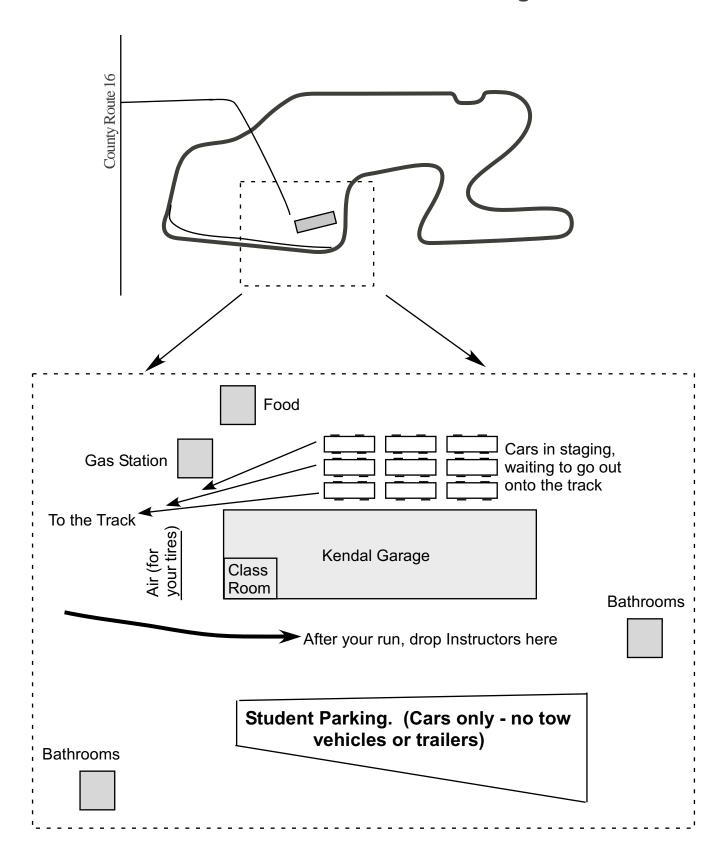
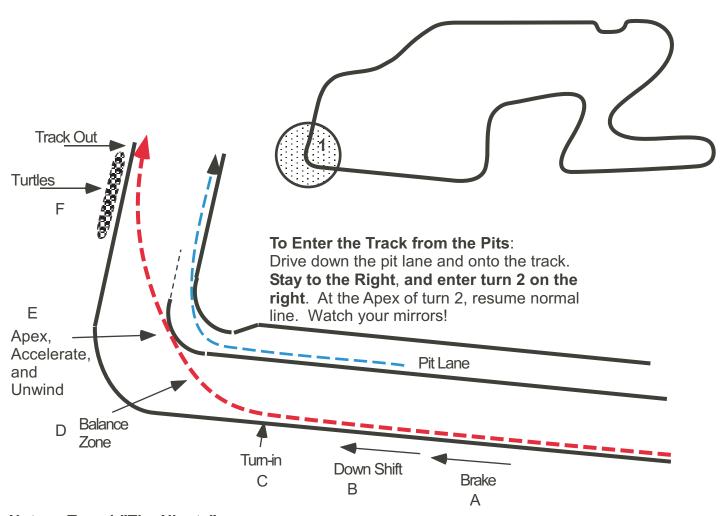
## **Traffic Flow around the Kendall Garage**



There is a video of Watkins Glen on our web site, if you'd like to see what the track looks like: http://www.gvc-bmwcca.org/Archive/movies/movies.aspx

Turn 1 "The Ninety"



Notes: Turn 1 "The Ninety"

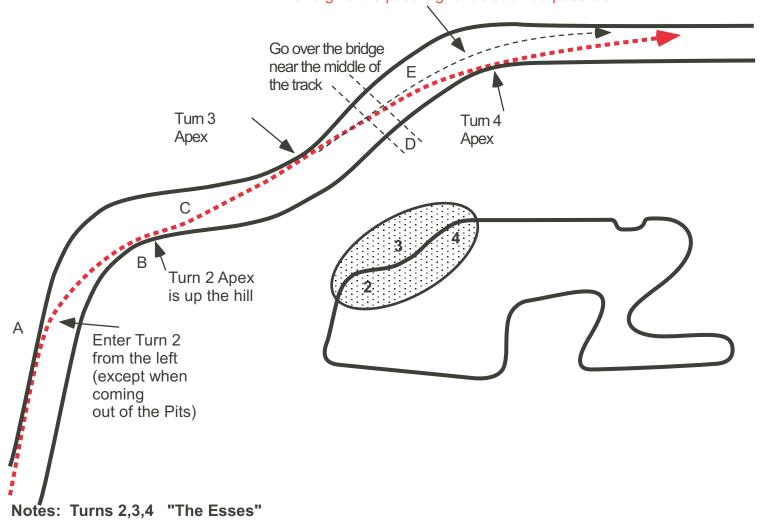
- A) The approach to turn 1 is from the left side of the track. During the approach to the corner, stay 12 to 18 inches from the edge of the pavement. This gives a safety margin during braking and shifting.
- B) The approach speed is much faster than the cornering speed. Hard braking is required and a downshift to 3rd is often necessary. Down-shift after braking to avoid over revving the motor.
- C) This is a late apex corner, with a late and decisive entry.
- D) Begin acceleration when you are sure that you can make it to the apex.
- E) Go to full acceleration as you pass the apex, while you unwind the steering, and track-out.
- F) Momentum and cornering forces should carry the car toward the track-out point. Accelerate, and shift to 4th before Turn 2.

