartment that poses a fire hazard, and analysis of the benefit of including a fire and/or smoke detector in that compartment;
- Identification of existing fire extinguishers and the necessity for additional fire extinguishers; and
- On a case-by-case basis, consideration of the benefit of fixed, automatic fire suppression systems.



The fire safety analysis performed employed system safety methods and techniques consistent with those presented in this plan. The following steps were taken to complete the fire safety analysis.

1. **Compile** and analyze historic records of equipment fire incidents and examine causes, contributing factors, and lessons learned. The fire safety analysis presents the known, prior fire incidents that occurred on SunRail and provides the determined causes.
2. **Take inventory**, from a fire safety features point-of-view, of each type of equipment used in SunRail Commuter Service. The fire safety analysis provides a list of equipment that the railroad operates and addresses any fire safety issues.
3. **Determine** the number and characteristics of significantly different operating environments present on the railroad and identify significant fire safety concerns with each. The fire safety analysis presents a review of SunRail Commuter Service and a risk assessment of each specific type of operating environment. Additionally, it provides a brief description of major changes in equipment, service or operations since the last submittal of the analysis.
4. **Develop** a list of significant ignition sources for each category of equipment and service. The fire safety analysis reviews the significant ignition source hazards for each category of equipment and service including a survey of applicable reference materials and results from a physical inspection/survey of the equipment. The analysis includes selected photographs of surveyed equipment, fire hazard analysis worksheets, and general system descriptions for passenger vehicles and locomotives.
5. **Assess** the hazard severity impact considering existing fire safety design features and other countermeasures for each category of equipment and service. The fire safety analysis includes data, calculations and fire modeling used to estimate emergency evaluation times and fire hazard scenarios for passenger vehicles and locomotives.
6. **Identify** the fire scenarios that could result in personal injury to passengers and crewmembers and estimate each scenario's Probability of Occurrence. Using fault tree analysis as the primary technique, the fire safety analysis presents the fire hazard analysis process, including fault trees illustrating probability of occurrence for each scenario, and hazard control/countermeasure verification and tracking log.
7. **Determine** the overall risk acceptability of each hazard identified in Steps 5 and 6 and develop and execute a fire safety remedial action plan if any fire



safety hazard for any category of equipment and service has an unacceptable fire risk rating. The fire safety analysis presents the quantitative and qualitative methods used to determine the probability and severity of fire risk.

8. **Monitor**, track and update the fire safety remedial action plans. The fire safety analysis presents the fire safety remedial action plan.

22.0 SYSTEM CHANGE MANAGEMENT

Effective configuration management can help to ensure that all changes and modifications made to the systems, operations, facilities, equipment, or other properties as well as policies, procedures, and/or rules used during SunRail Commuter Service are systematically planned, evaluated, approved by the appropriate parties, and documented.

All changes and modification to SunRail Commuter Service are done at the direction of the FDOT Passenger Rail Operations Manager only.

The scope of the following manuals describes the activities and responsibilities related to the establishment, maintenance, review and update of the Quality System.

Contractor team members will participate in SunRail Safety Certifications, APTA, FRA, FTA and NTSB Audits or inspections.

Refer to Appendix E for SunRail Configuration Management Plan

Refer to Appendix F for SunRail Safety & Security Certification Plan



23.0 INTERNAL SAFETY MANAGEMENT ASSESSMENT

Internal assessments provide a mechanism for determining the effectiveness of the system safety program plan and an assessment of the implementation level of program elements.

The objectives of SunRail internal safety assessment are to:

- Verify that the safety programs have been developed and implemented in accordance with the plan's requirements;
- Assess the effectiveness of the system safety programs;
- Identify program deficiencies;
- Identify potential hazards at /SunRail and to discover weaknesses in the current safety programs;
- Verify corrective actions are being tracked;
- Recommend improvements to the system safety program; and
- Provide management with an assessment of the status and the adequacy of the system safety plan.

The internal safety assessment is performed by SunRail. This assessment is a process by which they objectively examine evidence to determine its own compliance with the SSPP. The internal safety assessment process will be conducted on a triennial basis as determined by the following plan:

In Year 1 the following elements are audited:

- Policy Statement & SSPP Authority
- Purpose and Scope of the SSPP
- Goals for the SSPP
- Identifiable and Attainable Objectives
- System Description & Organizational Structure
- System Planning and Integration
- Hazard Management Process
- Accident/Incident Reporting & Investigation
- Training
- Safety Contract Requirements

In Year 2 the following elements are audited:

- Facilities Maintenance & Inspections
- Vehicle Maintenance Inspection/Repair
- Rules/ Procedures Compliance
- Training
- System Change Management



- Workplace Safety Program (Drug & Alcohol)

In Year 3 the following elements are audited:

- Internal Safety Management Assessment
- Emergency Response Planning & Response
- Workplace Safety Program (Fitness & Medical Monitoring)
- Safety Data Acquisition/Analysis
- Loss Prevention & Control
- Environmental Management Program
- Accident/Incident Reporting & Investigation

Unannounced audits are conducted on safety critical systems, repetitive failures and non-compliance items found.

Checklists and Procedures

Auditing teams utilize approved checklists in their audit. The checklists reflect the items and areas and the department being audited. The audited department is given the required opportunities to provide support documentation to the auditors so as to “close” the items on the checklist. Auditors may choose a day to do spot checks of individual records, such as maintenance records or personnel qualification records.

In advance of an audit, a checklist is prepared including:

- Reference number.
- Audit category (safety critical system, failure analysis, schedule, announced, and unannounced).
- Date of audit.
- Department audited and contact name.
- Auditor’s names.
- Inspections and observations conducted.
- Reference criteria including that found in the SSPP, standard procedures, training manuals, operating rules, and maintenance procedures.
- Results, comments, and observations.
- Recommendations.
- Corrective actions, and
- Method of verification.



Audit Responsibility

The FDOT Passenger Rail Operations Manager or designates are responsible for the implementation and oversight of announced and unannounced safety audits during the operation and maintenance of SunRail. The audit team should not include personnel with interests that may be in conflict with the audit duties.

Audit Reporting

The auditing group prepares an audit report which is provided to the FDOT Passenger Rail Operations Manager. Appropriate leadership prepares responses to the audit. Audit teams are proficient in the areas being audited.

Documents that will not be audited include confidential records and financial records, and other sensitive materials. Once an audit date and scope is established, all departments involved in the audit provide full cooperation to the auditors. Completed audits include findings, observations, open items, problem areas, corrective actions and a schedule for implementation of the corrective actions.

The audit report includes a summary of open items, areas of concern and the required corrective actions. Corrective actions, including a schedule for implementation are approved by leadership and are tracked for compliance until close-out by the respective managers.

At the end of the audit the audit team briefs leadership concerning the areas of concern and recommended corrective actions.

Annual Audit Report

The senior management will respond to all identified problem areas, including a schedule to implement corrective actions. Copies of the final internal audit reports are submitted to the FDOT Passenger Rail Operations Manager.

Audit Completeness

SunRail ensures all audits are performed on a coordinated basis. Documents that will not be audited include confidential records and financial records, and other sensitive materials. Once an audit date and scope is established, all contractors involved in the audit provide full cooperation to the auditors. Completed audits include findings, observations, open items, problem areas, corrective actions and a schedule for implementation of the corrective actions.

All internal safety audits are fully documented and reported to ensure that hazards are subjected to the hazard identification and resolution process for action to include tracking until resolved.



External Audits

All personnel will participate in SunRail, FDOT/FTA, APTA, FRA and NTSB audits or inspections.

INTERNAL SAFETY REVIEWS

Verification of compliance with the Rail System Safety Program Plan requirements are accomplished through reviews, tests, analyses, reports, inspections, safety reviews, investigations and drills. Safety Reviews are primarily of SunRail's Operations and Maintenance and Signals functions. However, all SunRail departments with system safety program responsibilities, including applicable contractors, are subject to planned and periodic reviews by SunRail Safety personnel.

