

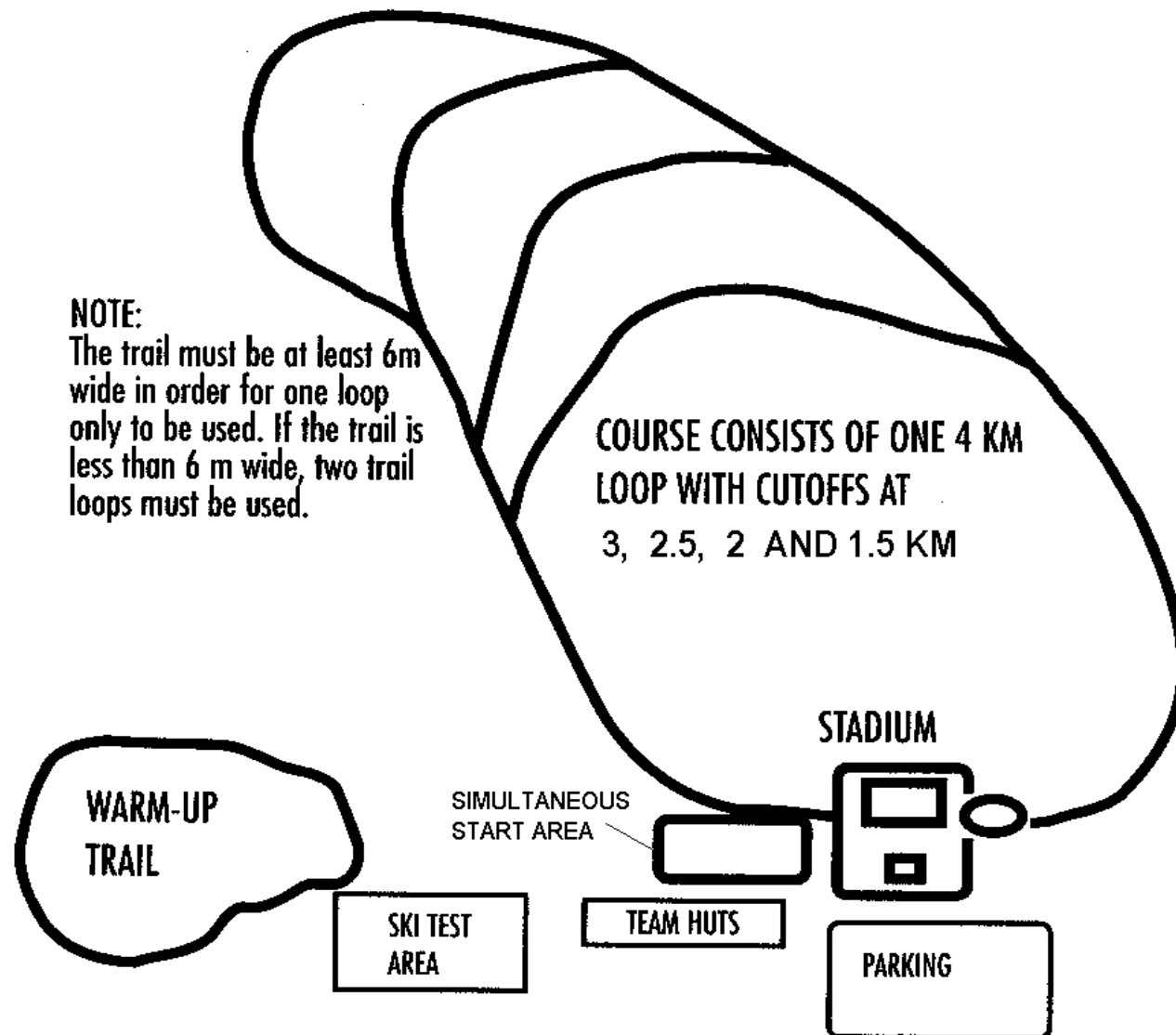
LESSON 4

Competition Facilities

Aim: To give you the information about biathlon facilities that you need as an official

- **General Layout - Description and Access Control Zones**
- **Stadium - components and specifications**
- **Start Areas and Relay Hand- over Zone - specifications**
- **Courses - specifications**
- **Range and Targets - specifications**

