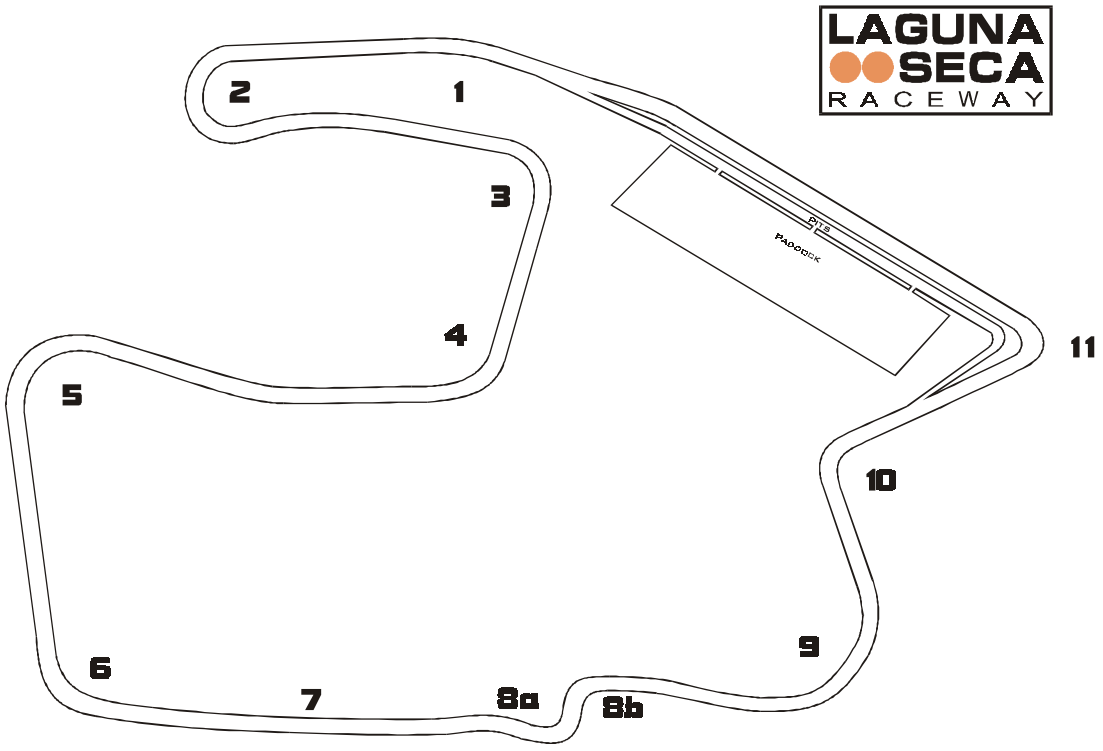
Driving Laguna Seca **Hank Watts & Brad Maker**

DISCLAIMER: The following information is provided by the Golden Gate Region of the Porsche Club of America as an orientation to this track. It is intended to be used only as a guideline and intended only for use by drivers at GGR events. All drivers are responsible for determining the safest and best approach for themselves and their cars. Under no circumstances will the region, its officers, event organizers, instructors or other members be responsible for any consequences to any driver as a result of completely or partially following the recommendations herein. This exclusion applies to events conducted by GGR as well as other events where drivers may choose to use these guidelines to assist in learning to drive this track.

Laguna Seca is a marvelous and famous racetrack located near scenic Monterey. It's located off Highway 68, about 5 miles east of Monterey. From Santa Cruz, take Highway 1 South. You can also join this route by turning off 101 onto 156 West, just south of Prunedale. Go past Fort Ord. Take the second Seaside exit, which is also marked as Laguna Seca. Proceed straight through town, until the road joins Highway 68 at a Y intersection. Turn left. Proceed past Laguna Seca Ranch. Turn left at Laguna Seca Recreation Area, then immediately right to go up the hill. A smile and a wave will get you by the ranger shack. Stay on the same road, winding down the hill. Once you sign the release you are in the pit area.



General Remarks on Laguna Seca

Straights: Many of the turns at Laguna Seca are connected by straights, as opposed to being directly connected with other turns. This provides excellent opportunities, in a cooperative environment, for letting faster cars pass. Even in the short straights, a little bit of cooperation will let the faster cars by before your car needs to brake for the next turn.

FIA Berms: Laguna Seca uses FIA-type berms for apexes (not entries or exits) that have a unique ribbed shape, sloping upwards away from the car, with the ribs getting increasingly deep as one goes up the slope. The appropriate use of these berms is to place the inside front tire so that the rumbling of the berm can be felt, but not so much as to upset the car. Roughly the outside third of the inside front tire should be enough into the ribbing at the apex to be heard.

