



## Annual Review of TTC's SH&E Management System

**Date:** June 3, 2021

**To:** Audit and Risk Management Committee

**From:** Chief Safety Officer (Acting)

### Summary

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The TTC continues to manage and mitigate occupational health and safety, operational safety as well as environmental risks due to its operations, activities and services in a systematic manner through the implementation and maintenance of its Safety, Health & Environment (SH&E) Management System.

A SH&E Management System is a comprehensive and proactive approach to managing SH&E risk. The system goes beyond a simple sum of individual or isolated safety and environmental management programs and activities, such as investigation, inspection or training. It is designed to improve SH&E performance and reduce risk by integrating all its processes into a continuous improvement cycle of Plan-Do-Check-Act.

A review of the TTC's SH&E Management System is conducted by the Safety, Security and Environment (SX) Committee on an annual basis. The purpose of the annual review is to evaluate the effectiveness and adequacy of the SH&E Management System and to identify opportunities for continuous improvement, ensuring the ongoing management of SH&E risk.

The period between Q4 2019 to Q3 2020 was reviewed by the SX Committee in March 2021. The review was completed through analysis of performance indicators, impact of the COVID-19 pandemic, status of key SH&E projects and initiatives, audit and investigation findings, regulatory oversight and TTC Executive Safety Focus Areas.

This report summarizes the full report of the annual review, which was approved by the SX Committee in April 2021. It includes new Opportunities for Improvement in the TTC's SH&E Management System and the updated 2021 to 2023 TTC SH&E Goals and Objectives.

## **Recommendations**

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It is recommended that the Audit and Risk Management Committee:

1. Approve the approach to continuously improving the effectiveness of the TTC's Safety, Health & Environment Management System, identifying priority safety, health and environment issues, and developing Corporate Safety, Health and Environment Goals and Objectives as described in this report.
2. Forward this report to the TTC Board for information.

## **Financial Summary**

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Approval of the recommendations in this report do not result in any financial implications beyond the funding included in the 2021 Operating Budget, as approved by the TTC Board on December 21, 2020 and City Council on February 18, 2021. The 2021 Operating Budget included additional funding of \$0.9 million to support the implementation of a comprehensive corporate-wide emergency management and enterprise resilience program.

The Interim Chief Financial Officer has reviewed this report and agrees with the financial impact information.

## **Equity/Accessibility Matters**

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An effective and robust SH&E Management System is essential to the protection of vulnerable populations in the community, among customers and employees. This review is management's tool for ensuring continuous improvement.

## **Decision History**

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The full report of the annual review, including the new Opportunities for Improvement and the updated 2021 to 2023 TTC SH&E Goals and Objectives, have been approved by the SX Committee. It was determined that this review would be presented annually to the Audit and Risk Management Committee and the TTC Board to provide members with information on the functioning of the TTC's SH&E Management System, which will help them fulfill their legislative duties as directors of a corporation.

## **Issue Background**

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The TTC's SH&E Management System is built on the TTC's commitment to protect the environment and the safety and health of its workers, customers and the general public.

The SX Committee meets annually to review the SH&E Management System, to ensure its continuing suitability, adequacy and effectiveness. This review identifies

opportunities for continuous improvement and evaluates how well the SH&E Management System is functioning in supporting the safety and security cornerstone of the TTC’s Corporate Plan.

Under safety and environmental legislation, TTC Board members are considered directors of a corporation and have prescribed duties to take all reasonable care to ensure that the TTC complies with safety and environmental legislation and all regulatory orders. As such, they should be aware of the TTC’s SH&E Management System and its performance.

## Comments

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The information listed below summarizes the results from the analysis of the following inputs during the annual review process:

- Performance indicators;
- Impact of the COVID-19 pandemic;
- Status of key SH&E projects and initiatives;
- Audit and investigation findings;
- Regulatory oversight; and
- TTC Executive Safety Focus Areas.