BIATHLON FACILITY EXAMPLE



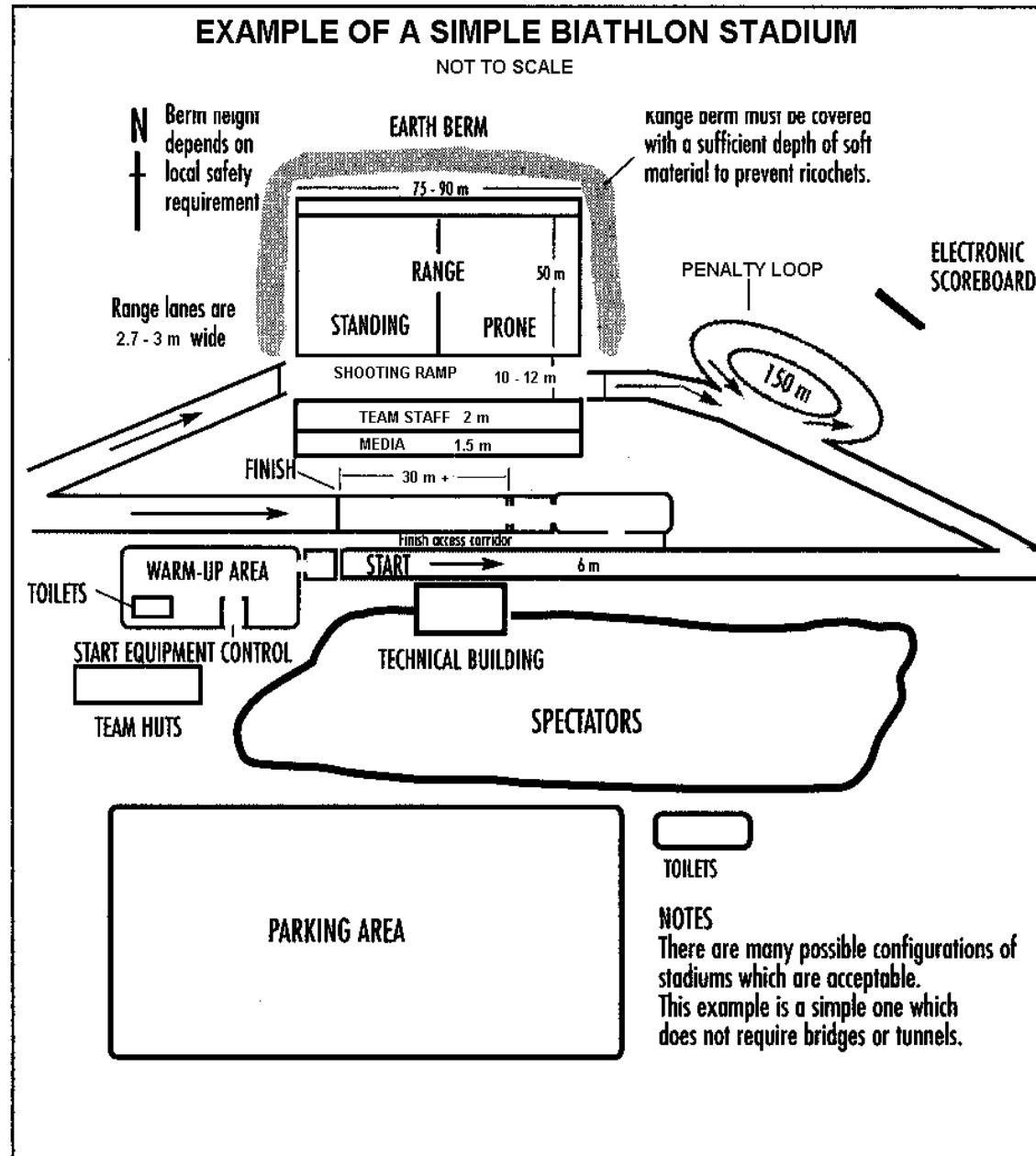
BIATHLON FACILITY ACCESS CONTROL ZONES

- 1- Ski test and waxing areas, team cabins**
- 2- Course**
- 3- Shooting range**
- 4- Start, warm- up and finish exit areas**
- 5- Start/ finish areas**
- 6- Competition office**
- 7- Technical areas - electronic timing/ targets, etc**
- 8- Doping control areas**
- 9- Media areas**
- 0- All operational areas**

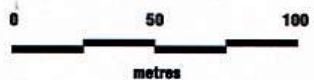
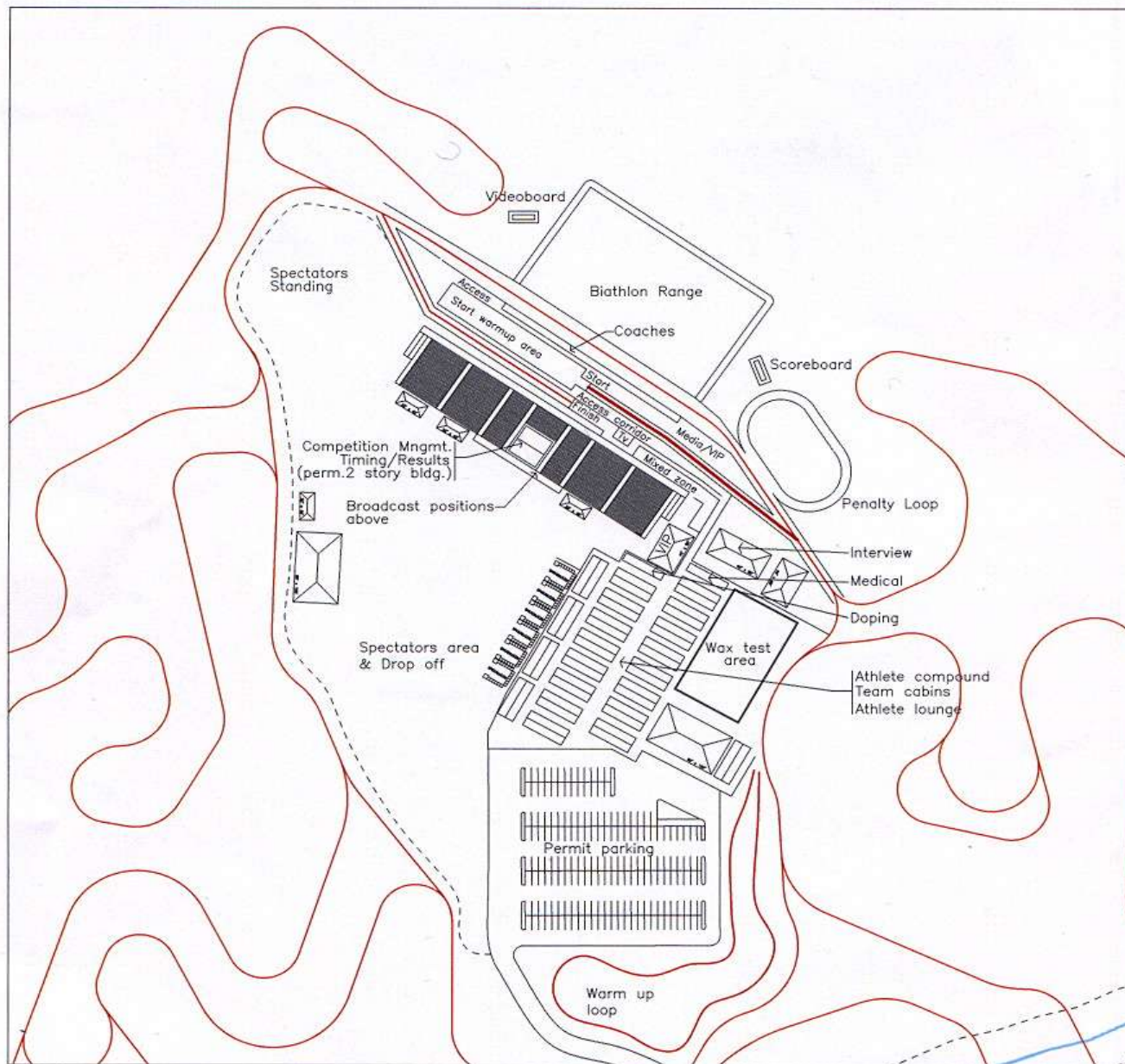
SPECIAL HOSTING AREAS

