FORMULA STUDENT EAST

SAFETY MANUAL

FSEAST 2024

TABLE OF CONTENTS

#FORMULASTUDENTEAST

ASSOCIATION OF AUTOMOTIVE ENGINEERS

Written by: Tamas CSÜTÖRTÖKI (Event Manager)
Released on 20th of July 2023
Revised on 21th of July 2024

1. INTRODUCTION

1.1. PURPOSE AND SCOPE OF THE MANUAL

1.1.1 SCOPE

The "Formula Student East Safety Manual" applies to all individuals involved in the Formula Student East event, from the time of arrival at the event premises, including the move-in process, throughout the entire duration of the event, including time spent off the racetrack, and until the departure from the event premises. This includes participants, organizers, volunteers, spectators, event staff, as well as any contractors or personnel involved in the construction and dismantling of event infrastructure.

1.1.2. PURPOSE

The purpose of this manual is to establish a standardized approach to safety and risk management, emphasizing preventive measures as the primary focus. It aims to create a secure environment, promoting best practices and ensuring compliance with safety regulations throughout the event. The manual serves as a reference for all stakeholders involved, guiding their actions and decisions to maintain a high level of safety awareness and adherence to safety protocols. However, in the event of an emergency, the manual aims to facilitate the most conscious and well-planned evacuation process, ensuring the safe and organized evacuation of injured or endangered individuals and the secure placement of participants. It strives to promote a proactive safety culture, but also provides guidance for prepared and effective evacuation and problem-solving measures in case of incidents.

1.1.3. UNFORESEEN SITUATIONS AND INSTRUCTION CHAIN

While comprehensive safety protocols and procedures are in place, it is acknowledged that unforeseen circumstances may arise that require unique interventions beyond the established protocols. In such situations, the Safety Manual provides an instruction chain to ensure a coordinated response and prevent conflicting action plans. This instruction chain outlines the designated authorities and their roles in providing instructions for emergency evacuation or problem resolution. By following this instruction chain, the aim is to maintain order and prevent chaos during critical situations.

1.2. OVERVIEW OF THE FORMULA STUDENT EAST EVENT

The Formula Student East event is a highly anticipated educational construction competition held annually. With a rich tradition, this event brings together teams from various universities across the globe to showcase their engineering and technical skills in the realm of motorsports.

1.2.1. EVENT OBJECTIVES

The primary objective of the Formula Student East event is to provide a platform for students to apply their theoretical knowledge in a practical setting, fostering their development as future engineers. The event promotes innovation, teamwork, and problem-solving abilities, challenging participants to design, build, and compete with formula-style race cars.

1.2.2. SAFETY FOCUS

Safety is of paramount importance throughout the Formula Student East event. The organizers are committed to creating a secure environment for all participants, staff, and spectators.
To ensure the highest level of safety, the event strictly adheres to the safety guidelines outlined in the event handbook and rules book, which are available on the official website (fseast.eu).
These safety guidelines encompass a wide range of areas, including:

- Vehicle Safety: Comprehensive regulations are in place to ensure the safety of participating vehicles, encompassing structural integrity, driver safety systems, and operational safety requirements.
- Track Safety: Safety measures are implemented to safeguard participants during dynamic events, such as acceleration, skidpad, autocross, and endurance. This includes safety barriers, clear signage, and track marshals to enforce safety protocols.
- Fire Safety: Strict fire safety regulations are in effect throughout the event premises, including the pit area and any designated welding or workshop areas. Fire extinguishers, fire suppression systems, and proper storage and handling of flammable materials are emphasized.
- Emergency Preparedness: The event maintains a comprehensive emergency response plan, including designated evacuation routes, communication protocols, and medical support on-site. Staff and volunteers are trained to handle emergency situations effectively and efficiently.
- Safety Inspections and Scrutineering: Prior to the event, rigorous safety inspections and scrutineering processes are conducted to assess the compliance of participating vehicles with safety regulations. This ensures that all vehicles meet the required safety standards.

1.2.3. SAFETY MEASURES

The Formula Student East event implements a comprehensive range of safety measures to mitigate potential risks and ensure the well-being of all involved. These measures include, but are not limited to:

- Pre-event safety inspections and scrutineering of participating vehicles
- Design and construction regulations to ensure structural integrity and driver safety
- Strict adherence to safety protocols during dynamic events, such as acceleration, skidpad, autocross and endurance
- Implementation of safety barriers, fencing, and spectator zones to maintain separation between participants and spectators
- Availability of medical personnel and first aid stations throughout the event premises
- Continuous monitoring and supervision of hazardous areas, ensuring compliance with safety guidelines

1.3. IMPORTANCE OF SAFETY AND RESPONSIBILITY

Ensuring safety is of utmost importance throughout the Formula Student East event. The organizers recognize that the pursuit of educational and engineering excellence must always be accompanied by a strong commitment to the well-being and security of all participants.

1.3.1. SAFETY CULTURE

The Formula Student East event promotes a robust safety culture, emphasizing the shared responsibility of all individuals involved. This safety culture fosters a proactive mindset, encouraging participants to identify potential risks, report hazards, and actively contribute to the overall safety of the event. Each person is expected to prioritize safety in their actions, decisions, and interactions throughout the event.

1.3.2. RISK MITIGATION

The event places significant emphasis on risk mitigation and preventive measures. This includes the implementation of comprehensive safety regulations, meticulous vehicle inspections, and adherence to safety protocols during all activities. Risk assessments are conducted regularly, and necessary measures are implemented to minimize potential hazards and ensure the well-being of participants, staff, and spectators.

1.3.3. INDIVIDUAL RESPONSIBILITY

At the Formula Student East event, everyone has a personal responsibility to prioritize safety. Participants are expected to be aware of and comply with safety regulations, use appropriate personal protective equipment, and engage in safe and responsible behaviour. It is vital for each individual to report any safety concerns promptly and follow instructions given by authorized personnel to maintain a secure environment.

1.3.4. CONTINUOUS IMPROVEMENT

The event organizers strive for continuous improvement in safety practices. Lessons learned from previous events, incident reports, and participant feedback are carefully reviewed and incorporated into updated safety procedures. By continuously evaluating and enhancing safety measures, the event organizers aim to create an environment that sets the benchmark for safety within the educational motorsport community.
By emphasizing the importance of safety and responsibility, the Formula Student East event aims to foster a culture where participants, staff, and spectators are actively engaged in maintaining a secure and enjoyable experience for everyone involved.

2. GENERAL SAFETY REGULATIONS & PROCEDURES AND PRACTICES

2.1. SAFETY AWARENESS

All participants, staff, and visitors are required to maintain a high level of safety awareness throughout the Formula Student East event. This includes understanding and complying with safety regulations, promptly reporting any safety concerns or hazards, and actively promoting a safe and secure environment.

2.2. PERSONAL PROTECTIVE EQUIPMENT (PPE)

The use of appropriate Personal Protective Equipment (PPE) is mandatory in designated areas and during specific activities. Participants must wear and properly maintain PPE, including helmets, fire-resistant clothing, safety goggles, gloves, and closed-toe footwear. It is the responsibility of each individual to ensure their PPE is in good condition and correctly worn at all times.

2.3. COMMUNICATION AND SIGNALING

Clear and effective communication is essential for maintaining safety. Participants must familiarize themselves with the designated communication channels, including radio frequencies or other forms of communication, and use them appropriately. Signaling systems and designated hand signals should be understood and used to convey messages and intentions effectively.

