



**NATIONAL
CIRCUIT CONSTRUCTION
AND
SAFETY STANDARDS**

VERSION 4
UPDATED April 2014

NATIONAL CIRCUIT CONSTRUCTION & SAFETY STANDARDS

Preamble:

This document contains the regulations of the Australian Karting Association Ltd (AKA) trading as Karting Australia (KA) for all KA Licensed permanent bitumen and/or dirt surfaced Sprint Kart circuits in Australia. These regulations are split into 4 sections as follows;

Section A: Track Inspections / Critical Incident Procedure.

Section B: New circuits or extensions/major alterations to existing circuits approved/constructed after 1st January 2014.

Section C: Existing circuits, approved and issued with a Track Licence prior to 1st January, 2014.

Section D: Speedway.

KA reserves the right to vary these requirements at any time, with issues of safety being paramount.

DEFINITIONS:

- Catch Traps:** An area of loose material designed to slow a kart, which has left the track surface, before it impacts a safety barrier or fence.
- Circuits:** The area and all features, bounded by and including the perimeter safety fence and grids.
- Complex:** The race complex in its entirety, including track, paddock, grids, buildings, spectators areas and vehicle parking.
- Corner:** A change in direction of the track, in excess of 20 degrees, generally with a radius to the inside and outside edges.
- Kerb:** A raised concrete barrier on the inside edge of a track corner, constructed to a specified profile, to deter karts from driving off the track.
- Paddock:** An area set aside for the use by competitors for kart maintenance, repair and storage during the course of an event. Clubs may put in place access exclusions to the paddock for vehicles and the general public.
- Parc Ferme:** A secure area adjacent the track and under the control of Officials. The general public is prohibited to enter this area and procedures may be put in place to restrict access by competitors and other persons.
- Ripple Strip:** A profiled concrete strip on the outside edge of a track corner, constructed to a specified profile, to deter karts from driving off the track.
- Run-off Area:** The area from the edge of the track to the first line of protection.
- Safety Barrier:** An energy-absorbing barrier designed to protect a kart and driver from hitting a solid object or official.
- Safety Catch Fence:** A fence structure used to safely restrain the forward movement of a kart that has left the track. It is of a higher standard than a safety fence.
- Safety Fence:** A structure erected as a final defence to safety restrain the forward movement of a kart that has left the track. A circuit will have a safety fence for its full perimeter.

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Security Fence:	A fence constructed to prevent the access of all persons to a secure area.
Separation Barrier:	Is a barrier designed to stop karts from short cutting the circuit.
Spectator Fence:	A low profile fence constructed to restrict the access of all persons to a specified area.
Start Grid:	An area set aside from the paddock and track for the assembly of karts in race order prior to the start of a race. Access restrictions may apply.
Straight:	The section of track between two corners.
Track:	A permanent or temporary course being a surface normally defined by a single edge line, kerbs and ripple strips at each side of the course used for karting competitions.
Stands and Temporary Structures:	All spectator stands, viewing platforms and like structures whether of a temporary or permanent nature, must be approved by the appropriate statutory or regulatory body(ies) charged with the responsibility of approving such structures and thereafter be maintained and repaired so that such structures, at all times, remain in full and strict compliance with the approval conditions as they exist from time to time.
Weigh-In-Area:	An area set aside from the paddock and track for the assembly of karts at the end of a race prior to being weighed. Access restrictions shall apply.

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Section A: Track Inspections:

- a) All AKA licensed circuits MUST be inspected annually for compliance with these regulations.
- b) The State Track Safety Inspector who carries out the inspection MUST endorse the Annual Track Licence when all regulations have been complied with. A club Track Safety Officer or authorized representative must be present at the time of annual circuit inspection by the relevant State Track Safety Inspector.
- c) At the request of clubs, Track Safety Inspectors must make inspections prior to any structural changes to the integrity of an existing circuit being made.

Club Track Safety Officers:

The functions of Club Track Safety Officers are to;

- a) Ensure that the circuit is maintained at all times in accordance with these regulations, including any variations as work orders by State Track Safety Inspectors.
- b) Ensure that all work orders / logbook reports have been remedied prior to the next race meeting.
- c) Liaise with the State Track Safety Inspector.
- d) Check communications – two way radios and Public address system are in proper working order.
- e) Check fire extinguishers, starting lights, track lighting (if applicable), and flags for compliance, condition and quantity.
- f) Maintain compliance with W H & S regulations.

State Track Safety Inspectors:

State Track Safety Inspectors are generally responsible for ensuring compliance with the following regulations and must endorse the Annual Track Licence for any given club.

The functions of State Track Safety Inspectors are to;

- a) Make inspections annually prior to the existing track license expiring.
- b) Make inspections at the request of the club, and if required, during a race meeting.
- c) Make recommendations to the Club on safety improvements in-line with these regulations.
- d) Communicate official information only to the respective club via the State Office.
- e) Prepare and sign inspection reports and forward them to the State Office, or as appropriate.

Event Classification / Inspection by the relevant Track Safety Inspector:

A final inspection of the host circuits for all CIK race meetings, AKA National Championships, State Open Championships, State Closed Titles and Promoted Series must be completed by the relevant State Track Safety Inspector at least 1 month prior to the commencement of the race meeting.

Host circuits for 'Titled' events must be inspected by the relevant State Track Safety Inspector as and when requested by the State Karting Council / Board of Directors.

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Critical Incident Procedure:

This procedure is applicable when any Competitor / Pit Crew / Race Meeting Official is transported to hospital as the result of an incident during a permitted race meeting.

- a) The Chief Steward shall contact the State Track Safety Inspector within 24 hours of the incident.
- b) The State Track Safety Inspector will inform the National Track Safety Inspector of the incident.
- c) The incident will be investigated with a view to Track Safety and compliance. This investigation can be by either meeting or teleconference.
- d) The results of this investigation to be forwarded to the Board of AKA Ltd.

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Section B:

The following are the regulations for all **NEW CIRCUITS** OR EXTENSIONS / MAJOR ALTERATIONS TO EXISTING CIRCUITS approved and or constructed after 1st January, 2014.

TRAC 1.01 Track Design:

The shape of the track, both in plan and vertical profile, is not constrained by these regulations, as it is dictated by certain variable factors, the types of competition for which the course is intended, the character of the terrain, considerations of economics, aesthetics, tradition, etc. However, the construction of the circuit must conform to any safety requirements, which may be specified by the AKA. Those responsible for a circuit design must also ensure that the prescriptions laid down by the Public Authorities are complied with and must obtain their official approval.

TRAC 1.02 Circuit Plan and Approval:

Prior to the construction of a new circuit or alteration of any existing circuit, 10 copies of the circuit plans must be submitted to the National Track Safety Committee for approval. All circuits will have a professionally drawn plan at a scale of 1:500 showing the track layout, surface contours, the direction of the racing, buildings, installation, access roads, race areas, the location of the starting grid, ambulance access and parking, the medical centre, pickup vehicles and of the Marshals' posts, as well as a Paddock plan with the pit spaces and access ways.

Non-compliance with this rule will be subject to an investigation and a possible penalty imposed and/or the track licence not being issued by the AKA.

TRAC 1.03 Track Density/Maximum Number of Starters:

Track Length (Metres)	Track width at narrowest point		
	6m	7m	8m
<500	20	22	24
500 - 625	22	24	26
626 - 750	24	26	28
751 - 875	28	30	32
876 - 1000	32	34	36
> 1000	NA	38	40

Upon application to the State Track Inspector a Club may apply for an increase of a maximum of 4 karts to the density of their existing track.

This will be approved on the basis that the out grid capacity and in-grid capacity match the track density.

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TRAC 1.04 Circuit Grading Criteria:

GRADE	EVENT STATUS	CRITERIA
International	CIK/FIA International Events	Refer CIK/FIA Homologation Regulations
A	National Sprint Championships	Circuits to be a minimum length of 750 metres and a minimum width of 7 meters.
B	State Open Sprint Championships (Bitumen)	Circuits to be a minimum length of 500 metres and a minimum width of 7 metres.
C	State Closed Sprint Titles (Bitumen)	Circuits to be a minimum length of 500 metres and a minimum width of 6 metres.
D	National and State Dirt Track Championships	Circuits to be a minimum length of 350 metres and a minimum width of 7 metres.
E	Any Open or Closed Race Meetings (non-championship)	Circuits to be a minimum length of 300 metres and a minimum width of 6 metres.

