



DRIVER'S EDUCATION AT WATKINS GLEN INTERNATIONAL JANUARY 2002

This supplement is intended to be used in conjunction with the Connecticut Valley Region (CVR) *Driver's Education Guide*. Its purpose is to acquaint beginners and other new participants at Watkins Glen International with the special procedures and characteristics of that environment. **Unless otherwise stated here, the basic information contained in the *Guide* applies.**

On pages 2-4, you'll find sections covering:

- I Background and Location**
- II Arrival, Registration and Final Tech**
- III Additional Information**

On pages 5-16 toward the end, you'll see two appendices:

- A Track and Track Elevation Maps**
- B Illustrated Driving Line Narrative by Jim Dresser**
- C Additional Track Terms**

For special inquiries regarding administration and logistics -- or to obtain general information about the CVR Driver's Ed program at other locations -- please contact our Registrar. If you have additional questions that can't wait until you arrive at the track, please contact the VP-Driver's Ed. Phone and email listings are printed in the *Challenge*.

We look forward to seeing you at Watkins Glen International!

**Connecticut Valley Region
Track Committee**

I: BACKGROUND AND LOCATION

Watkins Glen International is a world renowned road racing circuit located in the Finger Lakes region of New York. It is roughly 330 driving miles west of Hartford, Connecticut and 270 driving miles northwest of New York City.

The fun all started in 1948, when a law student by the name of Cameron Argetsinger devised a 6.6 mile course through the Village of Watkins Glen, utilizing existing asphalt, cement and dirt roads. On October 2 of that year -- "The Day They Stopped The Trains" -- this was the site of the first major road race in the United States following World War II.

A temporary track circuit was completed in 1953. A 2.3 mile permanent track was built in 1956, which was modified and extended to its present configuration (2.4 mile short course and 3.4 mile long course) in 1992.

Over the years, Watkins Glen International has hosted virtually every type of road race for automobiles -- from NASCAR to Formula One to Trans-Am, and from sprints to enduros.

The driver's roster reads like "Who's Who" in auto racing -- from the legendary Buck Baker (who edged out Fireball Roberts to win the first NASCAR race at the Glen in 1957) to more recent driving legends like Mark Donohue, Mario Andretti, Brian Redman, Vic Elford, Bobby Unser, Jody Scheckter, Bruce McLaren and Jeff Gordon.

Most importantly, CVR has been hosting Driver's Ed events at the Glen for two decades.

The Village of Watkins Glen, New York is situated near the southern tip of Seneca Lake. By car, the Village is roughly twenty-five minutes northeast of Corning, thirty minutes southwest of Ithaca and twenty-five minutes north of Horseheads. You'll no doubt want to plan your own route, but here are a few ways to get there:

- *From Boston and Springfield, Massachusetts:* Interstate 90 west to Interstate 88 west (near Albany) to Route 17 west (near Binghamton) to Route 14 north (at Horseheads).
- *From Hartford, Connecticut:* Interstate 84 west to Route 17 west (near Middletown) to Route 14 north (at Horseheads).
- *From New York City:* Interstate 87 north to Route 17 west (near Harriman) to Route 14 north (at Horseheads).

The racetrack is about three miles outside the Village, off of Route 414. To get there, go south on Route 414 to the traffic light at the top of the hill (3/4-mile). Turn right and go about 2-1/4 miles. The track will be on your left.

Additional information about Watkins Glen International can be obtained from the official web site (www.theglen.com).

II: ARRIVAL, REGISTRATION AND FINAL TECH

Arrival. You may arrive at the track as early as 6:00 AM, but you must be there no later than 7:00 AM in order to complete registration and final tech before the morning drivers' meetings.

Track entry is generally through the Main Gate. However, this can vary for PCA and CVR events, so be alert to changes when you arrive. At the gatehouse you will sign the Watkins Glen waiver. Once inside, proceed along the road until you reach the paddock garage.

Registration and Final Tech. The sequence is up to you, but both must be completed prior to the morning drivers' meetings.

- **Registration.** A table will be set up at the end of the garage that is closest to the track. Each driver must check-in there to:
 - Show his or her PCA membership card and driver's license.
 - Sign the CVR waiver.
 - Receive a Run Group assignment and time schedule.
 - Receive a flagging assignment.

- **Final Tech.** The tech line opens at 6:45 AM and closes promptly at 7:45 AM. It is located outside the paddock garage. *Note:* A regular tech inspection is required before you arrive at the track, just as with all other CVR Driver's Ed events, and you must have the signed original copy of the tech sheet with you to complete final tech. *Note also:* Zone 1 Driver's Ed participants who also are enrolled in the CVR program must have a separate tech sheet for each event.

III: ADDITIONAL INFORMATION

Accommodations. A list of local motels and bed & breakfast facilities are available on our website www.cvrpca.org.

Drivers' Meetings and Flag Safety Instruction. The meeting for all non-instructor drivers will begin promptly at 7:45 AM inside the paddock garage. The instructors' meeting also will begin at 7:45 AM in the garage area. The times and locations of any additional meetings for drivers in the Green and Yellow Run Groups will be announced at the morning drivers' meeting.

Flagging Assignments. Because official Watkins Glen personnel operate most flagging stations, our obligations are minimal. We must, however, provide assistance at Start/Finish, Pit-In and Pit-Out. Driver's Ed participants will be asked to spend a portion of their non-track time assisting in one of those locations.

Food and Beverage at the Track. Traditionally, CVR subsidizes a buffet dinner after the first track day at the Glen Club (located inside the track). A fee is paid by each dinner guest. Reservations are required so the caterer will know how much food to prepare. Dress is casual, a cash bar is available, and there's no better deal or social event in town!

Alcohol. As with all CVR Driver's Ed events, alcohol consumption is prohibited – guests as well drivers – until the last track session of the day is completed. Banned substances of any kind are never permitted, of course.

Garage Space. The paddock garage is available for parking the car you drive on the track at an extra charge of \$35 on a first-come, first-served basis. Sign up for a garage at the time you register for the event.