In accordance with the SSO Manual, non-FTA funded Fixed Guideway Transportation Systems (SunRail) are exempt from notifying and submitting safety review checklists to the SSO and submitting an Annual Safety Report.

SAFETY REVIEW RESPONSIBILITY

SunRail Safety and Security Manager has the responsibility for the implementation and oversight of the safety reviews while keeping in mind the independent nature of the safety review process. SunRail Safety and Security Manager selects the Safety review Team and Leader proficient in the areas being safety reviewed, ensuring that the safety review team does not include staff from the functions and/or units being safety reviewed.

SAFETY REVIEW PROCESS

SunRail Safety and Security Manager is responsible for developing and distributing standard procedures to be followed during the conduct of safety reviews, and assures that all safety reviews are conducted in a cooperative and professional manner. The procedures include a process for resolving problems or disagreements with findings.

The reviewed department is informed in advance of the safety review/review and is provided with information regarding the planned system safety review/safety review. Findings are communicated to the safety reviewed department to ensure expeditious corrective action. Critical deficiencies are communicated to the department head immediately or at an exit interview.

SAFETY REVIEW CHECKLIST

Safety Review teams utilize checklists in their safety review. The checklists reflect the items and areas and the department being safety reviewed. The audited department is given an opportunity to provide support documentation of the requirement on the checklist to the safety auditors. Safety auditors may choose a day to do spot checks of individual records, such as maintenance records or personnel qualification records.



SAFETY REVIEW REPORTS AND CORRECTIVE ACTION

All safety reviews are fully documented and reported. Upon the completion of each review and safety review, the Safety Department issues a report of the results that identifies areas of deficiency, provides recommendations and identifies corrective actions. Corrective actions and schedule for implementation are reviewed and approved by SunRail Safety and Security manager and are tracked until completed by the Safety Department. Copies of the report are distributed to the safety reviewed department and

FDOT	Passenger	Rail	Operations	Manager.
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SAFETY REVIEW SCHEDULE

Each safety review area is reviewed at least once every three years, with one-third of the functional areas safety reviewed each year. A safety review schedule is prepared annually, with specific safety review dates communicated to ODOT when established. At least 30 days advance notice of the planned safety review is communicated to the SSO.

The purpose of the safety review is to conduct safety reviews of safety-related activities in all SunRail departments and to report findings to the involved department and to the Executive Safety Committee, to ensure that effective corrective action is taken to resolve deficiencies.

SAFETY REVIEW REPORTS

SunRail will prepare and submit an annual report to the Executive Safety Committee no later than January 31 of each year, for the prior calendar year. The report documents the internal safety and security review activities; the status of compliance with the internal review schedule; activities performed; and subsequent findings, recommendations and CAPs developed to address the findings.



24.0 PROCUREMENT

System safety extends to include the routine procurement of supplies, materials, and equipment. These procedures must be in place and enforced to preclude the introduction into the railroad environment of unauthorized hazardous materials and supplies, as well as defective or deficient equipment or replacement parts.

SunRail contractor responsibilities include the routine, recurrent procurement of supplies, materials, and equipment. The contractor managers are responsible to ensure appropriate procedures are in place to preclude the introduction of unauthorized hazardous materials, supplies and/or defective or deficient material. Safety and security-related materials management activities include:

- Oversight of the activities of purchasing, facility/stockroom operations
- Assist in MSDS Management and conformance
- Assistance in the preparation/review of procurement specifications to control or eliminate the introduction of hazardous materials
- Provision of staff for the appropriate safety Haz-Mat training related to the handling of hazardous materials.
- Assistance in the development and implementation of appropriate hazard correction strategies

The Material Handler is responsible for the receipt, control and distribution of material as may be required. Procurements are executed in accordance with quality standards, established user department work schedules and needs, and governing laws and regulations.

Generally, specifications are in the form of written description, performance requirements, drawings, prints, commercial industry standards and other descriptive literature references. They should establish minimum requirements for the need in question to secure fair and open competition, upon equal terms to all bidders. Specifications should be reviewed by Procurement concurrently while being reviewed by the user department.

Procurement specifications must include requirements for submission Material Safety Data Sheets (MSDS) and related product information when requesting industrial chemicals, paint, cleaners, solvents or insecticides. All items to be produced shall be evaluated for health and safety compliance with current applicable regulatory specifications.



APPENDIX B: /SunRail VSMF AND STATION ADDRESSES

STATIONS

DeBary

630 South Charles R. Beall Blvd.
DeBary, FL 32713

Sanford

2720 West State Road 45
Sanford, FL 32771

Lake Mary

2200 West Lake Mary Blvd.
Lake Mary, FL 32746

Longwood

149 East Church Ave.
Longwood, FL 32750

Altamonte

2741 South Ronald Reagan Blvd.
Altamont, FL 32701

Maitland

801 North Orlando Ave.
Maitland, FL 32751

Winter Park

148 West Morse Blvd.
Winter Park, FL 32789

Florida Hospital Health Village

500 East Rollins St.
Orlando, FL32803

Lynx Central

101 West Livingston St.
Orlando, FL 32801

Church Street

99 West South St.

Orlando, FL 32801

Orlando Health/Orlando

250 Columbia St.
Orlando, FL 3286

Sand Lake Road

8030 South Orange Ave.
Orlando, FL32809

SunRail OCC and VSMF

801/401 SunRail Drive, Sanford, Florida 32771



APPENDIX C: / ROLLING STOCK LIST

Table 4-1 - SunRail (Department) - Fleet of Cars and Locomotives					
Passenger Cars					
Car#	Type	#	Seats*	Year	Manufacturer
2000-2012	Cab Car	13	132	2013	Bombardier
3000-3006	Coach car	7	150	2013	Bombardier
Bi-Level Cars		Total	20		
All Cars		Total	20		
Passenger Locomotives					
Loc#	Type	#	Year	Manufacturer	
100 - 109	GP40WH	10	2013	MPI Remanufactured	

*Accommodates bicyclists, special needs customers and are equipped with on-board wheelchair lifts

Table 4-1 - SunRail (Department) - Fleet of Cars and Locomotives					
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All Cars		Total	20		
Passenger Locomotives					
Loc#	Type	#	Year	Manufacturer	
100 - 109	GP40WH	10	2013	MPI Remanufactured	

*Accommodates bicyclists, special needs customers and are equipped with on-board wheelchair lifts



APPENDIX D: / TRAINING MATRIX

TRAINING REQUIREMENTS MATRIX FOR EMPLOYEE QUALIFICATION - SunRail

COURSE DESCRIPTION	RE SP.	Duration	OFFICE	STORES	MOE				OPS				MOW / FM		Requalification	
				Material Handler	Manager / Supervisor	QMP	QMP/MFE	Cleaner	Manager / Supervisor	Engineer	Conductor	Dispatcher	Track Inspector	MTCE		
1) Bombardier Orientation																
New Hire Orientation	BBD	8	X	X	X	X	X	X	X	X	X	X	X	X	X	Yearly
2) Bombardier Orientation																
HSE New Hire Orientation	BBD	8	X	X	X	X	X	X	X	X	X	X	X	X	X	Yearly
HSE Policy, Site Procedures and Rules	BBD		X	X	X	X	X	X	X	X	X	X	X	X	X	Yearly
Accident/Injury Reporting	BBD		X	X	X	X	X	X	X	X	X	X	X	X	X	Yearly
HAZCOM	BBD		X	X	X	X	X	X	X	X	X	X	X	X	X	Yearly
Emergency Preparedness	BBD		X	X	X	X	X	X	X	X	X	X	X	X	X	Yearly
Basic Fire Extinguisher	BBD		X	X	X	X	X	X	X	X	X	X	X	X	X	Yearly
Bloodborne Pathogens	BBD		X	X	X	X	X	X	X	X	X	X	X	X	X	Yearly
Lock Out/Tag Out	BBD		X	X	X	X	X	X	X	X	X	X	X	X	X	Yearly
Environmental Awareness & SWPP/SPCC	BBD		X	X	X	X	X	X	X	X	X	X	X	X	X	Yearly
Crane Operation	BBD	8				X	X								X	Three Years
Forklift	BBD	8		X		X		X							X	Three Years
CPR/First Aid/AED	BBD	8	X	X	X	X	X	X	X	X	X	X	X	X	X	Two Years
Fall Protection	BBD	8				X	X	X							X	Initial only
System Safety & Security Program Plans	BBD	8	X		X	X	X	X	X	X	X	X	X	X	X	Initial only
3A) MOE - New Hire - Required Training																
Locomotive Inspection	BBD-TCS	16				X	X									Three Years
Car Exterior Inspection	BBD-TCS	16				X	X									Three Years
Car Interior Inspection	BBD-TCS	16				X	X									Three Years
Class 1 Brake Test (232)	BBD-TCS	16				X	X									Three Years
Single Car Test	BBD-TCS	16				X	X									Three Years
ATS	BBD-TCS	8				X	X									Three Years
Hours of Service	BBD-TCS	2				X	X									Three Years
Blue Signal Protection	BBD-TCS	6				X	X									Three Years
Equipment Operator	BBD-TCS	160					X									Three Years
Coach Familiarization	BBD-TCS	8				X	X			X	X					Initial only
Loco Familiarization	BBD-TCS	8				X	X			X	X					Initial only
Air Brake Theory	BBD-TCS	8				X	X									Initial only
Coach & Loco Trouble Shooting	BBD-TCS	16				X	X			X	X					Three Years
Refrigerant Handling	BBD-TCS	8		X												Initial only
Maximo Training	BBD	8			X											Initial only



