

## General Information

Be aware, however, that this event is in no way affiliated with The All-American Soap Box Derby®

## Vehicle Specifications

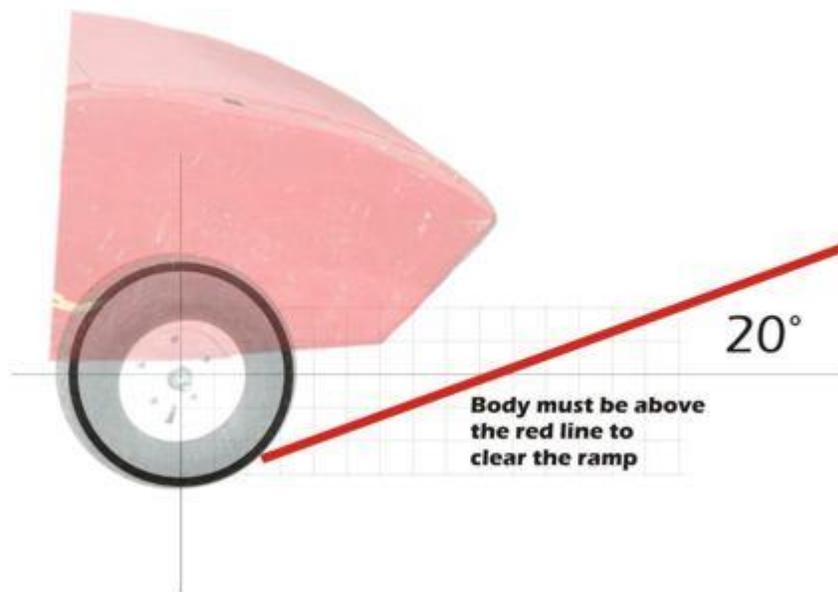
All new vehicles must be inspected prior to the race by appointment by calling Britt @ 435-225-5605 or by coming to the preliminary inspection on April 28, 2017.

	<b>Minimum</b>	<b>Maximum</b>
Track Width (outside of tires)*	24 inches	36 inches
Vehicle Height	3" ground clearance	60 inches
Seating Surface Height	3" ground clearance	16" above road surface
Total Vehicle Length	72 inches	96 inches
Wheelbase	48 inches	72 inches

*\*Width of body cannot project beyond maximum width*

Cars may be made of any material. Any metal frame elements that extend beyond the wheels must be properly blunted with a cross bar to prevent piercing in the event of a crash. Sheet metal on the body is okay. Axles and Sheet metal on the body is okay. Axles and components may be steel.

Road clearance must be no less than 3". To clear the ramp the ends of the car must be above a line 20° degrees with horizontal from the wheel centerline. Car must have 4 wheels and all four wheels must be in contact with the track at all times.



Cars will be towed up the ramp after each race, so a tow hook (eye bolt) should be provided for the tow strap. The hook must meet the clearance requirements outlined above.

To share ideas and techniques for build a derby car, we will hold clinics and tech nights. Visit [www.brighamcity.utah.gov/festivals](http://www.brighamcity.utah.gov/festivals) - Sesquicentennial Celebration for updated details.

## **Steering**

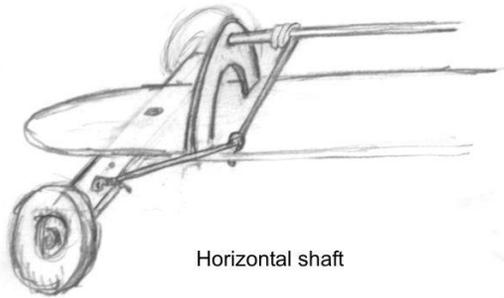
Steering must be positively controlled. Driver must be able to steer with one hand. Pivot axle steering must have limiters that prevent the car from turning a radius tighter than 15 feet. Careful consideration should be given to the steering ratio (angle of steering wheel turn to angle of front wheel pivot) to ensure that the steering is not too sensitive.

Attachment points for the steering must be positively secured along the axis of force of the cable. Screw in eyebolts will only be permitted into solid wood—not laminate or pressed wood.