2.4. HOUSEKEEPING AND WORK AREA SAFETY

Maintaining a clean and organized work area is crucial for safety. Participants should regularly remove debris, tools, and equipment from walkways and ensure proper storage to prevent tripping hazards. Work areas should be well-lit, and any spills or hazardous substances should be promptly cleaned and reported.

2.5. FIRE SAFETY

Fire safety is a paramount concern throughout the event. Participants must adhere to designated smoking areas and never smoke in prohibited areas. Open flames, flammable liquids, or unauthorized pyrotechnics are strictly prohibited unless specifically authorized and supervised by the event organizers. In case of fire, participants should follow evacuation procedures and report the incident immediately.

2.6. ALCOHOL AND SUBSTANCE USE

The consumption or use of alcohol or illegal substances is strictly prohibited during the Formula Student East event. Participants must be free from the influence of alcohol or drugs that impair judgment or coordination. Any individual found violating this regulation will be subject to disciplinary action.

2.7. NON-COMPLIANCE AND DISCIPLINARY ACTIONS

Failure to comply with safety regulations may result in disciplinary action, including but not limited to warnings, temporary suspension from participating in specific activities, or removal from the event premises. The event organizers reserve the right to enforce such actions to ensure the overall safety of all participants.
These general safety regulations provide a foundation for maintaining a safe and secure environment during the Formula Student East event. It is essential for all participants to familiarize themselves with these regulations and actively contribute to a culture of safety.

2.8. ALERT TYPES

During the Formula Student East event, two alert types may be issued on the racetrack and at the campsite: Orange Alert and Red Alert. These alert types can only be issued by the Event Manager or, in their absence, by a designated deputy. In case of their unavailability,

the Safety Supervisor is authorized to issue the alert. Announcements will be made through the official sound systems or the emergency public address system. In the event of a failure in these systems, announcements will be made through a manual public address system.

ORANGE ALERT ON THE RACETRACK
During an Orange Alert, the following measures will be implemented:
Team captains gathering in the catering tent
Rest of the Team

- Tighten the top five fasteners of tent doors.
- Remove all equipment from outside the pits.
- Work can continue in the pits.
- Officials will check the site for proper fastening.
- Frequency of announcements: Every minute until all precautions are finished.

RED ALERT ON THE RACETRACK
During a Red Alert, the following measures will be implemented:

- Dynamic activities stop immediately.
- Vehicles powered down by team members.
- Participants must leave the pits and event site immediately following the instructions of officials.
- Officials will close the tents completely.
- Frequency of announcements: Continuous, until the event site is emptied.

ORANGE ALERT AT CAMPSITE
During an Orange Alert, the following measures will be implemented:
Team camp responsibles gathering in the camp's catering tent
Rest of the Team

- Check team sleeping tents'tightenings!
- Check team tents' tightenings at the Grill & Fun area!
- Extinguish all open fires! (Sauna inculded ☺)
- Remove all freestanding untightened equipments from Grill & Fun area!
- Other camp areas can be used without disuption!
- Officials will check the site for proper fastening.
- Frequency of announcements: Every minute until all precautions are finished.

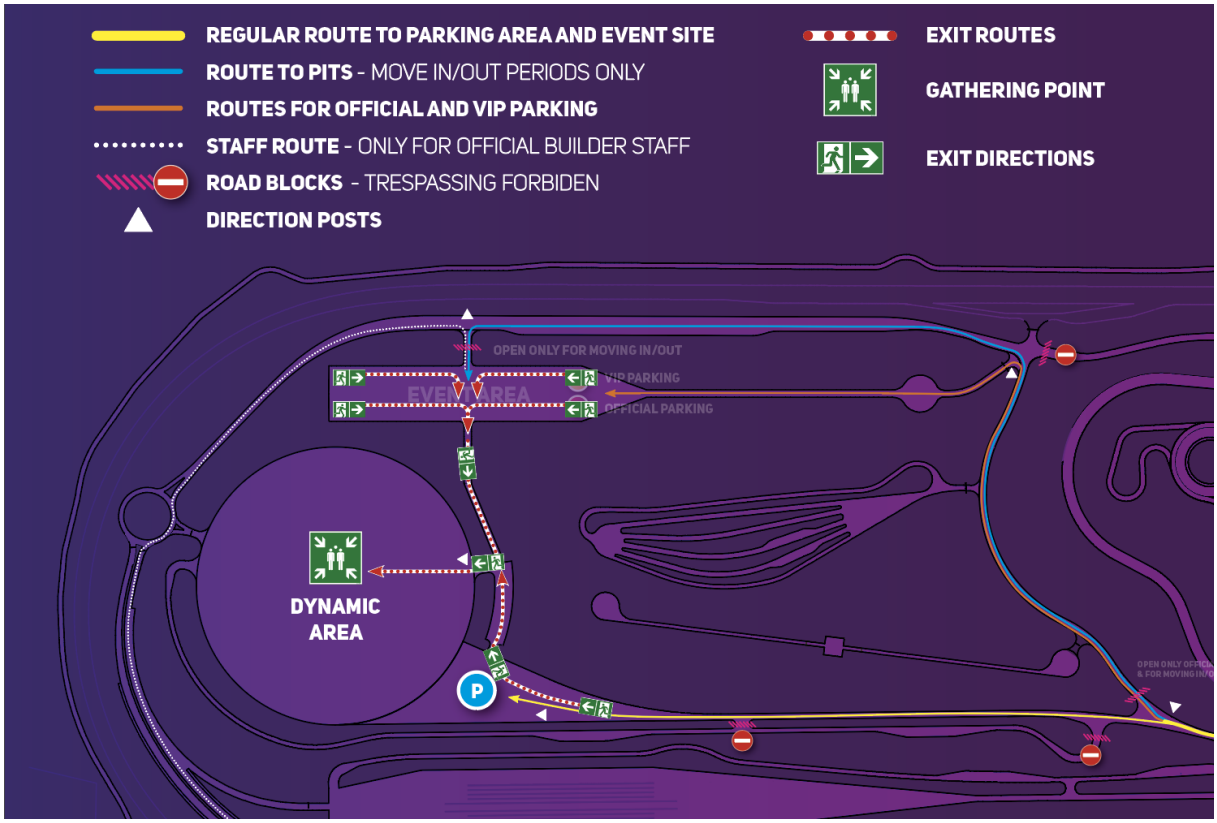
RED ALERT AT CAMPSITE
During a Red Alert, the following measures will be implemented:

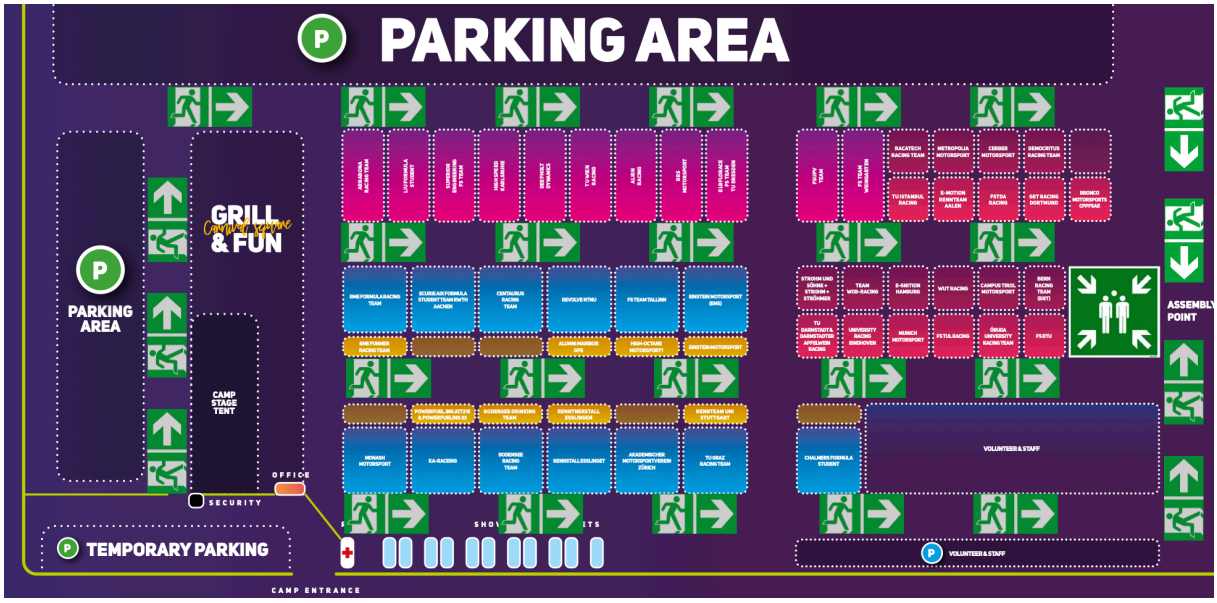
- Leave the area immediately and go to the designated assembly point BY FOOT.
- Car traffic is strictly FORBIDDEN!

- The official security guards all values, closes the area and keeps all evacuation routes free.
- Once the danger has passed, follow the instructions of the officials.
- Frequency of announcements: Continuous, until the event site is emptied.

It is crucial to ensure that the authorized personnel issue the alert types and that proper communication channels, including the official sound systems or emergency public address system, are utilized. Contingency plans should also be in place, including the availability of a manual public address system, in case of any failures.

2.9. EVACUATION PROCEDURE RACETRACK AND CAMPSITE:





In the event of an emergency requiring evacuation, follow the designated evacuation plan for a safe and orderly exit from the area towards the assembly point. Please refer to the attached map for clear directions.

2.9.1. ON-FOOT EVACUATION:

The evacuation process will be conducted on foot. Participants are advised to proceed on foot to ensure a smooth and safe evacuation process.

2.9.2. EVACUATION IN PAIRS:

It is essential to evacuate in pairs to enhance safety and support during the evacuation process. Stick together with a partner to help each other and stay informed.

2.9.3. LEFT SIDE OF THE EVACUATION ROAD:

During the evacuation, all participants must keep to the LEFT side of the designated evacuation road. This ensures unobstructed passage for emergency vehicles, enabling swift response to the situation.

2.9.4. DIRECTIONAL VIGILANCE:

Stay vigilant and aware of any rescue directions or instructions given by emergency personnel. Follow their guidance promptly to ensure a coordinated and efficient evacuation. Remain vigilant of any approaching rescue directions. In case of emergency, the incident site

may override the approach to the evacuation road. Follow the instruction to reach the evacuation road by the shortest route possible.

2.9.5. INCIDENT SITE OVERRIDE:

In case of an emergency situation that necessitates a different approach to the evacuation road, follow the instructions provided by event organizers or emergency responders. Safety is paramount, and instructions may be modified based on the situation.

2.9.6. DIRECT ROUTE TO EVACUATION ROAD:

When proceeding to the evacuation road, follow the shortest route possible while still maintaining a safe distance from any incident site. Avoid any unsafe or blocked pathways. By adhering to the above guidelines and remaining alert during the evacuation, we can ensure the safety and well-being of all participants, visitors, and event staff. Please familiarize yourself with the evacuation routes and designated assembly points outlined on the attached map. In the unlikely event of an emergency, staying calm and following these instructions will contribute to a successful and secure evacuation process.

2.10. EVENT OF FIRE

In the event of a fire, prioritize personal safety and immediately initiate emergency actions. With a loud and clear voice, inform the surrounding area about the emergency, clearly stating the nature of the situation, for example, 'Battery on fire!'

2.10.1. EMERGENCY ANNOUNCEMENT:

Raise an immediate alarm by loudly and clearly informing the vicinity about the nature of the emergency. Ensure that everyone in the area is aware of the situation and takes necessary precautions.

2.10.2. FIRE SUPPRESSION:

If it is safe to do so, attempt to move the burning object or vehicle outside the pit/tent area to minimize the risk of spreading the fire. Use appropriate firefighting equipment available in all areas to control the fire effectively.

2.10.3. COMMUNICATION:

Simultaneously, inform the Event Manager or any designated organizer with a two-way radio communication device about the incident. Provide them with all relevant details to facilitate a coordinated response.

2.10.4. EVACUATION PROTOCOL:

Those who cannot actively participate in firefighting or assisting in the situation must follow the designated evacuation routes promptly and proceed towards the designated assembly point for further instructions.
Ensuring clear and decisive communication during an emergency is vital to mitigate potential risks and protect the safety of all participants and attendees. By adhering to these guidelines and practicing proper emergency protocols, we can maintain a safe and secure environment during Formula Student East events.

2.11. BEHAVIOURS

2.11.1. BEHAVIOUR IN CASE OF REGULAR FIRES (FUEL, OIL, PAPER, WOOD, ETC.):

2.11.1.1. If you encounter a fire at the event site, immediately notify an official staff member equipped with a two-way radio. The official will follow protocol to directly inform the Event Manager and the relevant on-site firefighters and paramedics. These primary responders will handle the immediate intervention. To avoid unnecessary calls and potential miscommunication, do not call 112 yourself. The official staff will notify external rescue units and contact 112 if needed.
2.11.1.2. Prioritize the safety and well-being of individuals in the area. Assist injured people in leaving the vicinity and provide first aid if you possess the necessary knowledge and skills. Quick and appropriate first aid can make a significant difference in minimizing the impact of injuries.
2.11.1.3. If the fire is small and manageable, consider attempting to extinguish it using appropriate firefighting equipment. However, always prioritize your own safety; do not put yourself in harm's way. For electric consumer fires, promptly cut the power to the affected device if possible.
2.11.1.4. In case of a fire outbreak that is beyond your control or poses a significant risk, immediately leave the area and ensure that others do the same. Clear communication is vital in such situations; instruct others to evacuate the area promptly.
2.11.1.5. After evacuating, await the arrival of professional firefighters and emergency medical services. Their expertise and equipment are essential in handling the situation effectively and ensuring the safety of all participants.
2.11.1.6. Once firefighters and medical personnel arrive, cooperate with their instructions and allow them to handle the situation. They are trained to manage emergencies and will provide medical treatment as necessary.

2.11.2. BEHAVIOUR IN CASE OF ACCUMULATOR FIRES:

2.11.2.1. If an accumulator (battery pack) catches fire, immediately evacuate the area and ensure that others around you do the same. Safety is paramount, and it is crucial not to put yourself in danger while attempting to extinguish the fire.
2.11.2.2. If there are injured individuals in the vicinity, provide first aid if you are capable and qualified to do so. Refer to the section on "What to do in case of electric shock" for guidance on providing appropriate aid in such situations. Remember never to give water or food to the victim.
2.11.2.3. Immediately notify an official staff member equipped with a two-way radio. The official will follow protocol to directly inform the Event Manager and the relevant on-site firefighters and paramedics. These primary responders will handle the immediate intervention. To avoid unnecessary calls and potential miscommunication, do not call 112 yourself; the official staff will notify external rescue units and contact 112 if needed.
2.11.2.4. Stay clear of fumes emanating from the accumulator or the car. Be mindful of the wind direction to avoid inhaling potentially harmful substances.

