

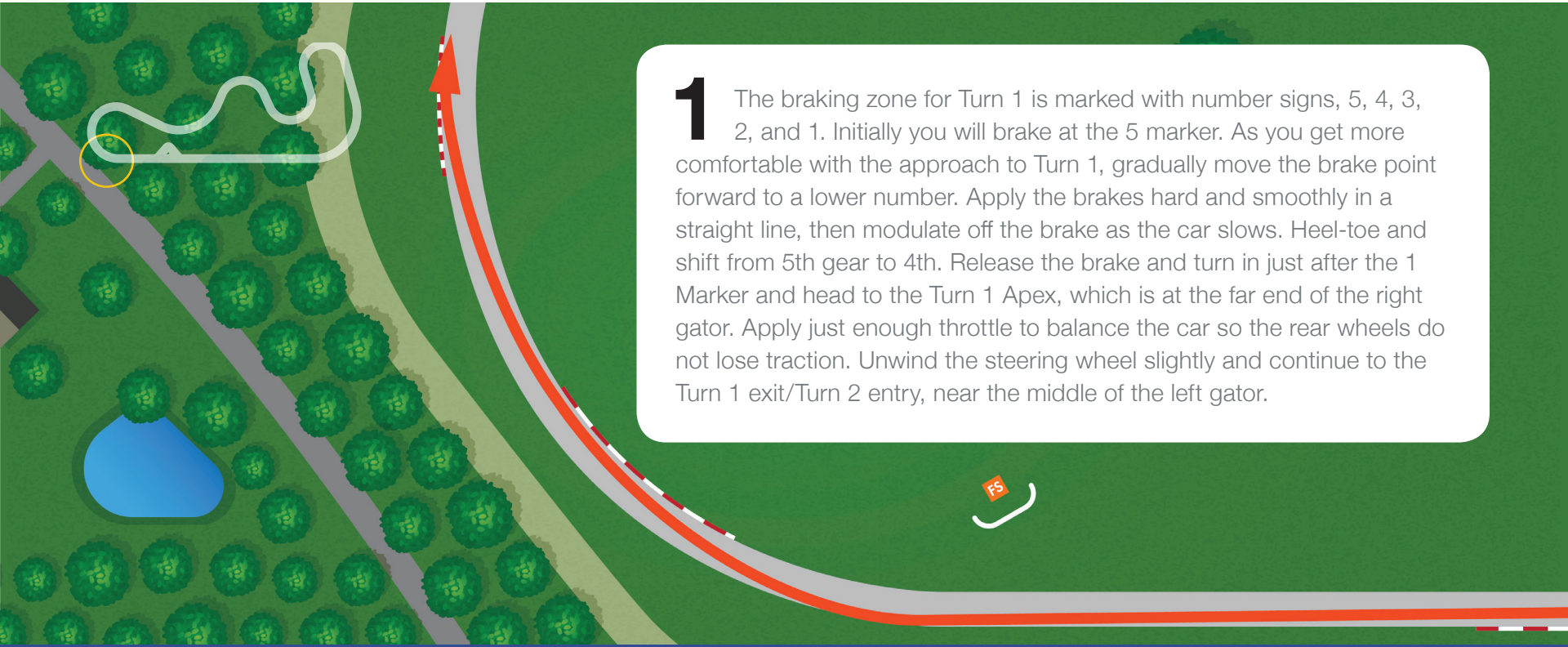
Introduction



This presentation is intended for novice students. It shows the “Student Line” for Roebling Road Raceway. We show all very late apexes because that is the safest way to drive Roebling. As drivers gain more experience, they may make adjustments to their line to accommodate their individual driving style and car. This “lap” is a good starting point. A glossary of terms is included at the end.