The most common problem is braking too late or too little, and entering the corner too early and/or too fast.

**Objective**: Fast exit. This is probably the most important corner on the track since it leads to the long back straight.

## Turn 2, 3, & 4 "The Esses"

If you are being passed, it is permissible to miss turn 4 apex, and give the pass signal as soon as possible.

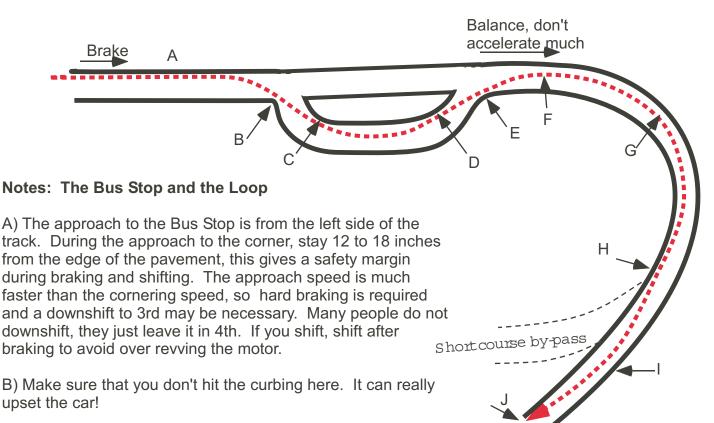


Check your mirrors before entering Turn 2. Is anyone closing on you?

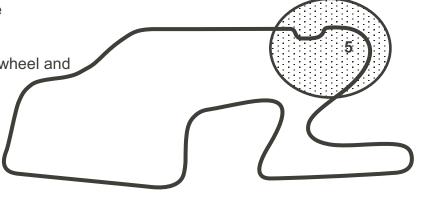
- A) Turn 2 is quite fast and is usually entered without braking, lifting off the gas is enough for most cars.
- B) The apex for Turn 2 is along the curb, up and around the corner.
- C) Near the end of the curbing, begin a transition across the track, toward the apex of Turn 3.
- D) After hitting the apex of turn 3, cross the bridge near the middle of the track.
- E) Check your Mirrors Now!!!! If there is no one behind you, transition towards the right, and hit Turn 4 apex. However, if someone wishes to pass you, it is not necessary to hit the apex of 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. Only do this if you feel comfortable. Remember, the slower car is in charge of passing.

**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' other students up the back straight.

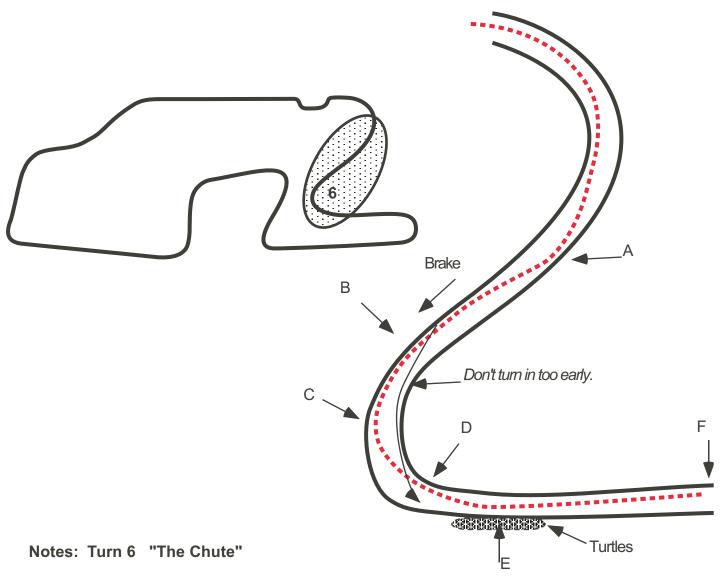
## The Bus Stop & Turn 5 "The Loop"



- 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 3/4 of the way across the track, then slowly, very slowly, start the right hand turn down the hill. Look way 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 reaching the apex, unwind the wheel and aim for the trackout 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".



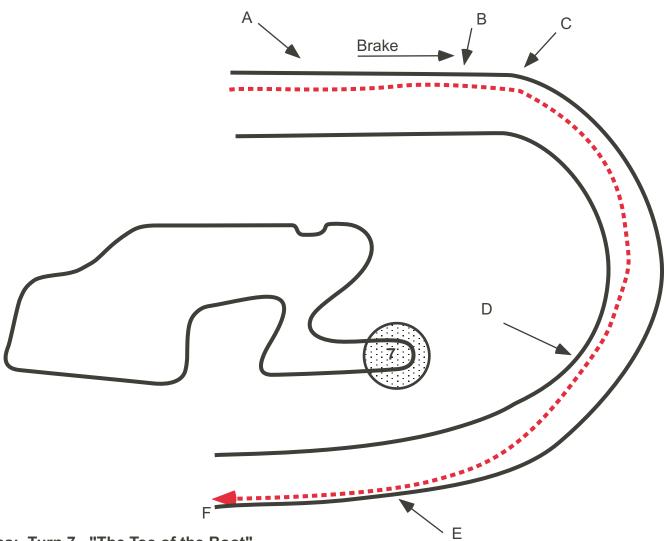
Turn 6 "The Chute"



- A) This is the track-out point of the loop. 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 to the corner, brake hard, downshift to 3rd, 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, get on the gas hard, and shoot 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 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 will run out of room. You can get a real 'kick' coming down the hill.

Turn 7 "The Toe of the Boot"

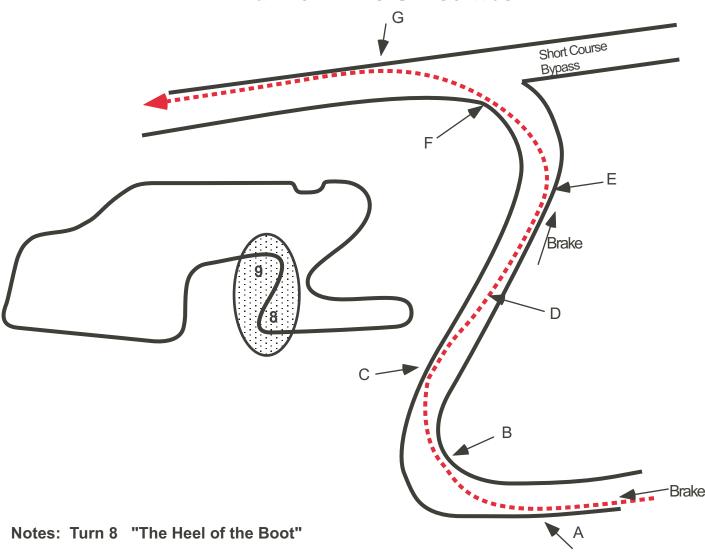


Notes: Turn 7 "The Toe of the Boot"

- A) After exiting from the Chute, transition over to the left edge of the track. Look in your Mirrors!!! Does anyone want to pass you? If so, remember that passing is allowed after this turn is completed. If someone wants to pass you, complete this corner, then get off the gas and let them pass.
- B) Approach this corner with hard braking, but stay to the left. Down shift to 3rd. 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 the apex.
- D) As soon as you can see the apex, get on the gas hard, and accelerate up the hill. Unwind the steering, and track out to the left.
- E) Track-out point for turn 7.
- F) Look in your mirrors again !!!!! Somone may have caught you in the corner. If so, lift off of the gas, and let them pass you. Under no circumstance, "Drag Race" them up the hill.

