



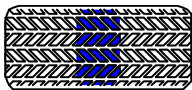
Course Outline

Dear Student,

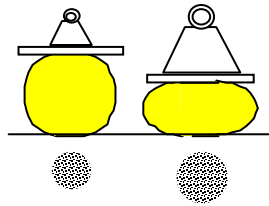
Welcome to Street Survival. We're confident that by the time you've completed our program you will have both a better appreciation for basic safety skills, and a better understanding of the circumstances that may require them. This program is about making teens *safer* drivers, not *better* or *faster* drivers. We are teaching fundamentals, and even the best student won't be a match for Tony Stewart without a great deal more seat time. The streets are a place to drive defensively, maximizing margins of safety and margins for error – whether your own or somebody else's. We encourage each of you, and especially those interested in becoming better and faster, to look into the more advanced driving programs that will be introduced to you at the end of Street Survival.

The following course outline is provided to give you a head-start on some of the concepts and terminology you'll be learning during our program. You don't have to absorb any of this prior to taking the course, but those who do will likely get more out of the program.

CLASSROOM I: Vehicle Dynamics – Some of the “science” of driving



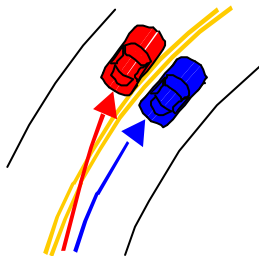
CONTACT PATCH
 The portion of the tire in contact with the road.



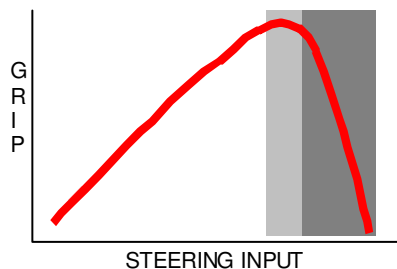
WEIGHT TRANSFER
 Gas, brake and steering effect Contact Patches much like different weights placed on a balloon.

GRIP
 \propto
WEIGHT

GRIP IS PROPORTIONAL TO WEIGHT
 The tire with relatively more weight on it will have relatively more grip. (that little fish means “proportional to”)



RADIUS \propto MPH
 A car's ability to turn is proportional to its speed.

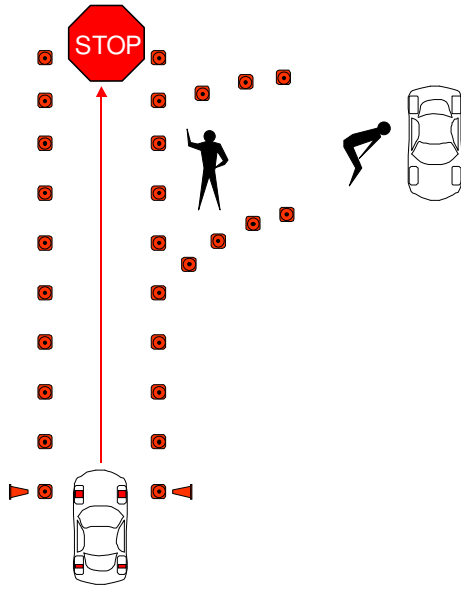


TIRE LIMITS
 When we ask too much of a tire it will begin to slide

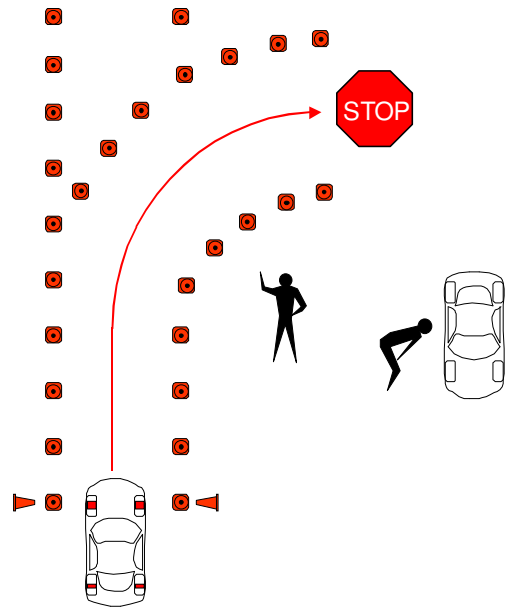
% **BRAKING**
 + % **CORNERING**
 + % **ACCELERATING**
 = **TOTAL DEMAND ON TIRES**

TIRE POTENTIAL
 A tire can do more than one thing once, but it can do only so much.