2.11.3. BEHAVIOUR IN CASE OF ELECTRIC SHOCK:

In the event of an electric shock, promptly call for medical help by finding an official with a radio. The official will follow protocol to directly inform the Event Manager and the relevant on-site firefighters and paramedics. These primary responders will handle the immediate intervention. To avoid unnecessary calls and potential miscommunication, do not call 112 yourself; the official staff will notify external rescue units and contact 112 if needed. Simultaneously, follow the steps below to ensure the victim's safety and well-being:
2.11.3.1. In case of an electrical shock, disconnect the power supply from the source side if accessible. Additionally, ensure the affected individual is no longer in contact with the electrical source before attempting any first aid, and immediately seek medical assistance. In case of a shock, caused by an electric car push one of the emergency shutdown buttons if available and wait until the TSAL (Tractive System Active Light) is switched off. This might take up to 5 seconds; remain patient during this time.
2.11.3.2. Communicate with the victim to assess their health condition. Be cautious when moving the victim away from any live contacts. Insulate yourself by wearing dry gloves or multiple layers of cloth, and cover potential contact paths with the car using the HV (High Voltage) isolation blanket.
2.11.3.3. Pay attention to your footing to avoid slips or falls while attempting to move the victim, but avoid moving them if there is a possibility of neck or spinal injuries, unless they are in immediate danger.
2.11.3.4. Do not provide water or food to the victim. Instead, focus on providing artificial respiration if the victim is not breathing and initiate CPR (Cardiopulmonary Resuscitation) if

the victim's heart has stopped (only if you are trained in CPR) or use an Automated External Defibrillator if available.
2.11.3.5. Cover any burns with a sterile dressing. Electrical burns may not look serious on the surface, but they can be severe deeper in the tissue.
2.11.3.6. Keep the victim comfortable, warm, and at rest, and monitor their breathing until emergency medical services arrive. Be aware that the victim might undergo ventricular fibrillation several minutes after experiencing a shock.

3. HAZARDOUS AREAS AND EMERGENCY SITUATIONS

3.1. PIT LANE

Pit Lane is a hazardous area where teams conduct repair and maintenance work in their designated pits. It is crucial to maintain order and ensure unobstructed access in the pits at all times. Handling electric vehicles in the pit area requires special attention and caution.

3.1.1. MAINTAINING ORDER AND ACCESS:

Always keep the pit area tidy and organized to facilitate smooth movement of vehicles and personnel. Avoid creating obstacles that could hinder access to the pits.

3.1.2. SAFETY PRECAUTIONS FOR ELECTRIC VEHICLES:

- After Use and Charging: Electric vehicles pose specific risks after usage and charging. The accumulator pack must be removed from the vehicle inside the pit and placed on a hand-kart. The hand-kart should be positioned near the pit door for quick removal if needed.
- High-Voltage System Activation: High-voltage systems can only be activated within the Scrutineering and Dynamic Area. Exercise extreme caution when handling high-voltage components and ensure proper safety protocols are followed.

3.1.3. HANDLING THE ACCUMULATOR PACK:

Under no circumstances should the accumulator pack be disassembled, except in the designated areas of Scrutineering and Charging area.

3.1.4. FIRE SAFETY:

Follow instructions of 2.10
By strictly adhering to these safety guidelines and regulations in the Pit Lane, we can significantly reduce the risks associated with working on vehicles and create a safer environment for all participants.

3.2 CHARGING & SCRUTINEERING TENT

The Charging & Scrutineering Tent is designated as a hazardous area due to the presence of high-voltage charging equipment and potential electrical hazards. Only authorized personnel should access this area, and strict safety protocols must be followed when handling electrical systems. Fire protection measures, including the availability of fire extinguishers, must be in place and readily accessible.

3.2.1. FIRE SAFETY:

Follow instructions of 2.10

3.3. WELDING & WORKSHOP AREA

The Welding & Workshop Area is a designated hazardous zone due to the presence of various potential risks, including welding operations, the use of power tools, and the potential for fire and explosion hazards. To ensure the safety of all participants and prevent accidents, strict safety protocols must be followed at all times within this area.

3.3.1. QUALIFIED PERSONNEL:

Only trained and qualified personnel are permitted to conduct welding and other related activities in the Welding & Workshop Area. These individuals must possess the necessary expertise and training to handle welding equipment safely. If teams do not have appropriately trained personnel, it is mandatory to seek assistance from the qualified personnel provided by the event organizers.

3.3.2. SAFETY EQUIPMENT:

All personnel working within the Welding & Workshop Area must wear appropriate personal protective equipment (PPE). This includes welding helmets with dark lenses, fire-resistant clothing, welding gloves, and suitable footwear.

3.3.3. FIRE-RESISTANT BARRIERS:

Fire-resistant barriers must be in place to prevent sparks and hot particles from igniting combustible materials nearby. These barriers should be positioned to shield flammable items from any potential welding hazards.

3.3.4. FIRE EXTINGUISHERS:

Adequate fire extinguishing equipment must be readily available in the Welding & Workshop Area. Participants must be familiar with the location and usage of fire extinguishers to respond quickly to any potential fire incidents. In case of fire, please follow the instructions of 2.10.

3.3.5. CLEAR WORKSPACES:

Keep the work area clear of unnecessary clutter and materials to avoid trip hazards and ensure easy access to fire extinguishing equipment in case of emergencies.

3.3.6. VENTILATION:

Proper ventilation is critical to disperse welding fumes and airborne particles effectively. Ensure that the Welding & Workshop Area is well-ventilated to minimize exposure to hazardous substances.

3.3.7. SUPERVISION OF QUALIFIED PERSONNEL:

A qualified safety expert or supervisor will be present in the Welding & Workshop Area to oversee activities. All participants must adhere to the safety and professional instructions provided by this expert to ensure their well-being and prevent accidents.

3.3.8. NO UNAUTHORIZED ACCESS:

Access to the Welding & Workshop Area is restricted to authorized personnel only. Visitors and spectators are not allowed within this area for their safety.
By strictly adhering to these safety measures and following the guidance of the qualified personnel present in the Welding & Workshop Area, we can significantly reduce the risk of accidents and ensure a safe and productive environment for all participants. Let us prioritize safety above all else to make this event a successful and secure experience for everyone involved.

3.4. ACCUMULATOR STORAGE AREA

The Accumulator Storage Area is identified as a hazardous zone due to the presence of battery packs and the potential risks associated with electrical and fire hazards. To ensure the safety of all participants and prevent accidents, strict safety protocols must be followed at all times within this area.

3.4.1. AUTHORIZED PERSONNEL ONLY:

Access to the Accumulator Storage Area is restricted to authorized personnel designated by the teams. Only individuals with proper training and authorization are allowed to enter this area.

3.4.2. BATTERY HANDLING AND STORAGE:

At the end of each day, teams are required to transport their battery packs to the Accumulator Storage Area using hand-karts and hand them over to a designated Scrutineer for safekeeping overnight. Team members are not permitted to place the battery packs into storage containers independently. The presence of a responsible Scrutineer is mandatory to oversee and supervise the process.