TRAC 1.05 Track Dimensions:

- a) Length: The maximum length of any track will be 1.7km (except as approved by AKA Ltd). The line around a track used for determining its length will be the centre line.
- b) Straight: The length of a straight will be measured from tangent points of the proceeding and following corners.
- c) Start Straight : All tracks are to have a minimum distance of 80m from the start line to the start of the first corner and be a minimum length of 130m.
- d) First Corner: The first corner must be as “open” as possible and a minimum width of 8m.
- e) Track Width:
 - i. All straights over 80m in length are to be minimum width of eight (8) metres; elsewhere the minimum width will be 7 metres.
 - ii. For all existing tracks, all straights over 80m in length are to be minimum width of 7 metres; elsewhere the minimum width will be 6 metres.
 - iii. Track widths will be measured over the sealed bitumen surface, excluding any kerbs or ripple strips.
- f) Separation:
 - i. The distance between high speed converging sections of track shall be a minimum of twenty (20) metres, between track edges, unless the AKA Safety Committee approves an alternative.
 - ii. All other sections of the track shall have a minimum of fourteen (14) metres separation, apart from the area around the internal radius of any corner.
- g) Track Gradient: The recommended maximum longitudinal gradient will be 5% and recommended maximum transverse gradient will be 10%.
- h) Vertical Clearance: There shall be no permanent or temporary objects within 3 metres vertically above the track surface.

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TRAC 1.06 Safety Features:

- a. Surface:
 - i. The surface of bitumen tracks will be sealed with bitumen / concrete. The surface of dirt tracks may be dirt / concrete / bitumen.
 - ii. The surface must be smooth and continuous and have sufficient fall to prevent formation of puddles in wet conditions (a minimum of 2.5% being recommended).
 - iii. Where practical, the track surface levels should follow the natural contours. Verges should be graded level with the track for a distance of 10 metres from the track edge.
 - iv. Please note that severe positive camber on corners can have a launching ramp effect and should be avoided.
 - v. Both edges of the track surface will be defined with a 100mm wide white line.
- b. No Mans Land:
 - i. All tracks are to have a “no mans land” marked on the track immediately before the starting line.
 - ii. The marking will be located in the centre of the starting straight, a minimum of 200mm and a maximum of 800mm in width and must be painted white.
 - iii. The length of the markings will be as required by the State Track Inspector but will be a minimum of 25 metres from the start line.
- c. Baulk Line:

All tracks are to have a bright green coloured line painted on the track a maximum of 40 metres from the start grid. This line is the baulk line. For new circuits, it is recommended that the baulk line not be on the track. Where the distance from the start grid to the track is in excess of 40 metres, the baulk line may be placed up to 5 metres from the edge of the track.
- d. Acceleration Line:

All tracks will have a yellow painted line on the track, at 90 degrees to the track edge, approximately 25 metres prior to the start line. This line is the acceleration line. It is recommended to have a yellow witches hat either side of the track verge identifying the acceleration line.
- e. Start Line:

A white line painted across the track at 90 degrees to the track edge, which may also be the finish line.
- f. Finish Line:

A white line painted across the track at 90 degrees to the track edge.
- g. Breakdown Lane:
 - i. Where a mechanical breakdown lane is provided it shall be adjacent to the main track.
 - ii. There must be a chicane at the entry to the deceleration lane aimed at substantially reducing the speed of the karts entering the breakdown lane.
 - iii. The sealed width of the deceleration lane must be a minimum of 1.5 metres and a maximum of 2.5m.
 - iv. The sealed width of the stopping area of the breakdown lane must be a minimum of 3.0 metres and separate from the main track by a safety barrier.
- h. Track edges, verges and run-off areas:
 - i. The track must be bordered all along its length on both sides by compact verges having an even surface.

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- ii. These verges must be free of debris or gravel and must normally be grass-covered over a minimum width of 1.0 metres
 - iii. The verges must be continuation of the transverse profile of the track, with no step between track edge and verge. Any horizontal transition must be very gradual and progressive.
 - iv. A run-off area is that section of ground between the verge and the first line of protection and unless otherwise specified must have the same basic characteristics as the verge, although it may be less stabilised. The run-off area must be graded to the verge. If there is a negative slope, this must not exceed 5% for a distance of 10 metres from the track edge; if there is a positive slope, this must not exceed 10% for a distance of 10 metres from the track edge, with a smooth transition from track to run-off area.
- i. Corners: Kerbs must be laid on the inside of corners to prevent karts moving onto the inside verge of corners in normal racing.
 - j. Ripple Strips
 - i. Are to be “a minimum 300mm wide and a maximum of 500mm wide”.
 - ii. The surface may be rippled.
 - iii. They will be sloped at a negative angle to the plane of the track and a maximum of 5 degrees.
 - iv. That the CIK Style ripple strip is to be used. (Refer to CIK Ripple Strip drawing in this document.
 - k. Kerbs Inside:
 - i. Are to be a maximum of 300mm wide.
 - ii. Their surface must be smooth.
 - iii. Their surface must form a positive angle to the plane of the track being a minimum of 15 degrees and maximum of 20 degrees (equivalent to 80mm to 110mm rise measured at the kerb extremity, for a 300mm wide kerb).
 - iv. As an approved alternative the current CIK/FIA kerb profile may be used.
 - v. It is recommended that the drainage slots be inserted in inside kerbs.
 - vi. The adjacent verge will be finished level with the top of the kerb.

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TRAC 1.07 Locating Safety Structures:

The primary and optimal form of protection for karts is to ensure suitable run off distances are provided between the edge of the track and any solid object. In general the minimum distance to a fence or barrier will be ten (10) metres.

- a. Safety barriers and catch traps must be installed to prevent karts crossing in any area where two sections of track are close to each other and/or there is a possibility that karts may cross.
- b. Solid objects should be removed from the track area where possible. If this is not possible, then suitable run off distance and protection is required. Any structure or solid object of any type must have safety barriers and catch traps to protect competitors.

TRAC 1.08 Safety Structures:

a) Safety Barriers:

Shall be designed to absorb the energy from impact with a kart and to rapidly decelerate an out of control kart with minimum damage to both kart and driver.

(a) Construction

(i) Tyre Barriers

Barriers to be constructed of similar **size automotive tyres** securely fixed in vertical stacks and longitudinally in a manner that forms a flexible structure. The tyre wall shall curve away at the end of the barrier.

The tyre barriers be constructed of similar size automotive or race car tyres (no commercial or

4wd tyres) securely bound in vertical stacks and longitudinally in a manner that forms a flexible structure. The tyre wall shall be constructed so as to curve away at the end of the barrier. Tyre barriers are constructed to a minimum of 600mm in height and by four stacks long, unless otherwise directed.

It is recommended that tyres are bolted or tek screwed to form barrier sections of four bundles. Washers will be used each side of the tyre wall. When using tek screws a suitable "speed nut" must be fitted to the thread end. Bolt or screw ends shall not protrude from the outside face of the completed wall. The barriers shall not be attached to the ground so they can move freely when contacted by a kart. Tyres must be in good condition.

(ii) Plastic Barrels

Plastic barrels may be used as a safety barrier around the track perimeter. **They cannot be used at flag points.** They may be used in other locations at the discretion of the State Track Inspector. The barrels must be parallel-sided plastic with minimum size of 600mm diameter x 900mm high. The barrels will have holes drilled in their bases to drain water. The barrels must be bolted together at the top and bottom, in-groups of five barrels. The barrels on the end of each group of five barrels must be filled with a maximum of 100mm of crushed stone as ballast. Each group of five barrels must be tied to the adjoining group with synthetic rope. They shall only be used in an upright position.

(iii) Alternatives – Safety barriers may be constructed of approved alternate material provided they meet the same performance criteria as listed above.

(iv) Commercial – Current alternative commercial barriers approved are; -Air fence kart inflatables.

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- (v) Separation – Safety barriers must be separated by a minimum of 300mm from any solid object or other safety structure.
- (vi) Belting - may be used to supply a continuous belting face to safety barriers in the areas of frequent impact. Minimum height to be 500mm, minimum thickness 5mm.
- (vii) Fixings
 - Rope shall be durable synthetic of a minimum 8mm diameter.
 - TEK screws will be a minimum of 4mm diameter with 25mm diameter washers each side of the fixing.
 - Bolts will be a minimum of 4mm diameter with 25mm diameter washer each side of the fixing.
 - Facings to be secured with minimum 6mm dome headed bolt with washers and nuts internally only, to be fixed on every second tyre row top and bottom.

(b) Locations

Safety barriers may be used in the following locations.

- (i) For separation between sections of track. Separation Barriers are constructed to be a minimum of 200mm in height and by 4 stacks long, unless otherwise directed.
- (ii) In high speed run-off areas, as a line of defence before a safety fence.
- (iii) For the protection of all trackside Officials posts including flag points, a double tyre barrier at right angles to the track will be constructed a minimum of three (3) tyres long by four (4) tyres high, with a minimum height of 720mm with a 300mm separation. All tyres to be bolted together as per TRAC 1.08.1(a)(i). Traffic side of tyre barrier to be painted WHITE.
- (iv) Where possible, safety barriers are to be a minimum of four (4) metres from the edge of the track and have verge and catch trap protection prior.

2. Catch Traps:

Catch traps are an area of loose material designed to slow a kart, which has left the track surface, before it impacts a safety barrier or fence.

(a) Construction

- (i) Catch traps will consist of a bed of woodchips a minimum of 2 metres wide by a minimum of 300mm high at the leading edge, the leading edge to be kept as near to vertical as possible. The height of the woodchip bed must remain constant throughout the width and length of the bed. The woodchip will be raked regularly to maintain a loose consistency.

OR

- (ii) A bed of gravel a minimum of two metres wide by 250mm deep set down 150mm into the existing surface level so as to produce a 100mm high leading edge. The stone to be used shall be either round river stone or clean crushed stone of a single size 5 – 10mm. On a regular basis, the surface of the trap is to be deeply raked up into ridges approximately 100mm deep and 200mm apart. A correct prepared gravel trap should be difficult to walk on.
- (iii) If either material is not available, then a locally available suitable non-compactable material may be used as approved by State Track Safety Inspector in consultation.
- (iv) In high-speed run-off areas the width of the trap will be increased to 4 metres.

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- (v) The catch trap must be graded to the verge or track surface. If there is a negative slope, this must not exceed 5% for a distance of 10 metres from the track edge; if there is a positive slope, this must not exceed 10% for a distance of 10 metres from the track edge, with a smooth transition from track to run-off area.
- (b) Locations
 - (i) In front of fences in high-speed areas.
 - (ii) In all areas where deemed necessary by the State Track Safety Inspector.

3. Safety Catch Fence:

A catch fence is a last line of restraint in critical areas where a kart may otherwise be projected over a safety fence or crossing to another section of track. It will normally only be used on existing circuits. On new circuits and alterations to existing circuits, it is preferable to provide adequate run-off areas rather than to rely upon barriers to control karts.

- (a) Construction
 - (i) A 50mm square x 2.5mm diameter chain wire fence with steel rails, or a heavy wire or cable along the top, and a heavy wire or cable along the bottom. Fencing shall be installed to manufactures recommendations.
 - (ii) A minimum height of 1.8 metres metres.
- (b) Location
 - (i) A catch fence will normally be located in high speed run-off areas.
 - (ii) A catch fence will be located at the maximum distance possible from the outside edge of the track.

4. Safety Fence

A safety fence is used to control the access of spectators and unauthorised persons into dangerous or controlled areas. All circuits will have a safety fence for the full perimeter of the track. Gates may be provided but these must be able to be locked. Gates must only swing inwards.

- (a) Construction
 - (i) As a minimum a safety fence will be 1.15 metres high above the adjacent ground levels. It will be constructed from heavy galvanised wire with a 2.5mm high tensile tensioned top wire and a lower panel of 6/90/30 hinge joint fencing from 2.5mm wire. Fencing shall be installed to manufactures recommendations
 - (ii) The maximum spacing of posts will be three (3) metres with corner braces and strainers as recommended by the manufacturer. Minimum post specification will be 75mm diameter CCA treated timber or 50mm NB galvanised steel posts and must be capped.
 - (iii) The wire mesh must be installed on the trackside of any supporting posts.

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(b) Location

(i) A safety fence will be located a minimum of 10 metres from the outside edge of the track.

5. Spectator Fence

A spectator fence is used to control the access of spectators and unauthorised persons into dangerous or controlled areas and to maintain a separation from safety or catch fence at all tracks. (a) Construction

A spectator fence must be a minimum of five (5) 2.5mm wire strands evenly spaced over the entire height, support posts at a maximum spacing of three metres. It will have a minimum height of 0.9 metres. A spectator fence is to have warning signs at 10m spacings stating, "KEEP OUT – PROHIBITED AREA".

(b) Location

In all areas where spectators are allowed, a spectator fence will be installed, set back a minimum of 0.8 metres and a maximum 1.8 metres from any safety fence or safety catch fence.

6. Security Fence

A fence erected to define and maintain a secure area such as parc ferme. It may be permanent or temporary. The fence will normally be 1.8 to 2.4 metres high chain wire supported on posts.

TRAC 1.09 Fire Extinguishers:

1. Fire Extinguishers are to be located at the following positions.

(a) At the weight in scales and at least four other accessible points in the paddock area for meetings with up to 200 entrants plus one additional extinguisher for each 100 (or part thereof) entrants.

For National Championships, fire extinguishers are to be located at the scales, start grid and four accessible points in the paddock area.

(b) At any fuel dispensing area, if in use.

(c) At any fuel testing area, if in use.

(d) At all flag points.

2. Fire extinguishers to be of a type suitable for flammable liquid fire and be non-hazardous to humans. Minimum 2.5kg and must have current certification tag.

3. Notices for fire extinguishers, 1000mm by 600mm, with lettering a minimum height of 180mm, are to be located with the bottom of the sign, minimum 2.0 metres above the ground at all locations in the parc ferme/paddock area, exceptions being the scale area and the fuel dispensing and testing areas and these areas must have suitable signs displayed.

4. Entrants may be required to supply an approved filled fire extinguisher in their paddock space, but the presence of such extinguisher shall not relieve the organisers of the obligation to supply adequate fire fighting equipment for the circuit as a whole.

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TRAC 1.10 Track Lighting:

1. Start Grid and Weigh Area

Must be such that no shadows are cast, which may be a danger to competitors and pit crews whilst starting or retrieving karts

2. Paddock

Must be adequate enough for competitors and pit crew to move around the paddock without endangering themselves by objects hidden in shadows.

3. Track

(a) No point of the track surface will measure less than 15 Lux.

(b) Track lighting is to be measured at ground level on the centre line of the track.

(c) No section of track surface will have its intensity of lighting vary by more than 20% over a 5m distance.

(d) No lighting source shall cause glare to drivers or officials.

(e) All new track lighting must be designed by a qualified person.

4. Emergency Track Lighting

Tracks will have emergency lighting. The emergency lighting will have an alternate source of power supply to that which powers the main track lighting. The emergency lighting will be permanently on during racing. The minimum number of lights will be one (1) light for every two hundred metres of track. Positioning of the lights will be at the discretion of the State Track Safety Inspector. Alternate power supply must comply to electrical authorities.

5. Control Lights (Flashing Amber Lights / Red and Blue Lights)

The minimum requirement for lights shall be 150mm diameter incandescent or a minimum of 100 square centimetres of LED mounted a maximum 2 meters high. Blue and amber lights shall be independently switched, red shall be full course. All lights shall be controlled from a central point. All cabling must be either underground or around fence lines and must comply with relevant electrical codes. Position, construction and number positions of lights to be decided in consultation with State Track Safety Inspector.

TRAC 1.11 Paddock Area:

(1) The paddock must be clearly defined and fenced. Under most conditions the public are permitted in the paddock. All karts shall be accommodated within the paddock area. The paddock must be of sufficient area to cater for the maximum number of karts likely to attend a race meeting.

(2) The paddock area surface is to be of a suitable material, graded and drained to maintain access during all weather conditions.

(3) The access ways to paddock spaces are to be a minimum width of 3 metres.

(4) A trade area is to be set aside for exclusive use of Trade Vehicles that have prior arrangements with the Promoters.

(5) The promoting club, in conjunction with the State Track Safety Inspector, will designate a safe area for the starting of kart engines. This area will be clearly marked and sign posted.

(6) All circuits shall have a main notice board. This board is to have a map showing;

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- (a) emergency vehicle access routes
- (b) fire extinguishers
- (c) Parc Fermé boundary
- (d) paddock boundary
- (e) emergency phone numbers
- (f) kart engine starting area

The notice board will be located in the paddock area and will be used to display all official communications to competitors and race information. It is recommended that the notice board be lockable and protected from the weather.

TRAC 1.12 Start Grid and Weigh In:

The entrance and exit to and from the track must be clearly defined “OUT” on the start grid and “IN” on the weigh grid.

The direction of racing and practice is to be displayed by an all weather arrow sign. The location of the sign is to be determined by State Track Safety Inspector.

1. Start Grid Area

- (a) Must be large enough to accommodate the maximum number of starters permitted on the track.
- (b) The kart positions on the grid are to be clearly marked as per grid layout diagrams. (single/double grid).
- (c) The grid surface is to be smooth bitumen sealed or concrete and well maintained.
- (d) The lane to the track must be fitted with a suitable gate of strength at least equivalent to the adjacent fence.
- (e) The sealed width of the lane to the track must be a minimum of 5m and the width between safety structures must be a minimum of 7.5metre.
- (f) The minimum grid surface width for a single grid is 7 metres.
- (g) The minimum grid surface width for a double grid is 12.5 metres.
- (h) As a minimum both sides of the start grid must be enclosed with a spectator fence spaced at a minimum of 7 metres to a maximum of 9 metres apart for a single grid and minimum of 12.5 metres to a maximum of 15 metres apart for a double grid.

2. Weigh In Area

- (a) The weigh in area must be fenced to prevent entry of unauthorised personnel. As a minimum a safety fence will be used.
- (b) Scales are to be located at the end of the weigh in area away from the track.
- (c) The surface is to be bitumen sealed or concrete and to be of sufficient area to accommodate the maximum grid capacity. (allow 4.0 m² per kart)
- (d) Access to the weigh in area will be by way of a deceleration lane. The sealed width of the deceleration lane must be a minimum of 1.5 m and a maximum of 2.5 m with an overall clear width of 3.0 m.
- (e) The deceleration lane will include suitable bends or a tyre chicane to slow the travel of karts.