- I - IBU Lounge**
- Z - Organizing Committee VIP area**
- X - Organizing Committee Special Hosting area**

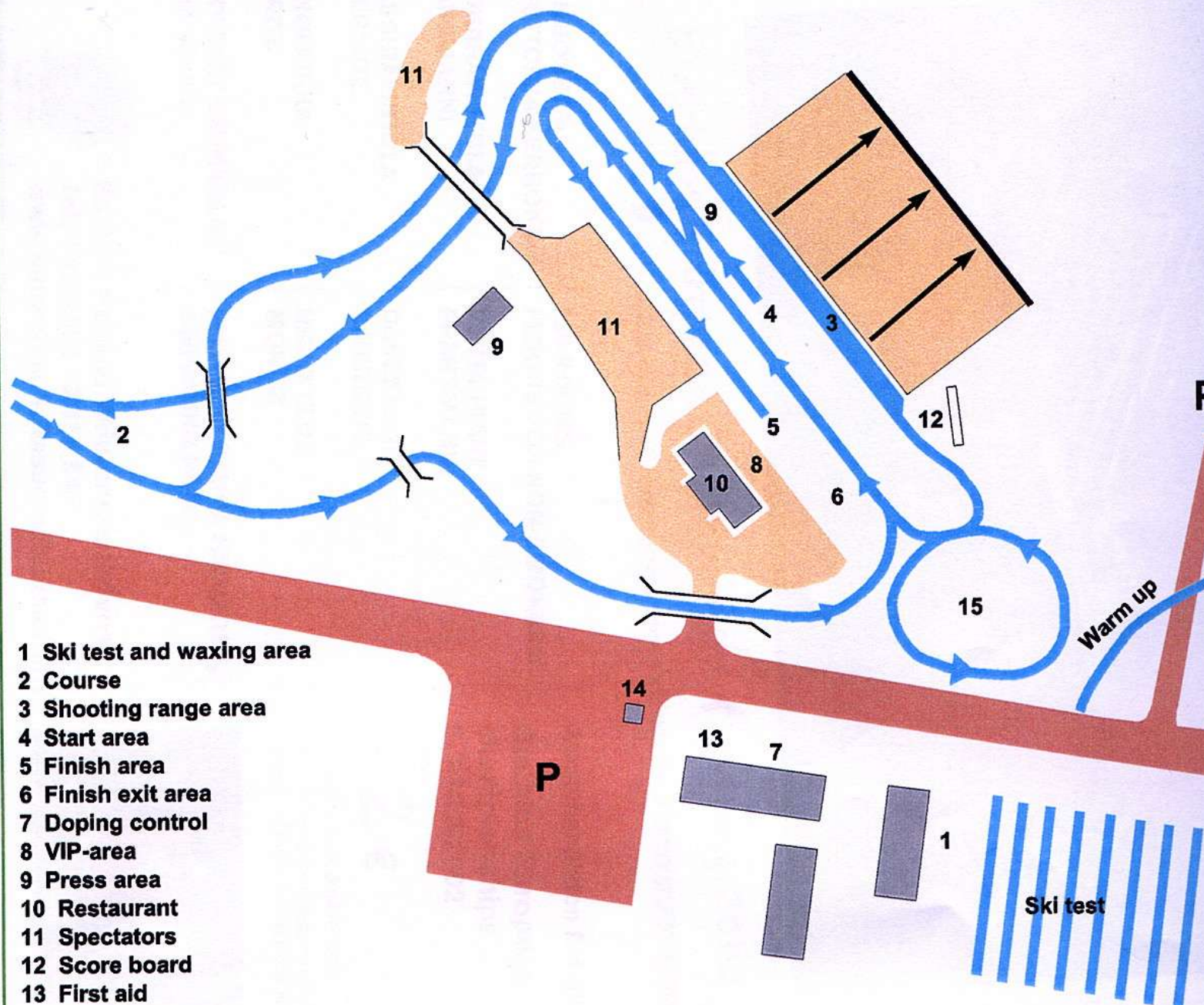
BIATHLON STADIUM EXAMPLE



ADIUM LAYOUT

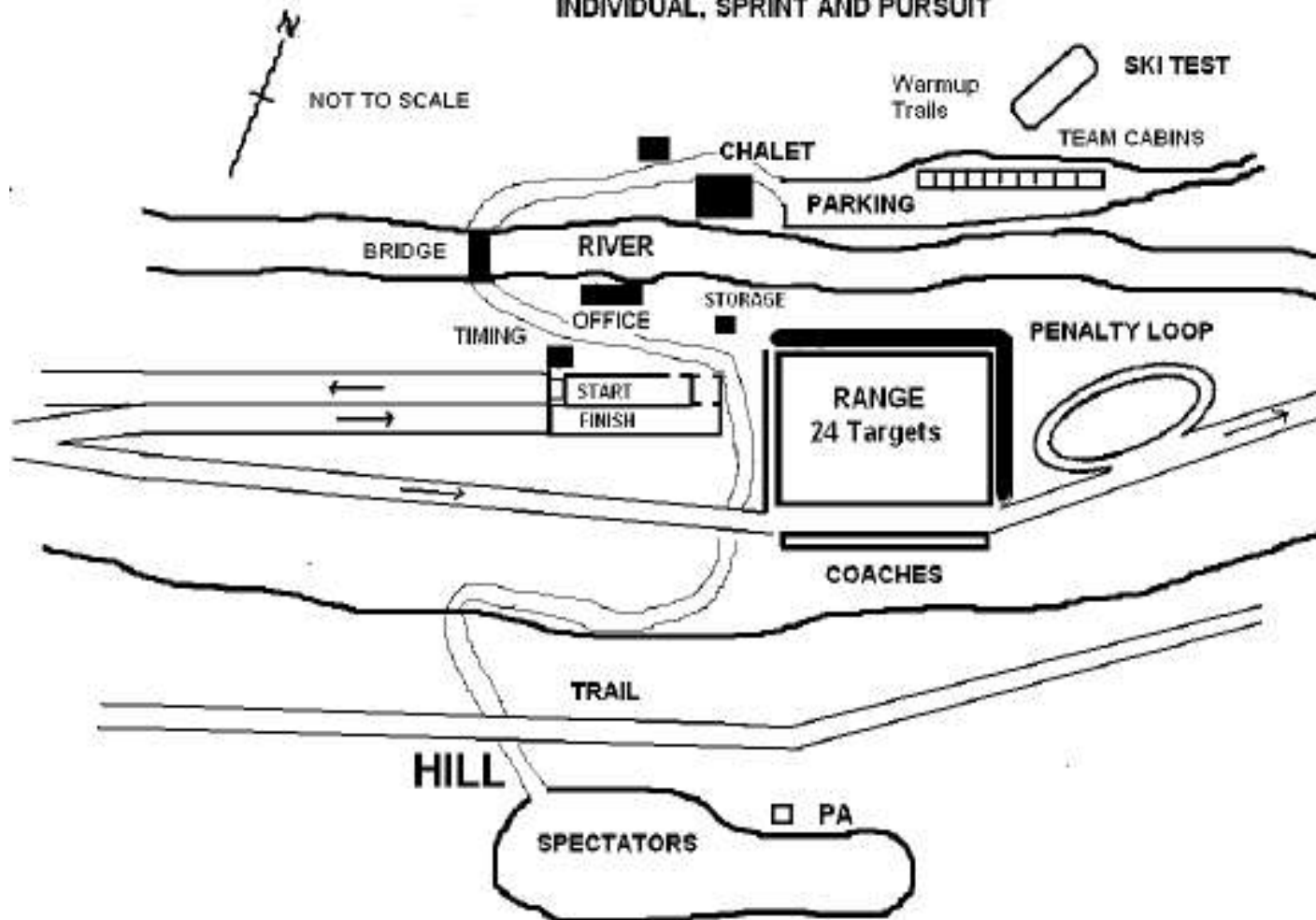


KONTIOLAHTI BIATHLON STADIUM



- 1 Ski test and waxing area
- 2 Course
- 3 Shooting range area
- 4 Start area
- 5 Finish area
- 6 Finish exit area
- 7 Doping control
- 8 VIP-area
- 9 Press area
- 10 Restaurant
- 11 Spectators
- 12 Score board
- 13 First aid
- 14 Information
- 15 Penalty loop

CHARLO BIATHLON STADIUM
FOR CANADA WINTER GAMES 2003
INDIVIDUAL, SPRINT AND PURSUIT



Charlo Stadium - Range



Charlo Stadium Range and Start/ Finish



Charlo Stadium Start/ Finish and Timing Building



Charlo Stadium - Range



EXAMPLE SIMULTANEOUS START AREA FOR RELAYS AND MASS START COMPETITIONS WITH ARRANGEMENTS

NOT TO SCALE

Competition
Trail

Sides of the converge area
must be clearly defined with
flags or fencing.

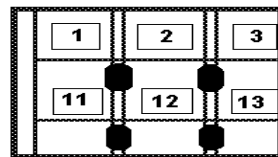
CONVERGE
AREA
smooth, level
untracked

50 m long

End of tracks 50 m line
is marked with small
flags between the sets
of tracks

REFEREES/STOPPERS

TRACKED AREA
smooth, level
50 m long
straight tracks
1.5 m between
tracks - center to
center



Start Line Detail
Numbering and
placement of
competitors

TD

START GROUP

Distance from start
line to competition
trail must be same
for all. Start line
may need to curve
or skew.