Gas and "Air". There is "air" at the track. The gas pumps are open at various times throughout the day. However, purchasing gas at the track is expensive, so it's best to top up before arrival.

Passing Zones. The designated locations for each Run Group and other directions (i.e. pass to the left or pass to the right) will be announced at the morning drivers' meeting.

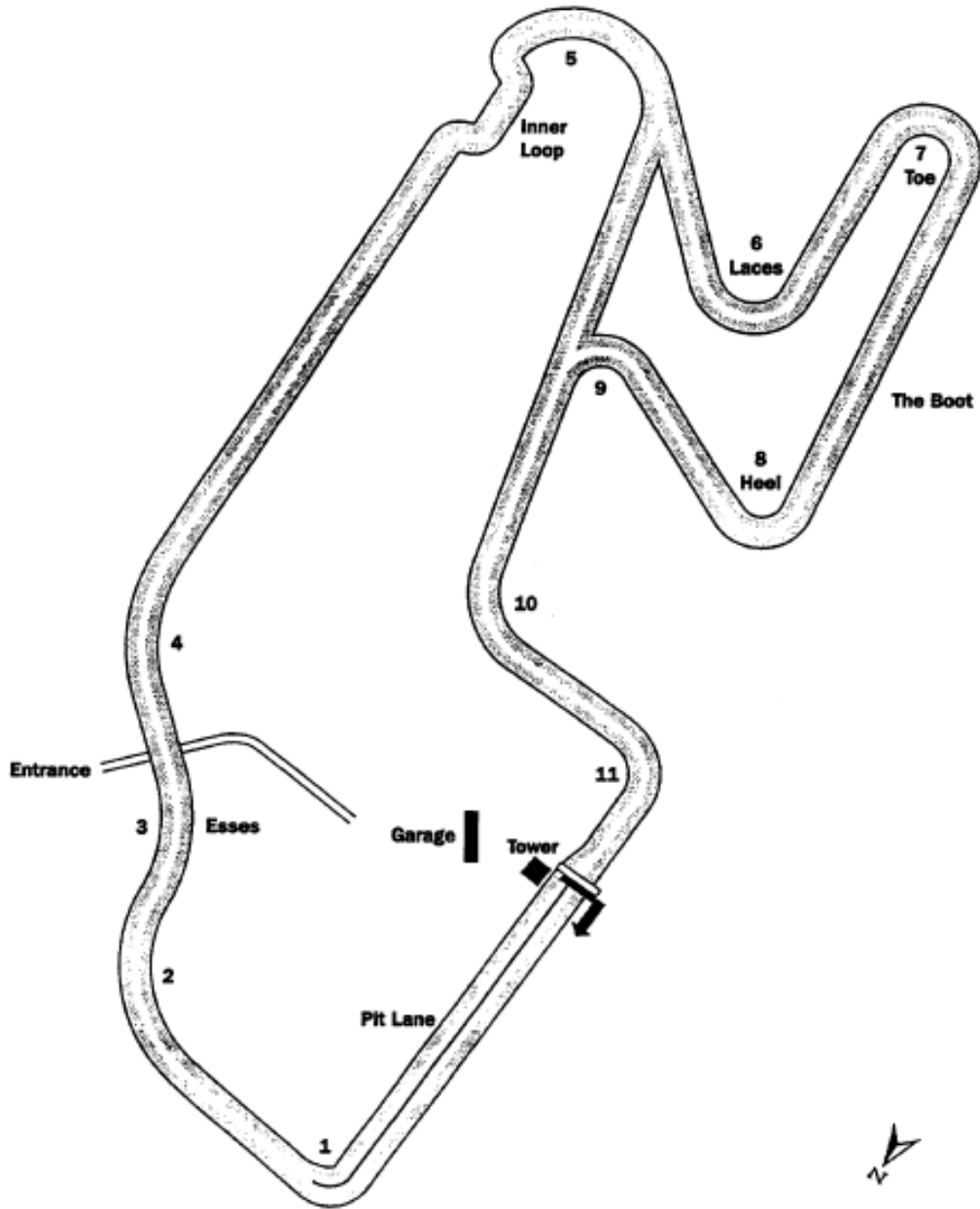
Weather. The conditions at Watkins Glen International can be highly variable. In fact, because of the size and layout of the track, it's not uncommon for one portion of the track to be bone dry while another portion is wet! The CVR Driver's Ed event will be run rain or shine unless otherwise determined by the VP-Driver's Ed. Check our website (www.cvrpca.org) for last minute information.