The weigh in area should be protected from an out of control kart by a catch trap or safety barrier.

- (f) An entry lane to the deceleration lane may be painted on the track.

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TRAC 1.13 Parc Fermé Area:

The Parc Fermé may include the start grid area, the weigh in area and the weigh scales, an area for impounding karts for technical checking and any tyre or fuel impound area. The Parc Fermé must be clearly defined and fenced and under most conditions the public are not permitted in the Parc Fermé. Appropriate spectator or security fences will define the Parc Fermé areas. No smoking is permitted in this area and this direction must be clearly signposted.

TRAC 1.14 Emergency Communication:

A telephone must be provided at all circuits. A mobile phone will suffice where reception can be achieved. Where telephone reception is not available, radio contact with emergency authorities must be in place during competition.

TRAC 1.15 First Aid Requirements:

These vary from State to State but there must be clear access for an ambulance and suitable areas set aside for first aid facilities. It is recommended that a medical room be established for use by first aid personnel and for the treatment and recovery of injured persons in private. (refer Rule 3.25 of the AKA Manual.)

TRAC 1.16 Stewards Meeting Room:

- (1) All circuits will have an enclosed facility for conducting Stewards hearings. The room should be weatherproof and provided with power. Artificial lighting must be provided.
- (2) A board in the Stewards' room to have a facility map showing;
 - (a) fire extinguisher locations
 - (b) Parc Fermé boundary
 - (c) paddock boundary
 - (d) emergency phone numbers
 - (e) kart engine starting area/areas.
 - (f) sensor device area
 - (g) track layout

TRAC 1.17 Control Tower:

It is recommended that control towers be adequately covered, closed and ventilated with access by way of a permanent stairway. This area is to be considered out of bounds except for essential race day Officials or their delegated messengers.

TRAC 1.18 Fuel Testing Facilities:

All buildings, including portable structures such as shipping containers, which are used for the purpose of fuel testing, must have adequate Fresh Air Ventilation System (flow through or exhaust system).

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TRAC 1.19 Technical Inspection Area:

- (1) Enclosed and covered facilities with adequate lighting and suitable benches are to be provided for Engine Measuring and Fuel Testing.
- (2) An adequate secured area for the impounding of karts, tyres, fuel, etc. is required for all State and National Championships and other events as required by the AKA.

TRAC 1.20 Tyre Inflation:

Complexes that have a facility for fitting and inflating tyres must provide a safety cage (approved) and sign instructing the use thereof. Maximum outlet pressure for fitting, inflating and cleaning is 4 bar or 58 psi.

TRAC 1.21 Sensor Devices:

Pick up / sender / sensor devices are not permitted inside the circuit safety fence unless in an approved designated area.

TRAC 1.22 Amenities:

- (1) Toilet and canteen facilities are to comply with Local Council regulations.
- (2) The design and maintenance of all facilities should be such to ensure that the safety of spectators and competitors is paramount.
- (3) Paths and trafficable surfaces should be even and non-slip.
- (4) Electrical and communication wires should be under ground or strung on poles and any hazardous areas isolated.
- (5) All new tracks must have a toilet that is accessible for disabled persons.

TRAC 1.23 Parking:

- (1) All circuits must have a designated parking area for competitors, officials and spectators.
- (2) All circuits must have a designated area, outside the fenced-in-track area, for the storage of track maintenance equipment and the parking of service vehicles.
- (3) All circuits must have a designated area for parking an ambulance and pick up vehicle/s. this area must be positioned so as not to cause a hazard for competitors or officials. If necessary, a safety barrier must be constructed.

TRAC 1.24 Official Signage:

Refer to the AKA Track Safety Manual for details of official safety signage to be displayed at race complexes. Such signs should measure at least 1.8 metres x 1.2 metres in size and be a white background with the words WARNING in LARGE BOLD LETTERS, with the following words in LARGE BLACK TEXT.

- (1) Waivers

WARNING:- Go-Kart racing is dangerous.

Spectators are reminded that motor racing is dangerous and accidents can happen. All care is taken to protect the public, but spectators are warned there is a possibility of an accident causing injury, death or property damage. By entry into the racing circuit, the spectator acknowledges that there is a degree of danger, and the promoter, clubs, corporations, organisations and persons having any connection with the promoting, organising or conduct of the event shall have no liability to the spectator except where due care and skill has not been exercised.

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- (2) Practice restrictions
- (3) Direction of practice / racing (Refer to TRAC 1.12 of these regulations)
- (4) Fire Extinguishers (Refer to TRAC 1.09 of these regulations)
- (5) Requirement to sign Indemnity Form.
- (6) Recommendation covered footwear be worn at all times (practice/race meeting) whilst in paddock area.
- (7) Enclosed footwear must be worn on the out-grid / in-grid at all times.

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Section C:

The following are the regulations for all EXISTING CIRCUITS that have been approved and previously issued with an AKA Track Licence prior to 1st January, 2014.

TRAC 1.01 Track Design:

The shape of the track, both in plan and vertical profile, is not constrained by these regulations, as it is dictated by certain variable factors, the types of competition for which the course is intended, the character of the terrain, considerations of economics, aesthetics, tradition, etc. However, the construction of the circuit must conform to any safety requirements, which may be specified by the AKA. Those responsible for a circuit design must also ensure that the prescriptions laid down by the Public Authorities are complied with and must obtain their official approval.

TRAC 1.02 Circuit Plan and Approval:

Prior to the construction of a new circuit or alteration of any existing circuit, 10 copies of the circuit plans must be submitted to the National Track Safety Committee for approval. All circuits will have a professionally drawn plan at a scale of 1:500 showing the track layout, surface contours, the direction of the racing, buildings, installation, access roads, race areas, the location of the starting grid, ambulance access and parking, the medical centre, pickup vehicles and of the Marshals' posts, as well as a Paddock plan with the pit spaces and access ways. Non-compliance with this rule will be subject to an investigation and a possible penalty imposed and/or the track licence not being issued by the NKC.

TRAC 1.03 Track Density/Maximum Number of Starters:

Track Length (Metres)	Track width at narrowest point		
	6m	7m	8m
<500	20	22	24
500 - 625	22	24	26
626 - 750	24	26	28
751 - 875	28	30	32
876 - 1000	32	34	36
>	NA	38	40

Upon application to the State Track Inspector a Club may apply for an increase of a maximum of 4 karts to the density of their existing track. This will be approved on the basis that the out grid capacity and Ingrid capacity match the track density.

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TRAC 1.04 Circuit Grading Criteria:

GRADE	EVENT STATUS	CRITERIA
International	CIK/FIA International	Refer CIK/FIA Homologation Regulations
A	National Sprint Championships	Circuits to be a minimum length of 750 metres and a minimum width of 7
B	State Open Sprint	Circuits to be a minimum length of 500 metres and a minimum width of 7
C	State Closed Sprint Titles	Circuits to be a minimum length of 500 metres and a minimum width of 6
D	National and State	Circuits to be a minimum length of 350 metres and a minimum width of 7
E	Any Open or Closed Race	Circuits to be a minimum length of 300 metres and a minimum width of 6

TRAC 1.05 Track Dimensions:

1. Length:

The maximum length of any track will be 1.7km (except as approved by KA). The line around a track used for determining its length will be the centre line.

2. Straight:

The length of a straight will be measured from tangent points of the proceeding and following corners.

3. Start Straight :

(a) All tracks are to have a minimum distance of 50m from the start line to the start of the first corner and be a minimum length of 80m.

(b) The first corner must be as "open" as possible and a minimum width of 7m.

4. Track Width:

(a) All straights over 80m in length are to be minimum width of eight (8) metres; elsewhere the minimum width will be 7 metres.

(b) For all existing tracks, all straights over 80m in length are to be minimum width of 7 metres; elsewhere the minimum width will be 6 metres.

(c) Track widths will be measured over the sealed bitumen surface, excluding any kerbs or ripple strips.

5. Separation:

(a) The distance between high speed converging sections of track shall be a minimum of ten (10) metres, between track edges, unless the National Safety Commission approves an alternative.

(b) All other sections of the track shall have a minimum of ten (10) metres separation, apart from the area around the internal radius of any corner.

6. Track Gradient:

The recommended maximum longitudinal gradient will be 5% and recommended maximum transverse gradient will be 10%.

7. Vertical Clearance:

There shall be no permanent or temporary objects within 2.4 metres vertically above the track surface.