## SH&E Performance Indicators

From the statistical analysis of SH&E performance data, the table below highlights the performance indicators where **adverse trends** were observed:

SH&E Performance Indicator	Identified Trends
<b>Occupational Health and Safety</b>	<ul style="list-style-type: none"> <li>• Over the five-year period, a statistically significant upward trend is observed in the overall lost time injury rate (LTIR). The upward trend was occurring prior to the onset of the COVID-19 pandemic.</li> <li>• Emotional trauma injuries represent 31% of the overall lost time injuries. When emotional trauma injuries are excluded, the LTIR shows no statistically significant trend.</li> <li>• The TTC has developed specific objectives to address the top injury events, including the development of the following programs:               <ul style="list-style-type: none"> <li>○ Musculoskeletal Disorder Prevention Program (developed);</li> <li>○ Suicide Prevention Program (developed);</li> </ul> </li> </ul>

SH&E Performance Indicator	Identified Trends
	<ul style="list-style-type: none"> <li>○ Workplace Violence Program (developed);</li> <li>○ Psychological Health and Safety Program (in development); and</li> <li>○ Traffic Safety Program (in development).</li> </ul>
<p><b>Customer and Public Health and Safety</b></p>	<ul style="list-style-type: none"> <li>● The significant drop in ridership across all modes due to the COVID-19 pandemic contributed to the increase in customer injury incident rates.</li> <li>● There was enough evidence to support a statistically significant upward trend in the following SH&amp;E performance indicators: <ul style="list-style-type: none"> <li>○ Bus customer injury incident rate (five-year period);</li> <li>○ Bus, streetcar and Wheel-Trans customer injury incident rates (two-year period);</li> <li>○ Station-related subway customer injury incident rate (five-year period);</li> <li>○ Station-related and vehicle-related subway customer injury incident rates (two-year period); and</li> <li>○ Suicide attempts rate, including fatalities (five-year and two-year periods).</li> </ul> </li> <li>● The TTC has implemented a number of initiatives to address the increase in customer injuries, including: <ul style="list-style-type: none"> <li>○ Safety messaging (e.g. slips, trips and falls poster campaign, elevator and escalator safety videos, entering and exiting vehicles social media campaign);</li> <li>○ Training improvements (e.g. suicide prevention, incident management); and</li> <li>○ Frontline support (e.g. increased presence in stations, partnership with Streets to Homes).</li> </ul> </li> </ul>

## **SH&E Projects and Initiatives**

The COVID-19 pandemic increased demand on available resources and impacted the implementation of current SH&E projects and initiatives. The table below summarizes key developments towards the Corporate SH&E Goals and Objectives from the Q4 2019 to Q3 2020 review period, with a focus on projects that have a significant impact across the whole organization.

<b>Project and/or Initiative</b>	<b>Key Developments</b>
<b>SH&amp;E Policy and Process</b>	
SH&E Management System Software	<ul style="list-style-type: none"> <li>• Safety Connect Software went live at the beginning of September 2020.</li> <li>• Onboarding of Occupational Health and Employee Wellbeing, Bus Maintenance and Shops and Streetcar Maintenance completed.</li> <li>• Onboarding to continue with non-transportation and transportation departments.</li> <li>• Preparation for Phase 2 underway.</li> </ul>
Emergency Management and Business Continuity	<ul style="list-style-type: none"> <li>• Corporate Emergency Response Plan approved in May 2020.</li> <li>• Pandemic and Infectious Disease Emergency Response Plan and Health and Safety Plan developed.</li> <li>• Review of Emergency Management (EM) and Business Continuity (BC) functions conducted in July 2020.</li> <li>• External consultant engaged to develop a detailed organizational design, governance framework and maturity roadmap in December 2020.</li> <li>• BC and EM functions to be reintegrated into Safety and Environment Department.</li> </ul>
Operational Rules Oversight	<ul style="list-style-type: none"> <li>• Operational Rules Executive Committee established in 2019 with support from Rules Working Groups.</li> <li>• Operational Rules are written mandatory directives that apply to different operational environments, such as subway, yard, streetcar, etc. Operational Rules are documented in Rule Books or Rule Book Alerts.</li> <li>• During the review period, 22 requests were submitted, resulting in 12 Temporary Rules Variances (10 approved) and two Rule Changes/Additions reviewed.</li> </ul>

