

Turning Zone Demarcation in Classic Technique Competitions

- no signage required
- World Cup level Mass Start is illustrated but for lower level competitions and Interval Start formats fewer tracks (2-3) would be used and the branches/whiskers are eliminated.

RED V – boards perpendicular at both sides of the track inside fencing line are the de facto indicators of the zone's limits.

Caution! These cannot interfere with the course, half size V-boards may be used. These V-boards can be moved if the zone is adjusted and tracks can be left inside the turning zone

Branches or Whiskers

placed between the tracks **are optional** but provides a better visual marker for high level competitions

Placement details:

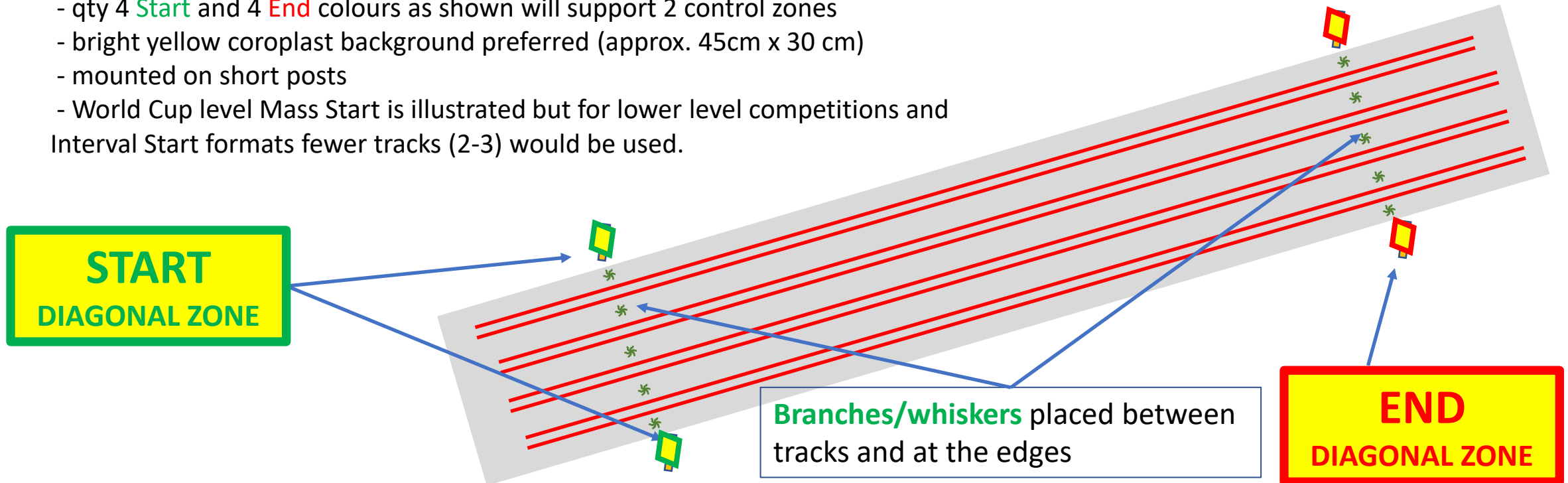
The positions for lifting and starting track-setting are marked with stakes as a reference for the course groomer. These are inspected/confirmed with the TD. Adjustments can be made following training and when changing course conditions dictate. Finishing turning zones too early is a common mistake that leads to un-necessary sanction considerations, better to extend them an extra metre or two after the tracks start, relative to the speed in the curve.

Turning Zones can also be placed on long and short downhill during which skiers will need to turn in one or more directions, here tracks are optional but most often they are removed.

Skiing direction

Technique Control Zone Demarcation – Classical Technique Competitions

- signage only, no V-boards
- qty 4 **Start** and 4 **End** colours as shown will support 2 control zones
- bright yellow coroplast background preferred (approx. 45cm x 30 cm)
- mounted on short posts
- World Cup level Mass Start is illustrated but for lower level competitions and Interval Start formats fewer tracks (2-3) would be used.