APPENDIX A

TRACK AND TRACK ELEVATION MAPS

Watkins Glen International

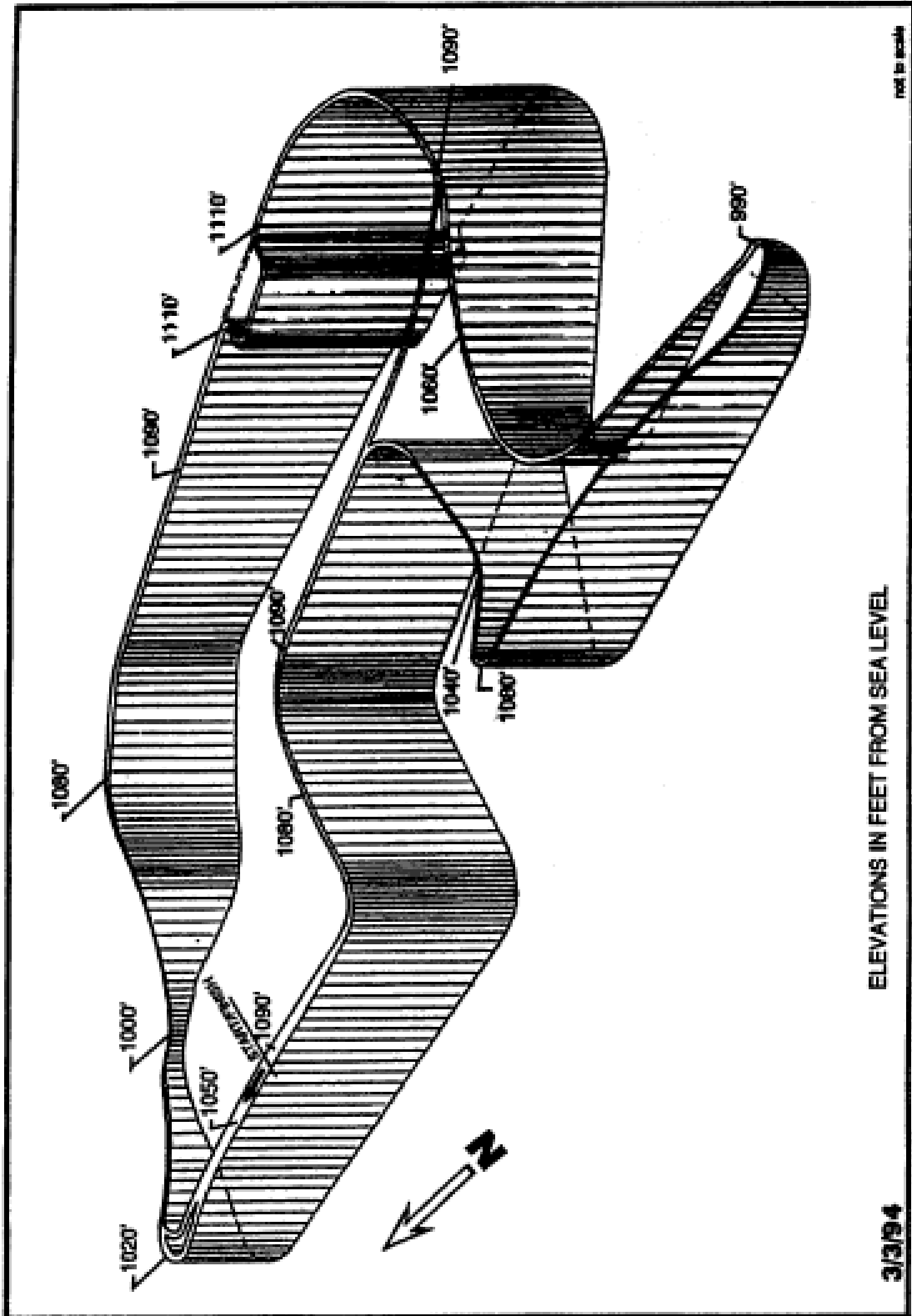
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Track width not to scale 9": 1 mile

Watkins Glen International

Track Elevation Map



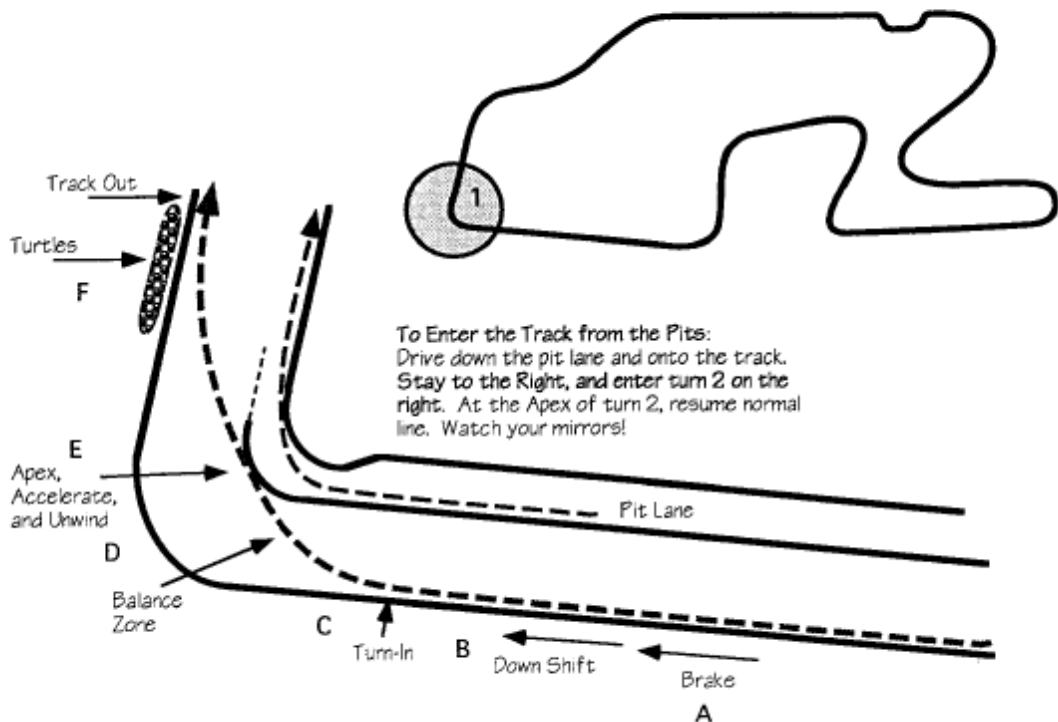
APPENDIX B

BY WALT LEISING, NIAGARA REGION, PCA

**ILLUSTRATIONS BY JIM DRESSER,
GENESEE VALLEY CHAPTER, BMW CAR CLUB**

**(DESCRIPTION ADAPTED SLIGHTLY BY JIM ADELMAN,
CVR/PCA, TO EMPHASIZE CVR INSTRUCTIONAL POINTS)**

TURN 1: "THE NINETY"

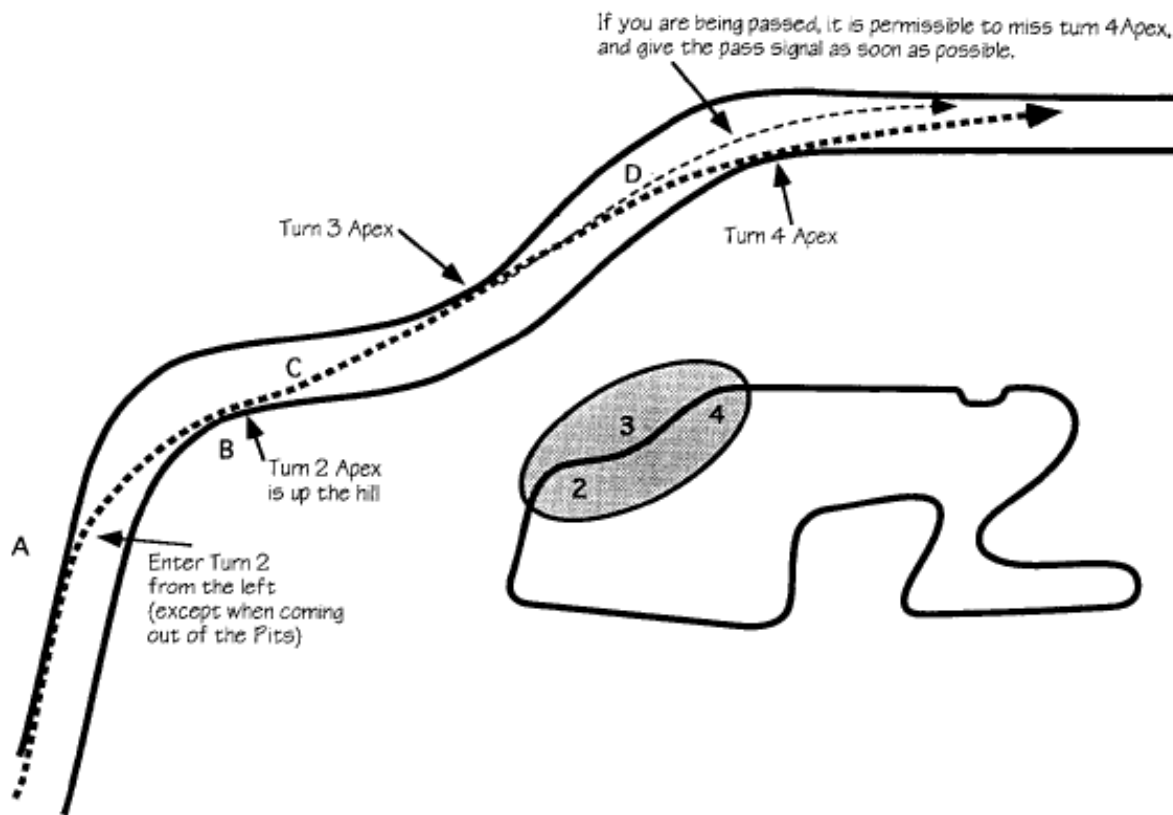


Notes: Turn 1 "The Ninety"

- A. The approach to Turn 1 is from the left side of the track. During the approach, stay a few feet from the edge of the pavement. This provides a safety margin during braking and shifting.
- B. The approach speed is much faster than the cornering speed. Hard braking is required and a downshift is necessary. With the car and steering wheel pointed straight ahead, shift *after* applying the brakes to avoid over-revving the motor.
- C. This is a late Apex corner with a decisive entry.
- D. Do not begin to accelerate until you are certain you can make it to the Apex.
- E. Accelerate as you pass the Apex, and unwind the steering wheel as you approach the Track-Out Point.
- F. Momentum and cornering forces should carry the car toward the Track-Out Point. Upshift -- after the Track-Out Point but before Turn 2 -- with the car and steering wheel straight.

Objective: Fast exit. This is probably the most important corner on the track since it leads to the long back straight. The most common problems are braking too soon and/or too little, and entering the corner too early and/or too fast.

TURNS 2, 3 & 4: "THE ESSES"



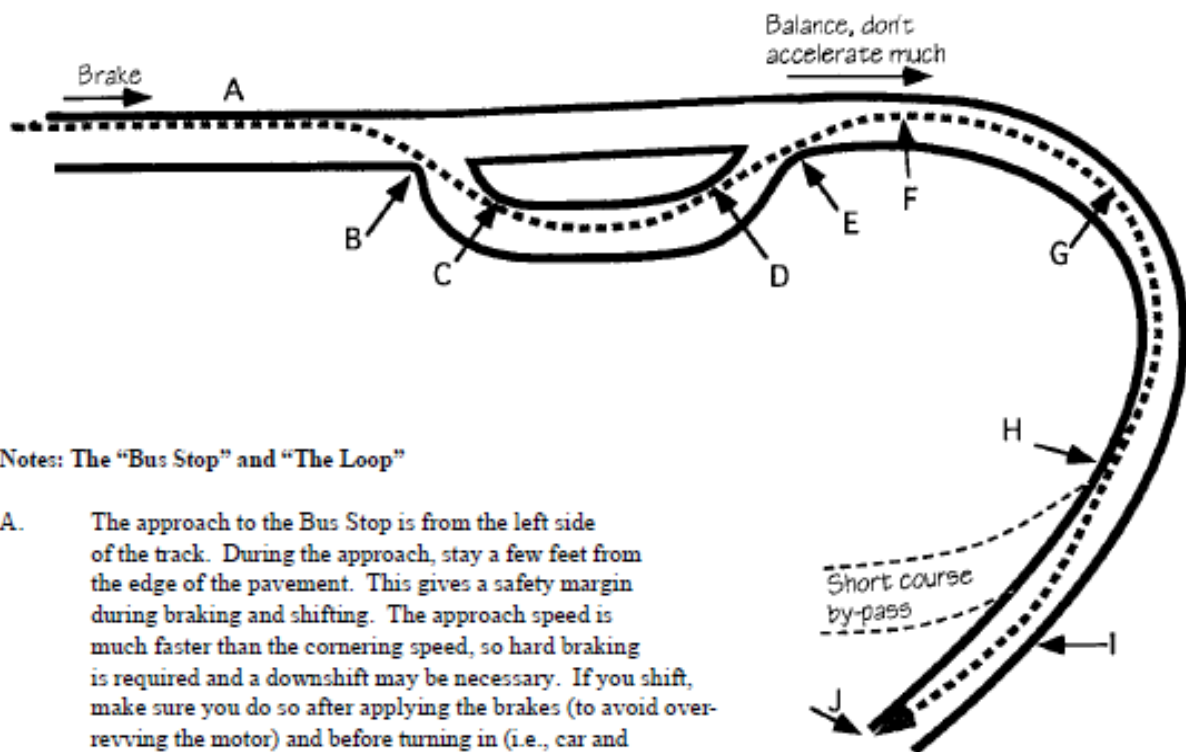
Notes: Turns 2,3 & 4 "The Esses"

Check your mirrors before entering Turn 2. Is anyone closing on you?

- A. Turn 2 is quite fast and usually is entered without braking. Lifting off the gas before the Turn-In Point (car and wheels straight) is enough for most cars.
- B. The Apex for Turn 2 is along the curb, up and around the corner.
- C. Near the end of the curbing, begin a transition across the track toward the Turn 3 Apex.
- D. Check your mirrors now! If there is no one behind you, transition toward the right and clip the Turn 4 Apex. However, if someone wishes to pass you, it is not necessary to clip the Apex at Turn 4. It is much better to move to the left a little earlier than normal, and give the pass signal. This will allow more time for passing. Do this only if you feel comfortable. Remember that the slower car *always* must signal before a pass can be made.

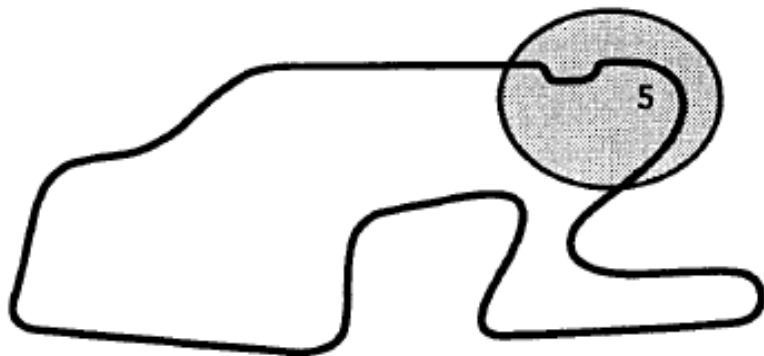
Objective: Smoothness!!! Don't jerk the steering wheel. Anticipate a pass by checking your mirrors often. Allow other people to pass you! Don't drag race along the back straight.

THE "BUS STOP" AND TURN 5 "THE LOOP"

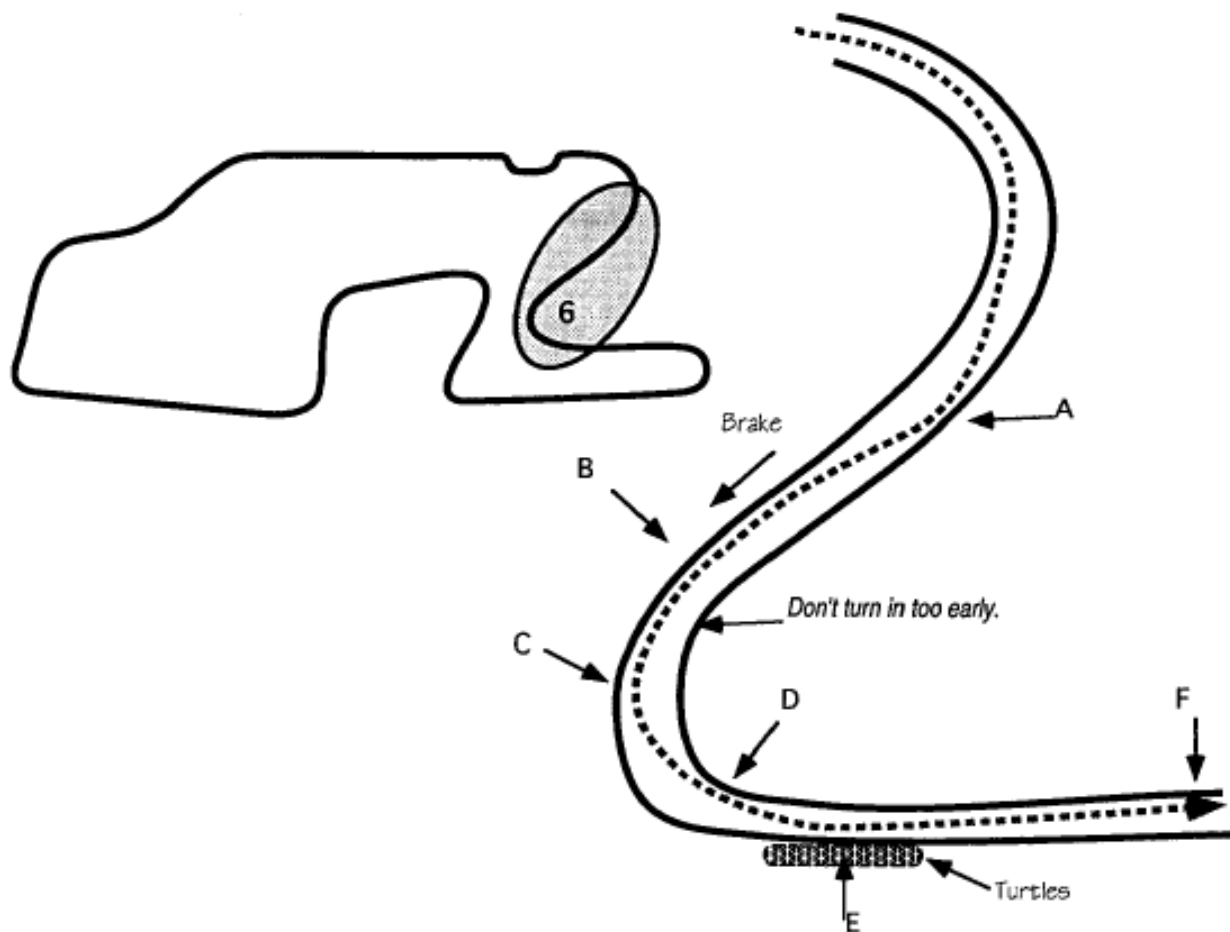


Notes: The "Bus Stop" and "The Loop"

- A. The approach to the Bus Stop is from the left side of the track. During the approach, stay a few feet from the edge of the pavement. This gives a safety margin during braking and shifting. The approach speed is much faster than the cornering speed, so hard braking is required and a downshift may be necessary. If you shift, make sure you do so after applying the brakes (to avoid over-revving the motor) and before turning in (i.e., car and steering wheel pointed straight ahead).
- B. Make sure you don't hit the curbing here. It can really upset the balance of the car.
- C. After completing the entry to the Bus Stop, try to make a smooth transition to the left, making a smooth arc connecting points B, C, D and E.
- F. After completing the Bus Stop, track out about $\frac{3}{4}$ of the way across the track, then slowly, very slowly, start the right hand turn down the hill. Look ahead for the Apex. Don't turn in very much or too early, and don't accelerate.
- G. Don't accelerate yet. You're not to the Apex.
- H. Once you see the Apex, squeeze the throttle. Begin unwinding the steering wheel after you pass the Apex, and aim for the Track-Out Point.
- I. The Track-Out Point.
- J. Finally, cross back to the right side of the track and get ready for Turn 6, "The Chute".



TURN 6: "THE CHUTE"

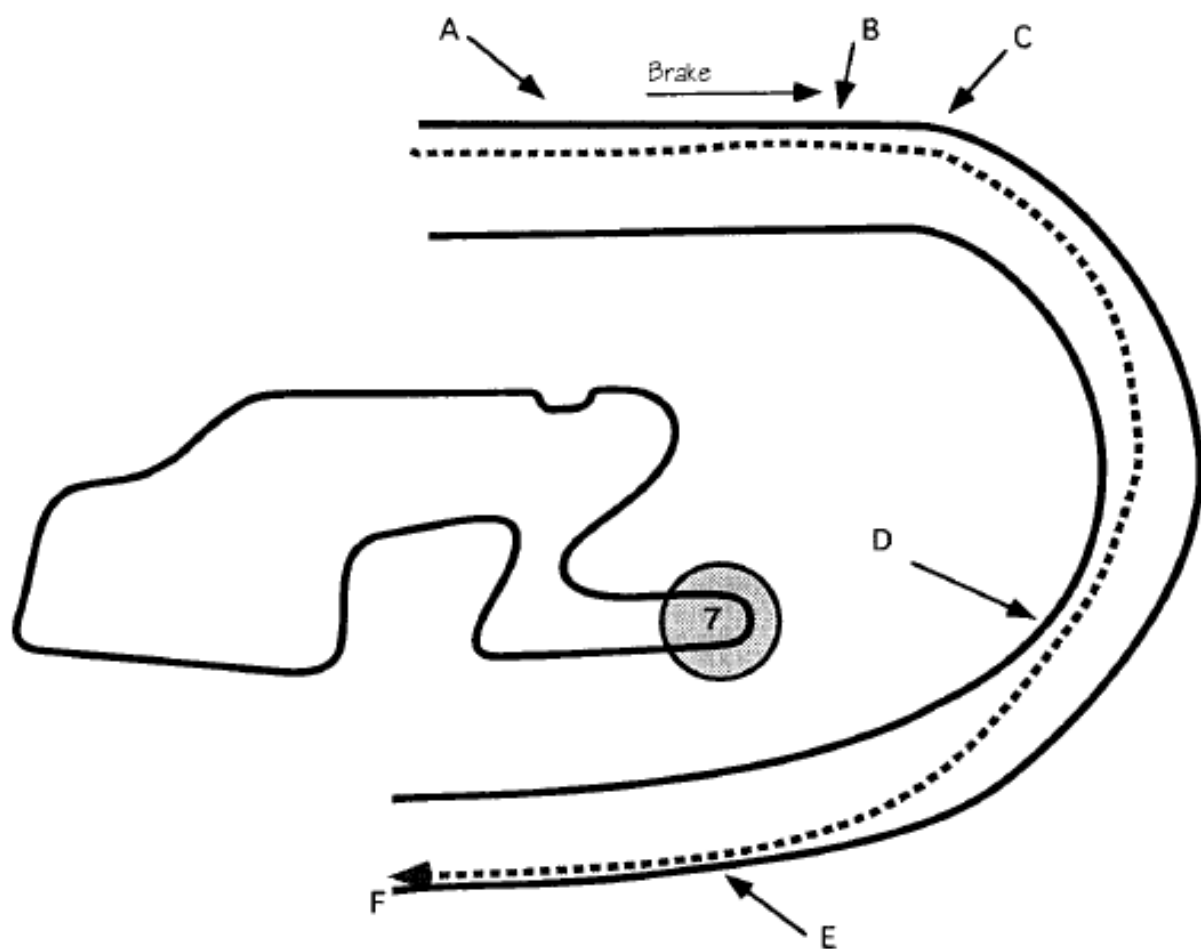


Notes: Turn 6 "The Chute"

- A. This is the Track-Out Point of The Loop (i.e., the previous turn). Continue accelerating down the hill, and cross over to the right side of the track.
- B. The approach to The Chute is from the right side of the track. During the approach, brake and downshift (car and wheels straight), and follow the outside edge of the pavement.
- C. Don't turn in too early, or you will run out of track at the exit.
- D. As soon as you can see the Apex, squeeze on the throttle as you go down the hill. Make sure you get in tight to the Apex!
- E. Track-Out Point for Turn 6.
- F. Cross over to the left side of the track, upshift if necessary, and get ready for "The Toe of the Boot".

Objective: This turn looks nasty, but it's a lot of fun. Just don't turn in too early or you'll run out of room.

