

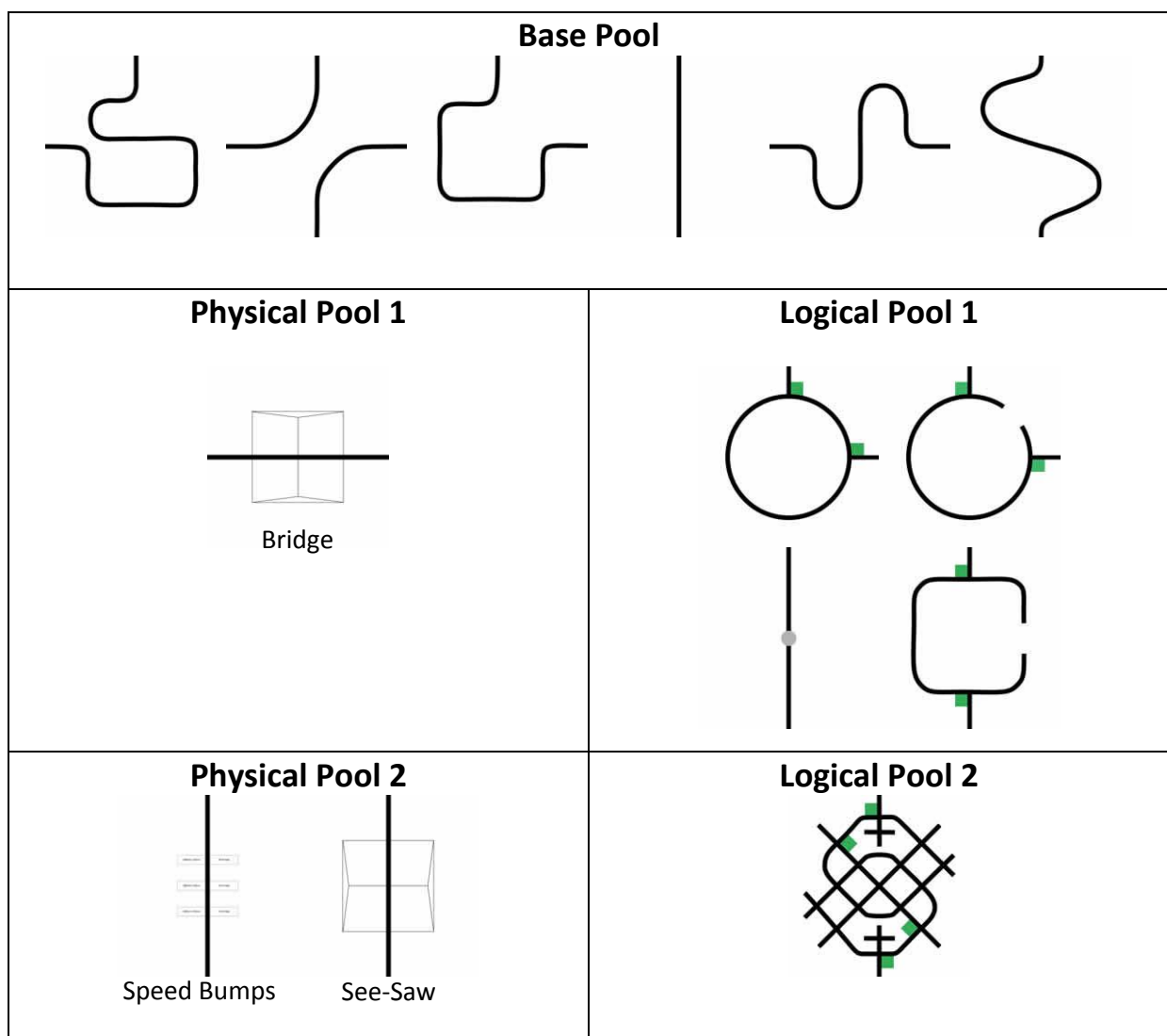
RoboCupJunior Victoria – Victorian Rescue Field 2017

Application of Field Specifications

The following field specifications variations will apply for all competitions held in Victoria for 2017.

Main Field

The main field will consist of the following tiles separated into four separate pools. When designing field layouts, tiles may be duplicated or omitted.



Tiles are 594 mm x 594 mm and should be made of a suitably rigid material to ensure that they do not flex more than 3 mm in use ('bumps' up to 3mm are acceptable).

Tiles will be printed with Black, Green, Grey and Red. Each tile will have a white background. Colours printed on the tiles will be recognised correctly when using Lego EV3 and NXT colour sensors.