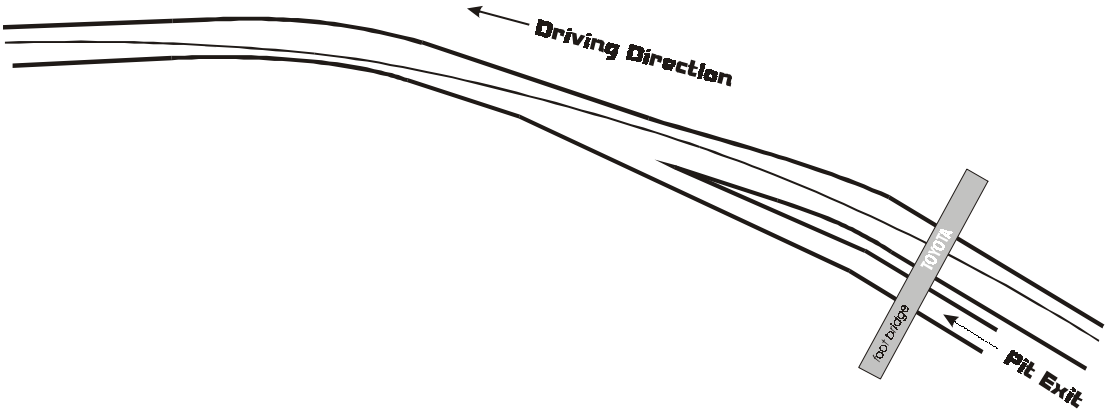
Runoff Room: Unlike track such as Willow Springs, ThunderHill and Buttonwillow, Laguna Seca has close walls and poses very serious risks to the car and the driver. Distances from the pavement to the wall range from 0 feet to perhaps 100 feet, but are almost always close enough to be accessible to a speeding car sliding over grass and dirt. Drivers who have become tolerant of leaving the paved surface need to take a more conservative approach at Laguna Seca, lest the car and driver be placed at excessive risk.

Some of the runoff areas have been constructed of sand pits which will help a car slow down before encountering a wall. However, the capability of these sand pits to slow the car will work against the car and driver if they are encountered sideways. When that happens the leading side of the car tends to dig in, rolling the vehicle rather easily. Try to ponder this enough so that, if you end up having to go off into a sand pit, your natural reaction is to attack the pit straight on.

The text occasionally indicates likely gear choices as a very general guideline only. The gear chosen will, in many cases, depend not only on the gearing, rev limit and torque curve of the car, but also on driver preference. There are places where higher gears may add smoothness and may make a high-horsepower or low-available-traction car more controllable but at the expense of critical acceleration. Cars with narrow horsepower bands obviously need more careful gear selection; cars with broad torque curves may care less.

The lines described in this document are qualifying or time trial lines. With appropriate adjustments for the specifics of your car, they should produce the fastest laptimes available for your driving level.

Turn 1

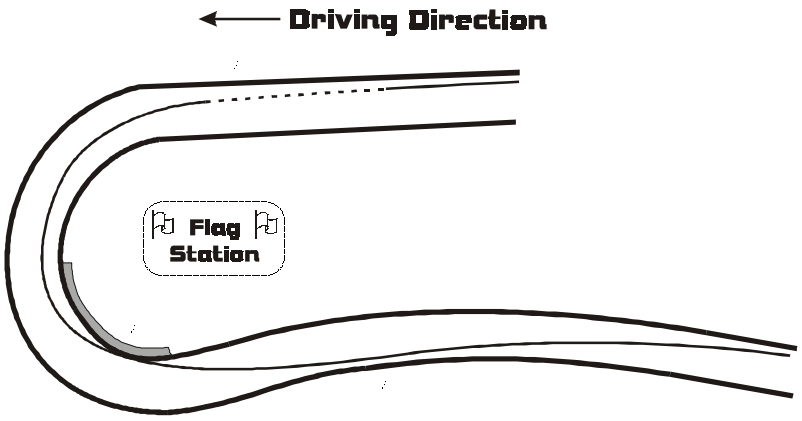


Turn 1 is a left jog in the main straight: Really part of the straight from turn 11 to turn 2, this turn at the top of the hill does no more than cause the driver to attempt to create a straight line across it. Speeds are high, and the hill obscures the track past the crest.

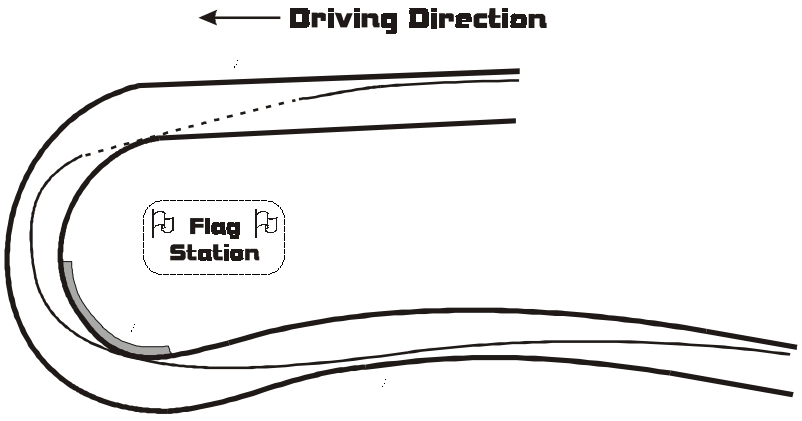
The hill in the middle of this straight, which in cross-section approximates a bell-curve, exaggerates the importance of accelerating early. Compared to a completely flat straight, available horsepower will seem to be reduced in the middle third of its length. So, any extra velocity you can gain exiting Turn 11 will pay greater dividends than you'd expect.