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

# Turn 8 "The Heel of the Boot" Turn 9 "The Off-Camber"



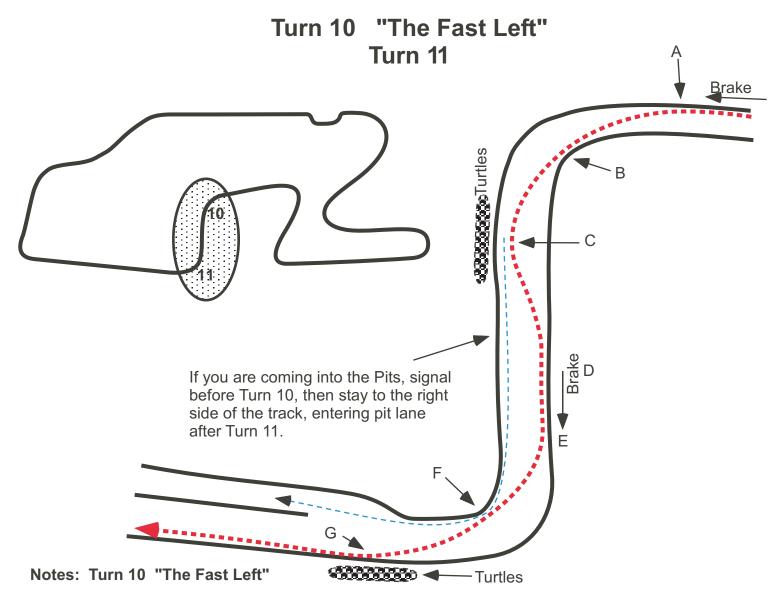
- A) After exiting from the Toe of the Boot, remain over to the left edge of the track. Look in your Mirrors!!! Get all the passing done well before this corner. Brake in a straight line, and downshift to 3rd for most cars. This corner is much like Turn 1, being a late apex, right hand corner.
- B) Make sure you get in tight to the apex. Once you make it to the apex, unwind the steering, 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 a late apex, left hand corner.

### Notes: Turn 9 "The Off-Camber"

- E) Brake hard, leaving it in 3rd gear for most cars. This is one of the hardest turns on the track because the apex is way around the corner. Again, don't turn in too early.
- F) I told you the apex was way around the corner! Now that you've found it, accelerate towards the track-out point.

**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!

Jim Dresser



- A) Depending on the horsepower of your car, braking for this corner may or may not be required. If necessary, brake in a straight line, and leave it in 4th for most cars. This corner is very fast, and you must get in tight to the apex. Look ahead and aim for it!
- B) Make sure you get in tight to the apex.
- C) Once you make it to the apex, track out about 3/4 of the way, then cross the track. This is one long, smooth turn.
- D) Brake in a straight line, downshift to 3rd, and look for the apex of 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 again, check your Mirrors!!!! If someone is behind you, give them the passing signal and get off the gas. Let them pass you! Do this as early as you can.

**Objective**: Turn 10 is fast and fun. After the Apex, Track-out about 3/4 of the way - This gives you a margin of error in case you go in too fast or early.

Turn 11 should be done as smootly as possible because it leads to the long front straight.

Jim Dresser

### **Track Terms**

**Armco -** Nasty blue guard rails that you want to avoid!

**Balance** - Don't add more gas, or brakes, or steering. Just be smooth & steady.

Bite - The amount of traction the tires have.

**Bleeding the Brakes** - A procedure to remove air and contaminated fluid from the brake lines.

Blipping the Throttle - A quick stab on the throttle to quickly raise the RPM's of the engine in order to down shift without damaging your engine. 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.

**Cheating In** - 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, A.K.A. Bedding in, Seating Brake Pads - Removing the gases from the brake pad material by alternately heating and cooling the pads. Done before you go out on the track.

**Down Shift** - Shifting the transmission to a lower gear.

**Feeding In** - Gently increasing the amount of steering wheel input. Also used in reference to throttle pressure.

**Heel and Toe** - Using the right foot to depress the brake pedal and blipping the throttle at the same time. Done during a down shift.

**Locking Up** - When the wheels no longer rotate due to the brakes being fully engaged.

**Oversteer** - When the car wants to turn more than you want it to. i.e., the tail of the car wants to come around.

**Red Mist** - Time to get off the track because your mind can't concentrate. See Brain Fade.

**Smooth** - The style of driving where there are no jerky movements as you drive around the track. The smoother you are, the faster you'll drive.

**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.

**Tighter** - Add a little more steering input so that you will be closer (tighter), to the apex.

**Track out Area** - The area on the outside edge of the track where you should be when you finish your turn.

**Traction** - How well the tires stick to the road.

**Trail Braking** - Holding the brake pedal down while turning into a corner. This gently shifts the weight of the car to the outside front wheel to increase the bite of that tire.

**Transition** - A very gentle turn.

**Turn in Area** - The area on the outside edge of the track where you begin the turning procedure.

Turtles, A.K.A. Rumble strips, Speed Bumps - Those miserable bumpy things just outside of the Track out Area.

**Understeer** - When the car would rather go straight then turn and you have to increase the amount of steering wheel movement to get the car through the corner.

**Up Shift** - Shifting the transmission to a higher gear.

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