3B) MOE - Qualified - Required Training													
Locomotive Inspection	BBD-TCS	8			X	X	X					Three Years	
Car Exterior Inspection	BBD-TCS	8			X	X	X					Three Years	
Car Interior Inspection	BBD-TCS	8			X	X	X					Three Years	
Class 1 Brake Test	BBD-TCS	8			X	X	X					Three Years	
Single Car Test	BBD-TCS	8			X	X	X					Three Years	
ATS	BBD-TCS	8			X	X	X					Three Years	
Hours of Service	BBD-TCS	2			X	X	X					Three Years	
Blue Signal Protection	BBD-TCS	4			X	X	X					Three Years	
Equipment Operator	BBD-TCS	160					X					Three Years	
Coach & Loco Trouble Shooting	BBD-TCS	16			X	X	X	X	X	X		Three Years	
4) MOW Required Training													
Track (213-214)	BBD - TCS	80									X	X	Three Years
5) OPS Required General Training													
Bombardier Operational Procedures Manual	BBD - TCS	8			X			X	X	X			Yearly
Emergency Preparedness	BBD	8			X			X	X	X			Two Years
6A) ENGINEER - New Hires (Initial Certification 200 hours Class + 240 hours OJT)													
Operating Rules (217)	BBD-TCS	100						X					Initial
Operating Practices (218)	BBD-TCS	40						X					Initial
Drug & Alcohol (219)	BBD-TCS	4						X					Initial
Communications (220)	BBD-TCS	4						X					Initial
Loco Safety Stds (229)	BBD-TCS	20						X					Initial
Air Brakes (238)	BBD-TCS	24						X					Initial
Engineer Cert (240)	BBD-TCS	8						X					Initial
Territory Familiarization (OJT)	BBD-TCS	240						X					Initial
6B) ENGINEER - Qualified (Re-Certification 16 hours Class + 160 OTJ)													
Operating Rules (217)	BBD-TCS	6						X					Three Years
Operating Practices (218)	BBD-TCS	2						X					Three Years
Drug & Alcohol (219)	BBD-TCS	1						X					Three Years
Communications (220)	BBD-TCS	4						X					Three Years
Loco Safety Stds (229)	BBD-TCS	1						X					Three Years
Air Brakes (238)	BBD-TCS	1						X					Three Years
Engineer Cert (240)	BBD-TCS	1						X					Three Years
Territory Familiarization (OJT)	BBD	160						X					Initial
7A) CONDUCTOR - New Hires (Initial Certification 160 hours Class + 160 hours OJT)													
Operating Rules (217)	BBD-TCS	80						X	X				Initial
Operating Practices (218)	BBD-TCS	24						X	X				Initial
Drug & Alcohol (219)	BBD-TCS	4						X	X				Initial
7A) CONDUCTOR - New Hires (Initial Certification 160 hours Class + 160 hours OJT)													
Communications (220)	BBD-TCS	4						X	X				Initial
Loco Safety Stds (229)	BBD-TCS	4						X	X				Initial
Air Brakes (238)	BBD-TCS	16						X	X				Initial
Conductor (242)	BBD-TCS	8						X	X				Initial
Customer Service	BBD-TCS	16						X	X				Initial
Territory Familiarization (OJT)	BBD	160						X	X				Initial
7B) CONDUCTOR - Qualified (Re-Certification 16 hours Class)													
Operating Rules (217)	BBD-TCS	4						X					Three Years
Operating Practices (218)	BBD-TCS	4						X					Three Years
Drug & Alcohol (219)	BBD-TCS	1						X					Three Years
Communications (220)	BBD-TCS	2						X					Three Years
Loco Safety Stds (229)	BBD-TCS	1						X					Three Years
Air bakes (238)	BBD-TCS	2						X					Three Years
Conductor (242)	BBD-TCS	2						X					Three Years
Customer Service	BBD-TCS	8						X					Yearly
Territory Familiarization (OJT)	BBD	160						X					Initial
8A) DISPATCHER - Qualified (Re-Certification)													
Operating Rules (217)	BBD-TCS	8						X					Three Years
Railroad Operating Practices - RWP (218)	BBD-TCS	8						X					Three Years
Drug & Alcohol (219)	BBD-TCS	8						X					Three Years
Communications (220)	BBD-TCS	8						X					Three Years
Territory Familiarization (OJT)	BBD-TCS	80						X					Three Years
Emergency Preparedness	BBD-TCS	8						X					Three Years
CAD - Computer Aided Dispatching	BBD-TCS	40						X					Three Years
Movement Authority (EC-1)	BBD	8						X					Three Years
8B) DISPATCHER - New Hire													
Operating Rules (217)	SunRail	8						X					Three Years
Railroad Operating Practices - RWP (218)	BBD	8						X					Three Years
Drug & Alcohol (219)	TCS	8						X					Three Years
Communications (220)	TCS	8						X					Three Years
Territory Familiarization (OJT)	BBD	80						X					Three Years
Emergency Preparedness	BBD	8						X					Three Years
CAD - Computer Aided Dispatching	Ensaldo	120						X					Three Years
Movement Authority (EC-1)	BBD	8						X					Three Years



Herzog Technologies Training Matrix 2013 -2014

Course Description	Duration (Hours)	Manager / Supervisor	Signal Maintainers, Crew Foreman, Crewman	Office	Requalification
RWP	4	x	x		Yearly
Operating Rules	4	x	x		Yearly
HTI Guidebook / Orientation	3	x	x		Initial Only
Hours of Service	1	x	x		Initial Only
Drug and Alcohol	1	x	x		Initial Only
Territory Qualification			x		New Hire Only
MOW Hazmat	2		x		Initial Only
Fall Protection	4		x		



APPENDIX E: / CONFIGURATION MANAGEMENT PLAN

Configuration Management

Configuration Management Procedures are a set of practices and procedures of identifying all components and their relationship in a dynamic and continually evolving system for the purpose of maintaining integrity, traceability and control over change throughout the cradle to grave lifecycle of the component. These practices will ensure that appropriate personnel have reviewed the changes, have been provided accurate reference documentation for informed decision-making about the change, and that any modifications are properly and systematically documented. A change in configuration refers to a modification that may result in the physical and/or operational features of any asset.

Key components of the Configuration Management Procedures:

- A clear definition of the initial state equipment and any changes that fall within the scope of configuration management.
- A set of procedures for submittal and documentation of changes to assets
- A method to protect customers from potential hazards that could be created by changes without configuration control.
- Availability to review changes in configuration for any personnel involved in asset maintenance.
- A method to review and capture information before a change in configuration is performed.
- A method to update as-built drawings.