3.4.3. SCRUTINEER SUPERVISION:

Scrutineers will be responsible for receiving and giving guidance for storing the battery packs in the designated containers or pre-registered trailers. In the morning, the responsible Scrutineer will hand over the battery packs to the authorized team members.

3.4.4. FIRE SAFETY PRECAUTIONS:

As with any hazardous area, the risk of fire is a critical concern. In the event of a fire within the Accumulator Storage Area, teams must promptly follow the instructions outlined in section 2.10 of the safety regulations to ensure a coordinated and safe response.
By adhering strictly to these battery handling and storage procedures and respecting the presence of authorized personnel and Scrutineers, we can mitigate potential risks and maintain a secure environment for everyone involved. Let us prioritize safety above all else to ensure a successful and incident-free Formula Student East event.

3.5. DYNAMIC AREA

The Dynamic Area is a restricted zone, and only authorized personnel with a Dynamic Pass are permitted to enter. Those with valid authorization must adhere to the guidelines outlined for this area and follow the instructions given by the responsible Track Marshalls.

3.5.1. AUTHORIZED PERSONNEL ONLY:

Access to the Dynamic Area is exclusively granted to team members with a valid Dynamic Pass. This pass indicates that they have met the necessary requirements and training to be present in this area.

3.5.2. COMPLIANCE WITH TRACK MARSHALLS:

All personnel within the Dynamic Area must strictly obey the instructions provided by the responsible Track Marshalls. Their guidance is crucial for ensuring a safe and coordinated environment during dynamic events.

3.5.3. HANDLING EMERGENCY SITUATIONS:

In the event of an emergency, the Track Marshalls present in the respective dynamic area will lead the rescue and evacuation operations. Their priority is to secure the surrounding environment and ensure the safety of all team members, organizers, and participants. Special attention should be given to the driver's safety as a top priority.

3.5.4. RESTRICTED ACCESS FOR RESCUE PERSONNEL:

During an emergency situation, only the designated Track Marshalls and those in their immediate vicinity should be involved in the rescue efforts. All other personnel must ensure that rescue vehicles can reach the scene unobstructed to facilitate a swift and effective response.
By strictly adhering to the rules and guidelines within the Dynamic Area and trusting the expertise of the authorized personnel and Track Marshalls, we can maintain a safe and controlled environment during dynamic events. Let us prioritize the well-being and safety of all participants to ensure a successful and accident-free Formula Student East competition.

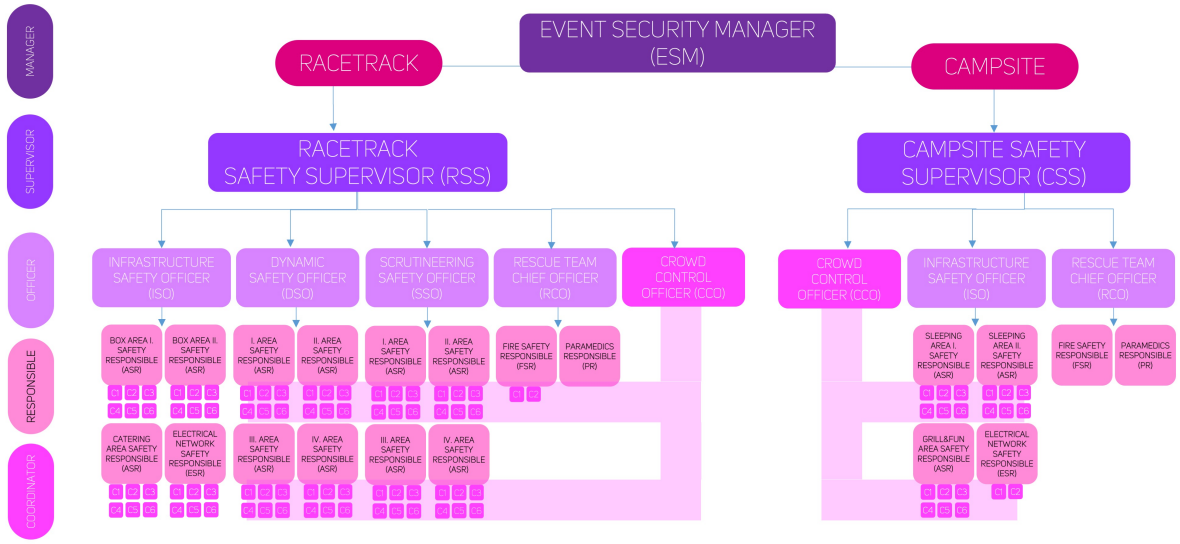
3.6. FUEL STATION

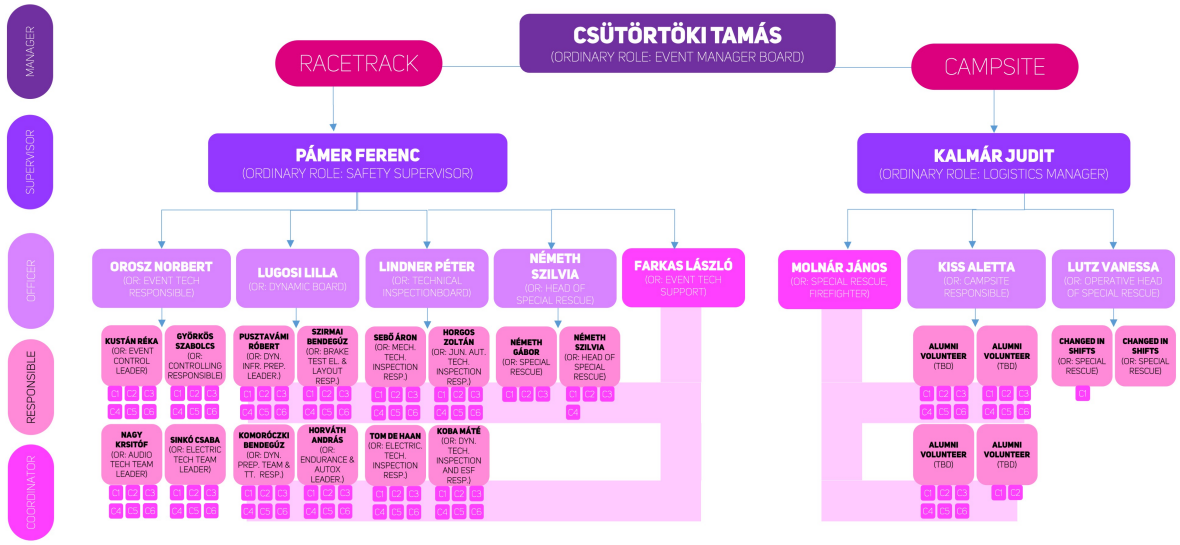
The Fuel Station is designated as a hazardous area due to the presence of flammable fuel and potential fire hazards. Strict safety protocols must be followed when handling fuel, including proper fuel storage, handling equipment, and fire suppression systems. Smoking, open flames, or any other source of ignition is strictly prohibited in the Fuel Station area. Specific guidelines and regulations will be provided for each hazardous area, outlining the safety measures, access restrictions, and emergency procedures to be followed.

4. SAFETY PERSONNEL AND ROLES:

At Formula Student East, the safety and well-being of all participants are of utmost importance. The event is equipped with a dedicated team of safety personnel, in addition to the resources provided by contracted partner of the Association of Automotive Engineers. These professionals play critical roles in handling emergencies, providing first aid, and maintaining effective communication and coordination.