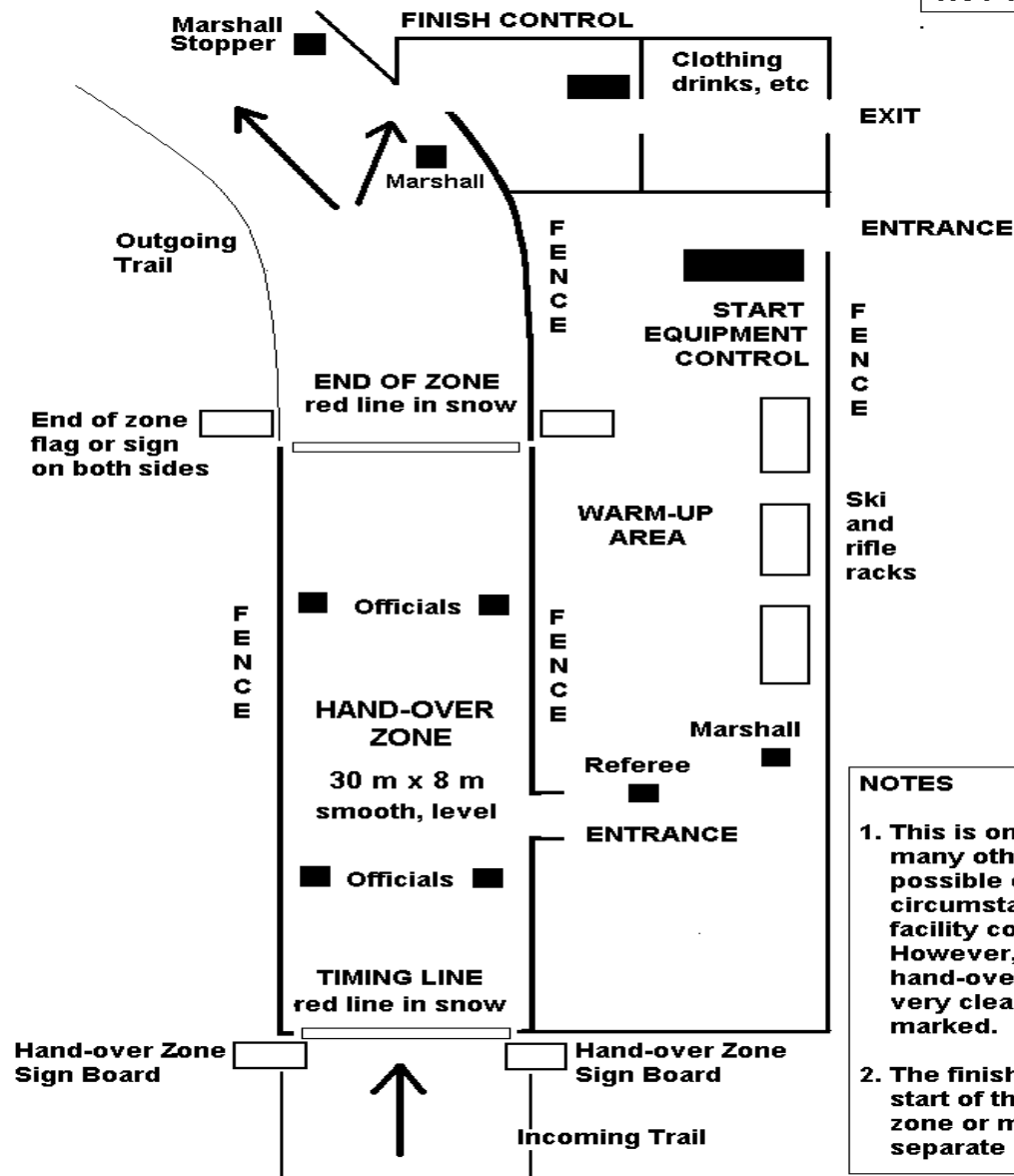
2.5 m between start rows

NOTES

1. Minimum 8 tracks but ideal to have all starters in 1 row.
2. Start rows may be added as required by number of teams.
3. For placement of starters in rows, refer to the rules and see start line detail diagram.
4. Start signals are: 1 minute, 30 seconds, "Ready", gun within 5 secs. Do not show clock.
5. TD informs stoppers about false start by radio - stop is made at 50 m line.

EXAMPLE RELAY HAND-OVER ZONE and ARRANGEMENTS

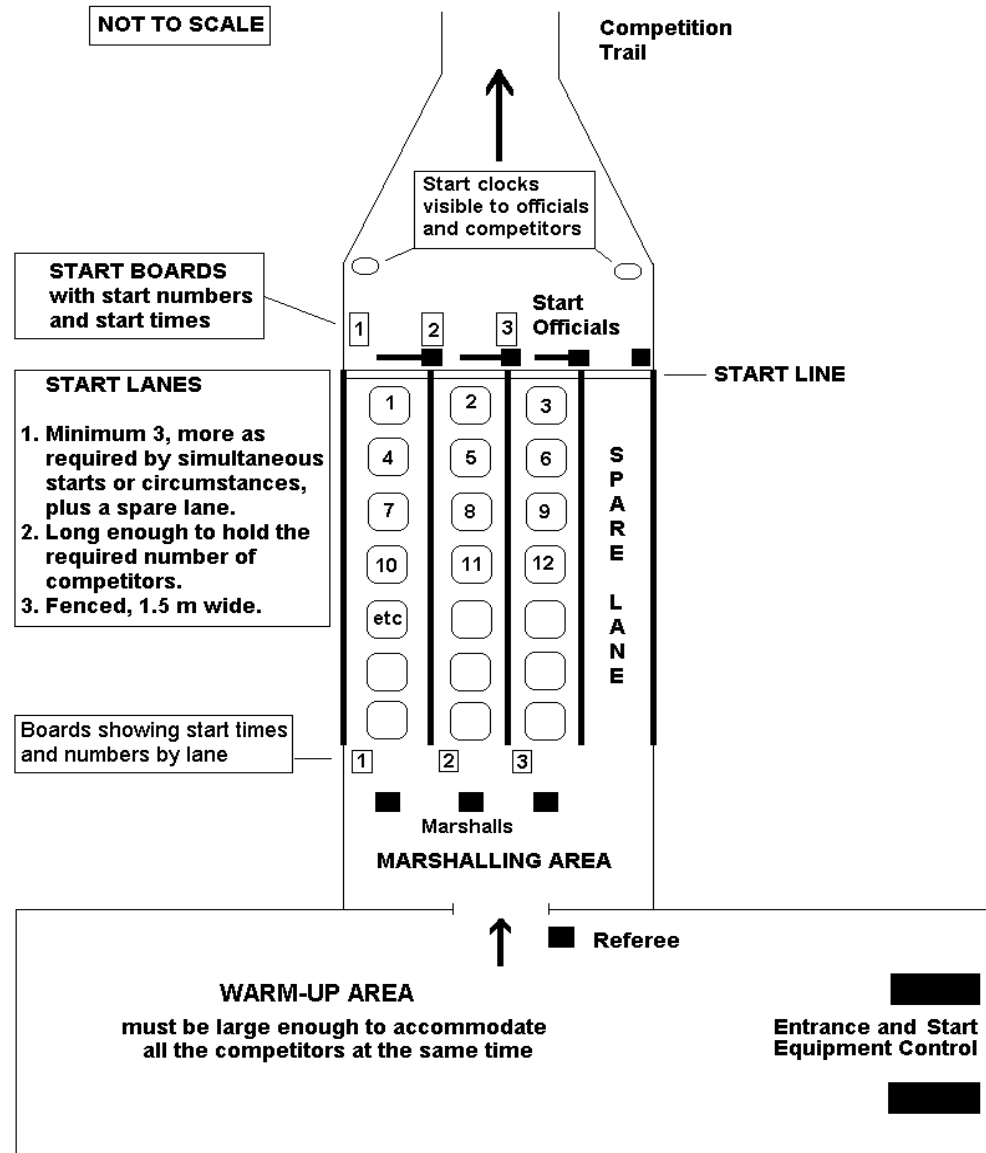
NOT TO SCALE



NOTES

1. This is only an example, many other variations are possible depending on the circumstances and the facility configurations. However, in any case the hand-over zone must be very clearly defined and marked.
2. The finish can be at the start of the hand-over zone or may be in a separate location nearby.

