Event Obstacle Safety Guideline

1) Overview

This guideline outlines the procedures and practices for the design, build, execution, maintenance, inspection and delivery of Obstacle Course Races (OCR) produced, sanctioned or associated with World OCR, the Fédération Internationale de Sports d'Obstacles, it's member federations, leagues, association and other related organisations.

2) Referenced Documents

This guideline is based on the ASTM International F24.61 Standard Practice for Obstacles. If doubt exists as to the application and use of this guideline, the referenced standard shall take precedent.

NOTE: *Event Producers should be aware that local, regional and national laws and standards may also apply to their events.*

3) Definitions

OCR: Obstacle Course Races are events which include a course designed for Participants to traverse primarily on-foot include Obstacles.

Event Producer/Operator**:** Organization that produces and operates the OCR

Builder: Entity or person(s) engaged to construct the obstacles

Participants: persons participating in the OCR

Spectators**:** persons watching the event

Event Personnel: any entity, person, volunteers or contractors engaged by Event Producer to help produce the OCR

Qualified Engineer**:** any person with an engineering degree and experience relevant to their assigned OCR work

Qualified Medical Professional: any person with a specialty in emergency medicine or sports medicine with relevant professional experience in OCR

Qualified Person: person with possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.

Competent Inspector**:** one who is capable of identifying existing and predictable danger, unsanitary conditions, is familiar with the build process, and who has authorization to take prompt corrective measures to eliminate these hazards.

Obstacle**:** Man made or natural elements at an OCR that are defined as obstacles or features by the Event Operator that Participants interact with, which includes any structures and immediately surrounding areas.

Course or Course Route**:** predetermined route between start and finish areas at OCR, that include Obstacles intended for participants

Water Element**:** component of Obstacle that has water with which participants interact

Structural Element**:** Any component of an Obstacle with the possibility of structural failure, overload, or collapse.

Potentially Hazardous Obstacle Elements

- ***Electricity:*** component of Obstacle which includes ability for participants to receive an electrical charge

- ***Fire:*** component of Obstacle which includes potential for participants to be burned
- ***Smoke:*** component of Obstacle which includes participants inhaling substances potentially immediately dangerous to life or health
- ***Explosive substances:*** components that are designed to, or potentially could explode, for example coloured talcum powder used in "colour runs."

4) Obstacle Standards

This guideline applies to Obstacles on a Course that is open to Participants. Event Producers should prohibit all people from accessing obstacles when the course is not open.

a) Creation, Design and Documentation

i) Obstacles must have a written Risk Assessment and Mitigation Plan created before Obstacles are built. This should be done by a Qualified Person. The "Risk Assessment and Mitigation Plan" identifies hazards, probability and severity of harm and risk mitigation plans associated with Participants' use of the Obstacle.

ii) A written Operating Guideline must be created for an Obstacle before that Obstacle is built on course. The Operating Guideline outlines proper use of the Obstacle by Participants, operation of the Obstacle by Event Personnel and may include obstacle specific emergency response Procedures and rescue Procedures where applicable.

iii) If an Obstacle contains a Potentially Hazardous Obstacle Element, the Risk Assessment and Mitigation Plan and Operating Guideline must specifically address the Potentially Hazardous Obstacle Element.

iv) Obstacles with potential for one Participant to have a high impact fall onto another Participant must have protocols to minimize potential of said risk.

v) Any Obstacle in which Participants may fall shall require the Risk Assessment and Mitigation Plan to determine fall protection appropriate to the likelihood and severity of risk, if appropriate at all. Appropriate determination shall take into account the following factors, at a minimum: assessment of height of fall, relevant landing surface, mechanism of Participant fall, Participant body orientation throughout Obstacle, appropriate fall protection signage and fall protection maintenance.

b) Engineer Approval

i) All Obstacles that include a Structural Element require a Qualified Engineers written approval of the Obstacle drawing, approving the structural integrity of Obstacles for proposed use before being used at the OCR.

ii) When approving Obstacle drawings, a Qualified Engineer must approve the structural integrity of the Obstacle considering environmental factors, wind, conceivable Participant volume and loading, and Participant interaction.

c) Build and Strike

i) Obstacles must be built according to Qualified Engineer approved drawings.

ii) Event Organizers must conduct and document a pre-event inspection of all Structural Obstacles before each day of the OCR to ensure they comply with the Qualified Engineer approved drawings and the Operating Guideline for the Obstacle. Inspection shall be completed by a Competent Inspector.

iii) Any modifications to Structural Obstacles that change the overall structural integrity of the Obstacle relative to Qualified Engineer approved drawings, shall be approved by Qualified Engineer before intended use and documented.

iv) All Obstacles shall have an alternative route around the Obstacle for Participants if they choose not to attempt or complete the Obstacle.

d) Periodic and Ongoing Maintenance

i) Event Operator / Event Personnel shall create a process by which the Obstacles are monitored throughout the OCR for safe operation.

ii) Event Operator shall create and document a process by which all appropriate Obstacle materials and obstacles are inspected periodically for structural integrity and safe operability. This process shall also address seminal events that alter materials' structural integrity and safe operability.