Configuration Management provides the principles, practices and procedures to establish and control safety critical documents and asset generation, maintenance and repair, modification, upgrades and disposal. An asset in SunRail environment is identified but not limited to revenue and non-revenue rolling stock, buildings, systems, components, revenue generation, electrical power infrastructure, and right-of-way systems devices necessary for rail service.

Safety critical documents include rules, instructions, emergency operating procedures, training materials, drawings and engineering reference material. These documents are subject to review or revision as a result of:

- Repeated service failures
- Incidents or accidents
- Major service changes
- Extensions
- Safety issues
- Design changes to facilities, equipment or vehicles

Configuration Management (CM) ensures that operations, maintenance, repairs and modifications to equipment are intrinsically safe as related to the equipment, the personnel and the environment.

Any new device that becomes an asset of SunRail falls under the guidelines of CM. Existing assets are also part of CM to control changes to the assets and ensure that all appropriate departments are aware of the changes and approve them.

The Configuration Control Advisory Committee (CCAC) is the controlling body of personnel representing all SunRail Departments. The CCAC will oversee the CM charter and review of



modifications. All initialization, operation and disposal of SunRail assets will follow the CM procedures to ensure:

- New assets arrive in a quality status that is documented and pre-arranged.
- A careful in-depth review and approval occur before any changes are made.
- All modifications are properly documented in the inventory and work order systems.
- Proper disposal of the asset meets SunRail's requirements and the reorder of the asset is provided in the inventory systems.

CM procedures are reviewed periodically by SunRail Safety group to assure that changes to facilities, hardware, equipment, and operating and support systems are not made without the review of the new configuration by all departments affected by the proposed changes and to ensure that the modified system meets all approved safety requirements.



APPENDIX F / SAFETY AND SECURITY CERTIFICATION

Safety and Security Certification

System safety and security play an important role in achieving SunRail's mission and goal of providing a safe and efficient service for our customers. The safety and security certification plan ensures that any design or operating hazards/threats are identified, monitored and properly controlled or mitigated prior to commencement of operation. The plan addresses all systems and equipment, which may be reasonably expected to pose hazards or threats to SunRail customers, employees, contractors, emergency responders and the general public. The plan identifies the technical and managerial tasks required during the design, supply, construction and commissioning of any SunRail project or equipment.

SunRail self-certifies that all safety critical systems and major capital projects that may affect safety are ready for operation. The goals of the safety and security certification program are to verify that identified safety and security requirements have been met and to provide evidence that the new or rehabilitated equipment, system and facilities are safe to use by:

- Verifying that appropriate codes, standards and guidelines including SunRail's design criteria have been incorporated into the specifications.
- Ensuring that a thorough and complete system safety/security engineering process is followed throughout the acquisition phase.
- Ensuring that all identified hazards or threats have been eliminated or controlled.
- Ensure that normal and emergency hazard resolution methodologies have been implemented.
- Ensuring that all training required for the safe and secure operation of any new vehicles is complete.

The objectives of the certification program that support the goals include:

- Specific safety and security requirements have been identified to ensure the most comprehensive specification possible to avoid inadvertent hazards or threats.
- Verify that all documentation identified as safety critical have been reviewed to ensure compliance with safety criteria.
- Facilities and equipment have been constructed, manufactured, inspected, installed and tested in accordance with safety requirements in the design criteria and contract documents.
- Operations and maintenance manuals reflect appropriate rules, instructions and procedures necessary for the control of hazards and include appropriate warnings and cautions required for safety critical operations.
- Training documents have been developed for the training of operating personnel and emergency response personnel.
- All personnel have been trained properly and qualified.
- Emergency response personnel have been prepared to respond.
- Testing has been completed.
- All security related issues have been addressed
- A verification tracking log has been prepared to track all safety related issues that are not complete at the time of revenue operations.

An outline of the certification process is shown below. The process begins with system design and continues through the start of revenue operation:



- Prepare preliminary hazard analysis
- Identify those safety and security related elements to be certified
- Establish design criteria
- Conduct drawing reviews to ensure that preliminary hazards have been resolved during the design phase.
- Prepare design conformance checklists
- Verify conformance with design criteria
- Prepare specification conformance checklists
- Verify conformance with specifications
- Perform testing, training, emergency response coordination
- Manage integrated testing
- Resolve open items
- Perform Pre-revenue testing
- Approve completed checklist and issue safety and security certificate.

Each critical system element receives a written safety/security certificate. When all required system elements are certified, a system-wide certificate is issued along with a safety and security verification report. Final authority to approve certification rests with the DOT Regional Secretary.

SunRail certification programs are detailed in separate documents which include project specific design criteria requirements. Security documents are sensitive and therefore are restricted.



APPENDIX G / HAZARD MANAGEMENT PLAN

I Purpose

The purpose of this SOP is to communicate the process and to control and document SunRail Hazard Reporting and Management. To define SunRail notification systems to be used to identify and delineate any and all safety critical hazards associated with SunRail operations, procedures, facilities and interaction with the public. The goal is to identify any safety hazards and track the actions taken to mitigate such hazards. The document also provides a consistent means of identifying, evaluating and mitigating all risks to a level acceptable to the appropriate authority. The Central Florida Rail Commuter (SunRail) is committed to the safest transit operation possible; as a result, SunRail is committed to having uninhibited reporting of all incidents, hazards and occurrences which may compromise the safe conduct of our operations. To this end, every employee is responsible for communicating any information that may affect the integrity of transit safety. Such communication must be completely free of any form of reprisal.

II Objective

To create a standardized method for categorizing, tracking and resolving hazards. The long-term objective of this Standard Operating Procedure is to reduce incidents and injuries by identifying hazards and resolving them prior to an incident occurring, and to provide a system by which employees and management have a reporting process until the listed hazard has been abated or mitigated. SunRail will not take disciplinary action against any employee who discloses a hazard, incident or occurrence involving safety. This policy shall not apply to information received by the Authority from a source other than the employee, or which involves an illegal act, or a deliberate or willful disregard of promulgated regulations or procedures. (See Attachment A – Non-Punitive Hazard Reporting Policy).

III Responsibility

It is the responsibility of SunRail to review all of the reports listed below for safety critical system hazards and hazardous situations that require abatement actions. It is the responsibility of all contractor personnel to submit sources of hazard information to SunRail for review. Once items have been reviewed and determined to be a safety hazard, these items will be given a hazard classification level and entered into a reporting log and tracked until completion.

Safety Committee

It is the responsibility of the respective Safety Committee to track to resolution all Hazard Report Forms. If the hazard identified in the Hazard Report Form cannot be resolved by the originator of the form's immediate Supervisor, Department Head, or Local Safety Committee, O&M and Signal Management will submit the Hazard Report Form to the Executive Safety Committee for resolution. SunRail will monitor the process by attending all meetings and ensuring the Action Registers are being used to capture and track the Hazard Reports and associated corrective actions.



General Responsibilities

It is the responsibility of each department manager to:

1. Encourage employees to communicate unsafe conditions to management.
2. Record hazards regardless of the method used in identifying the hazard (i.e., inspections, audits, employee observation, etc.).
3. Work with the Office of Safety and Risk Management to develop a corrective action plan after evaluating the hazard and assessing its risks.
4. Arrange for actions to be taken to eliminate or control the hazard (i.e., submit a request for repair to the proper departments).
5. Track the status of all hazards and corrective actions within the department to ensure they are resolved and completed in a timely manner.
6. Keep all affected employees and contractors informed of the hazard and its resolution status including when it is finally resolved.
7. Report deviations from corrective action completion schedules to Safety and Security Manager.
8. Maintain adequate and accessible documentation related to the identification and resolution of hazards, including the date when implementation of the hazard resolution was completed.

