



# Pump Track Standards

Want to build a pump track that's fun, safe, and built to last? These guidelines share Velosolutions' proven approach to world-class track design and construction.

At Velosolutions, we are passionate about making pump track racing more accessible and enjoyable for everyone. To support this vision, we are publishing our official pump track design and construction guidelines.

Velosolutions is the founder and organiser of the official [Velosolutions UCI Pump Track World Championships](#). By publishing these guidelines, we aim to promote safe and fun pump track racing around the world—bringing more fast riders to the World Championships.

These guidelines are **not** intended to restrict creativity—quite the opposite. We believe every builder should have the freedom to bring their own ideas to life. However, by following these recommendations, we can help raise the overall quality of pump tracks worldwide, making them safer, more fun, and more durable for riders of all levels.

Velosolutions sets these guidelines as a **minimum standard** for its pump tracks. **Only Velosolutions Pump Tracks that meet these minimum standards are eligible to host qualifying events for the Velosolutions UCI Pump Track World Championships.**

We strongly encourage applying these standards to all racing events in order to maintain the safety of the racing community.

That said, meeting the parameters outlined below does **not guarantee** the functionality and safety of a pump track. This depends heavily on the **experience and workmanship of the shapers** who carry out the construction.

These standards may not apply to **beginner-specific tracks or tracks built for adaptive use.**

# Design Guidelines

**Important:** When designing race pump tracks, keep in mind that they are generally used by **all skill levels**. Therefore, Velosolutions designs all tracks to be beginner-friendly, while remaining exciting and challenging for experts.

## Track width:

- Min. 2m (Velosolutions Standard).

## Turn height:

- Must be consistent from entrance to exit.
- Turns with a direction change of more than 90°: min. height 1.30m.
- Turns with a direction change of less than 90°: may be lower than 1.30m.

## Turn steepness:

- Min. 55° (Velosolutions Standard). Slightly less is tolerable, but not below 50°.

## Turn must be shaped concave/round

- With a wide flat bottom for beginners and a steep top.

## Turn radius:

- Min. 3m (Velosolutions Standard: 4m). Turn radius must co-relate with the speed that riders are expected to come into it. Higher speeds require bigger turns.

## First roller placement:

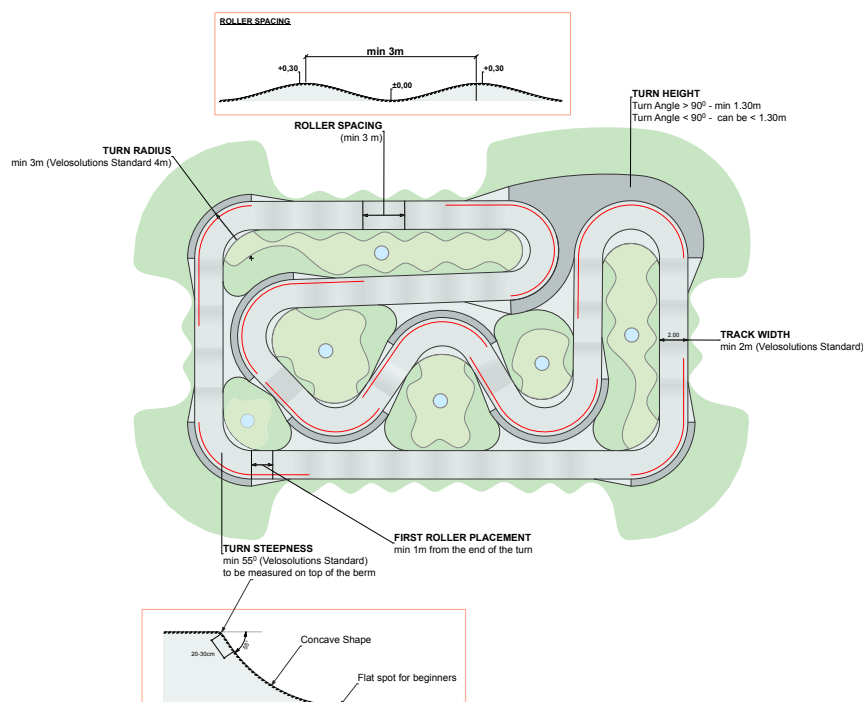
- The first roller before and after each turn must be at least 1m from the end of the turn (Velosolutions Standard: 1.50m).

## Roller spacing:

- Min. 3m between each roller.

## Roller height:

- Should be designed in relation to roller spacing, but strict proportionality is not required.



# Quality Recommendations

## Foundation:

- Min. 200mm of compacted crushed stone as the base layer before applying asphalt.
- In regions with freezing temperatures, a thicker base is required.

## Compaction:

- The raw shape must be thoroughly compacted before paving.

## Asphalt Mix:

- Elevated fine aggregate content (below 2mm) for a smooth, grippy surface.
- High binder content to enhance durability.
- Minimal coarse stone content, with a maximum aggregate size of 12mm.
- Use a soft binder for improved flexibility and longevity.

## Asphalt Application:

- Lay asphalt at 100mm thickness and compact to 80mm.
- Extensive compaction is required to achieve a long-lasting, smooth, and high-performance surface.
- While the 80mm compacted thickness differs from conventional road standards, it is highly recommended to ensure proper shaping, steep turn stability, and overall longevity.

# Contractor Recommendations

## Experience:

- If you're new to pump track construction, we strongly recommend building 3–5 beginner tracks before taking on a full-scale race track.

## Specialized Expertise:

- General road construction companies are not recommended, as they typically lack the precision needed for detailed, rounded shapes and may not prioritise the steepness required for proper pump track function and safety.

By following these guidelines, we can work together to create high-quality pump tracks that are not only race-ready, but also fun, safe, and built to last.