5) Course Route Design Standards

a) Risk Assessment and Mitigation Plan

i) Event Operator shall draft a general Course Risk Assessment and Mitigation Plan which shall include an end of the day course sweep to ensure the Obstacles and the Course are cleared off all Participants before they are de-staffed.

ii) Event Operator shall design a course that takes into account the health and safety of participants and spectators including but not limited to the following factors: medical access to all parts of course, Spectator areas and access, Adequate course marking, Adequate water stations, Water obstacle placement, weather mitigation protocols, Terrain assessments, Evacuation routes, Course checks and sweep Procedures, Pre-event walk through.

6) Water Quality and Safety

a) Water Depth Staffing/Signage/Alternate Route

Obstacles with a Water Element require the following staffing:

i) Over 4 ft Water Depth: certified Lifeguard(s) needed

ii) Over 8 ft Water Depth: Rescue Diver(s) and certified lifeguards needed. Minimum 2 divers staffed.

iii) The number of lifeguards/divers shall be at the discretion of the Event Operator who shall consider the following factors when staffing: length, width, depth of the water and the expected participant load on the Obstacle.

b) Water Element

Any obstacle with a Water Element requires a Water Rescue Plan that outlines water personnel schedule and rescue response protocols.

c) Signage

i) If an Obstacle has a Water Element and the water is over 4 ft in depth, the Event Operator must post signage before the Obstacle communicating a variation of the message 'If you can't swim, go around obstacle'

ii) If an Obstacle has a Water Element, the Event Operator must post signage before the Obstacle communicating a variation of the message 'No diving'.

d) Water Quality

i) The Event Operator shall treat as appropriate any non-potable water sources that are used at the OCR before the event to mitigate health risks.

ii) The Event Operator shall notify Participants of the potential inherent risks of contact with Event water and mud.

7) Event Day Operations Safety

a) An Emergency Action Plan (EAP), is a formal written plan, developed by the Event Producer, that identifies potential emergency conditions at the event site and prescribes the Procedures to be followed to minimize or prevent loss of life and property. EAPs should be developed in the following areas for any OCR:

i) Severe weather (monitoring lightning, wind and wet bulb globe temperature throughout the Event),

ii) Natural Disaster

iii) Mass Casualty

iv) Obstacle Failure

v) Lost Person

vi) Fire Emergency

vii) Active shooter

viii) Bomb Threat

ix) Medical Emergency

x) Critical Communications Failure

xi) Critical Power Failure

xii) Venue Evacuation

xiii) Aeromedical evacuation (considers landing zone, Procedures, clearance and activation)

b) Staff/Volunteer Instruction/Orientation

i) Event Operators must ensure any volunteers are adequately prepared to perform roles assigned to them before deployed on Course.

ii) OCR Medical staff must be briefed about rescue protocols, obstacle specific risks, communication protocols, course and obstacle access points, no drive zones, locations of life saving equipment, important emergency response protocols for Potentially Hazardous Obstacle Elements, and emergency action plans before deployed on course.

iii) Event Staff must be adequately briefed about safe driving protocol, emergency action plans, and overall site safety before deployed on course.

iv) Any vendors or sponsors must be adequately briefed about safe driving protocol and overall site safety.

v) Participants must be informed, before heading on Course, how to access medical care on Course and their ability to bypass any Obstacle should they choose.

c) Event Infrastructure and Equipment Maintenance

i) Event Operators must employ security protocol appropriate for event size, location and type.

ii) Event Operators must retain parking and transit protocols appropriate for event size, location and type and have emergency egress and ingress identified.

iii) The Event Organizer ensures that fuel sources stored safely and securely per appropriate NFPA standards.

iv) The Event Organizer ensures that electrical energy sources are used and maintained pursuant to NFPA Part 70 Section 525 or the appropriate European standard.

8) Medical, Health and Safety Provision

i) The Event Organizer shall establish and maintain a safe and functional environment to deliver medical care to all persons onsite at the OCR.

ii) The Event Organizer shall provide a central medical treatment location that provides shelter from the environment and privacy to patients and has: Adequate space based on predicted patient volume, Adequate lighting, HVAC as appropriate, Clean treatment areas, Working treatment furniture (cots,

beds, chairs, etc.), Safe electrical sources (GFI, proper gauge extension cords, LED energized indicators, etc.), Potable water source

iii) Establishes a safe and functional method for transporting patients to the medical facility for both ambulatory and non-ambulatory patients

iv) The Event Organizer shall provide adequate first aid and immediate lifesaving equipment at the event determined by the Medical Risk Assessment. A Medical Risk Assessment considers matching the medical resources to the risks an average person would encounter on the Course and should consider the following factors: size of event, risk of obstacles, likelihood of potential injuries, weather, advanced medical response and wildlife.

- There is a minimum of one automatic external defibrillator (AED) onsite in the medical treatment facility. There are AED capability to reach any location on the course. There is an AED located at any electrified Obstacle.
- The Medical Risk Assessment must address ensuring adequate rescue and extraction capabilities for all Obstacles and for ambulance inaccessible areas of the course (i.e. backcountry or rugged terrain areas).

v) Prior to event, the Event Organizer shall create a procedure for transfer of patients into the local healthcare system for patients requiring advanced level of care.

vi) The Event Organizer ensures that a Qualified Medical Professional oversees the health and safety aspects of the Event. The Qualified Medical Professional shall be involved in the Event planning and shall approve the medical plan.