The width of the black line is 15 mm and green turn hints are 40 mm x 40 mm

All lines meet the edge of the tile halfway along its length.

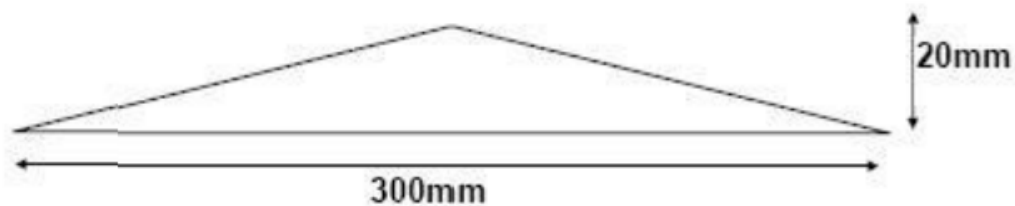
Some tiles may have 'intersection markers', which are Green, approximately 40 mm x 40 mm in size and indicate the side towards which the robot should turn.

There may be up to 3 mm bumps between tiles, however the Rescue Competition Organiser will endeavour to minimise these where possible.

The tile surface will be smooth vinyl.

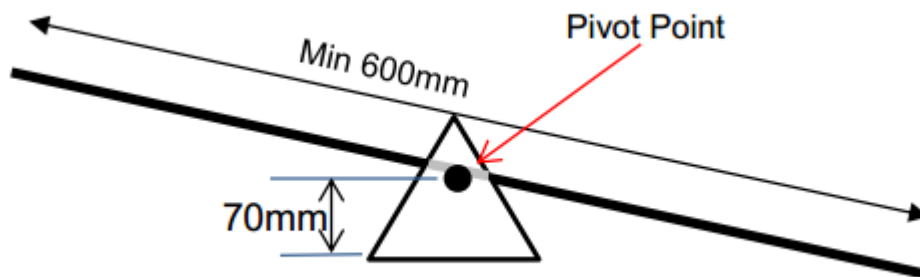
Bridge

The bridge will be constructed to the following dimensions. It should sit flat on the Bridge Tile and there should not be 'bumps' at either side of the bridge greater than 3mm.



See-Saw

The seesaw should be constructed to the following dimensions. It should sit flat on a straight tile and there should not be ‘bumps’ at either side of the see-saw greater than 3 mm.



The pivot board is 600 mm x (594 – ‘Pivot support width’ * 2) mm. The maximum height of the pivot point of the platform will be 70mm above the top surface of the field. Robots will need to be able to climb and descend both sides while following the line. The See-Saw competition surface will be of similar material to the Rescue Tiles with a standard width black line.

Seesaw supports will be painted in Dulux Raw Sunset.

Speed Bumps

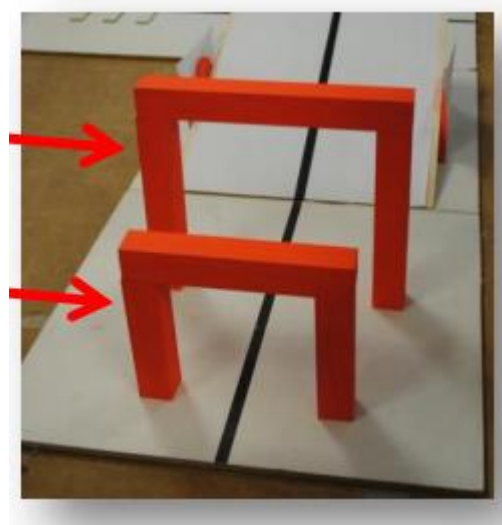
The “Speed Bumps” will consist of rectangular sections, 200 mm x 30 mm, white in colour, with a height of 5 mm. A black line will run across the top surface of the speed bump.

Water Tower

The “Water Tower” will be a clear 1.25 L PET soft drink bottle filled with water. The tower is not to be intentionally moved from its location. When navigating the water tower, robots must regain following the line on the Water Tower tile. The water tower will be clear with all external labels removed if possible (bottles without ‘waists’, e.g. Coke, are preferred). Should the line not be reacquired within the tile, the robot will have been deemed 'loss of line' and be required to start from the beginning of the course.

Doorway

The doorway will consist of three (3) pieces of solid wood 41 mm x 41 mm fixed together and painted in Dulux Raw Sunset. It is 270 mm wide and 270 mm high for Open Rescue and 180mm wide and 180mm high for all other divisions. The doorway may be placed on a straight section of the line. The Doorway is not mounted to the tile it is sitting on.