EXAMPLE PURSUIT START AREA and ARRANGEMENTS

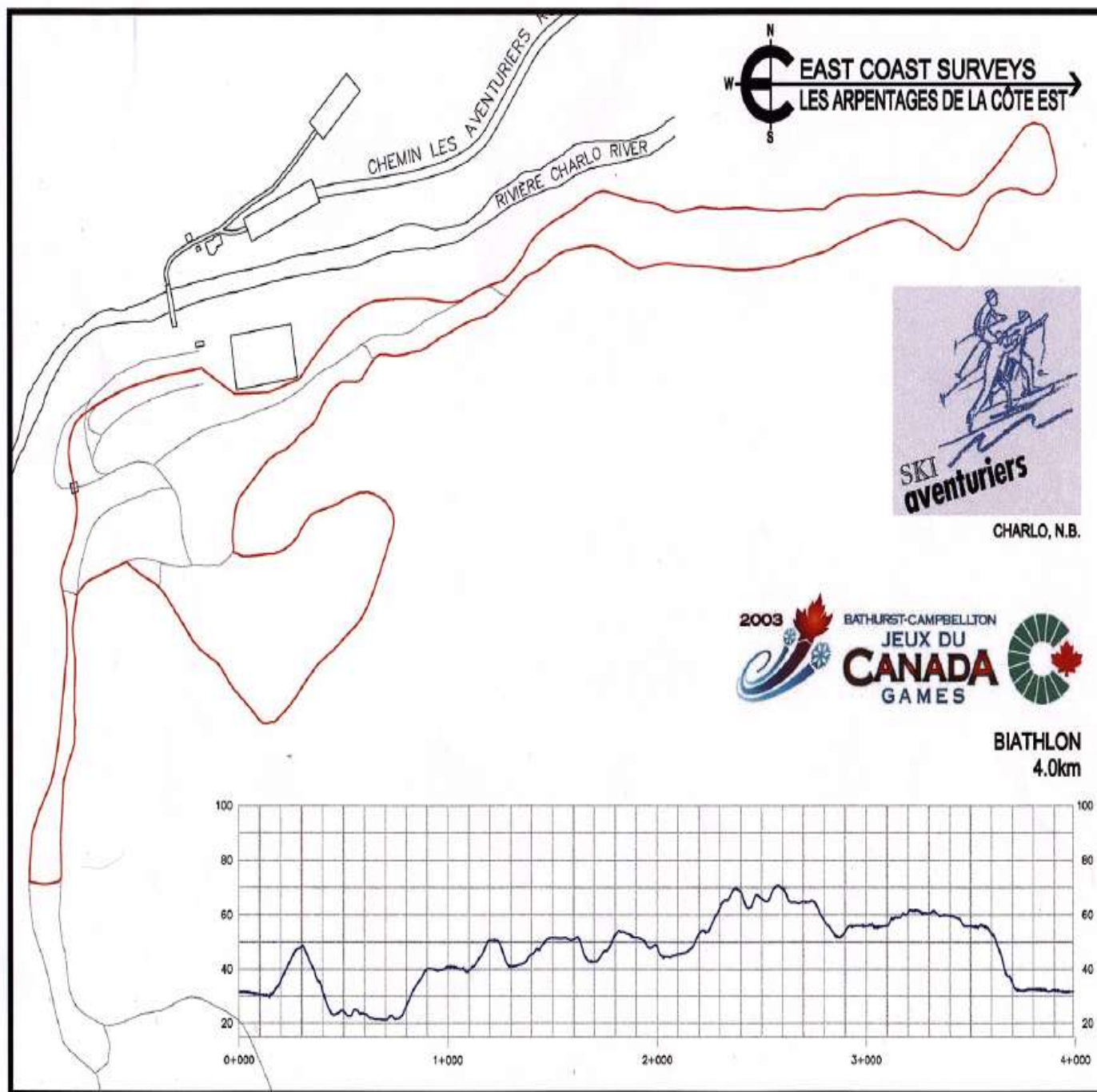


COURSE SPECIFICATIONS

- **General - changing terrain, no extremely long difficult climbs, no dangerous descents, changes should not break rhythm**
- **Max altitude - 1800 m above sea level**
- **Width - 6 m (4 m for maximum 50 m)**
- **Length deviation - plus/ minus 5%**
- **Tracks - if required, TD directs**
- **Safety - full speed without risk**
- **Grooming - level, packed, not frozen, clear of obstructions**
- **Marking - for definition, identification (along right side), colors - red, green, yellow, blue, brown**
- **Finish sign - 100 M TO FINISH**
- **Fencing - so no possibility of error**

CBC COURSES AT SMR

- **www.coloradobiathlon.org/forms/**
- **Course maps linked at bottom of page**



RANGE SPECIFICATIONS

- right prone, left standing, numbering starts at right with 1
- minimum 30 targets at WC; Canadian Championships 24
- shooting distance 50 m (+/- 1 m)
- sideways deviation: 1% (0.5 m)
- target center height: 80 to 100 cm above level of firing point
- lane width: 2.7 to 3 m (2.75 is ideal) marked 1.5 m to rear with boards in snow 2 cm deep
- center target in center of lane
- background white from bottom of target to 1 m above
- ramp totally snow covered, no ice, level, smooth
- mats: 150 x 150 cm 1 to 2 cm thick
- wind flags: every 3rd lane, 5 and 20 m (from targets)
- relay cups: 1 m high
- reserve rifle racks: center, 2 rifles per team
- marking (zone of silence): 10 m from left and right

NOT TO SCALE

Minimum 30 targets for WC events

The diagram illustrates the layout for a biathlon target range. Key features include:

- Shooting Direction:** Indicated by a large arrow pointing from left to right, labeled "Skiing direction".
- Targets:** A detailed inset shows a target with a diameter of 115mm and a central bullseye with a diameter of 45mm. The targets are arranged in a line, with a "Free Space min. 3m" between them.
- Lane Markers:** T-post markers are used to define lanes, alternating colors (e.g., blue and red).
- WIND-FLAG:** A flag is placed at the start of the range, with a size of 100mm x 400mm, weight of 5g, and placement of 2 flags to every third lane.
- Target Placement:** Targets are placed at a distance of 20m from the start line. The distance between the start line and the first target is 10m. The distance between the first and second target is 1.5m. The distance between the second and third target is 2.7 - 3m. The distance between the third and fourth target is 10m. The distance between the fourth and fifth target is 10 - 12m.
- Team Staff and Media:** A "Team Staff" area is located at the bottom of the diagram, with a width of 2m. A "Media" area is located below the Team Staff area, with a width of 1.5m.
- End of the Shooting Ramp Area:** Indicated by a dashed line and a red marking at the bottom right of the diagram.

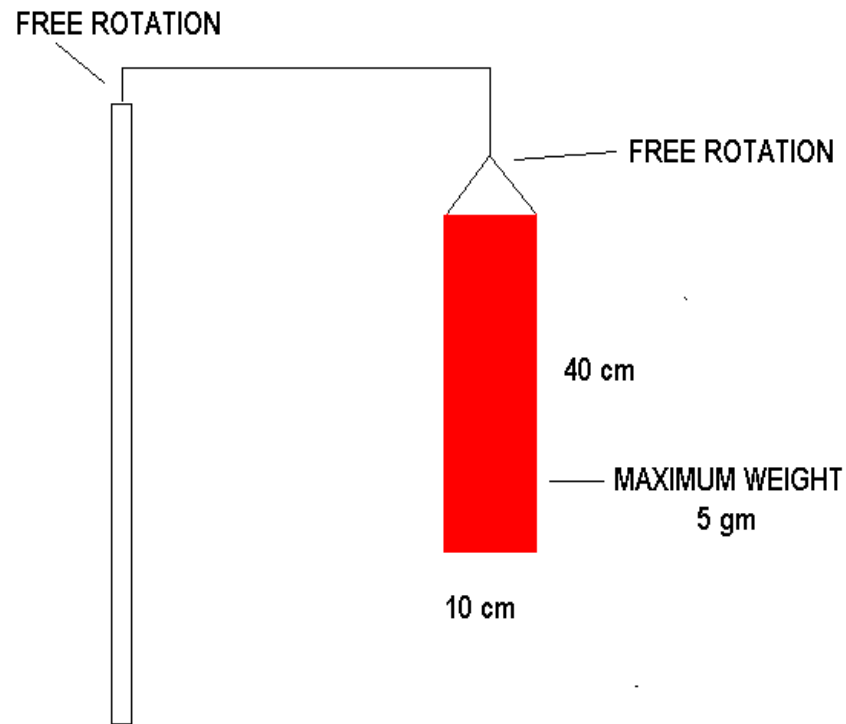
50 m +/- 1 m

0.8-1.0 m

min. 0.3 m

WIND-FLAG MUST BE UNDER LINE OF AIM

EXAMPLE OF A WINDFLAG



TYPES OF COMMON BIATHLON TARGETS

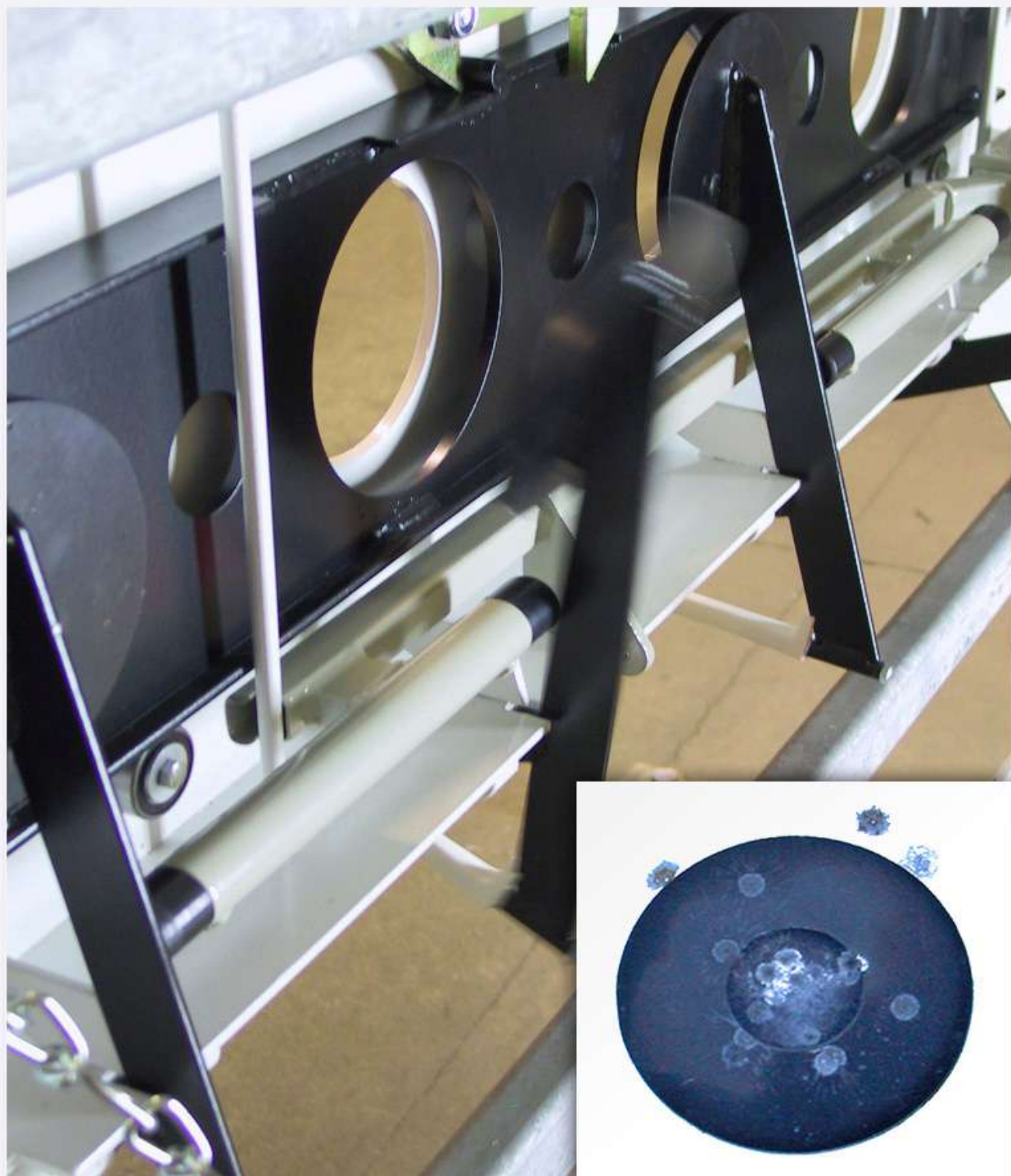
KURVINEN

- **Mechanical - but full electronics can be attached.**
- **Principle is a metal plate which falls backward when hit causing white flap to operate and sends electronic scoring signal**