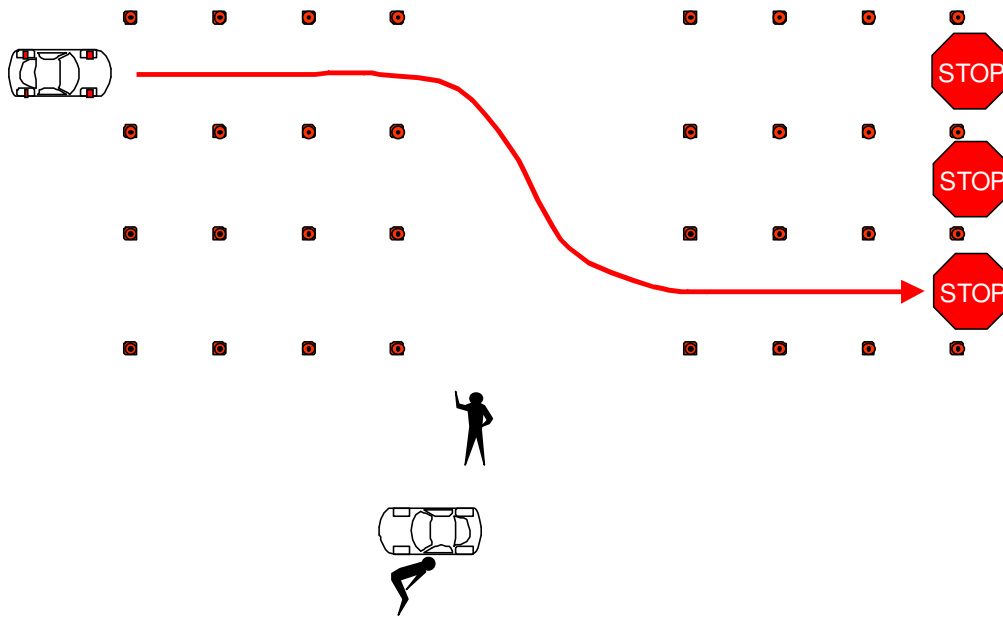
EXERCISES: Braking & Avoidance



STRAIGHT LINE BRAKING

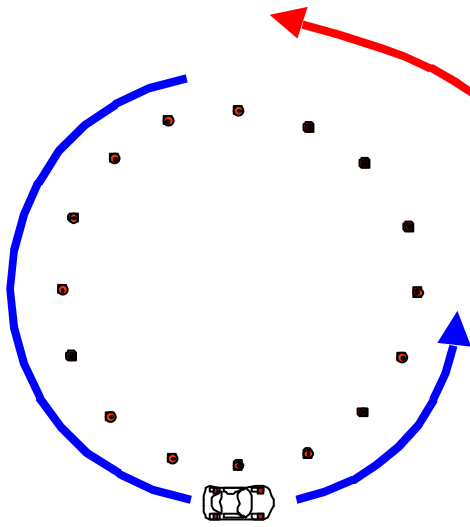


BRAKING AND TURNING



EMERGENCY AVOIDANCE

EXERCISES: Skid Pad, Figure 8 Types of Skids



SKIDPAD

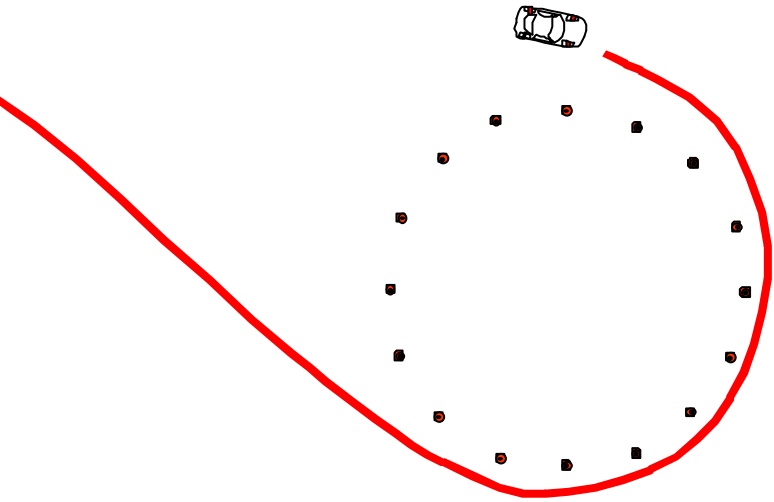
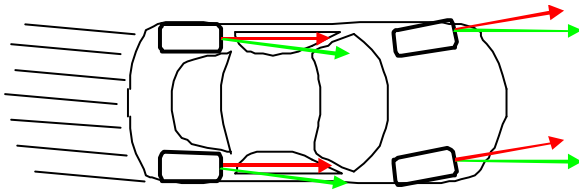
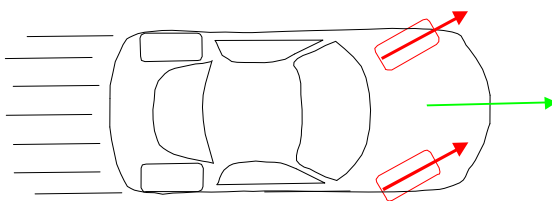


FIGURE 8



FOUR WHEEL SKID

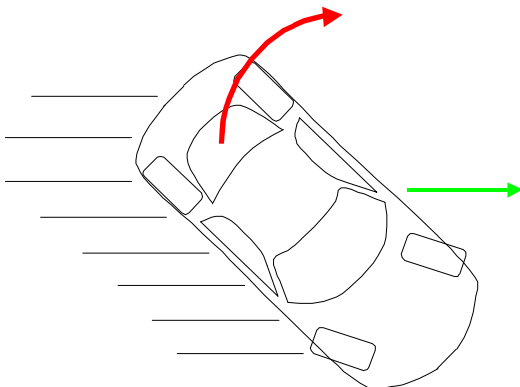
All four wheels slide evenly as the radius that the car is driving on grows due to excess speed.