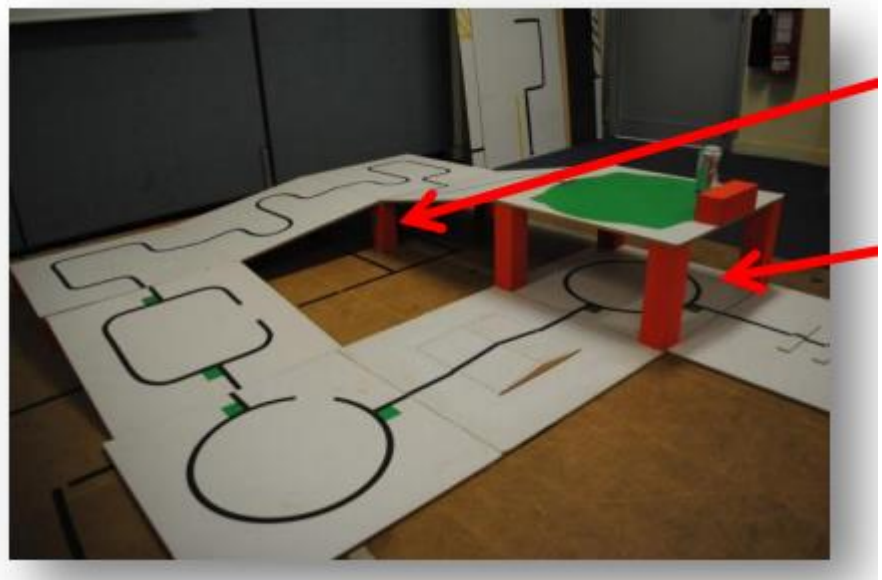
Elevator Blocks

Tiles will be used as ramps to allow the robots to 'climb' up to and down from the elevated tile. Ramps can increase or decrease in elevation only 90 mm at a time between tiles.

Elevator blocks are to be made of 70 mm x 70 mm wood painted in Dulux Raw Sunset

Note: Courses may incorporate 'Tunnels'. Robots must be designed so that they can navigate along any tile that may be placed on the base of the 'Tunnel'. The See-Saw will not be placed under a tunnel.

Tiles may be elevated to 90, 180 or 270 mm.



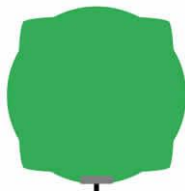
City Limits Tile

This is simply a lead in tile (straight, black, 15 mm line) that the robot is placed on prior to the first tile. Robots usually start behind the join of this tile and the first scored tile.

Rescue Tile

The rescue tile is the same size as other tiles and designed as below. It will have a piece of highly reflective foil 40 mm x 15 mm in size as discussed in the 'RCJA Rescue Field Specifications' document. Open Rescue only: The Rescue Tile will have a block covering the red rectangle opposite the silver foil (the Evacuation Platform). Its specifications can also be found in the 'RCJA Rescue Field Specifications' document.

Riley Rover, Primary and Secondary Rescue Tile:



Advanced Rescue Tile:



Rescue Tile

The Rescue Tile will be a 594 mm x 594 mm tile, white background with the chemical spill indicated by the green area. At the point where the black line meets the green area, there will be a piece of highly reflective foil, 40 mm x 15 mm in dimension.

For Open Rescue, The Rescue Tile will have an evacuation platform, 70 mm high, 200 mm wide and 70 mm deep located at the rear of the chemical spill. The platform will be painted in Dulux Raw Sunset as the location rectangle on the Rescue Tile.



Evacuation Platform (Advanced Rescue only)

The Rescue Tile will have an evacuation platform, 70 mm high, 200 mm wide and 70 mm deep located at the rear of the chemical spill. The platform will be painted in Dulux Raw Sunset. The evacuation platform will be secured to the Rescue Tile (it can be removable, by securing using Velcro or similar).

Water Tank (victim trapped on top)

The Water Tank (with victim trapped on top) will be represented by a 375ml aluminium soft drink can wrapped in aluminium foil or aluminium foil tape. A Lego person may be secured on top.

The can will contain material such as rice bringing the weight of the Water Tank to 100gms. A liquid must not be used to add weight to the can.

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If you would like any assistance modifying your rescue field to comply with the Victorian specifications, please contact RCJV Chair, Evan at evan@baileyfinance.com.au.