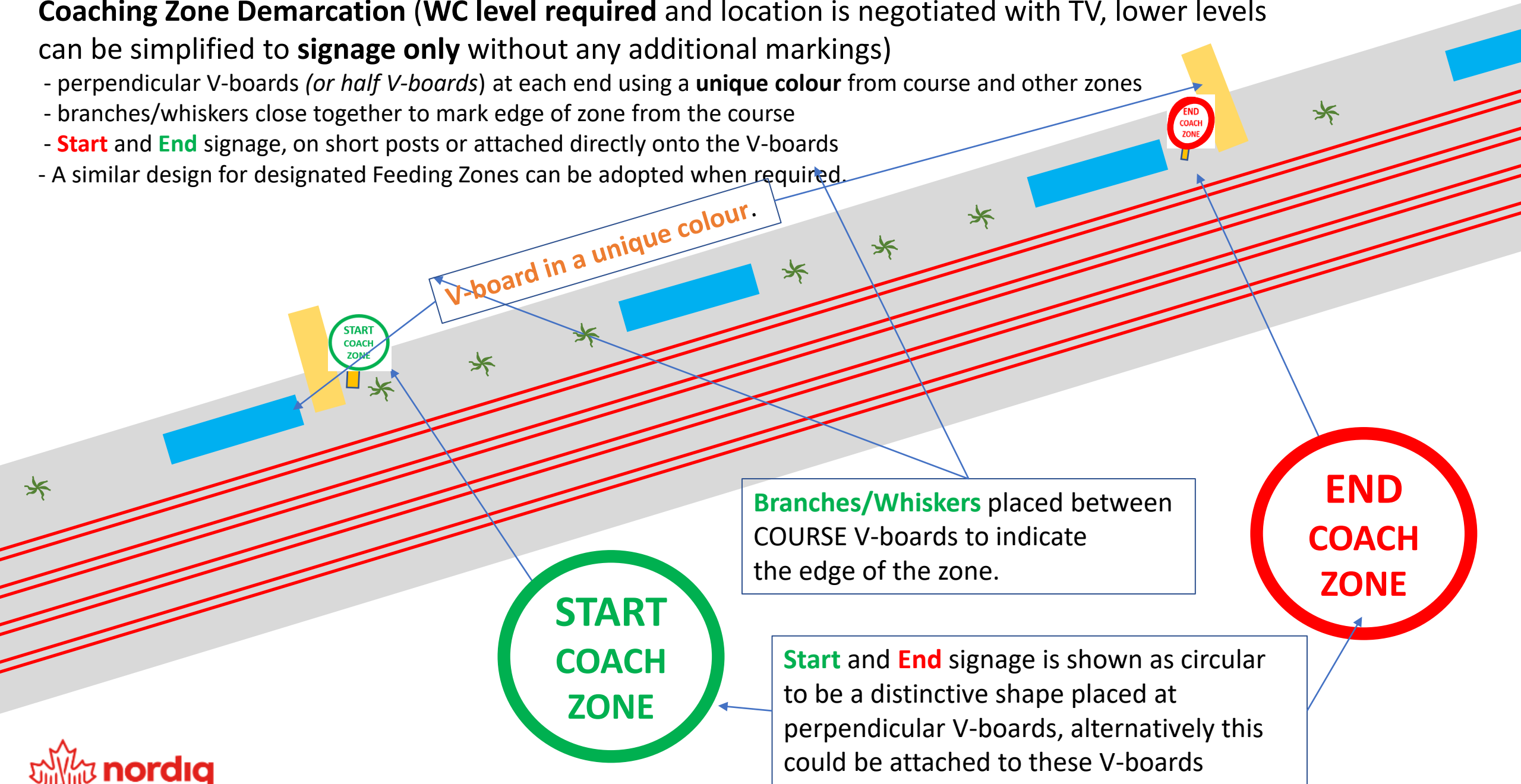
Placement Details: To be located on an uphill with **avg gradient 14-16%**, **zone length 50 – 70 m**, ideally straight or with slight curve and not too short. The START location must be placed part way up the hill 2-3 metres after the natural transition into Diagonal Technique, this point depends on the speed for the faster skiers in the days competition. The END should be marked just before the skier crests the top of the climb, these positions must be confirmed by the TD and observed during training.

The most common error in setting this zone is that it starts too early and skiers with too much speed cannot easily or naturally make the change into diagonal technique until they slow down.

It may be a fact that some courses do not offer any good possibilities, new courses should be to consider this need in designing good uphill. These technique control zones must be controlled by video recording if at all possible.