TURN 7: "THE TOE OF THE BOOT"

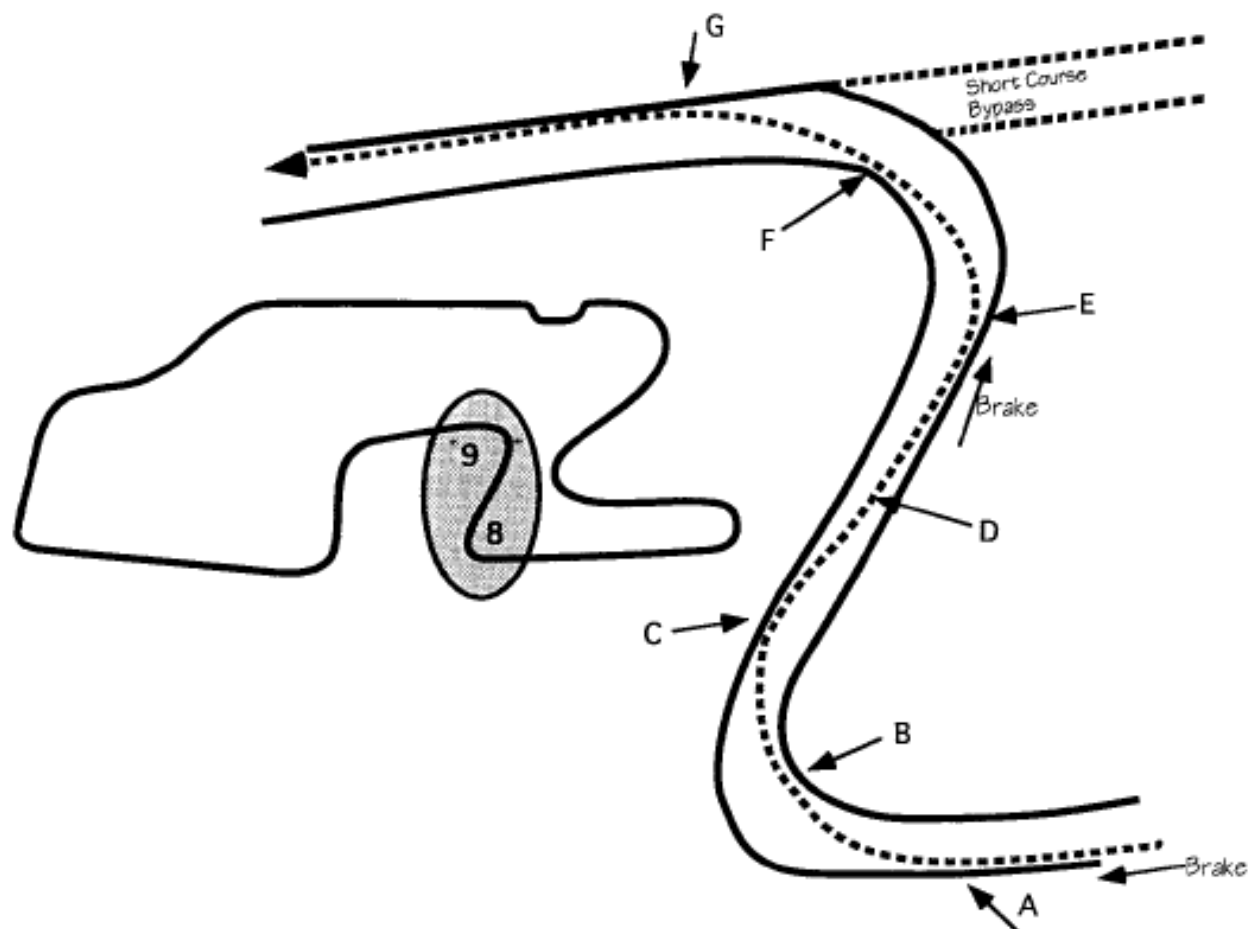


Notes: Turn 7 "The Toe of the Boot"

- A. To exit The Chute, transition over to the left of the track, staying a few feet from the edge as a safety margin.
- B. Approach this corner with hard braking and stay to the left. Downshift if necessary. This is a late Apex corner.
- C. As the road begins to go uphill, add a little steering input and look for the Apex. Don't accelerate hard until you can see – and you know you can reach – the Apex.
- D. As soon as you see the Apex, squeeze the throttle and accelerate up the hill. Unwind the steering wheel and track-out to the left.
- E. After the Track-Out Point for Turn 7, upshift. Remember the car and wheels must be straight for all shifting and braking movements.
- F. Check your mirrors!!!! Someone may have caught you in the corner. If so, lift off the gas enough to let them pass. Under no circumstance, "drag race" up the hill.

Objective: Get as much speed as you safely can at the exit of this corner.

TURN 8: "THE HEEL OF THE BOOT" and TURN 9: "THE OFF CAMBER"



Notes: Turn 8 "The Heel of the Boot"