Project and/or Initiative	Key Developments
Safety Certification Audit	<ul style="list-style-type: none"> <li>Phase 3BE of ATC project certified, with Phase 3CE certified in November 2020.</li> <li>Activities performed in support of eBus program launch.</li> <li>These audits are process-based verifications of documentation to verify that large scale/complex projects do not introduce unknown hazards.</li> </ul>
<b>Occupational Health and Safety (OHS)</b>	
Management of OHS Hazards and Risks	<ul style="list-style-type: none"> <li>Hazard Identification and Risk Assessment and Job Safety Analysis procedures currently being implemented.</li> <li>Processes to be fully implemented in the Infrastructure and Engineering Group (Q3 2021), followed by the Vehicles Group.</li> </ul>
Track Level Safety	<ul style="list-style-type: none"> <li>Comprehensive review and revision of Subway/SRT Rule Book to start in 2021.</li> <li>Subway Yard Safety Working Group formed in Q4 2019. Yard Rule Book presented for approval in Q1 2021.</li> </ul>
Fire and Life Safety	<ul style="list-style-type: none"> <li>Several projects placed on hold due to the pandemic and associated restrictions.</li> <li>Other projects ongoing (e.g. Greenwood fire main project) or completed (e.g. fire code audits, fire drills, fire safety plans).</li> <li>Fire access routes finalized at all properties, but Wilson Yard.</li> </ul>
Fitness for Duty Policy and Program	<ul style="list-style-type: none"> <li>Overall decline in random testing failure rate from start of random testing in 2017 to Q3 2020.</li> <li>Increase in non-compliance around wave one (Q1/2 2020) of the pandemic.</li> </ul>
<b>Customer and Public Safety</b>	
Suicide Prevention Program	<ul style="list-style-type: none"> <li>Contract initiated in 2020 with new suicide prevention skills training company.</li> <li>Study on platform edge doors (PEDs) drafted and targeting Q4 2021 for Board report.</li> <li>Updates to Suicide Prevention Action Plan in development.</li> </ul>

Naloxone Program	<ul style="list-style-type: none"> <li>• Program will be sustained with Special Constables and extended to Fare Inspectors.</li> <li>• Opportunities to extend training to customer-facing groups being explored.</li> </ul>
Traffic Safety	<ul style="list-style-type: none"> <li>• Traffic Safety Committee convened in October 2019.</li> <li>• Corporate Program - Traffic Safety in development.</li> <li>• Focus areas: engineering, education, engagement, enforcement and evaluation.</li> </ul>
Transit Enforcement	<ul style="list-style-type: none"> <li>• SafeTTC app has received 5,093 reports (as of October 31, 2020).</li> <li>• Homeless was most common type of call and Harassment was second most common type of call (from November 1, 2019 to October 31, 2020).</li> <li>• Special Constables working with City's Streets to Homes program. Special Constables and Toronto Police Service deployed to high-incident stations to provide assistance.</li> </ul>
<b>Occupational Hygiene and Environment</b>	
Waste Management Program	<ul style="list-style-type: none"> <li>• TTC-wide consolidated hazardous waste contract awarded in Q4 2020, with over 20 contracts consolidated.</li> <li>• Ongoing work to implement hazardous waste storage areas.</li> </ul>
Spills Program	<ul style="list-style-type: none"> <li>• Spill Contingency Plans developed for all operating facilities, except Hillcrest Complex, by end of 2020.</li> </ul>
Idling Control Procedure	<ul style="list-style-type: none"> <li>• Implementation at 90% (Q2 2021).</li> </ul>
Subway Air Quality	<ul style="list-style-type: none"> <li>• Health Impact Assessment issued by Toronto Public Health in January 2020 found taking the subway was associated with health benefits.</li> <li>• The assessment also found air quality improvements were expected to be associated with health benefits and that the levels of PM2.5 warrant mitigation.</li> <li>• TTC is pursuing ways to reduce greenhouse gas emissions and outdoor air pollution.</li> </ul>
Radon Study	<ul style="list-style-type: none"> <li>• Company-wide study initiated in 2020 with five phases over the next six years.</li> <li>• Testing conducted by consultant to determine if levels are above or below action level.</li> </ul>