Turn 2: "The Andretti Hairpin"

The "classic" line



The "double apex" line



Turn 2 is a hairpin left at the end of the main straight: This turn is not quite a hairpin, and not quite a sweeper. “Slow sweeper” might describe it best. There are two approaches to this turn. Students should learn the classic line first, since parts of this approach will be used in the alternate line, and the classic line is also easier to execute. Students who gain proficiency in the classic line may then attempt the alternate double-apex line more safely.

The classic line: Approaching turn 2 the brakes are applied very firmly, heading the car into the right side of the beginning of the turn. Because of the speed and downward slope of the track, this braking zone presents a visual challenge. Drivers trying to “eyeball” their transition from throttle to brake may have trouble being consistent. It is important to establish fixed reference points on or beside the track (from which to make small incremental adjustments). Most cars will need to downshift to 2nd gear prior to turn-in.

There is normally a clearly visible seam in the pavement that starts straight and then follows the curve of the turn. If the car is about a car's-width to the left of the right edge of the track, the right front tire will be on this seam. Having slowed the car sufficiently let the front tire follow this seam. After the first part of the turn the seam is less visible, but continue to hold the same relative distance from the right side of the curve, perhaps a distance of 8 or 10 feed from the pavement edge.

At a point about 60% through the turn the car needs to rotate slightly toward the apex. If the car is being driven near the limits of tire adhesion a slight throttle lift will accomplish this task. If not, the car can just be pointed in with the steering wheel.

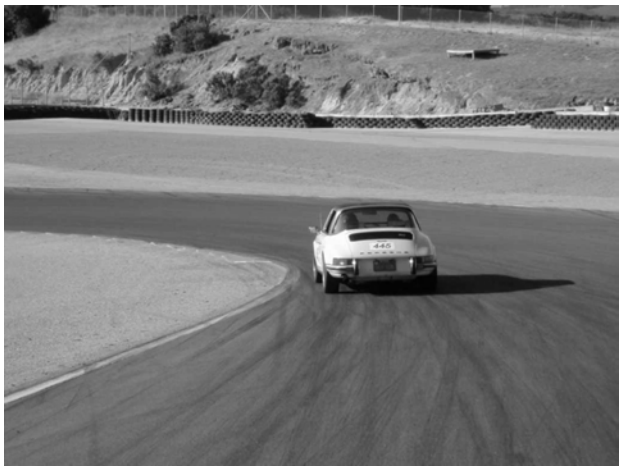
Cars having difficulty with wheel-spin and oversteer on the exit of this corner may benefit from using 3rd gear instead of 2nd. This eliminates one downshift on the way in as well as the upshift on the way out. It will however, increases the car's propensity to understeer in the early part of the turn. A carefully-controlled throttle in 2nd gear will do better for most drivers. Once the car settles from the rotation the throttle can be applied aggressively. This will take the car on a path through a very late apex (75% around the FIA berm)…

…and across the track to the point at the outside edge where the track turns slightly to the right. If the apex is slightly early the right tires may run through the dirt at this point, which will not cause difficulty as long as the car is pointed straight ahead. However, if the driver fights to avoid the dirt, and while the car is still turning an outside rear tire hits the dirt, the likely path of spin is to the left where the wall is closer than it looks. A shift to 3rd will likely be needed soon after the exit point. Proceed from this right-side exit across the track to the entry to turn 3. There is room here for cooperative passing.

The double-apex line: The last part of the turn is taken in the same way; only the beginning of the turn differs from the classic line.

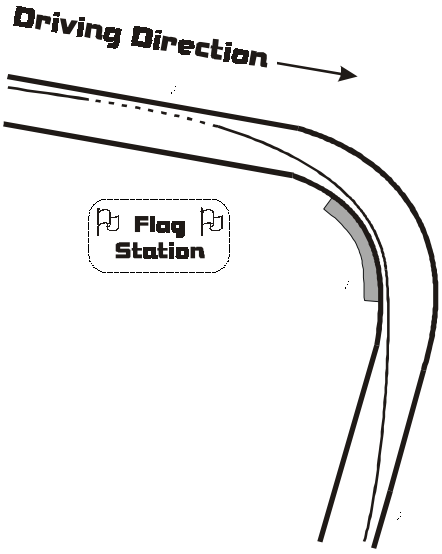
To execute the double apex, and starting again at the beginning of turn 2, drive at full throttle to the point at which one would brake for the classic line. However, instead of braking, rotate the car to the left on a line that will cause the left front tire to run to the edge of the pavement on the inside of the turn (and the left side of the track).

The point to shoot for is on a straight line from the turning point, as far to the left as one can point the car without driving over dirt on the inside. Once the car completely settles from the rotation, the brakes must be fully applied. Applying the brakes earlier will most likely lock up the left front tire, creating some level of instability and a massive flat spot. Obviously we are braking later, but we are also pointed into the fat section of the turn; rather than having to slow the car by the beginning of the turn, we need only get the speed reduced by the middle of the turn, which is relatively further down the track.



Continue braking, trailing off as one nears the classic line. The car must now be rotated onto the classic line at roughly the point at which the classic line noses the car in to the late apex. This will likely require some trail-braking. Your speed will momentarily be below that of the classic line, but the car has gotten here faster by virtue of braking much later and spending less time negotiating the sweeping first part of the classic line. The rest of the turn follows the classic line.

Turn 3



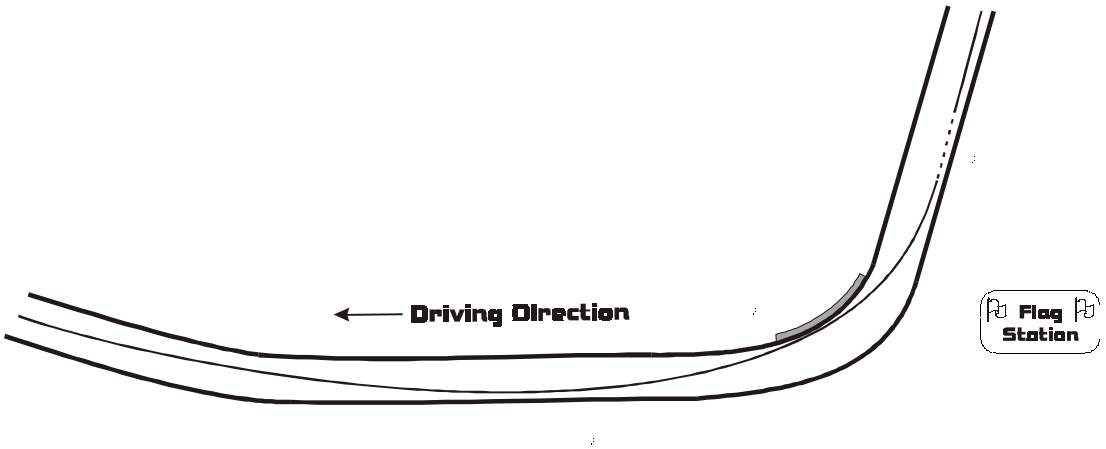
Turn 3 is a right-hand turn of more than 90 degrees. This turn poses a visual problem. People tend to turn in at the point that would be appropriate if it were a 90 degree turn. However, the turn is slightly more than 90 degrees, and very much needs a slightly later turn in. Try to err on the side of entering too slowly and you will be able to maximize your exit speed with a nice late-apex line. This will pay dividends in the long, fast section that follows.

Brake down to the 1 marker and turn in after it on a line that will achieve an apex about two-thirds of the way around the inside FIA berm.

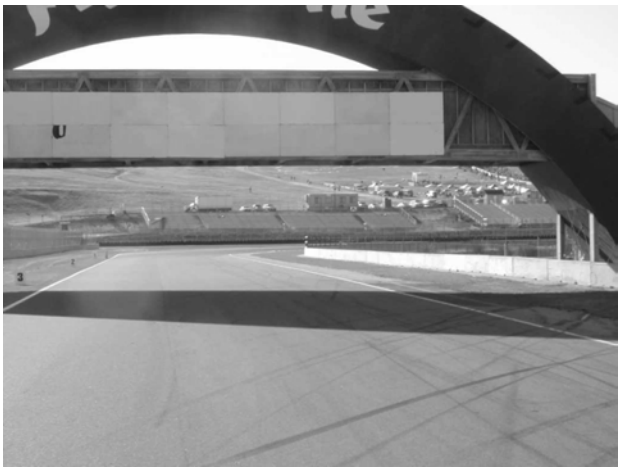
This approach will allow the power to be fully applied right near the apex point and therefore achieve better exit speed.

The exit will be to the left of the track. The exit berm is fairly flat. Some passing can be cooperatively achieved in the short straight before turn 4. Some cars will need to shift to 4th gear in this section (and may or may not need to shift back to 3rd for turn 4).

Turn 4



Turn 4 is a right-hand turn of slightly less than 90 degrees and poses the opposite problem from turn 3. Many drivers will turn in too late, thinking that is necessary to achieve a late apex.

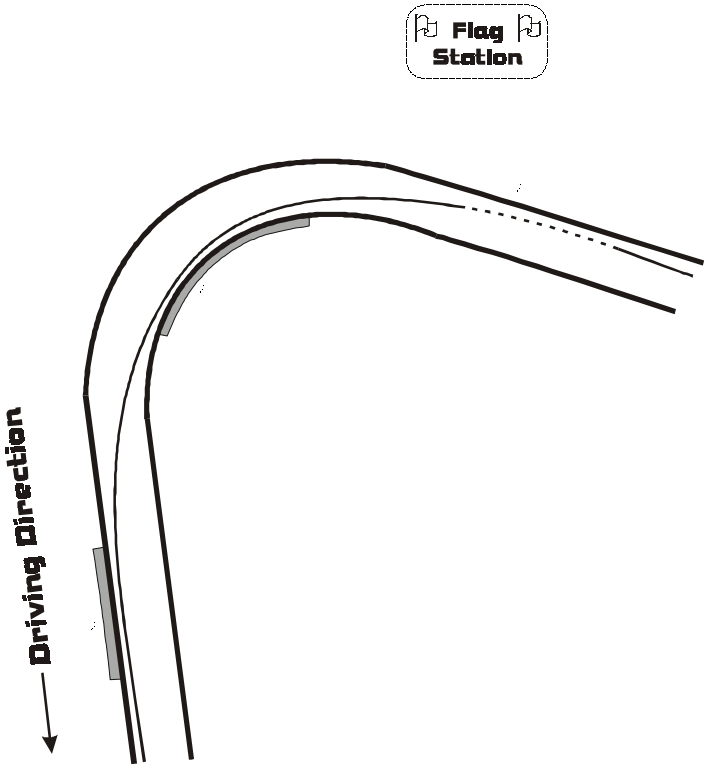


Most cars will require a slight use of the brakes to adjust the speed downward, though other cars may require only a lift to set the front suspension down slightly to assist in the turn-in. The turn-in is earlier than your eyes will suggest …

…but will still produce an apex at the end of the FIA berm. You should be able to feel the slight rumble of the berm; the tire will continue, hanging partially over the dirt just past the end of the berm. Power can be applied as soon as the turn-in is made, well before the apex.

Continue to an exit on the far left. By holding a slight rightward steering input at the exit the car will continue on in a graceful arc and end up settling on the right side of the track just as the track straightens in its approach to turn 5. Cooperative passing can be easily achieved in the straight between 4 and 5. Most cars will need to shift to 4th if 3rd was used for the turn.

Turn 5



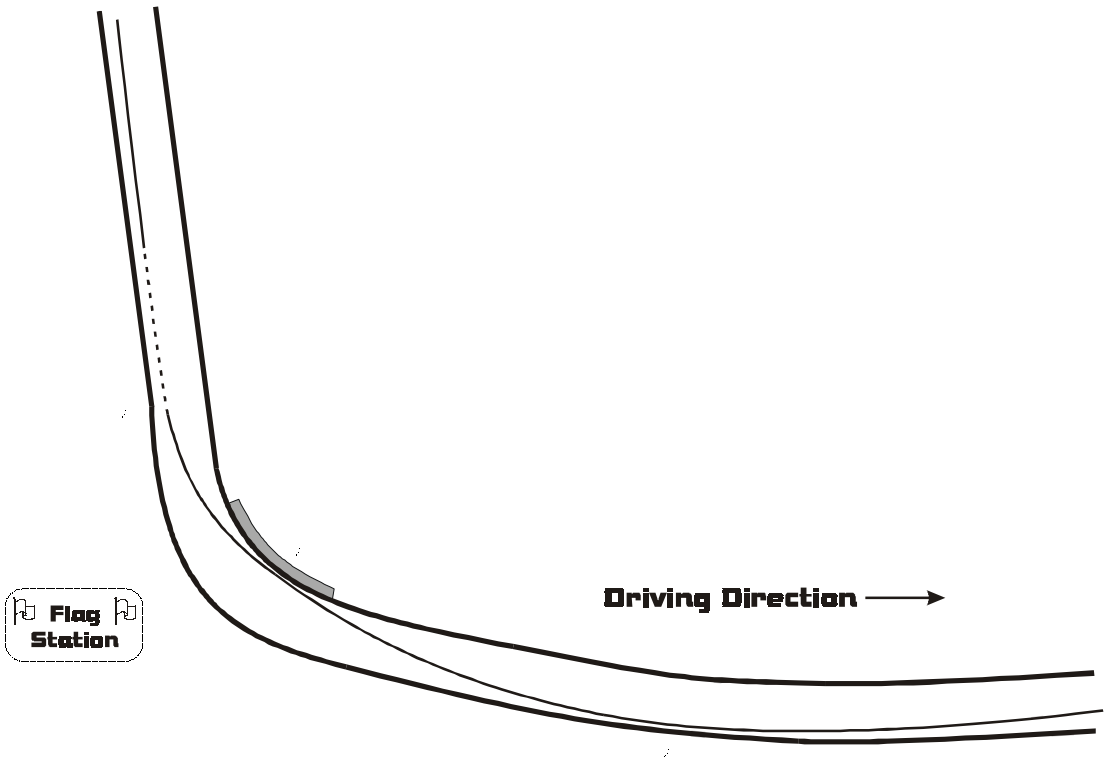
Turn 5 is a left, after which you head up a hill and past the traditional sound check station. This is a banked, uphill turn that provides more traction than expected. Since this corner is well over 90 degrees, the apex is rather late.

Braking for this turn is moderate. Most cars will need to drop to 3rd gear here. Turn in near the 1 marker. . .

…and proceed smoothly to an apex about 60% along the inside FIA berm. A smooth and relatively gradual steering input will help you avoid reaching the apex berm too early. Be absolutely sure to hit this apex, as the track keeps turning long after the end of the inside berm, and the exit does not leave much room for error.

The banking just past the exit will tend to hold the car very nicely. Complete the turn at the right edge of the track near the end of the exit berm. The sound check station is now on your right. There is room before turn 6 to let faster cars pass. Some cars will need to shift to 4th before turn 6.

Turn 6



Turn 6 is known as the “Salinas Exit.” This turn has a depression in the area near to and just before the apex. Because of this the pavement will tend to release and then re-grab the car, processing the front end first, then the back of the car. For this reason the turn will feel, even when executed optimally, somewhat jerky.

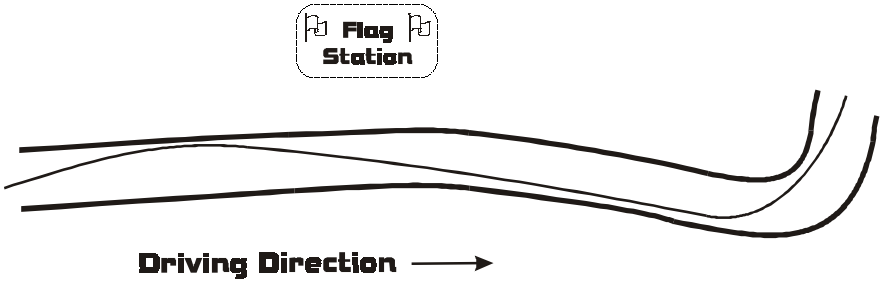
Most cars will require only slight or moderate braking prior to turning in. 3rd gear is commonly used. Turn-in is at about the 1 brake marker…

…hitting an apex that is slightly late and continuing to an exit that is about half way along the right side exit berm. Power can be fed in as soon as the apex is neared, if you're on the right line.

If you are NOT on the right line and an off-track experience appears imminent, it is important that you suppress your instinct to "save" the situation. Dropping a heavily loaded outside tire into the dirt here will quickly spin the car to the inside where a tire-wall awaits. (Notice all the skid & wall marks.) Instead, straighten out your steering-angle and drive off the track in a controlled manner. There are risks to the right as well, but the sand trap is there to help and there is much more room to figure things out than to the left.

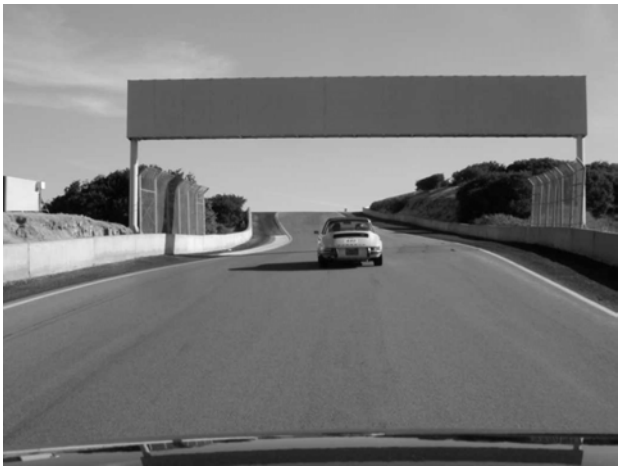
The road continues to bulge outward to the right. The proper line is neither to follow that bulge nor to move the car to the left side of the track. Rather, hold a path that will take you to the rightmost edge of the track where there is a small crest about 2/3rds of the way up the hill. During this section there is also a good opportunity to let faster cars by. Most cars will (eventually . . . you're going uphill and acceleration is typically not rapid) need 4th gear here.

Turn 7



Turn 7 is a slight bend to the right going up the hill. From the position on the right side of the track at the mid-hill crest, the pavement will close in from the right, naturally forcing the car to the left.

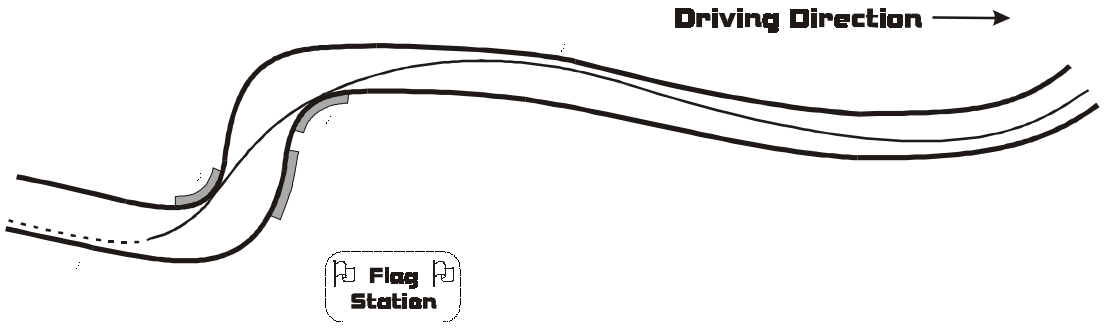
Look to point the car into the slot, or slight outward protrusion of the track on the left side just before the crest. Your driver's-side tires should pass loudly over the painted rumble strip on the left side of the track. The reason for the line we're on is that, to get out into that area if you'd come up the left side of the track, you would have to slightly veer left before making the slight right turn over the main crest of the hill. This combination of movements tends to upset the car.



However, approaching as we do from the right side of the track, the only motion necessary is to veer the car right when the left edge of the track is reached after the rumble strip.

From this point, there is a straight line available that touches the right edge of the track at the crest and leaves the car optimally positioned for straight line braking along the right edge of the track between the 3 and 1 markers preceding the corkscrew. For almost all cars some braking will be needed before the crest. When the car gets light over the crest relax the brake pressure, then reapply it firmly once the car begins to settle on the top of the hill.

Turn 8 and Turn 8a: "The Corkscrew"



Turns 8 and 8A comprise "The Corkscrew." This begins a legendary downhill section of track which drops over seventy feet in elevation. Standing at the top of the corkscrew, the steepness of the track, its twisting changes in camber, and the view of the Monterey Bay are all quite impressive.

Proper execution of the path up the hill and through turn 7 will put you on the extreme right side of the track for the entry to the corkscrew. You will see others entering in the middle or on the inside, but this is simply a result of not doing the hill correctly. During braking, select your gear. For most cars, 2nd gear will provide rapid acceleration down the hill, but you'll have to shift nearly mid-air. Third will be smoother, but not as fast.

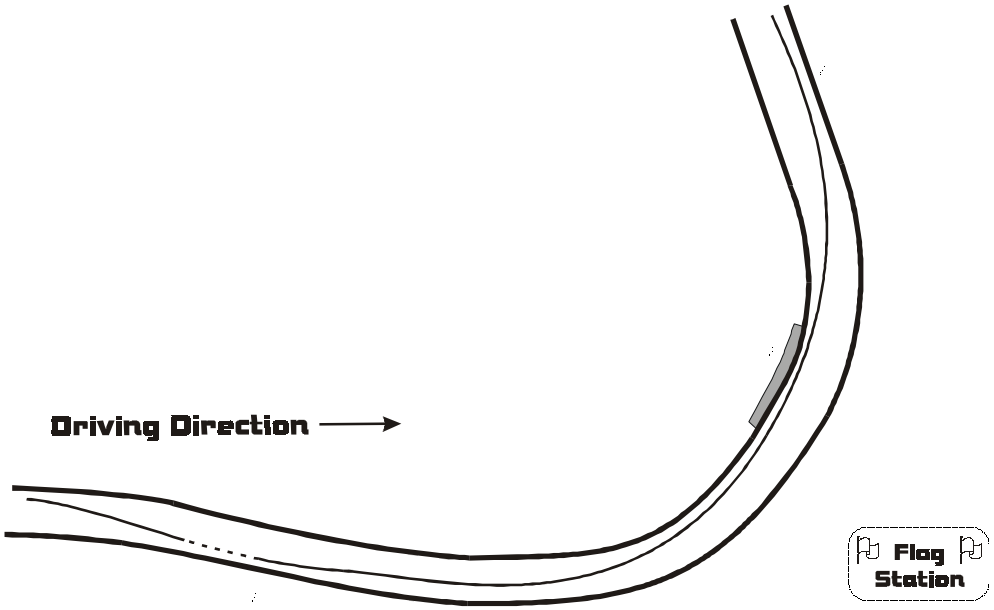
Turn in for a late apex on the FIA berm, touching it enough to hear a slight rumble from the front tire. Your path is now blind, below you, and you'll need to learn through practice how much to rotate the car.

In the beginning, the best target is to point the car at the rightmost of the two large oak trees that come into view in front of you. If you have rotated the car the correct amount, you'll be on a path as you drop over the crest of the hill to turn just slightly to the right before the apex of 8A on your right.

Apex 8A just beyond the midpoint. If you selected 2nd gear you may need to shift while passing the apex of 8A.

The exit of 8A is at the left side of the track. The wall is very close here. As soon as the car is settled, immediately move most of the way to the right of the track and prepare for turn 9.

Turn 9: "The Senna Curve"



Turn 9 is a sweeping downhill left, passing under a bridge. The downhill grade gives the illusion of extra available horsepower as the car enters this turn. It also gives the illusion of poor camber, when in fact the first two-thirds are nicely banked -- offering good tire traction prior to the bridge. There are many valid approaches to turn 9, though many of them are more appropriate for motorcycles or F1 cars than streetable Porsches.

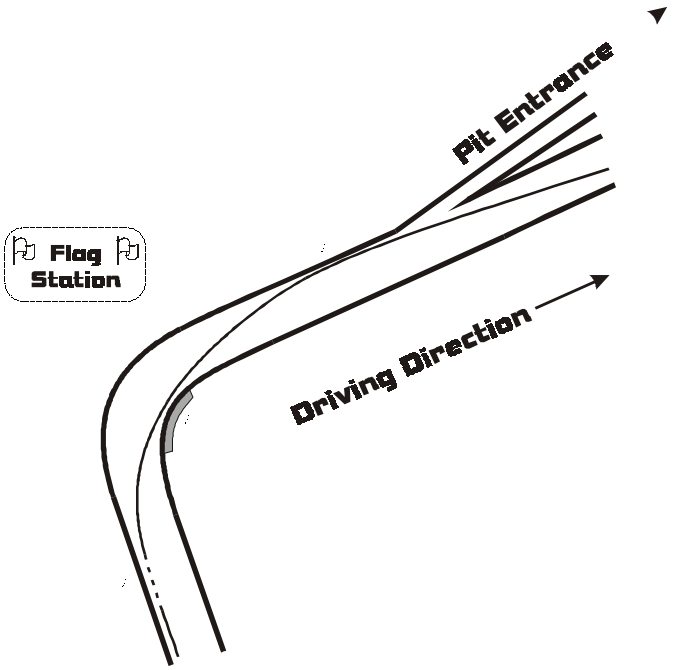
The time trial line is to move the car to within a car's-width or perhaps a width-and-a-half of the right edge of the track, turning in once a path to a late apex can be seen. The apex itself will not be visible at the turn-in point. For most cars a slight downward speed adjustment is needed.

Turn in and continue smoothly to the apex, about 2/3rds of the way around the apex berm.

This turn is basically a negotiation process with your car. Feed in power as much (but only as much) as it will take and still stay on the line you have selected.

Continue to an exit on the right side of the track, where camber is noticeably poorer than earlier in the corner. If you had to drive out to the exit, you can bring more speed or select a very slightly earlier apex. There is no space for passing between 9 and 10.

Turn 10



Turn 10 is a sweeping downhill right with significant banking.

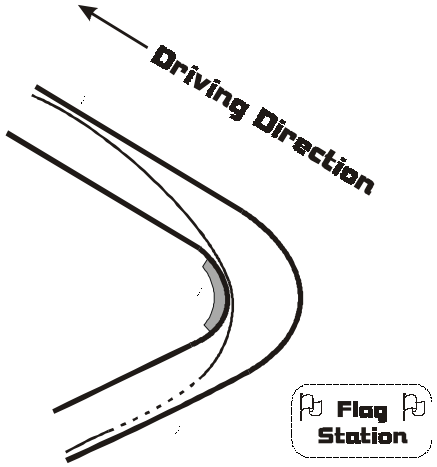
A slight downward adjustment of speed will be necessary at the entry to 10. Turn in around the 1 brake marker …

…and proceed to an apex that is just slightly late. For some cars this turn responds well to diving in as if to take an early apex, but holding the car in around the apex so as to leave the apex area on a latish-apex line. If you're interested in this approach, make the changes in your line very gradually.

The exit will carry you all the way to the left. Be aware that the turn is banked on the inside, but the exit flattens out to level, possibly a little off-camber, and grip will be reduced.

The straight between 10 and 11 offers an excellent passing opportunity. Depending upon the passing rules in effect, let by any cars that have grouped up behind you. It is normally possible to let 2 or 3 cars pass during this straight. This will allow them to get a clean shot at turn 11 and the important entry to the main straight.

Turn 11



Turn 11 is a sharp, flat left onto the main straight. You will need to brake moderately hard to set up for 11. Heavy cars with non-race brake pads may need to start braking as early as the 4 marker. Virtually all cars will need to downshift to 2nd gear during this braking zone. As 2nd gear is often more difficult to downshift into that 3rd, start shifting early enough to avoid rushing the process. A missed shift here can ruin a good laptime.

The turn-in is late, as is the apex, a little more than halfway around the inside berm. Braking here will include, for almost all cars, a little trail-braking to keep the nose planted as the car rotates into the turn.

Find a path and speed that allows you to give the car full throttle as early as possible without having to lift off the throttle in the turn. . A clean, full throttle exit from this corner is worth giving up a fraction of your entry speed. This is definitely a case where “slower in, faster out” is likely to pay dividends.

There is no exit berm, just runoff room in the dirt. If you hang tires off in the dirt in this area, be very careful not to spin the car back across the track and into the inside wall. If only two tires are off there will be room to get back onto the track before the right-side wall begins.

In addition to staying on the throttle and shifting the car, use the front straight first to let any cars behind you get past you. If you need to lift out of the throttle to make this happen, do so. Once the cars that need to pass are safely by, turn your attention to your car. Check the gauges (temperature, oil pressure, fuel) and note how the car is feeling. Depending on whether you are passing or being passed or have full use of the track, drive under the start/finish bridge between the O and the N in the HONDA lettering. This will set you up for as straight a shot as possible over the crest of the upcoming hill, where the car gets light and you won't want to be turning unnecessarily.

That's one lap of Laguna Seca, justifiably world famous and a delight to drive.

Credits: The GGR track driving documents were prepared primarily by Hank Watts (GGR Chief Instructor) and Brad Maker. Hank did the photography and the text first draft; he had the final say about the text and is therefore responsible for it. Brad did the larger amount of work, putting the text, photos and graphics together, graphics parsing and editing, the entire layout and provided input to the text as well. Others contributed to the photography process (Neil Yonk, Fred Nelson, Warren Walker, Evan Williams) and in suggesting modification and additions to the text (especially John Tavernetti). Source trackmaps were by Trevor Swallow.