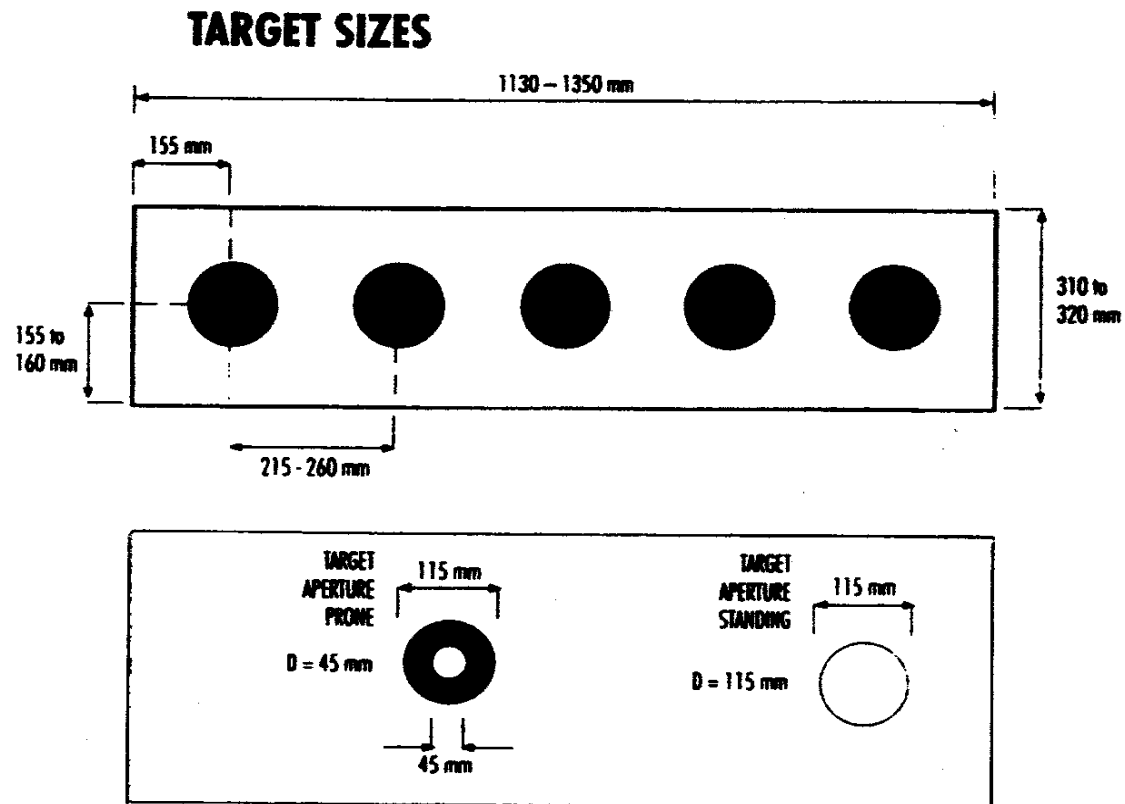
HORA

- **Electronic operation only**
- **Principle is a plate which converts bullet impact to an electronic impulse and causes white flap to operate and send electronic scoring signal**

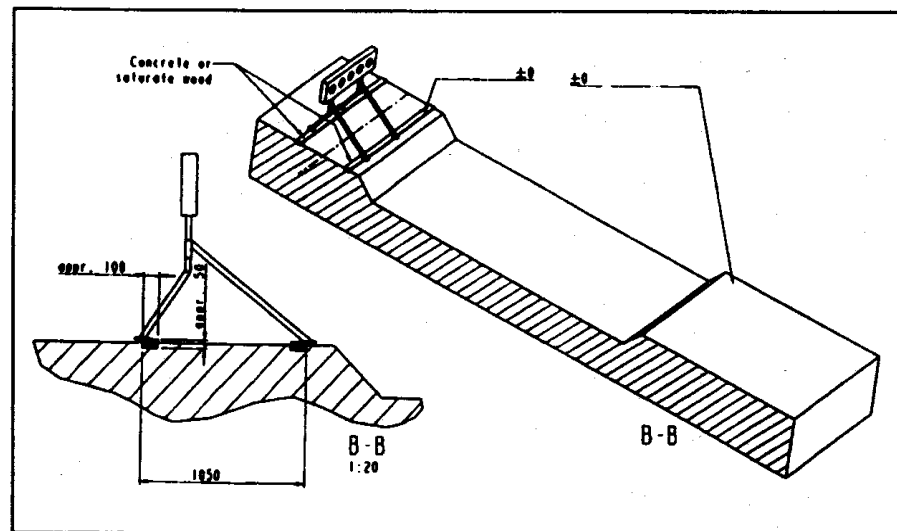




TARGET SIZES



TARGET INSTALLATION



LESSON 5 OUTLINE

Preparations for a Biathlon Event and Competitions

Aim: To provide you with the required knowledge about the preparations for a Biathlon event and competitions

- **Bids, Invitations, Registrations**
- **Programs - Training, Competition, Social/ Cultural, Ceremonial**
- **Hosting Logistics**
- **Facility Preparations, Official/ Unofficial Training, Zeroing**
- **Entries, Team Captains Meetings and Draws**
- **Equipment Checks and Use of Measuring Devices**

BIATHLON HOSTING

Bids, Invitations and Registrations are made according to the applicable event rules.

INVITATIONS

Invitations for WCH, Y/ JWCH, WC, CCH and CC must contain the following information (see Hosting Policy for Canada):

- a) name, location and dates of the event;**
- b) host community facts and weather data;**
- c) event schedule with all event activities, including time and place of team captains meetings;**
- d) technical specifications of the competition facility with stadium and course maps;**
- e) list of key organizing persons and TD and IRs;**
- f) travel connection information;**
- g) customs, rifle and ammunition import/ export regulations, and regulations for use of radios;**
- h) accommodation and meal information with costs;**
- i) arrival and departure transport arrangements;**
- j) on site transport arrangements (hotel - stadium), and rental vehicle availability and costs;**
- k) registration and entry forms;**
- l) organizing committee contact information – address, telephone, fax, e- mail;**
- m) any other necessary information**