## **Audit Findings**

A number of audits and other safety assurance activities are conducted to examine different aspects of the SH&E Management System. Based on the findings, corrective actions are established and tracked on an ongoing basis.

In response to the COVID-19 pandemic, new Safety Assurance Checks were developed to monitor compliance with specific control measures, including physical distancing, vehicle disinfection and bus barrier and mask use.

As part of track level safety efforts, in February 2020 the Safety and Environment Department began conducting track level safety observations during night shift operations to monitor work zone compliance. Work has also continued on the corrective actions identified during the APTA Yard Safety Peer Review.

Updates on key audits and the status of corrective actions as of November 2020 are outlined in the table below.

<b>Audit</b>	<b>Status</b>
SH&E Management System External Audit	External consultant engaged to conduct a review of the SH&E Management System (final report expected Q3 2021).
APTA Yard Safety Peer Review	33 corrective actions identified. Work has continued on these items by the Yard Safety Working Group.
Waste Management	Four outstanding corrective actions are in progress and expected to be completed by Q4 2021.
Queensway Bus Garage	Five outstanding corrective actions are in progress and expected to be completed by Q3 2021.
Subsurface Contamination	Six outstanding corrective actions are long-term projects being completed and tracked.
Fuel Management	The outstanding corrective actions will be addressed by the Storage Tank System Audit, expected to be completed in Q3 2021.
Storage Tank System	The audit is expected to be completed in Q3 2021. A Corporate Program – Storage Tank System Management will be developed.



## **Regulatory Oversight**

The table below summarizes and compares the number of events and documents issued that have involved interactions with the regulatory agencies, including any orders issued, between Q4 2019 to Q3 2020 (current review period) and Q4 2018 to Q3 2019 (previous review period). This includes interactions with the Ministry of Labour, Training and Skills Development (MLTSD), Ministry of Environment, Conservation and Parks (MECP), Technical Standards and Safety Authority (TSSA) and City of Toronto.

All orders and violations issued to the TTC have been complied with and are considered to be closed. Incidents related to COVID-19 accounted for 22 of the 77 incidents that occurred during the current review period.

<b>Type of Event/Documents Issued</b>	<b>Number (Q4 2018 to Q3 2019)</b>	<b>Number (Q4 2019 to Q3 2020)</b>
<b>Occupational Health and Safety</b>		
MLTSD Orders	22	11
Field Visit Reports	47	61
Regulatory Agency Interaction Reports (RAIR) Issued	44 incidents resulting in 107 interactions	77 incidents resulting in 133 interactions
Work Refusals	8	21
Safety Complaints	18	18
Section 51 Notices (Critical Injury or Fatality)	26	24
Section 52 and 53 Notices (Injury/Illness or Accident)	3	12
Other (Incident Investigation)	N/A	2
<b>Environment</b>		
TSSA Orders	0	0
City of Toronto Notices of Violation	2	1
MECP Inspection Reports	0	0

The TTC regularly engages with Toronto Fire Services (TFS) when submitting Fire Safety Plans and responding to Fire Code Audits and site visits. The TFS process typically involves a 30-day and 60-day follow-up on code violations to ensure corrective actions have taken place. This results in a minimum of two site visits per property if a deficiency is found and an Inspection Order is issued.

The following table outlines the number of site visits, Inspection Orders issued and the total number of violations within the Inspection Orders as of November 2020. All violations have been complied with and are considered to be closed.