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TRAC 1.06 Safety Features:

1. Surface:
 - (a) The surface of bitumen tracks will be sealed with bitumen / concrete. The surface of dirt tracks may be dirt / concrete / bitumen.
 - (b) The surface must be smooth and continuous and have sufficient fall to prevent formation of puddles in wet conditions (a minimum of 2.5% being recommended).
 - (c) Where practical, the track surface levels should follow the natural contours. Verges should be graded level with the track for a distance of 5 metres from the track edge.
 - (d) Please note that severe positive camber on corners can have a launching ramp effect and should be avoided.
 - (e) Both edges of the track surface will be defined with a 100mm wide white line.
2. No Mans Land:
 - (a) All tracks are to have a "no mans land" marked on the track immediately before the starting line.
 - (b) The marking will be located in the centre of the starting straight, a minimum of 200mm and a maximum of 800mm in width and must be painted white.
 - (c) The length of the markings will be as required by the State Track Inspector but will be a minimum of 25 metres from the start line.
3. Baulk Line:

All tracks are to have a bright green colored line painted across the out-grid lane a minimum of 5 metres back from the circuit edge (or appropriate to suit local conditions with approval of State Track Safety Inspector).
4. Acceleration Line:

All tracks will have a yellow line painted on the track, at 90 degrees to the track edge, 60 metres (or appropriate to suit local conditions with approval of State Track Inspector) prior to the start lights and /or Starting Point.
5. Start Line:

A white line painted across the track at 90 degrees to the track edge, which may also be the finish line.
6. Finish Line:

A white line painted across the track at 90 degrees to the track edge.
7. Breakdown Lane:
 - (a) Where a mechanical breakdown lane is provided it shall be adjacent to the main track.
 - (b) There must be a chicane at the entry to the deceleration lane aimed at substantially reducing the speed of the karts entering the breakdown lane.
 - (c) The sealed width of the deceleration lane must be a minimum of 1.5 metres and a maximum of 2.5m.
 - (d) The sealed width of the stopping area of the breakdown lane must be a minimum of 3.0 metres and separate from the main track by a safety barrier.
8. Track edges, verges and run-off areas:
 - (a) The track must be bordered all along its length on both sides by compact verges having an even surface.
 - (b) These verges must be free of debris or gravel and must normally be grass-covered over a minimum width of 1.0 metres

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- (c) The verges must be continuation of the transverse profile of the track, with no step between track edge and verge. Any horizontal transition must be very gradual and progressive.
- (d) A run-off area is that section of ground between the verge and the first line of protection and unless otherwise specified must have the same basic characteristics as the verge, although it may be less stabilised. The run-off area must be graded to the verge. If there is a negative slope, this must not exceed 5% for a distance of 5 metres from the track edge; if there is a positive slope, this must not exceed 10% for a distance of 5 metres from the track edge, with a smooth transition from track to run-off area.

9. Corners:

Kerbs must be laid on the inside of corners to prevent karts moving onto the inside verge of corners in normal racing.

10. Kerbs Outside

- (a) Are to be "a maximum" 500 mm wide.
- (b) The surface may be smooth or rippled.
- (c) They will be sloped at a negative angle to the plane of the track and a maximum of 5 degrees.

11. Kerbs Inside:

- (a) Are to be a maximum of 500 mm wide.
- (b) Their surface must form a positive angle to the plane of the track being a minimum of 15 degrees and maximum of 20 degrees (equivalent to 80mm to 110mm rise measured at the kerb extremity, for a 300mm wide kerb).
- (c) As an approved alternative the current CIK/FIA kerb profile may be used.
- (d) It is recommended that the drainage slots be inserted in inside kerbs.
- (e) It is recommended that the face of the kerb be 25mm high reference the National Circuit Construction and Safety Standards Manual..
- (f) The adjacent verge will be finished level with the top of the kerb.

TRAC 1.07 Locating Safety Structures:

The primary and optimal form of protection for karts is to ensure suitable run off distances are provided between the edge of the track and any solid object. In general the minimum distance to a fence or barrier will be five (5) metres.

- (a) Safety barriers and catch traps must be installed to prevent karts crossing in any area where two sections of track are close to each other and/or there is a possibility that karts may cross.
- (b) Solid objects should be removed from the track area where possible. If this is not possible, then suitable run off distance and protection is required. Any structure or solid object of any type must have safety barriers and catch traps to protect competitors.

TRAC 1.08 Safety Structures:

1. Safety Barriers:

Shall be designed to absorb the energy from impact with a kart and to rapidly decelerate an out of control kart with minimum damage to both kart and driver.

- (a) Construction
 - (i) Tyre Barriers

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Barriers to be constructed of similar **size automotive tyres** securely fixed in vertical stacks and longitudinally in a manner that forms a flexible structure. The tyre wall shall curve away at the end of the barrier.

The tyre barriers be constructed of similar size automotive or race car tyres (no commercial or 4wd tyres) securely bound in vertical stacks and longitudinally in a manner that forms a flexible structure. The tyre wall shall be constructed so as to curve away at the end of the barrier. Tyre barriers are constructed to a minimum of 600mm in height and by four stacks long, unless otherwise directed.

It is recommended that tyres are bolted or tek screwed to form barrier sections of four bundles. Washers will be used each side of the tyre wall. When using tek screws a suitable "speed nut" must be fitted to the thread end. Bolt or screw ends shall not protrude from the outside face of the completed wall. The barriers shall not be attached to the ground so they can move freely when contacted by a kart. Tyres must be in good condition.

(ii) Plastic Barrels

Plastic barrels may be used as a safety barrier around the track perimeter. **They cannot be used at flag points.** They may be used in other locations at the discretion of the State Track Inspector. The barrels must be parallel-sided plastic with minimum size of 600mm diameter x 900mm high. The barrels will have holes drilled in their bases to drain water. The barrels must be bolted together at the top and bottom, in-groups of five barrels. The barrels on the end of each group of five barrels must be filled with a maximum of 100mm of crushed stone as ballast. Each group of five barrels must be tied to the adjoining group with synthetic rope, minimum 8mm UV protected. They shall only be used in an upright position.

(iii) Alternatives – Safety barriers may be constructed of approved alternate material provided they meet the same performance criteria as listed above.

(iv) Commercial – Current alternative commercial barriers approved are; -Air fence kart inflatables. (v) Separation – Safety barriers must be separated by a minimum of 300mm from any solid object or other safety structure.

(vi) Facings - may be used to supply a continuous belting face to safety barriers in the areas of frequent impact. Minimum height to be 500mm, minimum thickness 5mm.

(vii) Fixings

- Rope shall be durable synthetic of a minimum 8mm diameter, UV protected.
- TEK screws will be a minimum of 4mm diameter with 25mm diameter washers each side of the fixing.
- Bolts will be a minimum of 4mm diameter with 25mm diameter washer each side of the fixing.
- Facings to be secured with minimum 6mm dome headed bolt with washers and nuts internally only, to be fixed on every second tyre row top and bottom.

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(b) Locations

Safety barriers may be used in the following locations.

- (i) For separation between sections of track. Separation Barriers are constructed to be a minimum of 200mm in height and by 4 stacks long, unless otherwise directed.
- (ii) In high speed run-off areas, as a line of defense before a safety fence.
- (iii) For the protection of all trackside Officials posts including flag points, a double tyre barrier at right angles to the track will be constructed a minimum of four (4) tyres long by four (4) tyres high, with a minimum height of 720mm with a 300mm separation. All tyres to be bolted together as per TRAC 1.08.1(a)(i). Traffic side of tyre barrier to be painted a different colour from all other tyres.
- (iv) Where possible, safety barriers are to be a minimum of five (5) metres from the edge of the track and have verge and catch trap protection prior. (or appropriate to suit local conditions with approval of State Track Safety Inspector).

2. Catch Traps:

Catch traps are an area of loose material designed to slow a kart, which has left the track surface, before it impacts a safety barrier or fence.

(a) Construction

(i) Catch traps will consist of a bed of woodchips a minimum of 2 metres wide by a minimum of 300mm high at the leading edge, the leading edge to be kept as near to vertical as possible. The height of the woodchip bed must remain constant throughout the width and length of the bed. The woodchip will be raked regularly to maintain a loose consistency.

OR

- (ii) A bed of gravel a minimum of two metres wide by 250mm deep set down 250mm into the existing surface level so as to produce a level leading edge. (In total 500mm deep) The stone to be used shall be either round river stone or clean crushed stone of a single size 5 – 10mm. On a regular basis, the surface of the trap is to be deeply raked up into ridges approximately 100mm deep and 200mm apart. A correct prepared gravel trap should be difficult to walk on.
- (iii) If either material is not available, then a locally available suitable non-compactable material may be used as approved by State Track Safety Inspector in consultation.
- (iv) In high-speed run-off areas the width of the trap will be increased to 4 metres.
- (v) The catch trap must be graded to the verge or track surface. If there is a negative slope, this must not exceed 5% for a distance of 5 metres from the track edge; if there is a positive slope, this must not exceed 10% for a distance of 5 metres from the track edge, with a smooth transition from track to run-off area.

(b) Locations

- (i) In front of fences in high-speed areas.
- (ii) In all areas where deemed necessary by the State Track Safety Inspector.

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3. Safety Catch Fence:

A catch fence is a last line of restraint in critical areas where a kart may otherwise be projected over a safety fence or crossing to another section of track. It will normally only be used on existing circuits. On new circuits and alterations to existing circuits, it is preferable to provide adequate run-off areas rather than to rely upon barriers to control karts.

(a) Construction

- (i) A 50mm square x 2.5mm diameter chain wire fence with steel rails, or a heavy wire or cable along the top, and a heavy wire or cable along the bottom. Fencing shall be installed to manufactures recommendations.
- (ii) A minimum height of 1.8 metres.

(b) Location

- (i) A catch fence will normally be located in high speed run-off areas.
- (ii) A catch fence will be located at the maximum distance possible from the outside edge of the track.
- (iii) Internal safety catch fences to be removed.

4. Safety Fence

A safety fence is used to control the access of spectators and unauthorised persons into dangerous or controlled areas. All circuits will have a safety fence for the full perimeter of the track. Gates may be provided but these must be able to be locked. Gates must only swing inwards.

(a) Construction

- (i) As a minimum a safety fence will be 1.15 metres high above the adjacent ground levels. It will be constructed from heavy galvanised wire with a 2.5mm high tensile tensioned top wire and a lower panel of 6/90/30 hinge joint fencing from 2.5mm wire. Fencing shall be installed to manufactures recommendations
- (ii) The maximum spacing of posts will be three (3) metres with corner braces and strainers as recommended by the manufacturer. Minimum post specification will be 75mm diameter CCA treated timber or 50mm NB galvanised steel posts and must be capped.
- (iii) The wire mesh must be installed on the trackside of any supporting posts.

(b) Location

- (i) A safety fence will be located a minimum of 5 metres from the outside edge of the track.

5. Spectator Fence

A spectator fence is used to control the access of spectators and unauthorised persons into dangerous or controlled areas and to maintain a separation from safety or catch fence at all tracks.

(a) Construction

A spectator fence must be a minimum of 6/90/30 hinge joint fencing with 2.5mm wire, support posts at a maximum spacing of three metres, or must be a minimum of five (5) 2.5mm wire strands evenly spaced over the entire height, support posts at a maximum spacing of three metres. It will have a minimum height of 0.9 metres. A spectator fence is to have warning signs at 10m spacings stating, "KEEP OUT – PROHIBITED AREA".

(b) Location

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In all areas where spectators are allowed, a spectator fence will be installed, set back a minimum of 0.8 metres and a maximum 1.8 metres from any safety fence or safety catch fence.

6. Security Fence

A fence erected to define and maintain a secure area such as Parc Fermé. It may be permanent or temporary. The fence will normally be 1.8 to 2.4 metres high chain wire supported on posts.

TRAC 1.09 Fire Extinguishers:

1. Fire Extinguishers are to be located at the following positions.
 - (a) At the weight in scales and at least four other accessible points in the paddock area for meetings with up to 200 entrants plus one additional extinguisher for each 100 (or part thereof) entrants.

For National Championships, fire extinguishers are to be located at the scales, start grid and four accessible points in the paddock area.
 - (b) At any fuel dispensing area, (must have the appropriate approved fuel spillage kit), if in use.
 - (c) At any fuel testing area, (must have the appropriate approved fuel spillage kit), if in use.
 - (d) At all flag points.
2. Fire extinguishers to be of a type suitable for flammable liquid fire and be non-hazardous to humans. Minimum 2.5kg and must have current certification tag.
3. Notices for fire extinguishers, 1000mm by 600mm, with lettering a minimum height of 180mm, are to be located with the bottom of the sign, minimum 2.5 metres and maximum 3.5 metres above the ground at all locations in the parc ferme/paddock area, exceptions being the scale area and the fuel dispensing and testing areas and these areas must have suitable signs displayed.
4. Entrants may be required to supply an approved filled fire extinguisher in their paddock space, but the presence of such extinguisher shall not relieve the organisers of the obligation to supply adequate fire fighting equipment for the circuit as a whole.

TRAC 1.10 Track Lighting:

1. Start Grid and Weigh Area

Must be such that no shadows are cast, which may be a danger to competitors and pit crews whilst starting or retrieving karts
2. Paddock

Must be adequate enough for competitors and pit crew to move around the paddock without endangering themselves by objects hidden in shadows.
3. Track
 - (a) No point of the track surface will measure less than 15 Lux.
 - (b) Track lighting is to be measured at ground level on the centre line of the track.
 - (c) No section of track surface will have its intensity of lighting vary by more than 20% over a 5 m distance.
 - (d) No lighting source shall cause glare to drivers or officials.
 - (e) All new track lighting must be designed by a qualified person.
4. Emergency Track Lighting

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Tracks will have emergency lighting. The emergency lighting will have an alternate source of power supply to that which powers the main track lighting. The emergency lighting will be permanently on during racing. The minimum number of lights will be one (1) light for every two hundred metres of track. Positioning of the lights will be at the discretion of the State Track Safety Inspector. Alternate power supply must comply to electrical authorities.

5. Control Lights (Flashing Amber Lights / Red and Blue Lights)

The minimum requirement for lights shall be 150mm diameter incandescent or a minimum of 100 square centimeters of LED mounted a maximum 2 meters high. Blue and amber lights shall be independently switched, red shall be full course. All lights shall be controlled from a central point. All cabling must be either underground or around fence lines and must comply with relevant electrical codes. Position, construction and number positions of lights to be decided in consultation with State Track Safety Inspector.

TRAC 1.11 Paddock Area:

- (1) The paddock must be clearly defined and fenced. Under most conditions the public are permitted in the paddock. All karts shall be accommodated within the paddock area. The paddock must be of sufficient area to cater for the maximum number of karts likely to attend a race meeting.
- (2) The paddock area surface is to be of a suitable material, graded and drained to maintain access during all weather conditions.
- (3) The access ways to paddock spaces are to be a minimum width of 3 metres.
- (4) A trade area is to be set aside for exclusive use of Trade Vehicles that have prior arrangements with the Promoters.
- (5) The promoting club, in conjunction with the State Track Safety Inspector, will designate a safe area for the starting of kart engines. This area will be clearly marked and sign posted.
- (6) All circuits shall have a main notice board. This board is to have a map showing;
 - (a) emergency vehicle access routes
 - (b) fire extinguishers
 - (c) Parc Fermé boundary
 - (d) paddock boundary
 - (e) all track licences and Sport and Recreation licences.
 - (f) kart engine starting area
 - (g) evacuation plan and emergency phone numbers

The notice board will be located in close proximity to the Race Secretaries Office and will be used to display all official communications to competitors and race information. It is recommended that the notice board be lockable and protected from the weather.

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TRAC 1.12 Start Grid and Weigh In:

The entrance and exit to and from the track must be clearly defined "OUT" on the start grid and "IN"

on the weigh grid.' Covered Footwear' signs past this point.

The direction of racing and practice is to be displayed by an all-weather arrow sign.

The location of the sign is to be determined by State Track Safety Inspector.

1. Start Grid Area

- (a) Must be large enough to accommodate the maximum number of starters permitted on the track.
- (b) The kart positions on the grid are to be clearly marked as per grid layout diagrams. (single/double grid).
- (c) The grid surface is to be smooth bitumen sealed or concrete and well maintained.
- (d) The lane to the track must be fitted with a suitable gate of strength at least equivalent to the adjacent fence.
- (e) The sealed width of the lane to the track must be a minimum of 5m and the width between safety structures must be a minimum of 7.5metre.
- (f) The minimum grid surface width for a single grid is 7 metres.
- (g) The minimum grid surface width for a double grid is 12.5 metres.
- (h) As a minimum both sides of the start grid must be enclosed with a spectator fence spaced at a minimum of 7 metres to a maximum of 9 metres apart for a single grid and minimum of 12.5 metres to a maximum of 15 metres apart for a double grid.

2. Weigh In Area

- (a) The weigh in area must be fenced to prevent entry of unauthorised personnel. As a minimum a safety fence will be used in State and National Events.
- (b) Scales are to be located at the end of the weigh in area away from the track.
- (c) The surface is to be bitumen sealed or concrete and to be of sufficient area to accommodate the maximum grid capacity. (allow 4.0 m² per kart)
- (d) Access to the weigh in area will be by way of a deceleration lane. The sealed width of the deceleration lane must be a minimum of 1.5 m and a maximum of 2.5 m with an overall clear width of 3.0 m.
- (e) The deceleration lane will include suitable bends or a tyre chicane 4 high x 4 long to slow the travel of karts. The weigh in area should be protected from an out of control kart by a catch trap or safety barrier.
- (f) An entry lane to the deceleration lane may be painted on the track.

TRAC 1.13 Parc Fermé Area:

The Parc Fermé may include the start grid area, the weigh in area and the weigh scales, an area for impounding karts for technical checking and any tyre or fuel impound area. The Parc Fermé must

be clearly defined and fenced and under most conditions the public are not permitted in the Parc Fermé. Appropriate spectator or security fences will define the Parc Fermé areas. No smoking is permitted in this area and this direction must be clearly signposted.

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TRAC 1.14 Emergency Communication:

A telephone must be provided at all circuits. A mobile phone will suffice where reception can be achieved. Where telephone reception is not available, radio contact with emergency authorities must be in place during competition, practice, come-n-try days and working bees.

TRAC 1.15 First Aid Requirements:

These vary from State to State but there must be clear access for an ambulance and suitable areas set aside for first aid facilities. It is recommended that a medical room be established for use by first aid personnel and for the treatment and recovery of injured persons in private. (refer Rule 3.25 of the AKA Manual.)

TRAC 1.16 Stewards Meeting Room:

- (1) All circuits will have an enclosed facility for conducting Stewards hearings. The room should be weatherproof and provided with power. Artificial lighting must be provided.
- (2) A board in the Stewards' room to have a facility map showing;
 - (a) fire extinguisher locations
 - (b) Parc Fermé boundary
 - (c) paddock boundary
 - (d) evacuation plan and emergency phone numbers
 - (e) kart engine starting area/areas. (f) sensor device area
 - (g) track layout

TRAC 1.17 Control Tower:

It is recommended that control towers be adequately covered, closed and ventilated with access by way of a permanent stairway. This area is to be considered out of bounds except for essential race day Officials or their delegated messengers.

TRAC 1.18 Fuel Testing Facilities:

All buildings, including portable structures such as shipping containers, which are used for the purpose of fuel testing, must have adequate Fresh Air Ventilation System (flow through or exhaust system).

TRAC 1.19 Technical Inspection Area:

- (1) Enclosed and covered facilities with adequate lighting and suitable benches are to be provided for Engine Measuring and Fuel Testing.
- (2) An adequate secured area for the impounding of karts, tyres, fuel, etc. is required for all State and National Championships and other events as required by the KA.

TRAC 1.20 Tyre Inflation:

Complexes that have a facility for fitting and inflating tyres must provide a safety cage (approved) and sign instructing the use thereof. Maximum outlet pressure for fitting, inflating and cleaning is 4 bar or 58 psi. Air equipment must be tested annually.

TRAC 1.21 Sensor Devices:

Pick up / sender / sensor devices are not permitted inside the circuit safety fence unless in an approved designated area.

TRAC 1.22 Amenities:

- (1) Toilet and canteen facilities are to comply with Local Council regulations.
- (2) The design and maintenance of all facilities should be such to ensure that the safety of spectators and competitors is paramount.
- (3) Paths and trafficable surfaces should be even and non-slip.

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- (4) Electrical and communication wires should be under ground or strung on poles and any hazardous areas isolated.
- (5) All new tracks must have a toilet that is accessible for disabled persons.

TRAC 1.23 Parking:

- (1) All circuits must have a designated parking area for competitors, officials and spectators.
- (2) All circuits must have a designated area, outside the fenced-in-track area, for the storage of track maintenance equipment and the parking of service vehicles.
- (3) All circuits must have a designated area for parking an ambulance and pick up vehicle/s. this area must be positioned so as not to cause a hazard for competitors or officials. If necessary, a safety barrier must be constructed.

TRAC 1.24 Official Signage:

Refer to the AKA Track Safety Manual for details of official safety signage to be displayed at race complexes. Such signs should measure at least 1.8 metres x 1.2 metres in size and be a white background with the words WARNING in LARGE BOLD LETTERS, with the following words in LARGE BLACK TEXT.

- (1) Waivers
*WARNING:- Go-Kart racing is dangerous.
Spectators are reminded that motor racing is dangerous and accidents can happen. All care is taken to protect the public, but spectators are warned there is a possibility of an accident causing injury, death or property damage. By entry into the racing circuit, the spectator acknowledges that there is a degree of danger, and the promoter, clubs, corporations, organisations and persons having any connection with the promoting, organising or conduct of the event shall have no liability to the spectator except where due care and skill has not been exercised.*
- (2) Practice restrictions
- (3) Direction of practice / racing (Refer to TRAC 1.12 of these regulations)
- (4) Fire Extinguishers (Refer to TRAC 1.09 of these regulations)
- (5) Requirement to sign Indemnity Form.
- (6) Recommendation covered footwear be worn at all times (practice/race meeting) whilst in paddock area.
- (7) Enclosed footwear must be worn on the out-grid / in-grid at all times.

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Section D: SPEEDWAY:

1. TRACK LAYOUT

Direction of racing MUST be anti-clockwise.

The track should be close as possible, be on level ground and must be an oval (formed by two straights joined by two semi-circles).

If there is banking on the track it must grow from the inner edge of the racing surfaced to the outer edge of the track.

2. PREPARATION AND MAINTENANCE

The track should be properly watered in ample time prior to the meeting to ensure satisfactory racing and to protect the competitors and the public from excessive dust during the event.

To preserve the evenness of the track surface it should be graded as necessary between races.

3. TRACK MARKING

The inside and outside edges of the track must be clearly defined.

If there is no safety fence on the outer edge of the track, it should have a substantial run off zone as to arrest the progress of racing vehicles.

Safety fences must be constructed in such a way that they do not allow for the possibility of any part of kart or competitor to be caught under or between the boards.

3a. BAULK LINE

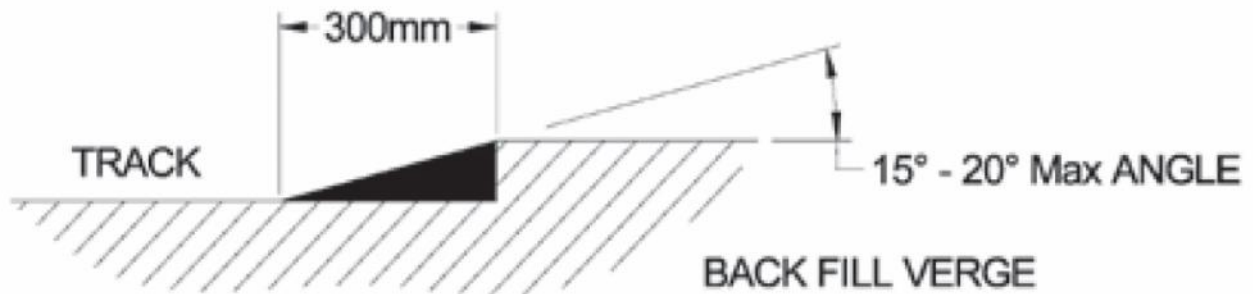
All tracks to have a point marked no more than 40 metres from the starting area that will be the baulk line.

3b. ACCELERATION LINE

All tracks to have a point marked approximately 25 metres prior to the Start / Finish line. This point is the acceleration line.

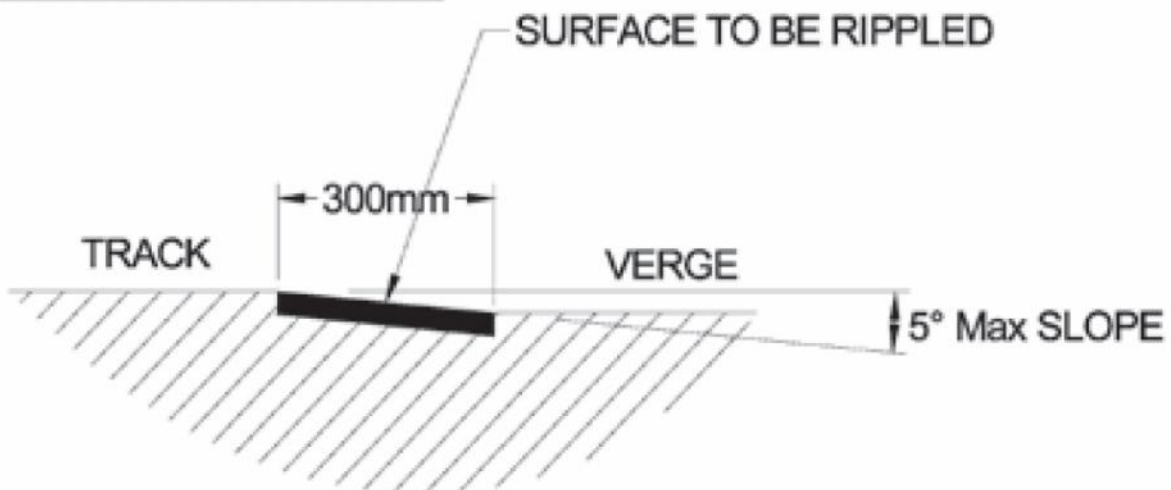
NATIONAL CIRCUIT CONSTRUCTION & SAFETY STANDARDS

KERBS - INSIDE



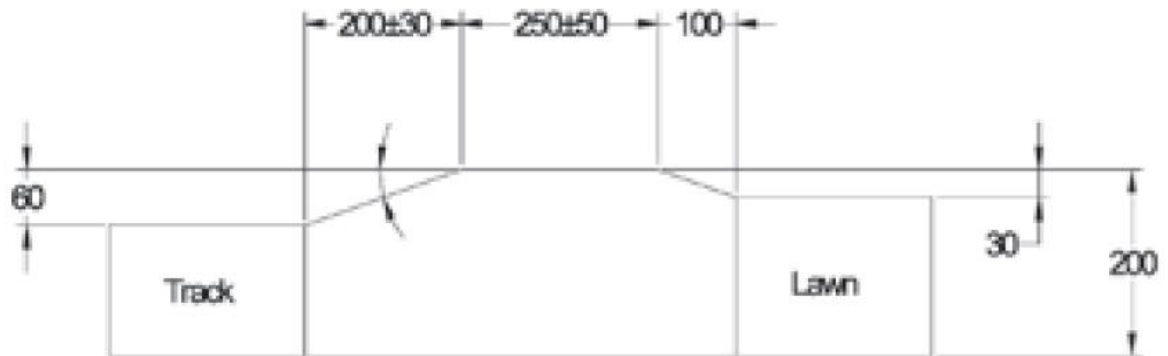
* Equivalent to 80mm to 110mm rise measured at the kerb extremity, for a 300mm wide kerb.