IV Sources of Hazard Information

There are several mechanisms and systems within SunRail that are used to identify conditions or situations that are known or suspected to be safety critical systems that may be hazardous to SunRail personnel, facilities, equipment, or the public. These mechanisms are listed below:

1. Hazard Report Forms
2. Safety Hotline telephone calls (407-732-6710)
3. Hazard reporting e-mails
4. Hazard reporting in-person
5. Loss Prevention Audits conducted by SunRail insurance carriers.
6. Internal and External audits conducted by Federal, State and Local jurisdictional authorities.
7. Vehicle Defect Reports
8. SunRail Safety & various SunRail department audits and inspections.
9. Audit results and suggestions of Safety Committees.
10. Findings and suggestions of Incident Review Committee.
11. Incident Investigations and TapRoot© cause and effect analysis.
12. Job Hazard (Safety) Analysis

All of these reports are evaluated for hazards as they are submitted to SunRail.

It is SunRail's objective to identify all safety critical hazards and track them to resolution.



Hazard Identification:

SunRail defines a hazard as any condition or set of conditions, internal or external to the system or system operation which, when activated, can cause injury, illness, death, or damage to loss of equipment or property, or severe environmental damage. SunRail is responsible for ensuring that all of its divisions, personnel, and contractors use acceptable hazard identification, analysis and resolution methods.

The objective of the hazard identification and resolution process is to identify and define as many credible hazardous conditions as possible and to eliminate or control these hazardous conditions or associated activities prior to their causing or contributing to an accident/incident, injury, death or other major loss. This is a proactive approach, which stresses the thorough evaluation of systems and proposed modifications from a safety perspective before losses occur. The hazard identification and resolution process applies to all operations and services of SunRail, with special emphasis placed on the initial stages of the design process for new equipment, new start projects, and/or prior to implementing modifications of existing facilities, systems or rolling stock. This is due to the large impact these activities often have on the system.

Elimination and control of hazards requires a process of analysis in which the cause and consequence of the hazard is evaluated. All employees are responsible for identifying, reporting, and, when possible, eliminating and controlling hazards that they encounter while performing their daily duties. In fulfilling their responsibilities, the Office of Safety and Risk Management works in coordination with appropriate managers and other necessary personnel to ensure identified hazards are resolved in a timely fashion.

Methods of Hazard Identification:

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

- conducting system inspections, audits, and regulatory inspections;
- evaluating reported hazards received from employees, customers, and contractors;
- reviewing accidents/incidents and system failure reports and conducting in depth investigations to identify causes; and
- Conducting inductive and deductive hazard identification and analysis.

While identifying every hazard within a system is virtually impossible, the implementation of one or all of these methods can greatly increase SunRail's ability to identify and thereby eliminate hazards. Through the implementation of CRFC's System Safety Program, SunRail has established a formal process for hazard identification and analysis and will use any and all of the following techniques when they are most applicable.

The primary means by which a department will be informed of a hazard is through self-identification. This is done either through employees or through management techniques such as inspections and audits or reviews of daily operating reports to identify trends. Conducting system inspections and audits and evaluating employee, customer, and contractor complaints often requires limited resources. Conducting inspections and audits includes conducting site surveys and personnel interviews to evaluate employee work practices and work environments. The inspection portion of this method is used daily by all personnel during the performance of their normal job duties and requires little more than an attentive eye or the use of safety checklists. Evaluating employee, customer, and contractor reports of hazards may require more in depth activities, which may again include conducting a site survey or performing interviews.

During day-to-day operations, it is the responsibility of all SunRail personnel and departments as well as all contractor personnel to identify and report hazards or potential hazards they encounter while performing the duties of their jobs while on SunRail property or while operating SunRail equipment. It is the responsibility of personnel and departments to secure the hazard area until it can be properly controlled or eliminated. Identified hazards shall be reported immediately, according to the appropriate chain of command, either verbally or by using a State Safety Oversight & SunRail Safety Hazardous



Condition Reporting Form, to the employee's direct supervision, department management, OCC, and/or the Office of Safety and Risk Management.

Hazards may also be reported to safety committees and through the Safety Hotline. It is the responsibility of the employee and his/her direct supervision to formally document the hazard report or safety concern. All reports are investigated and hazards and deficiencies are corrected or resolved accordingly.

Hazards or safety concerns identified by and received from passengers or the general public are normally communicated to SunRail vehicle operators or through the Customer Service hotline. Once received, it is the responsibility of SunRail vehicle operator or customer service representative to formally document the hazard or concern and to notify their direct supervision, department management, OCC, and/or SunRail Safety Officer.

If the hazard or safety concern is of such severity that it cannot be appropriately addressed at this level of management, the respective SunRail Safety Committee and SunRail Safety and Security Manager or his/her designee are notified. The Safety Committee works to develop acceptable corrective actions; however, the Safety and Security Manager is ultimately responsible for the safety of SunRail's operations and services. The Safety and Security Manager therefore has final authority and approval of what corrective actions to take or if the risk presented by the hazard is acceptable. SunRail Safety and Security Manager's decision is formally documented.

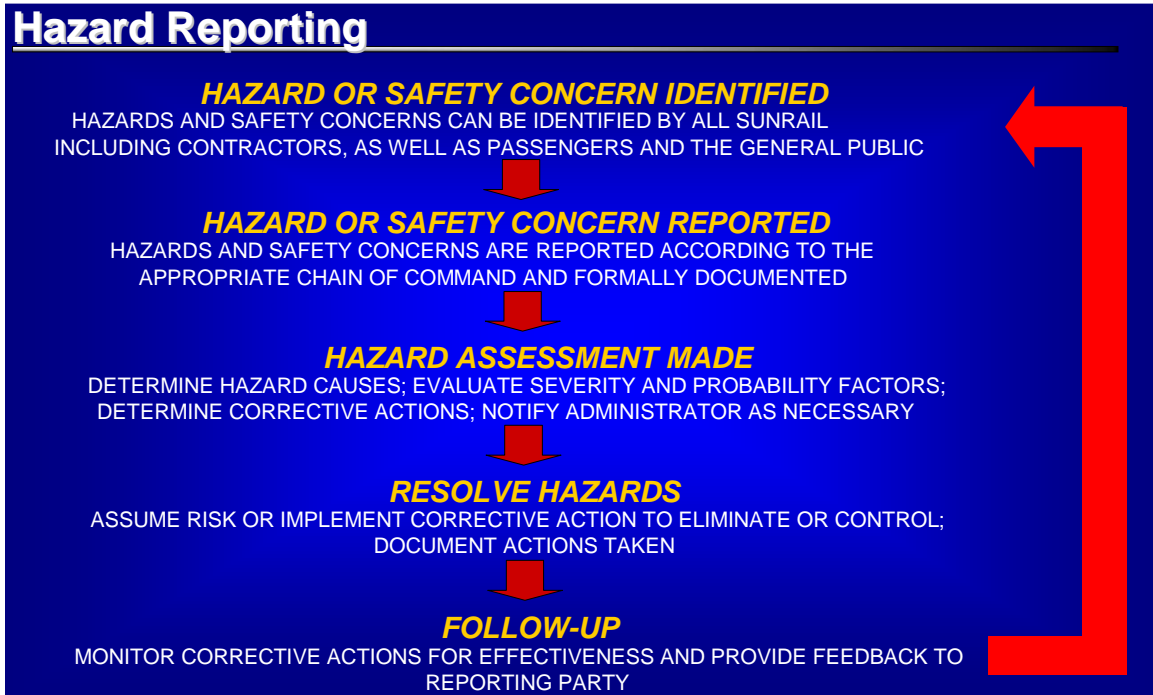
The results of employee reports are communicated back to the employee via a Safety Recommendation Report, if the employee requests a follow-up to the investigation. The hazard reporting process is depicted in **Figure 6-1**.

It is the responsibility of all employees to identify and report hazards and unsafe conditions; however, while Safety Officers work in or travel through various SunRail facilities and properties, they may identify hazards or unsafe conditions. As this occurs, if the hazard or unsafe condition cannot be immediately eliminated or controlled, the Safety Officer completes and submits to the appropriate parties (i.e., department managers and supervisors, Director, Office Safety and Risk Management, etc.) a State Safety Oversight & SunRail Safety Hazardous Condition Reporting Form.

This form is used to document information regarding the hazard such as its location; time and date of discovery; how it was identified and by whom; its potential or real effects on systems, passengers, or employees; its severity, probability, risk, and priority for correction; and what recommended actions should be taken both in the near and long term. The Safety Officer retains a copy of the form and performs follow-up activities with the appropriate parties to ensure the hazard is controlled or eliminated in a timely manner.



Figure 6-1 – Hazard Reporting Process



Another method of identifying hazards is through reviewing accidents/incidents and system failure reports and conducting in depth investigations to identify causes. Although SunRail strives to prevent accidents/incidents and system failures from occurring, the occurrence of such events can be used to positively improve the work environment and to eliminate hazards. Conducting comprehensive investigations of these types of events to determine their underlying causes often leads to the identification of hazards not readily identifiable during daily operations or through inspections, audits, or through employee, customer, or contractor reports. Once identified, the hazards are again eliminated or controlled.

V Hazard Report Submissions to Safety Committees

Originator of Form

It is the responsibility of the originator of the Hazard Report form to complete Section I of the form and to submit the form to their immediate Supervisor, a Local Safety Committee Member, or email or mail it to SunRail.

Supervisor or Local Safety Committee Member

It is the responsibility of the Supervisor or Local Safety Committee Member to complete Section II of the Hazard Report Form and to recommend corrective action for the hazard reported and to implement an interim remedial action, if applicable. If the hazard can be controlled with the corrective action, complete section IV and distribute copies of the document per the distribution list.

Local Safety Committee



It is the responsibility of the local Safety Committee and the Committee Chair to complete Section III of the Hazard Report form and track all reports and corrective actions using the action register in the monthly meetings. The local Safety Committee will rate the hazard according to frequency and severity and recommend corrective action if the hazard is still open. The recommended corrective actions will be forwarded to the appropriate parties involved with the hazard.

Management

It is the responsibility of O&M or Signal Management to resolve the hazard and ensure a responsible person is assigned the corrective action(s) and that section IV of the Hazard Report Form is properly completed and distributed and that follow up takes place with the originator. If the hazard cannot be resolved, Management will forward the Hazard Report Form to SunRail.

Procedure

All employees and contractors are charged with the responsibility of identifying, reporting and resolving hazards and hazardous conditions. The Hazard Report Form (Attachment B) is a vehicle for hazard tracking and hazard resolution. The Hazard Report Form can also be submitted anonymously. The procedure for using the Hazard Report Form is as follows:

Section I Originator

This section is to be completed by the employee identifying the hazard. The employee should complete items 1 through 5 as clearly as possible. Item 6 is optional and it gives the employee an opportunity to suggest corrective action. Once Section I is completed, the employee should give the form to his/her immediate Supervisor or a Local Safety Committee Representative. If there is no Local Safety Committee at the location, the form should be submitted to SunRail to ensure it is assigned the proper personnel for resolution. When resolution of the hazard is complete the Originator will receive a copy of the completed form.

Section II Supervisor/Safety Committee Member

This section is to be completed by the person receiving the Hazard Report. Complete items 7, 8, 9, 10 and if applicable, item 11. If this person is able to resolve the hazard, that person will complete section IV also. The form is then forwarded to the Chairperson of the Local Safety Committee, who will assign the Hazard Report Form a rating and a control number for the action register. The rating and control numbers are filled in at the top of the form in the appropriate boxes. If the hazard identified requires immediate attention, copy the report and bring it to the attention of management immediately.

If the hazard cannot be resolved or eliminated, the Supervisor or Local Safety Committee Member fills in Section II and forwards the form to the distribution list. It is then the responsibility of the Local Safety Committee Chairperson to distribute the Hazard Report Form to the Local Safety Committee and put the issue on the safety committee agenda.



Section III Safety Committee

The Chairperson of the Local Safety Committee will fill out Section III of the Hazard Report Form with the members of the Local Safety Committee. After completing items 12 and 13, the Local Safety Committee will discuss the hazard and assign a rating according to the procedure identified in Attachment D. Attachment D is a summary of SunRail Hazard Rating System that is found in the System Safety Program Plan.

The hazard rating will be documented according to Severity and Probability. The Final Rating will be documented in the box at the upper left hand corner of the form. For all Rail related hazards, it is imperative we coordinate with FDOT according to our System Safety Program Plan. Any hazard rated unacceptable must be forwarded to FDOT within 24 hours of making the determination and must be done so through SunRail. A corrective action plan for the hazard is then submitted to FDOT within 30 days for their review and approval and must detail the permanent actions to control the hazard to an acceptable level and the final risk assessment category, including probability and severity once the plan is put in place.

Once Section III is complete, it is the responsibility of the Local Safety Committee to resolve the hazard and complete Section IV of the form. If the Local Safety Committee cannot resolve the hazard, the form will be forwarded to SunRail for resolution. If SunRail resolves the hazard, SunRail will complete Section IV and forward the Hazard Report form back to the Local Safety Committee for documentation of resolution.

If SunRail cannot resolve the hazard, the issue is forwarded to the Executive Safety Committee (ESC). ESC will review the hazard and recommend corrective actions for the contractor to implement and will track the recommendation using its action register.

Section IV Resolution

Once the hazard is resolved or mitigated, Section IV is to be filled out by a responsible party. On line 20, if the hazard is resolved, box A should be checked off. If the hazard is to be deferred to a later date, box B should be checked off and an estimated completion date documented in the comments section. If the hazard is to be retained as is, box C should be checked off and the justification for retaining the hazard should be documented in the comments section.

The final step in completing the Hazard Report Form is to fill in item 21. This is done by the Committee Chair or SunRail.

VI Tracking System

All items listed in the Sources of Hazard Information received by SunRail will be reviewed to determine if the item qualifies as a safety hazard in need of mitigation. A safety hazard is defined as a source of danger to our passengers or our employees. Those items that fall into this category will be listed within the Hazard Tracking system known as the HazTrack Reporting Log.



Entries into this log will list the following information (See Attachment E):

1. Date the hazard was received.
2. Assigned report number
3. Open/closed status of the hazard
4. Originator reporting the hazard
5. Hotline call status
6. Contractor
7. Hazard location
8. Vehicle number status, if applicable
9. Hazard description and suggested corrective actions
10. Hazard classification level (see Attachment D)
11. Status of progress
12. Date of Draft to contractor
13. Date of Revisions/Status to SunRail
14. Date to State Safety Oversight
15. Completion Date

VII Follow Up

The Cumulative report of outstanding hazardous items is generated and delivered to all contractors and individuals, if applicable, that are responsible for initiating and completing the required abatement activities on a monthly basis. A status update is to be returned to SunRail, by the due date listed, with any revisions to the completion dates and the completing party or Department.

The report of outstanding items needing completion and the report containing all completed items will be sent to the State Safety Oversight. They are the jurisdictional authority governing SunRail Rail Operations. The information is also presented at the Executive Safety Committee every second month.

The Department, or individual responsible for abatement actions will review the report, submit evidence of completion on the listed items and send it to SunRail for final notation and closure on the HazTrack Reporting Log.

VIII Job Hazard Analysis (JHA)

At the beginning of each year, SunRail will ask each contractor to submit four Job Hazard Analysis (JHA) topics. One completed Job Hazard Analysis is to be submitted each quarter.

- Prior to submission to SunRail, the JHA should be reviewed with the respective Safety Committee for their input.
- JHA then should be reviewed with the employees who undertake that specific task associated with the JHA.
- JHA is incorporated into the appropriate SOP.



IX Hazard Analysis (HA)

Hazard Analysis is also conducted during safety and security certification of various systems and during all phases of operation. The hazard analysis process attempts to determine the set of primary events in the hazard generation process, their likely or potential outcomes, and the impacts these outcomes will have on the system. This includes a full evaluation of the risks and priority associated with the hazard. Once this has been determined and fully evaluated, appropriate action can be taken to mitigate, control, or eliminate the hazard and its associated risks. Hazard analysis also attempts to reduce the severity of accidents/incidents by introducing protective devices and equipment, procedures, and/or forms of system modifications that reduce the amount of human and property damage in an accident/incident event.