Coaching Zone Demarcation (WC level required and location is negotiated with TV, lower levels can be simplified to **signage only** without any additional markings)

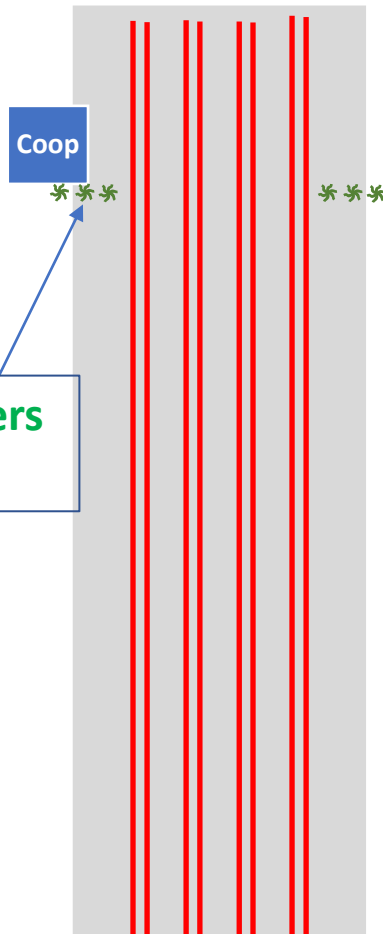
- perpendicular V-boards (or half V-boards) at each end using a **unique colour** from course and other zones
- branches/whiskers close together to mark edge of zone from the course
- **Start** and **End** signage, on short posts or attached directly onto the V-boards
- A similar design for designated Feeding Zones can be adopted when required.



Timing Points Demarcation – Intermediate Times and Bonus Sprint (WC only)

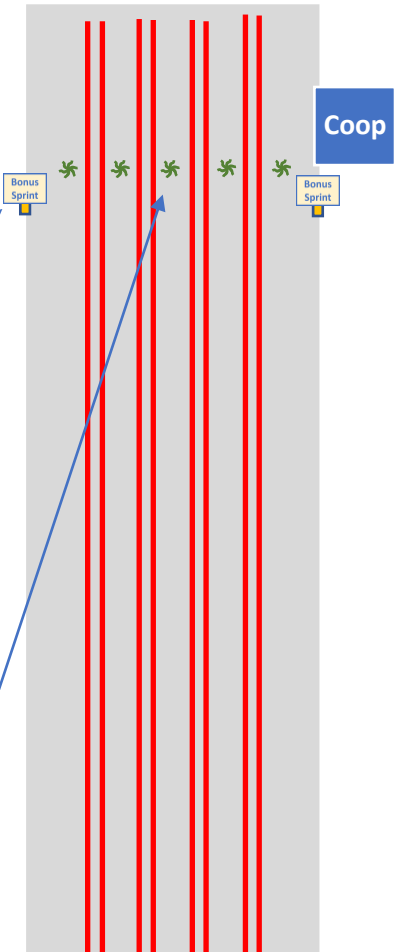
- FIS Marketing towers on the side
- No V-boards are required

Intermediate
Timing



Branches/whiskers
only at the sides

Bonus
Sprint



Branches/whiskers placed between
Tracks (in Classic) and at the edges

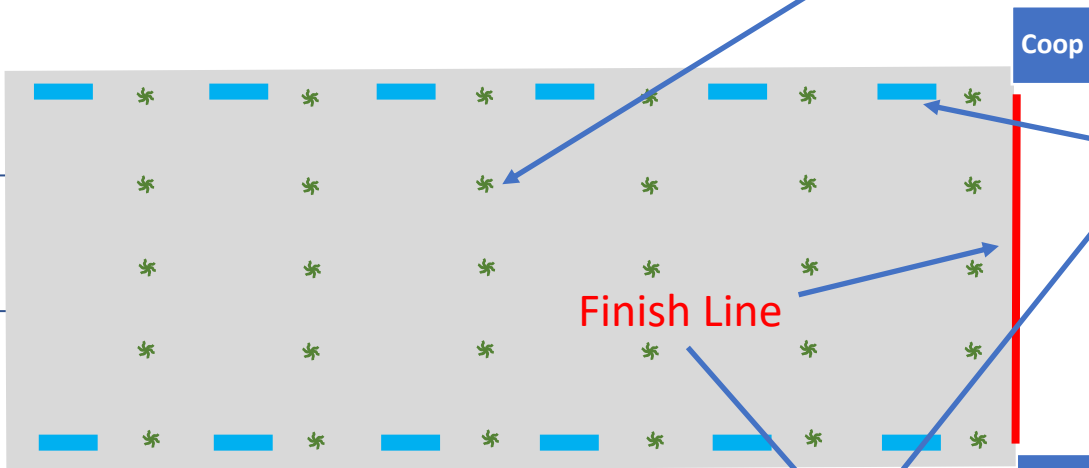
Finish Corridors & Finish Line

(fewer corridors/tracks required below WC level)

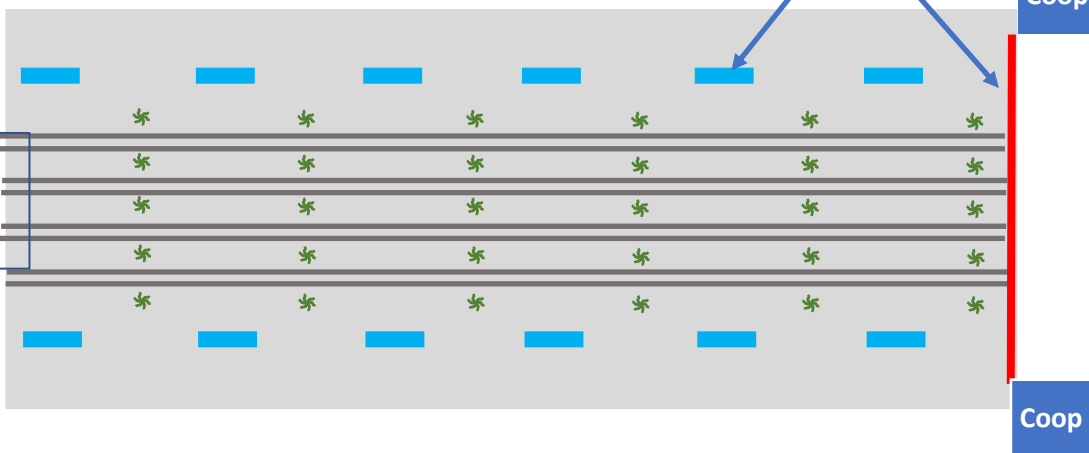
Branches/whiskers placed between tracks or corridors and at the edges
Course V-boards on the edge of defined track

V-Boards are placed to define the edge of the course. When fewer corridors or tracks are used as per ICR, the v-boards should be moved in to within .5 m from the tracks or defined corridor. This is an ideal opportunity to use 'closed ended' v-boards to reduce risk of ski snags.

Free Technique
- marked corridors

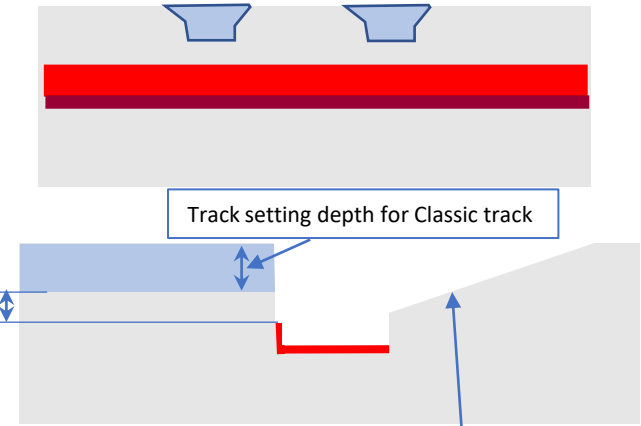


Classic Technique
- marked corridors



Finish Line Profile (not to scale)

Set depth to top of finish line material 2cm - 3cm below ski base, Can be more in soft conditions



Relevant FIS ICR technique references:

Section 310.2 Technique Definitions

Course, Start & Finish Zone specifications

Section C. Competition Formats

321. Interval Start

322. Mass Start Comp.

323. Skiathlon Comp.

324. Pursuit Comp.

325. Individual Sprints

326. Team Sprints

327. Relay Comp.

Relevant FIS Homologation Manual references:

Sections - 4.6 Sprint Competitions

- 5.1 Uphill Terrain (last paragraph)