4.1. DEFINITION OF ROLES AND RESPONSIBILITIES:





4.1.1. EVENT SECURITY MANAGER (ESM):

- Oversees all security operations at the event.
- Coordinates with supervisors for both the racetrack and campsite.
- Ensures compliance with safety regulations and protocols.
- Liaises with emergency services and manages overall security strategy.
- Develops and implements preventive security measures.
- Conducts regular risk assessments and updates security plans accordingly.
- Organizes and oversees safety training sessions for staff.
- have the authority to issue alerts, activate emergency protocols, and coordinate with all safety personnel and relevant authorities

4.1.2. RACETRACK SAFETY SUPERVISOR (RSS):

- Manages safety operations specific to the racetrack area.
- Supervises the Infrastructure, Dynamic, and Scrutineering Safety Officers, as well as the Rescue Team Chief Officer and Crowd Control Officer.
- Ensures safety protocols are followed and responds to incidents in the racetrack area.
- Conducts regular safety audits and inspections.
- Implements preventive measures to mitigate identified risks.
- Ensures all staff are trained on racetrack safety procedures.

4.1.3. CAMPSITE SAFETY SUPERVISOR (CSS):

- Manages safety operations specific to the campsite area.
- Supervises the Infrastructure Safety Officer, Crowd Control Officer, and Rescue Team Chief Officer.
- Ensures safety protocols are followed and responds to incidents in the campsite area.
- Conducts regular safety audits and inspections.
- Implements preventive measures to mitigate identified risks.
- Ensures all staff are trained on campsite safety procedures

4.1.4. INFRASTRUCTURE SAFETY OFFICER (ISO):

- Responsible for ensuring the safety of all infrastructure, such as electrical networks, AV systems, stages, EVENT TENTS, TEMporary structures, etc.
- Conducts regular inspections and ensures compliance with safety standards.

- Reports and addresses any infrastructurerelated safety concerns.
- Implements preventive maintenance schedules for all technical equipment.
- Coordinates with technical teams to ensure safety checks before and during the event.

4.1.5. DYNAMIC SAFETY OFFICER (DSO):

- Oversees dynamic safety aspects, track activities and marshalling during dynamic events. .
- Ensures safety procedures are in place and followed during dynamic operations.
- Coordinates with other safety officers to mitigate risks associated with dynamic EVENTS.
- Conducts regular risk assessments for dynamic operations.
- Trains staff on safe operation procedures for moving equipment.

4.1.6. SCRUTINEERING SAFETY OFFICER (SSO):

- Conducts inspections and verifications.
- Coordinates with Inspection teams to address any safety issues.
- Ensures all equipment meets safety standards before use.
- oversees scrutineering, technical inspection and battery pack handling during the event.

4.1.7. RESCUE TEAM CHIEF OFFICER (RCO):

- Leads the rescue team and coordinates all rescue operations.
- Ensures readiness and effective response to emergencies.
- Supervises the Fire Safety Responsible and Paramedics Responsible.
- Conducts regular drills and training for the rescue team.
- Implements preventive measures to enhance rescue operations.

4.1.8. CROWD CONTROL OFFICER (CCO):

- Manages crowd control strategies to ensure safe movement and prevent overcrowding.
- Coordinates with security personnel to manage entrances, exits, and crowd flow.
- Responds to crowdrelated incidents and emergencies.

- Conducts regular crowd risk assessments and implements preventive measures.
- Trains staff on effective crowd management techniques.

4.1.9. FIRE SAFETY RESPONSIBLE (FSR):

- Oversees fire safety measures and ensures compliance with fire safety protocols.
- Conducts fire risk assessments and coordinates fire prevention efforts.
- Responds to fire emergencies and manages firefighting resources.
- Implements regular fire drills and training sessions.
- Ensures all fire safety equipment is regularly maintained and inspected.

4.1.10. PARAMEDICS RESPONSIBLE (PR):

- Leads the medical response team and ensures prompt medical care.
- Coordinates with onsite paramedics and external medical services if necessary.
- Manages medical emergencies and ensures readiness of medical supplies and equipment.
- Conducts regular training for medical staff.
- Implements preventive health measures and monitors potential health risks.

4.1.11. AREA AND **ELECTRICAL NETWORK SAFETY RESPONSIBLE (ASR AND ESR):

- Responsible for the safety of specific designated areas.
- Conducts regular safety inspections and addresses any issues.
- Ensures compliance with safety protocols/ALERTS within their assigned area.
- Implements preventive measures specific to their designated area.
- Trains staff on areaspecific safety procedures.
- ** Responds to electrical emergencies and performs necessary interventions
- ** Ensures the safety of all electrical networks and systems at the event.
- ** Responsible for shutting down the electrical network during an emergency, while maintaining emergency power for public address and lighting systems.

4.1.12. SAFETY COORDINATOR (C1, C2, ETC.):

- Reports to the respective Area Safety Responsible (ASR).
- Assists in carrying out specific safety tasks as directed by the Area Safety Responsible.
- Primarily responsible for crowd control during evacuation procedures.

- Ensures swift and orderly evacuation of the assigned area in case of an emergency.
- Conducts regular safety checks and assists in implementing preventive measures.
- Coordinates with other safety staff to manage crowd flow and prevent overcrowding.
- Participates in safety drills and training sessions to stay prepared for emergency situations.

4.2. COMMUNICATION AND COORDINATION:

- All safety personnel are equipped with reliable communication devices to ensure efficient coordination during emergencies.
- All safety personnel (manager, supervisors, officers, responsibles, coordinators) maintain constant communication to ensure a unified response to any incidents.
- In the event of any emergency, safety personnel promptly communicate with each other and follow established protocols to provide the necessary support. Announcements regarding the emergency situation and safety instructions will be made through the official sound systems or the emergency public address system. These announcements will be clear, loud, and easily comprehensible to ensure that all participants are promptly informed.
- In case of a failure in the official sound systems or the emergency public address system, safety personnel will utilize a manual public address system as an alternative method to communicate important information to participants. This manual system ensures that crucial messages can still be conveyed effectively, maintaining situational awareness and facilitating appropriate actions by all involved parties.
- By employing multiple communication channels and contingency plans, Formula Student East aims to maximize the dissemination of essential information during emergencies, helping to maintain the safety and well-being of all participants throughout the event.

4.3. SUBSTITUTION POLICY:

- Substitution Policy

4.3.1. GENERAL PRINCIPLES

DESIGNATION OF SUBSTITUTES:

Each leadership position and responsible individual must designate a substitute from the immediate lower level.

COMMUNICATION:
The designation of the substitute and any changes must be promptly communicated via the security channel. The outgoing individual must log out, and the incoming substitute must log in to confirm the transition. The Event Security Manager (ESM) must acknowledge the substitution.

4.3.2. DETAILED RULES

4.3.2.1. Event Security Manager (ESM) Substitution:
- The substitute is chosen from either the Racetrack Safety Supervisor (RSS) or the Campsite Safety Supervisor (CSS).

4.3.2.2. Racetrack Safety Supervisor (RSS) Substitution:
- The substitute is chosen from the Infrastructure Safety Officer (ISO), Dynamic Safety Officer (DSO), Scrutineering Safety Officer (SSO), Rescue Team Chief Officer (RCO), or Crowd Control Officer (CCO).
- The designation must be communicated via the security channel. The RSS must log out, and the substitute must log in to confirm the transition. The substitution must be acknowledged by the ESM.