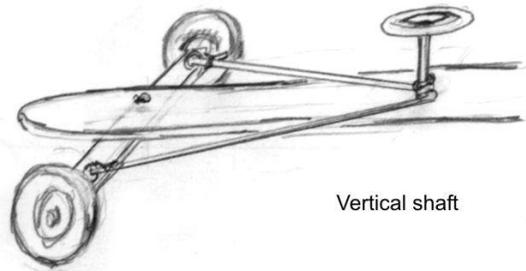
No rope pull steering is allowed. Foot steering is not allowed. Cable wind steering (a cable is wrapped around a cylinder that pulls on the axle as the shaft is turned) is recommended as an easy way to positively steer. Tiller steering is discouraged, especially if the car is equipped with a hand brake.

## Soap Box Derby Steering Systems

### Cable Wind Steering (recommended)

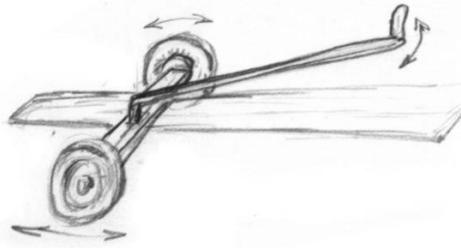


Horizontal shaft

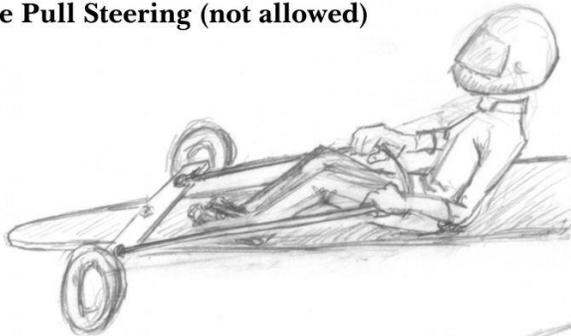


Vertical shaft

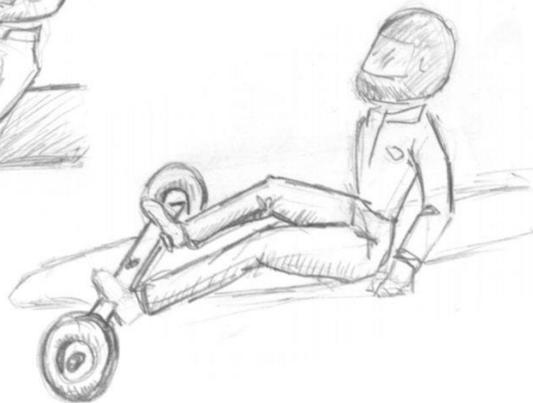
### Tiller Steering (discouraged)



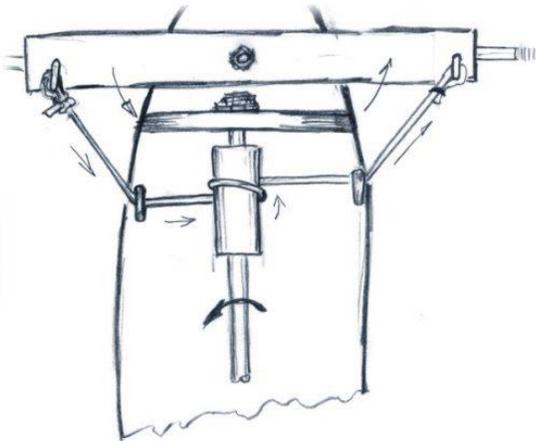
### Rope Pull Steering (not allowed)



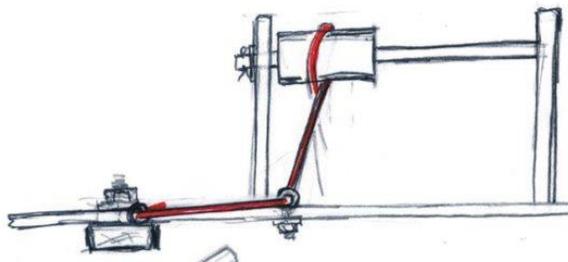
### Foot Steering (not allowed)



\*See attached detail for information on steering.