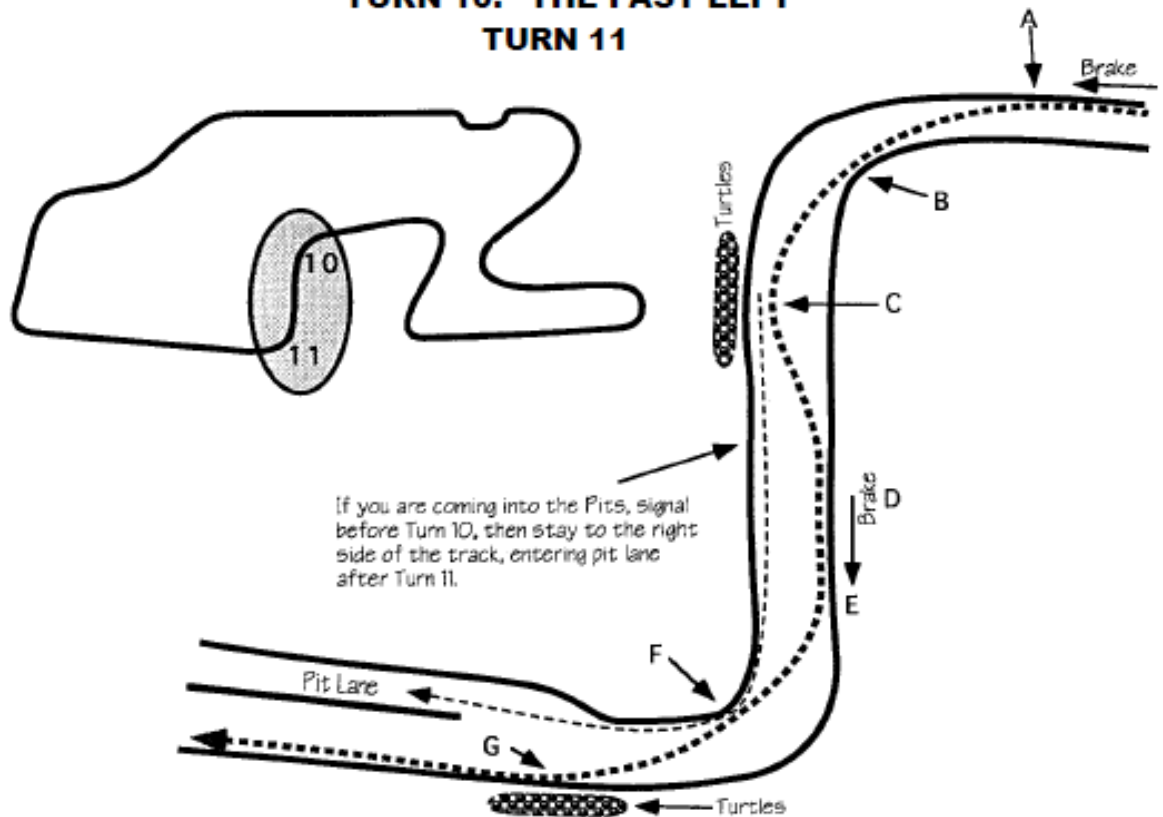
- A. After exiting from The Toe of the Boot, stay to the left of the track. Look in your mirrors!!! Get all passing done well before The Heel of the Boot. Brake in a straight line and downshift if necessary. This corner is much like Turn 1, being a late Apex right hander.
- B. Make sure you get in tight to the Apex. Once you make it to the Apex, unwind the steering wheel and accelerate to the Track-Out Point.
- C. The Track-Out Point for Turn 8.
- D. Now transition to the right, and get ready for the late Apex left hander.

Notes: Turn 9 "The Off Camber"

- E. Brake hard before the Turn-In Point at E (car and wheels straight, as always), staying in the same gear for most cars. This is one of the most difficult turns on the track because the Apex is way around the corner. Don't turn in too early!
- F. I told you the Apex was way around the corner! Now that you've reached it, accelerate toward the Track-Out Point at G.

Objective: Turn 8 is similar to Turn 1, but it is more than 90 degrees. Turn 9 is the slowest turn on the track. Enter slowly and look for the Apex. Don't turn in too early!

TURN 10: "THE FAST LEFT" TURN 11



Notes: Turn 10 "The Fast Left"

- A. If necessary, brake in a straight line before reaching the Turn-In Point. Most cars will stay in the same gear. This corner is very fast, and you must get in tight to the Apex. Look ahead and aim for it!
- B. One more reminder: Get in tight to the Apex.
- C. Once you pass the Apex, unwind the steering wheel, track out about $\frac{1}{4}$ of the way, then transition back across the track. This one long, smooth turn.
- D. Brake in a straight line, down shift if necessary, and look for the Apex at Turn 11.

Notes: Turn 11

- E. The Turn-In Point for Turn 11.
- F. Get in nice and tight. Then unwind the steering wheel, track-out and accelerate once past the Apex to the Track-Out Point at G.

Once again, check your mirrors as you enter the front straight!!! If someone is behind you, give the passing signal. Lift off the gas enough to let the other car pass more easily (once your car and wheels are straight).

Objective: Turn 10 is fast and fun. After the Apex, track-out about $\frac{1}{4}$ of the way. This gives you a margin of error in case you go in too fast or too early. Turn 11 should be done as fast and smoothly as possible because it leads to the long front straight.

APPENDIX C: ADDITIONAL TRACK TERMS*

ARMCO. Nasty blue guard rails that you want to avoid.

BITE. The amount of traction the tires have.

BLEEDING THE BRAKES. A procedure to remove air and contaminated fluid from the brake lines.

BLIPPING. A quick application of the throttle to raise RPM's in order to downshift without damaging your engine. This is done only when the clutch is depressed, usually during heel-and-toe.

BRAIN FADE. When you find it difficult to concentrate on what you're supposed to be doing. Come into the pits and take a rest.

CHEATING IN (ALSO KNOWN AS CRABBING). Moving away from the edge of the track before you begin a turn. This has the effect of making the track narrower.

CURING BRAKE PADS (ALSO KNOWN AS BEDDING, HEAT CYCLING OR SEATING). Removes gases from the brake pad material by alternately heating and cooling the pads. This is done *before* you go out on the track.

FEEDING IN. Gently increasing the amount of steering wheel input. Also used in reference to throttle pressure.

LOCKING UP. When the wheels no longer rotate due to the brakes being engaged beyond the tires' grip capability.

RED MIST. See brain fade. It's time to get off the track.

SQUEEZING. Gently adding pressure to the brake or throttle.

THRESHOLD BRAKING. Applying the brakes and holding them at the point where the wheels are just about to lock up.

THROTTLE STEERING. Using increased or decreased pressure on the throttle to assist in the making of a turn.

TURTLES (ALSO KNOWN AS RUMBLE STRIPS OR SPEED BUMPS). Those miserable bumpy things just outside of the track area (where you don't want to be).

* See Appendix A, *CVR Driver's Education Guide*, for additional definitions.