4.3.2.3. Campsite Safety Supervisor (CSS) Substitution:
- The substitute is chosen from the Infrastructure Safety Officer (ISO), Rescue Team Chief Officer (RCO), or Crowd Control Officer (CCO).
- The designation must be communicated via the security channel. The CSS must log out, and the substitute must log in to confirm the transition. The substitution must be acknowledged by the ESM.

4.3.2.4. Infrastructure Safety Officer (ISO) Substitution:
- The substitute is chosen from the Area Safety Responsible (ASR).
- The designation must be communicated via the security channel. The ISO must log out, and the substitute must log in to confirm the transition. The substitution must be acknowledged by the RSS or CSS.

4.3.2.5. Dynamic Safety Officer (DSO) Substitution:
- The substitute is chosen from the Area Safety Responsible (ASR).
- The designation must be communicated via the security channel. The DSO must log out, and the substitute must log in to confirm the transition. The substitution must be acknowledged by the RSS.

4.3.2.6. Scrutineering Safety Officer (SSO) Substitution:
- The substitute is chosen from the Area Safety Responsible (ASR).
- The designation must be communicated via the security channel. The SSO must log out, and the substitute must log in to confirm the transition. The substitution must be acknowledged by the RSS.

4.3.2.7. Rescue Team Chief Officer (RCO) Substitution:

- The substitute is chosen from either the Fire Safety Responsible (FSR) or the Paramedics Responsible (PR).
- The designation must be communicated via the security channel. The RCO must log out, and the substitute must log in to confirm the transition. The substitution must be acknowledged by the RSS or CSS.

4.3.2.8. Crowd Control Officer (CCO) Substitution:

- The substitute is chosen from the Area Safety Responsible (ASR).
- The designation must be communicated via the security channel. The CCO must log out, and the substitute must log in to confirm the transition. The substitution must be acknowledged by the RSS or CSS.

4.3.2.9. Fire Safety Responsible (FSR) Substitution:

- The substitute is chosen from among the subordinate fire safety team members.
- The designation must be communicated via the security channel. The FSR must log out, and the substitute must log in to confirm the transition. The substitution must be acknowledged by the RCO.

4.3.2.10. Paramedics Responsible (PR) Substitution:

- The substitute is chosen from among the subordinate paramedic staff.
- The designation must be communicated via the security channel. The PR must log out, and the substitute must log in to confirm the transition. The substitution must be acknowledged by the RCO.

4.3.2.11. Area Safety Responsible (ASR) Substitution:

- The substitute is chosen from the Area Safety Coordinators (C1, C2, etc.).
- The designation must be communicated via the security channel. The ASR must log out, and the substitute must log in to confirm the transition. The substitution must be acknowledged by the ISO, DSO, or SSO.

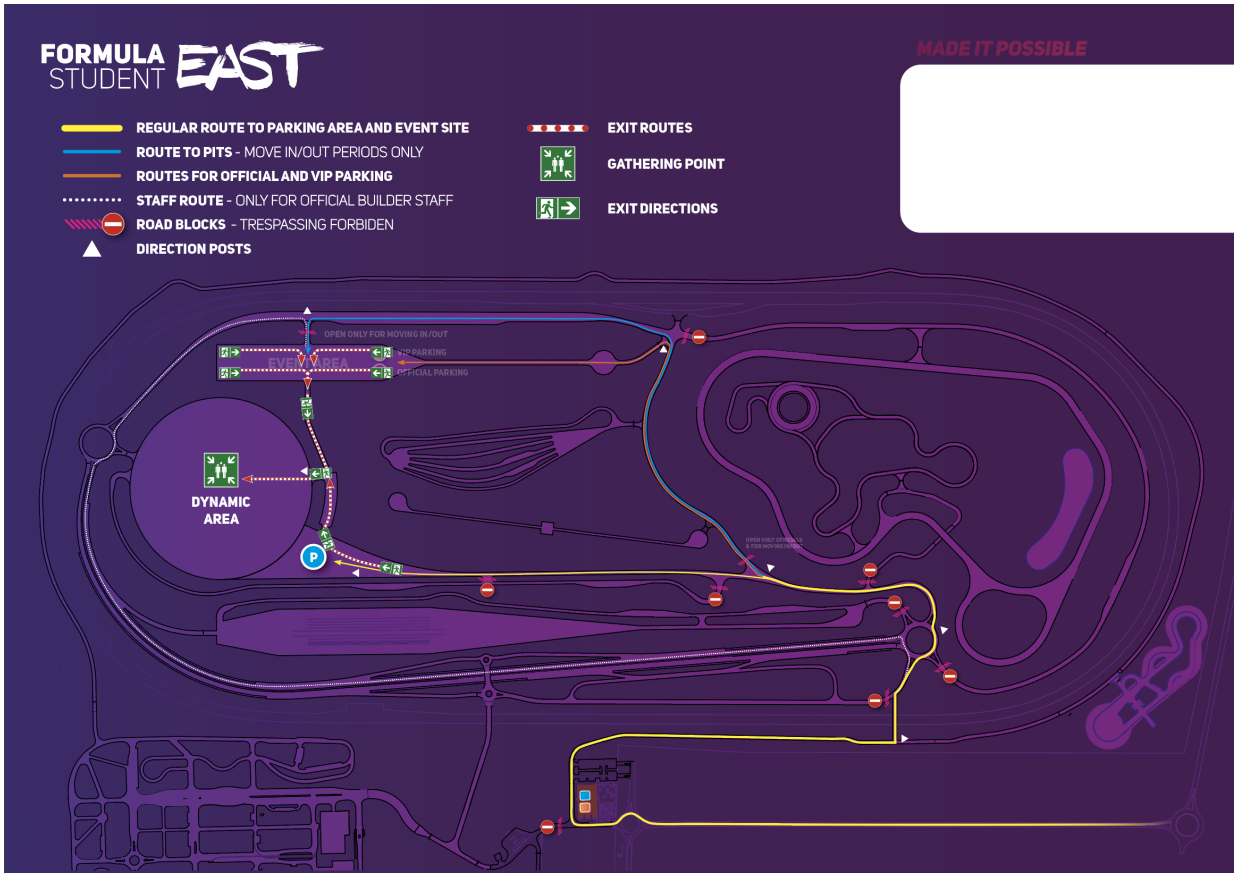
4.3.2.12. Electrical Network Safety Responsible (ENSR) Substitution:

- The substitute is chosen from among the subordinate technical staff familiar with the electrical network.
- The designation must be communicated via the security channel. The ENSR must log out, and the substitute must log in to confirm the transition. The substitution must be acknowledged by the ISO.

With a comprehensive safety infrastructure that includes the AAME's contracted rescue team Formula Student East is well-prepared to handle emergencies and provide a secure environment for all participants. Through effective communication, coordination, and succession planning, safety protocols are executed efficiently to safeguard the well-being of everyone involved.