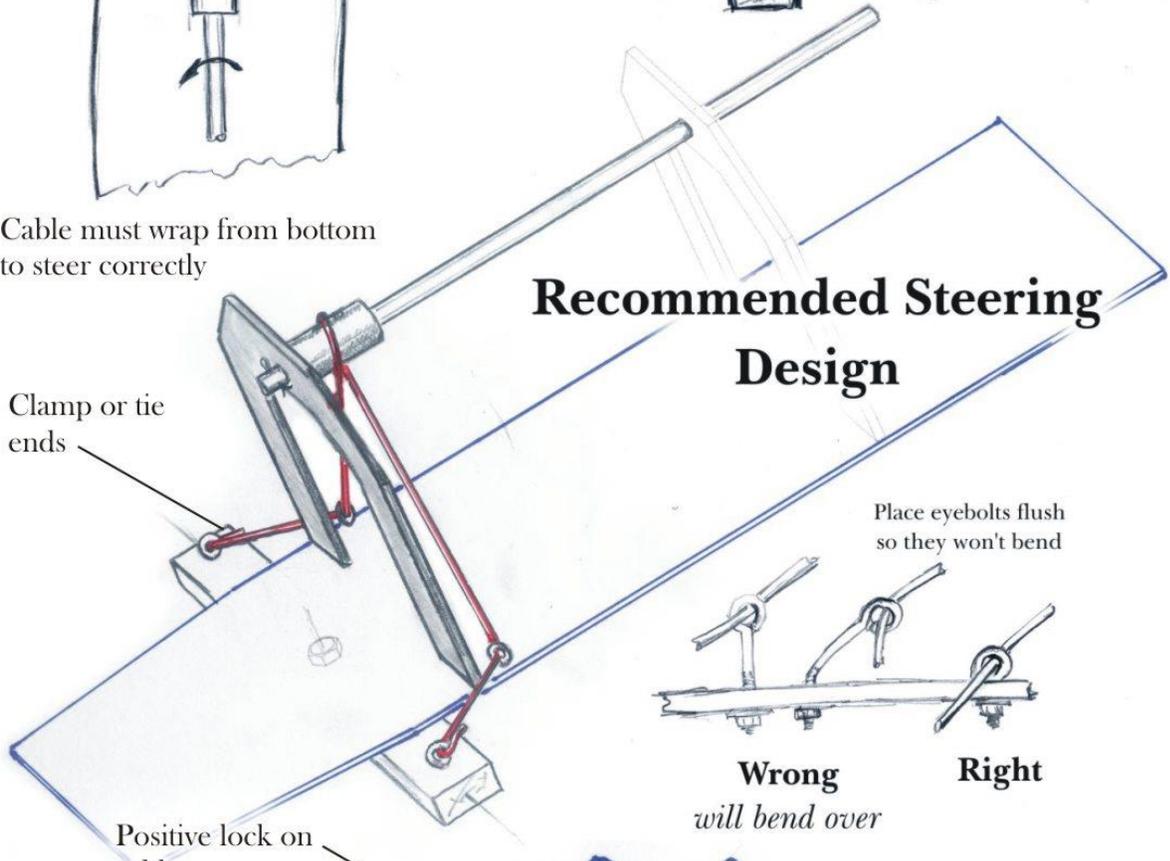


Cable must wrap from bottom to steer correctly

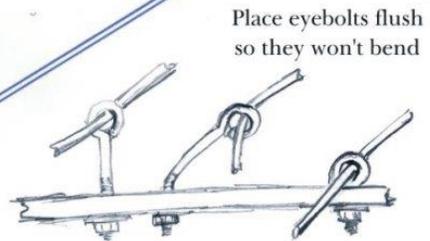


## Recommended Steering Design

Clamp or tie ends



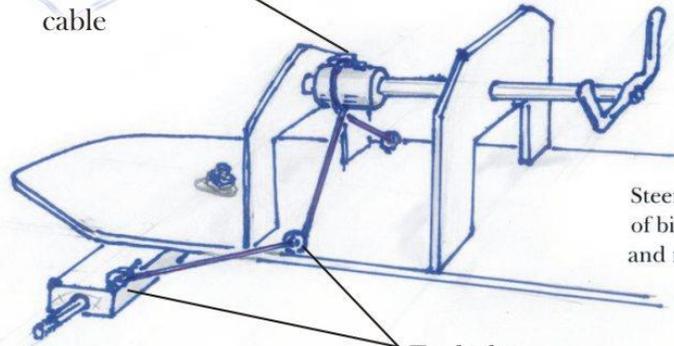
Positive lock on cable



**Wrong**  
*will bend over*

**Right**

Place eyebolts flush so they won't bend



Steering wheel can be made of bicycle handlebars cut off and mounted perpendicular to the shaft.

Eyebolts