SunRail prepares Hazard Analyses using various methods such as those listed below. SunRail follows the Hazard Analysis guidelines in accordance with the report from the FTA entitled, "Hazard Analysis Guidelines for Transit Projects".

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

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

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

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

X References

11.1 Florida Department of Transportation, 49 CFR Part 341 Rail Fixed Guideway Systems; State Safety Oversight

11.2 SunRail System Safety Program Plan

11.4 SunRail System Security Plan



Attachment A
Attachment B

CAtta



CENTRAL FLORIDA COMMUTER RAIL TRANSIT

Non-Punitive Safety Hazard Reporting Policy

Central Florida Commuter Rail Transit (CFCRT) is committed to the safest transit operation possible; as a result, CFCRT is committed to having uninhibited reporting of all incidents, hazards and occurrences which may compromise the safe conduct of our operations. To this end, every employee is responsible for communicating any information that may affect the integrity of transit safety. Such communication must be completely free of any form of reprisal.

The Central Florida Commuter Rail Transit will not take disciplinary action against any employee who discloses an incident or occurrence involving safety. This policy shall not apply to information received by CFCRT from a source other than the employee, or which involves an illegal act, or a deliberate or willful disregard of promulgated regulations or procedures.

The primary responsibility for safety rests with supervisors and managers; however, safety is everyone's concern.

Our method of collecting, recording and disseminating information obtained from Hazard Reports and the Safety Hotline (407-732-6710) has been developed to protect, to the extent permissible by law, the identify of any employee who prefers to remain anonymous and who provides safety information.

I urge all staff to use our safety hazard-reporting program to help CFCRT become a leader in providing our customers and employees with the highest level of safety.

Edward Connolly
FDOT Passenger Rail Operations Manager

February 2014





Attachment C

SunRail
CENTRAL FLORIDA RAIL CORRIDOR

RATING	HAZARD REPORT	CONTROL NO.
--------	---------------	-------------

SECTION 1 – ORIGINATOR		
1. Badge No. (optional):	2. Name (optional):	3. Date: / /
4. Hazard Location:		
5. Describe Hazard and Its Effects:		
6. Suggested Corrective Action:		

SECTION II – SUPERVISOR <input type="checkbox"/> SAFETY COMMITTEE MEMBER <input type="checkbox"/>		
7. Received by:	8. Dept./Contractor:	9. Date: / /
10. Recommended Corrective Action:		
11. Interim Remedial Action Taken:		

SECTION III – SAFETY COMMITTEE		
12. Chairperson:		13. Date: / /
14. Hazard Rating: Severity:	Probability:	Rating:
15. Recommendation:		
16. Forwarded to:		17. Date: / /

SECTION IV – RESOLUTION		
18. Name:		19. Date: / /
20. Action: A. Completed <input type="checkbox"/> B. Deferred <input type="checkbox"/> C. Retained as is <input type="checkbox"/>		
Comments:	DO NOT WRITE IN THIS BLOCK	
	21. Date Closed &	
	Initials:	

Distribution: Original: Safety Committee Chairperson; Copies: SunRail, Safety Committee and Originator



INSTRUCTIONS

This form may be completed by any employee identifying a hazard or unsafe condition. The form ensures that your concern will be addressed and you will be notified of what action is taken. If you have any questions or need additional assistance contact your local safety committee representative. If you are uncertain who your local representative is, contact your Supervisor or the Safety Department. Employees completing this form should type or print neatly.

SECTION I - ORIGINATOR: This section is to be completed by the employee identifying the hazard. You should complete items 1 through 5 as clearly and accurately as possible. Item 6 is optional, it gives you an opportunity to suggest corrective action. Upon completion of Section I you may submit the form to your Supervisor, local safety committee representative, or put it in the drop box. If there is no safety committee at your location, submit the form to the Safety Department. Upon completing this section, you may want to keep a copy of the form. Your concern will be assigned a rating. When action is complete on this item, you will receive a copy of the completed form.

SECTION II - SUPERVISOR/SAFETY COMMITTEE MEMBER: This section is to be completed by the person receiving the Hazard Report. Complete items 7,8,9,10 and, if applicable, item 11. If you are able to resolve the hazard, complete section IV also. The form is then forwarded to the Chairperson of the Local Safety Committee.

SECTION III - SAFETY COMMITTEE: This section is to be completed by the Chairperson of the Local Safety Committee. The Chairperson enters his/her name and date received. The form is now copied and distributed to the members of the local safety committee for discussion. The committee will rate the hazard based on severity, probability, and cost, and recommend a corrective action if warranted. The Chairperson will then complete items 14,15,16, and 17 and forward the form to the Department Head responsible for addressing the recommendation.

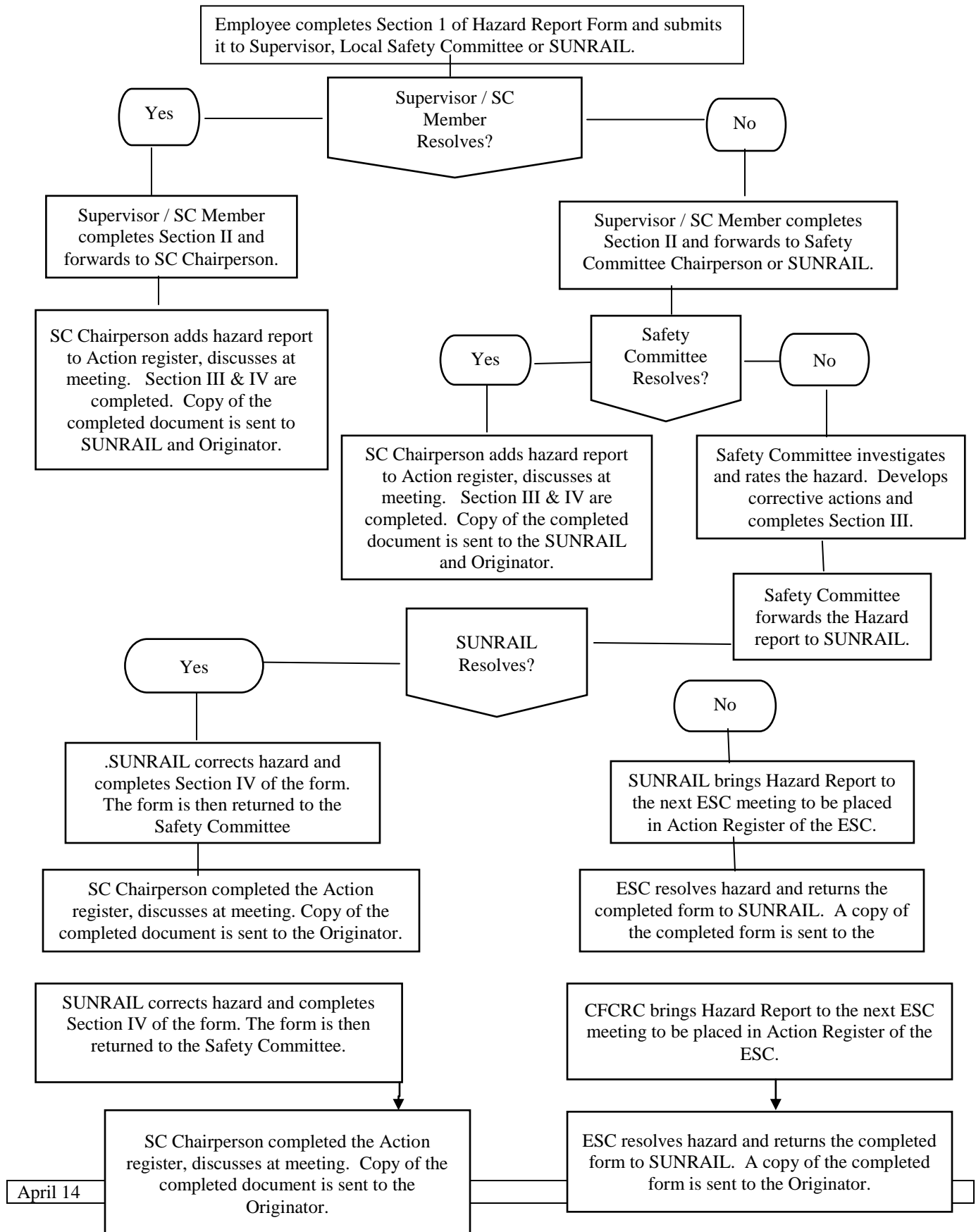
SECTION IV - RESOLUTION: This section is to be completed by the person responsible for resolving the hazard, or addressing the recommendation submitted by the Local Safety Committee. Complete items 18, 19, and 20A, 20B, or 20C as appropriate. The comments section should be used to indicate when and how the recommendation was completed, why it is deferred, or why it will be retained as is. The completed form is then returned to the Chairperson.