KERBS - OUTSIDE

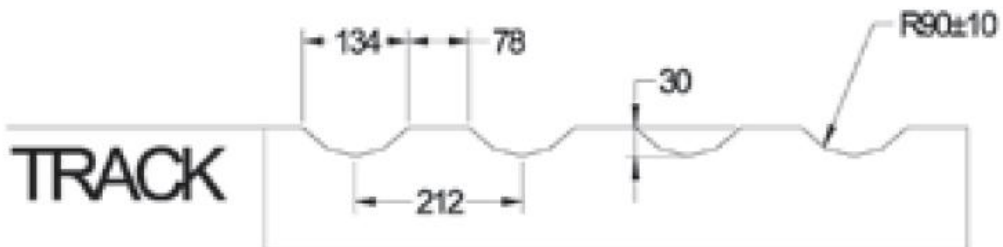


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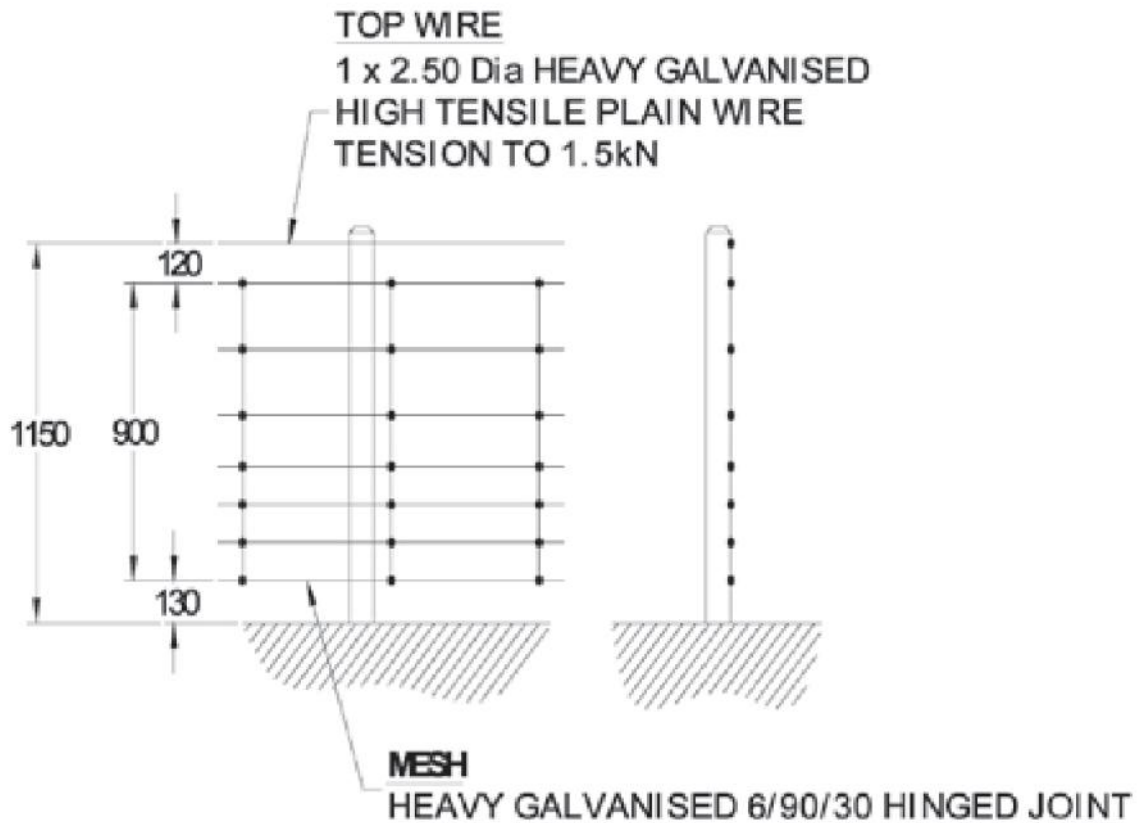
CIK Kerb



CIK Ripple Strip

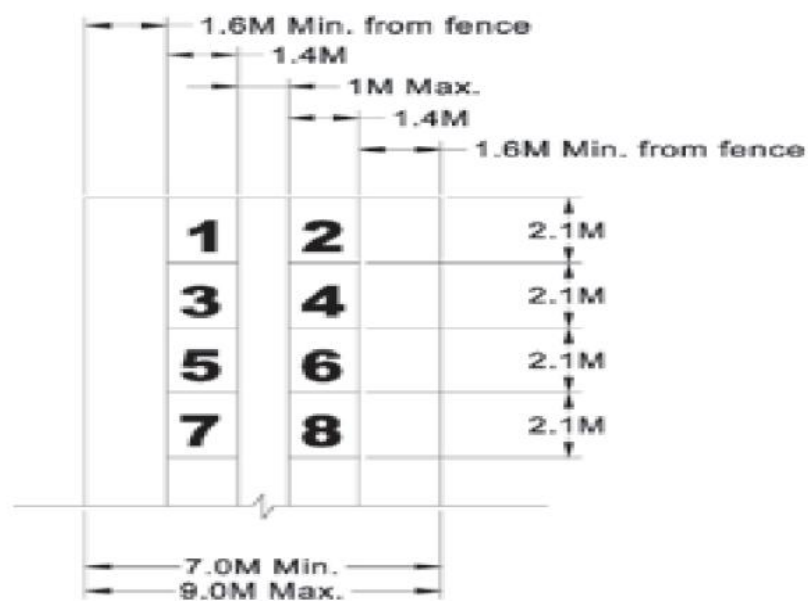


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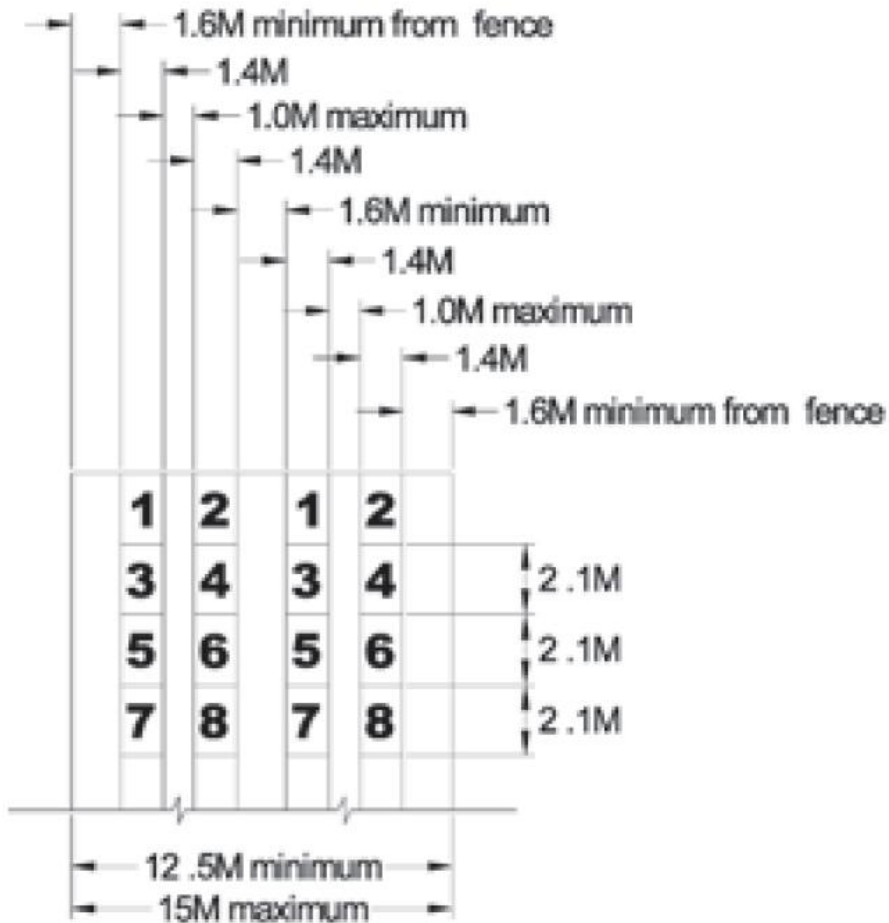
GRID LAYOUT

SINGLE GRID



NATIONAL CIRCUIT CONSTRUCTION & SAFETY STANDARDS

GRID LAYOUT DOUBLE GRID



OUT GRID FORMAT

44 Kart Grid Fishbone Pattern