5. APPENDICES

5.1. MAPS, TENT LOCATIONS AND MARKINGS



5.2. CONTACT LISTS, IMPORTANT PHONE NUMBERS

OFFICIALS: In case of an emergency, please call one of them, no matter what time it is.
Event Security Manager:
Tamás Csütörtöki
+36 30 370 0733
0-24h
ENGLISH/HUNGARIAN SPEAKING

Racetrack Security Supervisor:
Ferenc PÁMER
+36 20 924 1817
6-21h
HUNGARIAN SPEAKING
Regular emergency number: 112 0-24h

5.3. AVAILABLE EQUIPMENT AND TOOLS

5.3.1. FIRE EXTINGUISHER

5.3.1.1. 50-kilogram ABC powder fire extinguisher
The "ABC powder fire extinguisher" is used for extinguishing fires involving Class A, Class B, and Class C fires. Class A fires involve common combustible materials like wood, paper, and fabrics. Class B fires involve flammable liquids such as gasoline, oil, and paint. Class C fires involve energized electrical equipment.
The ABC powder fire extinguisher is versatile and effective in tackling different types of fires.

5.3.1.2. 6-kilogram ABC powder fire extinguisher

5.3.1.3. LITHIUM X6 AVD fire extinguisher for metal and batteries fire
The "LITHIUM X6 AVD fire extinguisher" is designed for combating fires involving metal fires and fires caused by lithium-ion batteries. It is specifically formulated to suppress fires associated with metals like lithium, magnesium, aluminum, and their alloys, as well as fires resulting from lithium-ion batteries found in various electronic devices and electric vehicles. The LITHIUM X6 AVD fire extinguisher is equipped to handle these specialized fire hazards effectively and safely.

5.3.2. SAFETY GLOVES

Safety gloves are used to protect the hands from various workplace hazards and potential injuries.

5.3.2.1. High voltage gloves
High voltage gloves are used for protection against electrical hazards. They are designed to provide electrical insulation and prevent electric shock when working with high-voltage equipment or conducting tasks that involve exposure to electrical currents. The gloves are made of specialized materials that offer a high level of dielectric strength and are crucial safety gear for electrical workers, technicians, and individuals dealing with high-voltage systems or components.

5.3.2.2. Hand Protection: Safety gloves provide a barrier between the hands and potential hazards such as sharp objects, rough surfaces, chemicals, and extreme temperatures. They help prevent cuts, abrasions, burns, and other injuries to the hands.

5.3.2.3. Chemical Resistance: Certain safety gloves are designed to be resistant to chemicals, acids, and other hazardous substances. They shield the skin from harmful chemicals and prevent chemical burns or irritations.

5.3.2.4 Heat and Cold Protection: Safety gloves come in various materials suitable for different temperature extremes. Insulated gloves protect against cold conditions, while heat-resistant gloves shield the hands from high temperatures and burns.

5.3.2.5 Grip and Dexterity: Many safety gloves have textured surfaces or coatings that provide a better grip on tools and objects, enhancing the worker's control and reducing the risk of accidental slips or drops.

5.3.2.6. Electrical Protection: Electrically-insulated safety gloves are essential for workers dealing with electrical equipment or live electrical components. They prevent electric shocks and reduce the risk of electrical accidents.

5.3.2.7. Preventing Contamination: In environments where hygiene and cleanliness are critical, such as laboratories or healthcare settings, safety gloves protect against cross-contamination and the spread of pathogens.

5.3.2.8. Comfort and Hygiene: Safety gloves are designed to be comfortable to wear for extended periods, reducing hand fatigue and promoting better hygiene by keeping the hands clean and protected.

5.3.2.9. Cut and Puncture Resistance: Some safety gloves are engineered with cut-resistant materials to protect against sharp objects like blades, glass, or metal, reducing the risk of lacerations and puncture wounds.

5.3.2.10. Personal Health and Safety: Using safety gloves demonstrates a commitment to personal health and safety in the workplace, promoting a culture of safety and preventing avoidable accidents.

Overall, safety gloves are a crucial part of personal protective equipment (PPE) and play a significant role in safeguarding workers' hands from a wide range of potential hazards, enhancing workplace safety, and reducing the risk of hand-related injuries.

5.3.3. SAFETY SHOES

Safety shoes are used to provide protection for the feet against various workplace hazards and potential injuries.

5.3.3.1. Toe Protection: Safety shoes typically have reinforced toe caps, often made of steel or composite materials, to protect the toes from impact and compression hazards. These help prevent injuries such as crushed toes or broken bones from heavy objects falling or rolling over the feet.

5.3.3.2. Sole Protection: The soles of safety shoes are designed to provide puncture resistance, protecting the feet from sharp objects like nails or metal shards that may be present on the floor.

5.3.3.3. Slip Resistance: Safety shoes are equipped with slip-resistant outsoles that help prevent slips, trips, and falls, especially in environments where floors may be wet, oily, or slippery.

5.3.3.4. Electrical Hazard Protection: Some safety shoes are specially designed to provide electrical hazard protection. They insulate the wearer from electric shocks and reduce the risk of electrical accidents in environments with exposed electrical circuits.

5.3.3.5. Chemical and Liquid Resistance: In certain work settings, safety shoes offer resistance to chemicals, oils, and other hazardous liquids, providing an additional layer of protection against potential skin contact.

5.3.3.6. Comfort and Support: Safety shoes are designed to be comfortable for extended wear, with features like cushioned insoles and arch support. This helps reduce foot fatigue and discomfort during long work shifts.

5.3.3.7. Compliance with Regulations: Many industries and worksites require employees to wear safety shoes to comply with safety regulations and standards. It ensures a safer work environment and minimizes the risk of workplace injuries.

5.3.4. SAFETY GLASSES

Safety glasses are essential personal protective equipment (PPE) designed to protect the eyes from potential hazards in various work environments. Here are some reasons why safety glasses are important:

5.3.4.1. Eye Protection: Safety glasses provide a physical barrier between the eyes and potential hazards such as flying debris, dust, chemicals, splashes, sparks, and other foreign objects. They help prevent eye injuries and damage.

5.3.4.2. Impact Resistance: Safety glasses are made of impact-resistant materials, such as polycarbonate or toughened glass, to withstand high-velocity impacts. This feature is crucial in industries where tools or materials may cause projectiles.

5.3.4.3. Chemical and Splash Protection: In workplaces dealing with chemicals, acids, or corrosive substances, safety glasses with sealed or indirect venting protect the eyes from splashes and spills that can cause chemical burns or eye irritations.

5.3.4.4. UV Protection: Some safety glasses offer UV protection, shielding the eyes from harmful ultraviolet rays. This feature is essential when working outdoors or in environments with exposure to UV radiation.

5.3.4.5. Preventing Eye Fatigue: Safety glasses with anti-glare or tinted lenses can reduce eye strain and fatigue caused by excessive brightness or glare from artificial lighting or sunlight.

5.3.4.6. Compliance with Regulations: In many industries, the use of safety glasses is mandated by safety regulations and standards to ensure worker protection and maintain a safe work environment.

5.3.4.7. Prescription Safety Glasses: Workers with vision problems can use prescription safety glasses, allowing them to see clearly while still enjoying the benefits of eye protection.

5.3.4.8. Preventing Contamination: In environments where hygiene is crucial, such as laboratories or healthcare settings, safety glasses protect against airborne particles and prevent contamination.

5.3.4.9. Comfort and Wearability: Modern safety glasses are designed for comfort, often featuring adjustable frames, cushioned nose pads, and lightweight materials for extended wear without discomfort.

5.3.4.10. Promoting a Safety Culture: Using safety glasses demonstrates a commitment to personal health and safety in the workplace, promoting a culture of safety and preventing avoidable eye injuries.

Overall, safety glasses are a critical component of PPE and are vital in safeguarding the eyes from potential hazards. By wearing safety glasses, workers can significantly reduce the risk of eye injuries and maintain their vision and overall eye health in various work settings.