CLOSE-OUT - CHAIRPERSON: If hazard was referred or retained as is, forward form to the Safety Department. If hazard was resolved, complete item 21 and distribute per list on bottom of form.

July 30, 2006



Attachment C





Attachment D

Hazard Classification System

The Hazard Classification System is based on frequency of occurrence and the severity of the deficiency. The combination of severity and frequency provides the hazard rating. SunRail will use these ratings to determine the importance of corrective actions and follow up for each deficiency. The following table provides a breakdown of the hazard ratings:

HAZARD RESOLUTION MATRIX				
SEVERITY CATEGORY →	I CATASTROPHIC	II CRITICAL	III MARGINAL	IV NEGLIGIBLE
FREQUENCY OF OCCURRENCE ↓				
(A) FREQUENT	1A	2A	3A	4A
(B) PROBABLE	1B	2B	3B	4B
(C) OCCASIONAL	1C	2C	3C	4C
(D) REMOTE	1D	2D	3D	4D
(E) IMPROBABLE	1E	2E	3E	4E

Hazard Risk Index

1A, 1B, 1C, 2A, 2B, 3A
 1D, 2C, 2D, 3B, 3C
 1E, 2E, 3D, 3E, 4A, 4B
 4C, 4D, 4E



1 UNACCEPTABLE
 2 UNACCEPTABLE (MANAGEMENT DECISION REQUIRED)
 3 ACCEPTABLE WITH REVIEW BY MANAGEMENT
 4 ACCEPTABLE WITHOUT REVIEW



Attachment E – Sample Tracking System

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Date Received	Report Number	Open / Closed	Originator	Hotline Call?	Dist / Rail	Hazard Location	Vehicle #	Hazard Description	Hazard Category	Responsible Party	Status	Date of Draft to Districts	Revised	
1/18/2012	HI2-01	CLOSED	M. Vine	No	Rail	Brookpark RTS	-	The yellow safety strips were very fog. As I stepped on it, my foot slipped. Suggested Corrective Action is to salt more often.	II C	Rail - D. Rehfuess / M. Evans	Report forwarded to D. Rehfuess and M. Evans. M. Evans replied with CITME work order stating snow/ice removal was completed.			
2/22/2012	HI2-02	CLOSED	T. Green (Customer)	No	Rail	V. Green Station - Green Line	-	Lighting above east-most pedestrian crossing burnt out. Suggested Corrective Action is to replace lighting.	III C	Rail - D. Rehfuess / B. Prince / M. Evans / D. Basso	Report forwarded to D. Rehfuess, M. Evans, D. Basso and B. Prince (2/22/12). D. Basso sent reply e-mail stating light was replaced.			
3/28/2012	HI2-03	CLOSED	Anonymous Operator	No	Rail	V. 140th	-	The fence along the right of way is down allowing access to tracks. Suggested corrective action is to repair.	II D	Rail - V. Luther	Luther has responded saying hole in fence is fixed. Also mentioned that same area was repaired last week but is being cut to be used as a shortcut. Asked Chief Jozge to patrol supervision. TP is patrolling area.			
3/22/2012	HI2-04	CLOSED	C. Gaglione	Yes	Rail	University Cedar	-	The wheelchair lift does not fully retract allowing parts of lift to be exposed. Suggested Corrective Action is to repair to be fully operational.	II C	Rail - D. Basso	C. Lewis forwarded information to R. Price and D. Basso. E-mailed status 6/26. Per D. Basso it was taken care of, however because of high vandalism the lift tends to be broken frequently.			
3/22/2012	HI2-05	Open	Service Quality	No	Rail	West Side	-	"NEAR MISS": A train entered a de-energized area on the west side. The issue was the result of power de-energization be taken further than the necessary work area. The mistake was that of the CeeCom specialist. There is a new way side that is now "permanently" open.	I C	Service Quality A. Richardson	A. Richardson is creating a procedure to properly identify permanently opened wayside disconnects. E-mailed Anthony for status 6/26. E-mailed again on 8/27, e-mailed Dr. Caver on 9/4.			
3/22/2012	HI2-06	CLOSED	Bernard Yergonias	No	Rail	V.177th - Madison RTS	-	The snow plows have struck concrete parking barriers moving 2 of them from their original position leaving the rebar sticking up in the lot. That rebar is a trip hazard or has the puncture potential. I did contact local dispatch about this hazard along with a parking lot sign that is backed to a 45 degree angle. Suggested Corrective Action is to repair to original state.	II C	Rail - D. Rehfuess, R. Price, V. Luther	Pictures have been taken and forwarded to Rail Facilities Maintenance personnel. Per D. Rehfuess, this has been taken care of.			
3/29/2012	HI2-07	CLOSED	D. Rehfuess / P. McCombe	No	Rail	Tower City - Heagy Rail	-	Round ad stickers on floor. Suggested Corrective Action is to remove the stickers.	IV C	Rail Facilities - B. Price	Not deemed a hazard.			
3/29/2012	HI2-08	CLOSED	D. Rehfuess / P. McCombe	No	Rail	Tower City - D11 Emergency Exit	-	Sand spilled on floor/stairway. Suggested Corrective Action is to clean to remove sand.	II C	Rail Facilities - B. Price	According to reports completed by D. Rehfuess, cleaned.			
3/29/2012	HI2-09	CLOSED	D. Rehfuess / P. McCombe	No	Rail	Tower City - D2 Emergency Exit	-	Stairwell needs cleaning. Suggested Corrective Action is to clean the stairwell.	II C	Rail Facilities - B. Price	According to reports completed by D. Rehfuess, cleaned.			
3/29/2012	HI2-10	CLOSED	D. Rehfuess / P. McCombe	No	Rail	Tower City - Heagy Rail	-	Need bike rack on West End. Suggested Corrective Action is to install the bike rack.	N/A	Rail Facilities - B. Price	Not deemed a hazard			
3/29/2012	HI2-11	CLOSED	D. Rehfuess / P. McCombe	No	Rail	Tower City - Heagy Rail	-	Lamp lens are dirty and bulbs are dim. Suggested Corrective Action is to clean lens and replace burnt bulbs.	II C	Rail Facilities - B. Price	e-mailed for status update 6/26, and again on 8/27. Bob Prince checking into with Bill Luther as of 8/28. Received copy of MO that job has been completed.			

N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL
Date of Draft to Districts	Revisions/Status to Safety Data	Date To State Safety Oversight	Date Closed & Initials																					
			1/19/12 - CD																					
			2/22/12 - CD																					
			3/23/12 - CD																					
			6/26/12 - CSB																					
			6/26/12 - CSB																					
			3/29/12 - CD																					
			3/29/12 - CD																					
			3/29/12 - CD																					
			3/29/12 - CD																					
			8/29/12 - CSB																					



APPENDIX H / SunRail SAFETY GOALS AND OBJECTIVES

Goals:

1. Reduce injuries and incidents

Target

12/12 incidents/injuries per year

2. Implement safety management System

Target: Number of inspections conducted by upper management, number of safety observations/efficiency testing, number of safety committees attended by upper management

3. Reduce the number of rule violations

Target: 6/year

4. Conduct internal safety reviews

Target: 7/year

5. Encourage safety reporting

Target: 6/month