FRONT WHEEL SKID

(Understeer)

Too much steering input for a given radius, or too much acceleration for a given steering input, makes the front tires start to slide. The car does not go where your steering inputs tell it to.



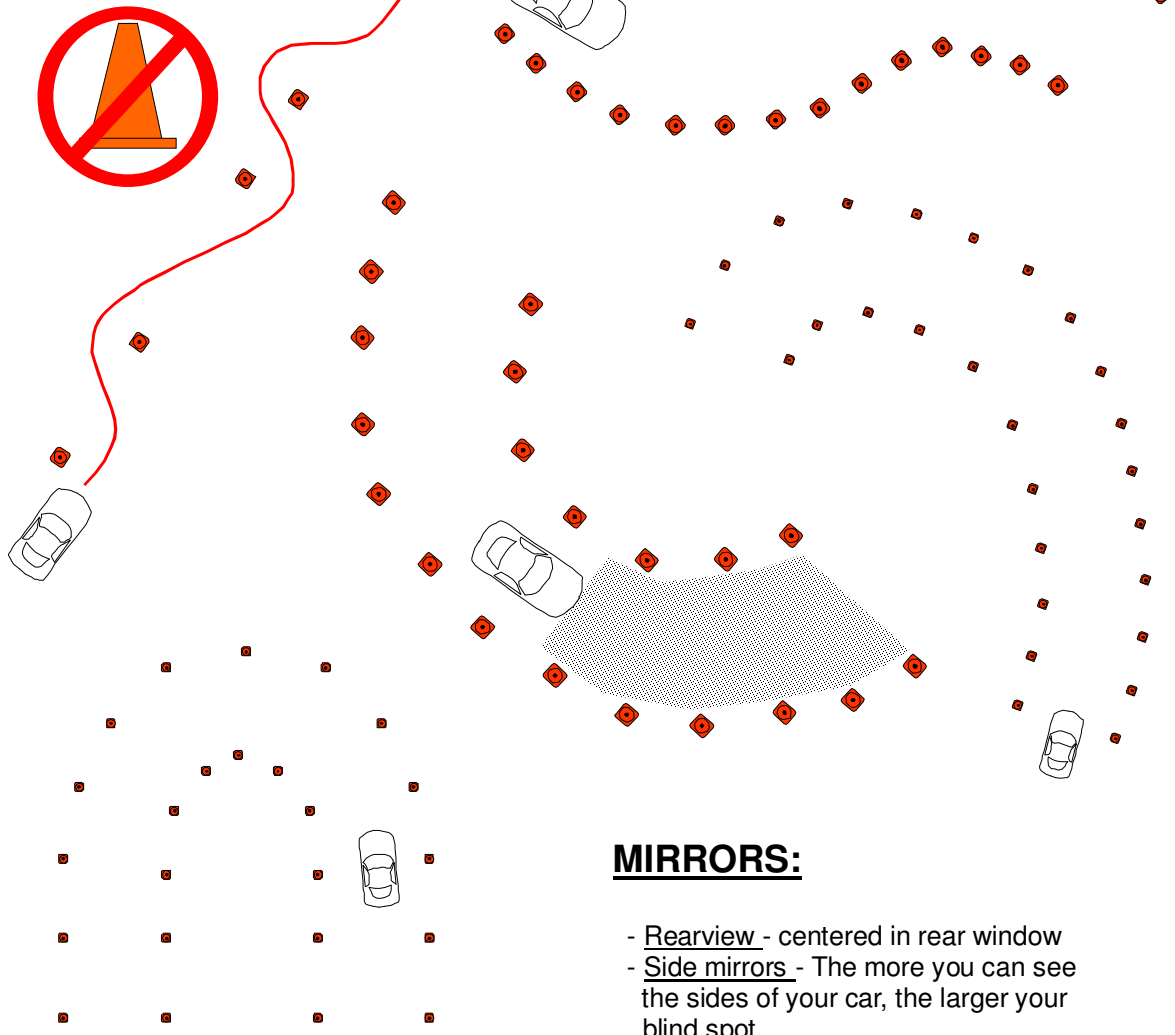
REAR WHEEL SKID

(Oversteer)

Excessive braking and turning, excessive power in a rear-drive car, or turning one way and then the other too quickly can cause the rear wheels to break loose and slide. These slides very quickly become spins.

EXERCISES: Combined Exercise

CONES = ACCIDENTS



MIRRORS:

- Rearview - centered in rear window
- Side mirrors - The more you can see the sides of your car, the larger your blind spot.

SEATING POSITION:

