

Camarillo Collider

2017-09-21

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Overview

Camarillo is emerging as a nexus of enthusiast racing. We need a local track designed for sustained high speed and open to the public.

Key Features

1. 205 mph track design top speed.
2. Minimum visual and acoustic impact.
3. Zero-obstacle uniform profile circuit for minimum hazard.
4. Two lanes for engineered autonomous counter-circuit head-on collisions.



Market

- Professional and enthusiast race drivers looking to practice at sustained high speeds.
- Race owners looking to test the sustained high-speed operation of their vehicles.
- Race component designers and manufacturers looking to prove the performance of their products on a high speed track.
 - Stress testing components under real track conditions
 - Intentional collision or loss-of-control on unmanned vehicles to test safety devices, roll cage design, and real acceleration limits.
- Private vehicle owner/operators looking to drive their vehicle as fast as it can go.
- Live internet streaming of track operations and events.
 - Reduced track fee for clients that allow streaming of their track time.
 - Collision event streaming as a publicity and marketing tool.

Specifications

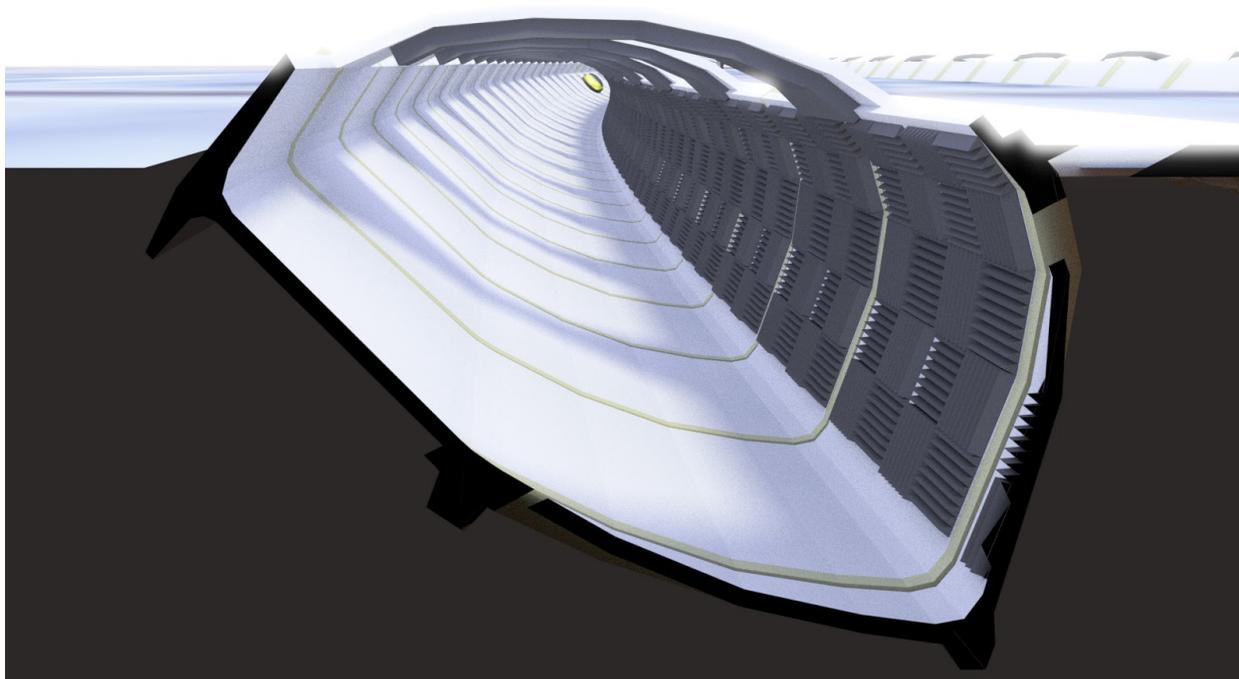
The current conceptual design would cost approximately three million dollars to build, and could easily pay for itself with minimal track fees.

Calculations

Given a maximum 2.5 gee force, and a coefficient of friction of 0.55, track bank angle should be 40 degrees. Given a 205 mph design speed, track diameter should be about a half mile across (2500 feet diameter).

With the given track diameter, assuming 30' wide 4" thick concrete slab, we have 2900 yards of concrete. At \$100/yard, the pour cost is \$290k. Rough project cost is primary material times ten, which gives us approximately three million dollars total project cost.

If the track were in operation for 8 hours a day, at a one tenth duty cycle, with 100mph laps, at \$1.50 per lap total income would be \$18k, which would pay a \$3M debt on a 20 year term.



Milestones

I. Funding and site selection

The first step is to gather interested parties and decide on a site. This includes getting initial conceptual input from property owners, as well as county and municipal authorities. This phase will cost approximately \$7k.

II. Design

A \$50k design fee is estimated for a full detailed design.

III. Permitting

Permitting, studies, and various approval fees are estimated at \$400k.

IV. Construction

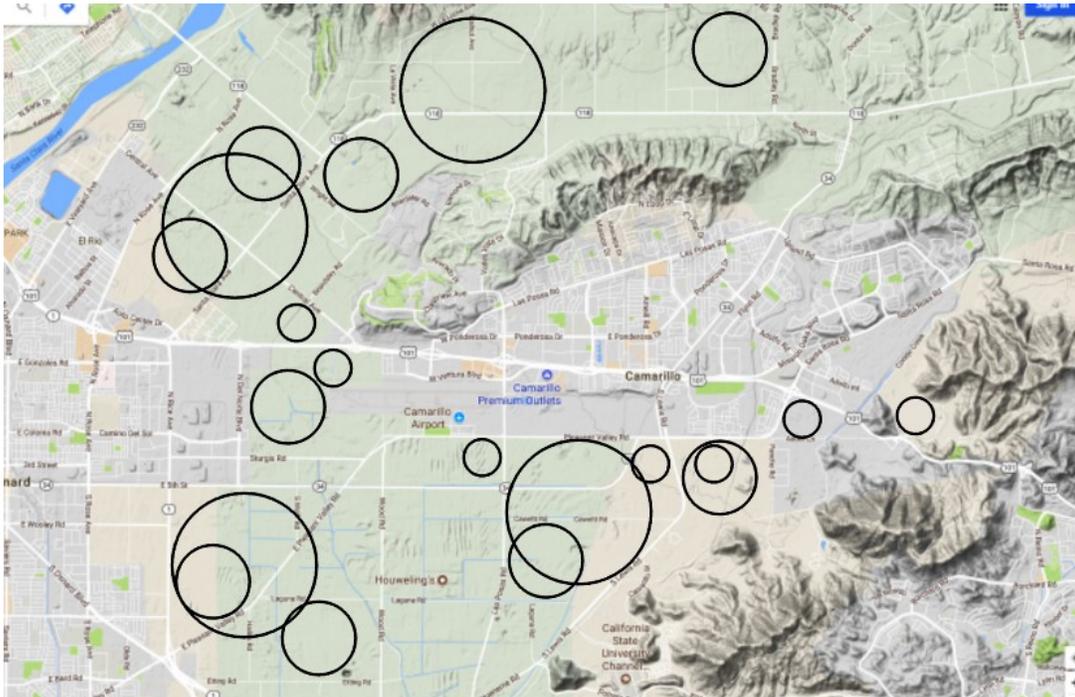
Total construction costs are estimated at \$3M, as justified in the calculations above.

V. Additional Tracks

A track rated at 300 mph is estimated to be one mile across and cost \$6M.

A track rated at 425 mph is estimated to be two miles across and cost \$12M.

A track rated at 521 mph is estimated to be three miles across and cost \$18M.



Competition

Direct competition: the Las Vegas Motor Speedway

The nearest track designed for sustained high speeds is the titular Las Vegas Motor Speedway. It features a “superspeedway” with a record lap speed of 225 mph.

The 20 degree bank turns will support 1.5 gees. As they have a 1500’ diameter, the maximum sustained speed is 115 mph.

The fee to “bring your own car” to the track is approximately \$1k, not including transport to and from the track.

The LVMS is not designed exclusively for sustained high speed, and also provides many other services (such as bleachers, flat tracks, RV hookups, and multi-vehicle operation) which are ancillary to the goals stated in this proposal.



Indirect competition

There are several flat tracks within a few hundred miles, but these are not designed for *high speeds*.

There is the Camarillo airport, but the straight runway is not designed for *sustained* high speeds.

There are two automotive manufacturer proving grounds in the high desert, but they are not *open to the public*.