Type of Event/Documents Issued	Number (November 2018 to November 2020)
<b>Fire and Life Safety</b>	
TFS Site Visits	~ 140
Inspection Order Reports	48
# of Code Violations	115
# of Code Violation Occurrences	340

### **Opportunities for Improvement**

During the review period, Executive Safety Focus Areas were identified and presented at the Board meeting on December 15, 2020. These Executive Safety Focus Areas have been integrated into the annual review, resulting in the creation of four new Opportunities for Improvement, as outlined in the table below.

Opportunity	Safety Focus Area	Solutions/Strategic Options
Opportunity to improve safety communications	Employee Engagement	<p>Solution:</p> <ul style="list-style-type: none"> <li>Develop and implement an engagement strategy and communication plan to broaden reach and increase engagement with employees.</li> <li>Review and rebrand all internal communications channels including launching MyTTC app and revamp TTC-TV to better reach frontline employees.</li> <li>Provide a platform for employee feedback and transparency on safety initiatives.</li> </ul>

Opportunity	Safety Focus Area	Solutions/Strategic Options
Opportunity to improve operating processes	Process Reviews and Audits	Solution: <ul style="list-style-type: none"> <li>Identify and implement opportunities for improvement in current operating practices, policies and procedures, including the ATC system.</li> </ul>
Opportunity to improve bona fide requirements and job descriptions	Onboarding and Training	Solution: <ul style="list-style-type: none"> <li>Applying a safety lens to the identification of bona fide requirements and review of job descriptions. Focus on safety-critical positions to ensure employees develop and maintain required knowledge and skills.</li> <li>Evaluate the training and competency element of the SH&amp;E Management System and ensure training programs adequately address safety awareness and competency requirements.</li> </ul>
Opportunity to improve facility compliance	Process Reviews and Audits	Solutions: <ul style="list-style-type: none"> <li>Develop strategy and implement targeted facility compliance audits to assess legal compliance and address any deficiencies.</li> </ul>

**TTC SH&E Goals and Objectives**

As a result of this review, the 2021 to 2023 TTC SH&E Goals and Objectives have been established. These goals and objectives are attached to this report as Attachment 1.

## **Contact**

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## **Signature**

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Chief Safety Officer (Acting)

## **Attachments**

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Attachment 1 – 2021 to 2023 TTC SH&E Goals and Objectives

## ATTACHMENT 1 – 2021 TO 2023 TTC SH&E GOALS AND OBJECTIVES

The attachment summarizes the corporate goals and objectives for 2021 to 2023 established from the annual review of the TTC's SH&E Management System. The Group/Department level effort is categorized as follows:

Category	Percentage of Effort	Description of Effort
1	0 to 25	Safety and Environment to formalize or evaluate existing processes with minimal involvement required from Groups and Departments.
2	25 to 50	Development and/or implementation of a program with some existing processes and minor to moderate gaps. Group/Department effort required will vary by applicability of the program.
3	50 to 75	Development and/or implementation of a program with minimal existing processes and moderate to major gaps. Group/Department effort required will vary by applicability of the program.

The goals and objectives have been classified according to expected timeframe for completion e.g. short-term, mid-term, long-term. The categories are as follows:

Category	Timeframe
Short-Term	Q2 2021
Mid-Term	Q3 2021 – Q2 2022
Long-Term	Q3 2022 – Q4 2023
Completed	N/A
Delayed/Reprioritized	To be determined

**Goal 1: Continue to strengthen and improve the effectiveness of the SH&E Management System (standards and foundational programs)**

Item	Objective	Lead Department	Involved Groups / Departments	Group / Department Effort	Timeframe
1	<b>Safety and Environment Department Communications</b> (create, implement engagement strategy and communication plan)	Corporate Communications	Safety and Environment	1	Short-term
2	<b>Link SH&amp;E information and support with emerging technology</b> (include SH&E in MyTTC SAP Jam)	Safety and Environment	Corporate Communications	1	
3	<b>Corporate Standard – PPE</b> (update, implement)	Safety and Environment	All	1	Mid-term
4	<b>Contractor SH&amp;E Management Standard</b> (develop)	Safety and Environment	All	2	
5	<b>Leading Indicator Metrics</b> (propose, incorporate)	Safety and Environment	All	1	
6	<b>SH&amp;E Software Phase 1:</b> Implement incident reporting, investigation and corrective action tracking module.	Safety and Environment	All	3	
7	<b>Incident Reporting and Investigation Program</b> (review, update)	Safety and Environment	All	2	
8	<b>Hazard and Near Miss Reporting Program</b> (develop, implement)	Safety and Environment	All	3	

Item	Objective	Lead Department	Involved Groups / Departments	Group / Department Effort	Timeframe
9	<b>Light Rail Transit (LRT) Operations</b> (incorporate into SHEMS)	Safety and Environment	LRT	1	Mid-term
10	<b>Hazard Identification and Risk Assessment Procedure</b> (implement)	Safety and Environment	All	3	
11	<b>Job Safety Analysis Procedure</b> (develop, implement)	Safety and Environment	All	3	
12	<b>Emergency Medical Reponses Standard</b> (develop, implement)	Safety and Environment	All	2	
13	<b>Naloxone Program</b> (develop, implement)	Safety and Environment	Special Constable Service Revenue Protection Operations	2	
14	<b>Automatic External Defibrillator Program</b> (develop, implement)	Safety and Environment	All	2	
15	<b>Zero Injury Program</b> (develop, implement)	Safety and Environment	All	1	
16	<b>Emergency Management / Business Continuity</b> (develop governance framework, organizational design)	Safety and Environment	All	2	

17	<b>Workplace Inspection Standard</b> (develop, implement)	Safety and Environment	All	2	Long-term
18	<b>Construction SH&amp;E Management Program</b> (develop including COR requirements, implement)	ECE	ECE Safety and Environment Materials Management Subway Infrastructure Plant Maintenance Streetcar Way	3	
19	<b>Service and Supply Contractor SH&amp;E Management Program</b> (develop, implement)	Safety and Environment	All	3	
20	<b>Utilities Management Program</b> (develop, implement)	Safety and Environment	ECE Infrastructure and Engineering	3	
21	<b>SH&amp;E Software Phase 2:</b> Implement additional modules to support business processes.	Safety and Environment	All	3	
22	<b>Real-Time Hazard Assessment Procedure</b> (develop, implement)	Safety and Environment	All	3	
23	<b>Safe Work Planning</b> (develop, implement)	Safety and Environment	All	3	



**Goal 2: Systematically manage occupational safety hazards with serious injury potential**

Item	Objective	Lead Department	Involved Groups / Departments	Group / Department Effort	Timeframe
1	<b>Safe Operation of Powered Lift Trucks</b> (develop, implement)	Safety and Environment	Operations Vehicles Infrastructure and Engineering Materials Management ECE	2	Mid-term
2	<b>Safe Operation of Overhead Cranes and Hoists Program</b> (develop, implement)	Safety and Environment	Operations Vehicles Infrastructure and Engineering Materials Management ECE	2	
3	<b>Hazardous Energy Control/ Lockout Tagout Program</b> (implement)	Safety and Environment	Operations Vehicles Infrastructure and Engineering Materials Management OTC ECE	3	
4	<b>Active Fall Protection Program</b> (implement)	Safety and Environment	Operations Infrastructure and Engineering Vehicles Materials Management ECE	2	
5	<b>Fatigue Management</b> (assess)	Safety and Environment	Operations Vehicles Infrastructure and Engineering	1	

Item	Objective	Lead Department	Involved Groups / Departments	Group / Department Effort	Timeframe
			Special Constable Service Revenue Protection		
6	<b>Safe Operation of Vehicle Lifting Devices</b> (develop, implement)	Safety and Environment	Operations Vehicles Infrastructure and Engineering Materials Management ECE	2	Long-term
7	<b>Ladder Safety Program</b> (update, implement)	Safety and Environment	Operations Infrastructure and Engineering Vehicles Materials Management ECE	2	
8	<b>Mobile Elevated Work Platform Program</b> (develop, implement)	Safety and Environment	Operations Infrastructure and Engineering Vehicles Materials Management ECE	2	Delayed/To be determined
9	<b>Scaffolding Program</b> (develop, implement)	Safety and Environment	Operations Infrastructure and Engineering Vehicles Materials Management ECE	2	
10	<b>Machine Guarding Standard</b> (develop, implement)	Safety and Environment	Operations Infrastructure and Engineering Vehicles ECE	3	

Item	Objective	Lead Department	Involved Groups / Departments	Group / Department Effort	Timeframe
11	<b>Electrical Safety</b> (gap analysis against requirements in CSA Standard Z462)	Safety and Environment	Operations Infrastructure and Engineering Vehicles ECE	2	
12	<b>Electrical Safety Program</b> (develop, implement)	Safety and Environment	Operations Infrastructure and Engineering Vehicles ECE	3	Delayed/To be determined

**Goal 3: Update existing SH&E processes to ensure compliance with legislation and best practice**

Item	Objective	Lead Department	Involved Groups / Departments	Group / Department Effort	Timeframe
1	<b>Subway Air Quality</b> (develop mitigation strategies and action plans)	Safety and Environment	Operations ECE	1	Mid-term
2	<b>Radon Study</b> (conduct study and implement action plans)	Safety and Environment	All	1	Long-term
3	<b>Managing Heat Stress Procedure</b> (develop and implement)	Safety and Environment	Operations Vehicles Infrastructure and Engineering Revenue Protection	1	Delayed/To be determined
4	<b>Managing Cold Stress Procedure</b> (develop and implement)	Safety and Environment	Operations Vehicles Infrastructure and Engineering Revenue Protection	1	
5	<b>Smoke Free Workplace Policy</b> (update and implement)	Safety and Environment	All	1	

**Goal 4: Manage business to ensure compliance with all applicable environmental laws and regulations**

Item	Objective	Lead Department	Involved Groups / Departments	Group / Department Effort	Timeframe
1	<b>Waste Management Program</b> (implement)	Safety and Environment	Operations Materials Management OTC Vehicles Infrastructure and Engineering ECE	3	Short-term
2	<b>Subsurface Contaminant Management Program</b> (implement)	Safety and Environment	Operations Vehicles Infrastructure and Engineering ECE	1	Mid-term
3	<b>Idling Control Procedure</b> (develop, implement)	Safety and Environment	Operations Vehicles Infrastructure and Engineering	1	
4	<b>Storage Tank Program</b> (develop, implement)	Safety and Environment	ECE Operations Infrastructure and Engineering Vehicles	1	Long-term
5	<b>Chemical Management Program</b> (develop and implement)	Safety and Environment	Operations Vehicles Infrastructure and Engineering	1	

**Goal 5: Continue to improve and strengthen Traffic Safety**

Item	Objective	Lead Department	Involved Groups / Departments	Group / Department Effort	Timeframe
1	<b>Traffic Safety Program</b> (develop and implement)	Safety and Environment	Operations Maintenance Project Development and Planning Vehicle Programs Revenue Protection Corporate Communications Marketing and Customer Experience	2	Mid-term
2	<b>Driver Safety Assist Systems</b> (evaluate and pilot)	Vehicle Programs	Operations Maintenance Safety and Environment ITS Project Development and Planning	2	
3	<b>Operator Risk Registry Program</b> (develop and implement)	Operations	Safety and Environment OTC	2	

**Goal 6: Continue to improve and strengthen Track Level Safety**

Item	Objective	Lead Department	Involved Groups / Departments	Group / Department Effort	Timeframe
1	<b>Streetcar and Overhead Rule Books</b> (update and issue)	Streetcar Transportation Streetcar Infrastructure	Infrastructure and Engineering Vehicles Operations OTC Safety and Environment ECE	2	Short-term
2	<b>ATC Process Review</b> (identify, implement opportunities for improvement)	Safety and Environment	Infrastructure and Engineering Operations	2	
3	<b>APTA Subway Yard Safety Peer Review Recommendations</b> (implement action plan)	Infrastructure and Engineering	Infrastructure and Engineering Vehicles Operations OTC Safety and Environment ECE	2	Mid-term
4	<b>Subway/SRT Rule Book</b> (update and issue)	Safety and Environment	Infrastructure and Engineering Vehicles Operations OTC Safety and Environment ECE	2	

**Goal 7: Continue to improve and strengthen Fire and Life Safety**

Item	Objective	Lead Department	Involved Groups / Departments	Group / Department Effort	Timeframe
1	<b>Fire Safety Plans</b> (obtain TFS approval for surface properties)	Safety and Environment	N/A	1	Short-term
2	<b>Fire Equipment Management Software</b> (implement and integrate)	Safety and Environment	Plant Maintenance	1	
3	<b>Fire Access Routes</b> (determine and establish)	Safety and Environment	Operations Vehicles Infrastructure and Engineering ECE	3	
4	<b>Hot Work Standard</b> (develop and approve)	Safety and Environment	N/A	1	Mid-term
5	<b>Fire Safety Program</b> (update)	Safety and Environment	N/A	1	Delayed/To be determined
6	<b>Subway System Track Level Fire Survey and Inventory</b> (conduct and document)	Safety and Environment	N/A	1	



**Goal 8: Ensure SH&E Management System is functioning effectively**

Item	Objective	Lead Department	Involved Groups / Departments	Group / Department Effort	Timeframe
1	<b>External Third Party Review of Safety and Environment Services and Structure</b> (review, receive report)	Safety and Environment (External Consultant)	Human Resources	1	Short-term
2	<b>External Third Party Review of SHEMS</b> (conduct, receive report, develop action plan)	Safety and Environment (External Consultant)	All	2	
3	<b>Evaluate Training and Competency element of the SH&amp;E Management System</b>	Safety and Environment	Human Resources OTC	1	Mid-term
4	<b>Facility Compliance Audits</b> (conduct, address deficiencies)	Safety and Environment	Operations Infrastructure and Engineering Vehicles	2	
5	<b>Procurement Corrective Action Plan</b> (establish, track)	Safety and Environment	Safety and Environment Materials Management	2	
6	<b>Identify Bona Fide Requirements and Review Job Descriptions</b> (review, revise)	Human Resources OTC	Safety and Environment	2	Long-term

7	Conduct SH&E Audit of the <b>Workplace Hazardous Materials Control Program</b>	Safety and Environment	Operations Vehicles Infrastructure and Engineering OTC ITS Materials Management	2	Delayed/To be determined
8	Conduct SH&E Audit of the <b>Joint Health and Safety Committee Item Resolution Procedure</b>	Safety and Environment	Selected Joint Health and Safety Committees	1	
9	Conduct SH&E Audit of the <b>Respiratory Protection Program</b>	Safety and Environment	Operations Vehicles Infrastructure and Engineering	2	
10	Conduct SH&E Audit of the <b>Discharged Water Program</b>	Safety and Environment	Operations Vehicles Infrastructure and Engineering	1	
11	Conduct SH&E Audit of the <b>Asbestos Management Program</b>	Safety and Environment	Operations Vehicles Infrastructure and Engineering	2	

**Goal 9: Reduce the frequency of lost time injuries at the TTC**

Item	Objective	Lead Department	Involved Groups / Departments	Group / Department Effort	Timeframe
1	<b>Psychological Health and Safety Program</b> (develop, implement)	Safety and Environment	All	2	Mid-term
2	<b>Musculoskeletal Disorder Prevention (Ergonomics) Program</b> (implement)	Safety and Environment	All	3	Delayed/To be determined