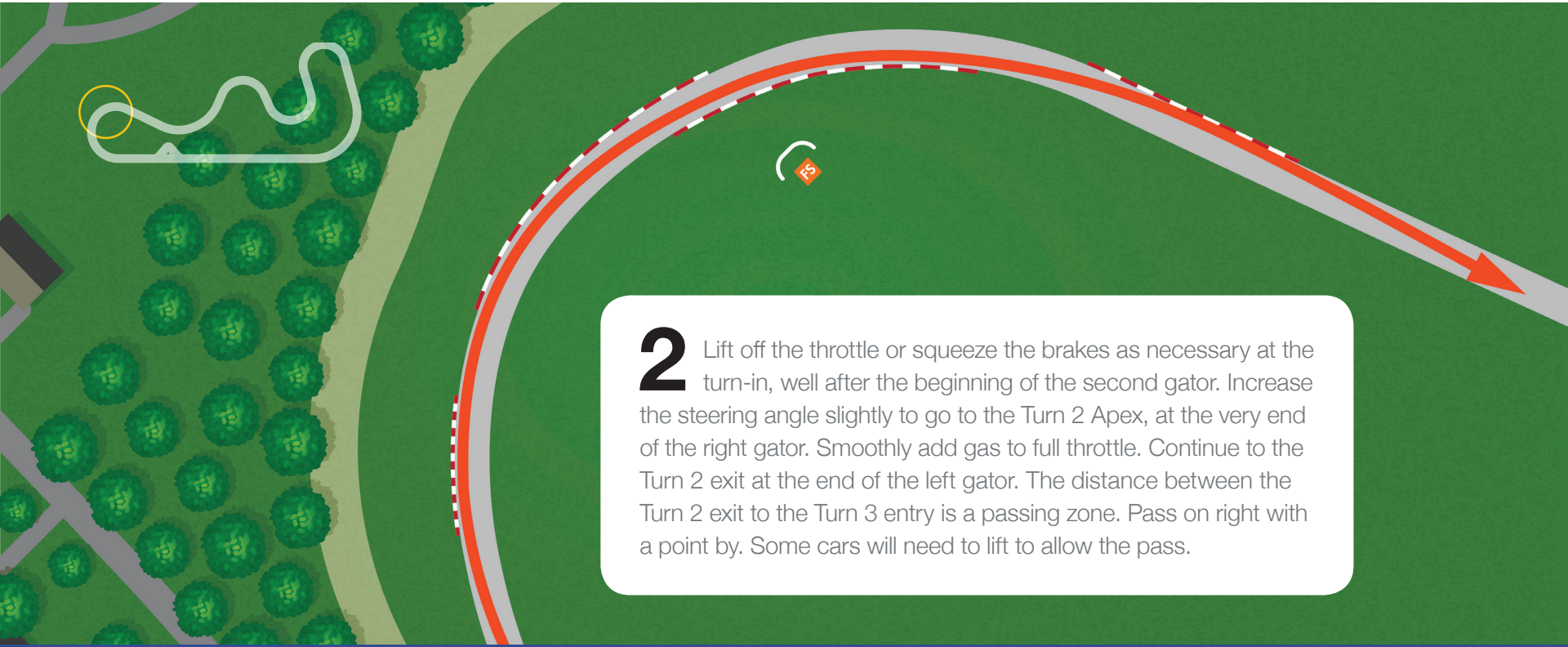


Turn 1



1 The braking zone for Turn 1 is marked with number signs, 5, 4, 3, 2, and 1. Initially you will brake at the 5 marker. As you get more comfortable with the approach to Turn 1, gradually move the brake point forward to a lower number. Apply the brakes hard and smoothly in a straight line, then modulate off the brake as the car slows. Heel-toe and shift from 5th gear to 4th. Release the brake and turn in just after the 1 Marker and head to the Turn 1 Apex, which is at the far end of the right gator. Apply just enough throttle to balance the car so the rear wheels do not lose traction. Unwind the steering wheel slightly and continue to the Turn 1 exit/Turn 2 entry, near the middle of the left gator.

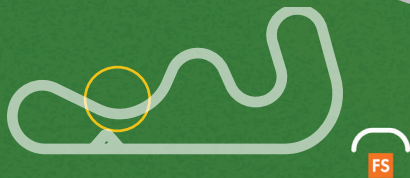
Turn 2



2 Lift off the throttle or squeeze the brakes as necessary at the turn-in, well after the beginning of the second gator. Increase the steering angle slightly to go to the Turn 2 Apex, at the very end of the right gator. Smoothly add gas to full throttle. Continue to the Turn 2 exit at the end of the left gator. The distance between the Turn 2 exit to the Turn 3 entry is a passing zone. Pass on right with a point by. Some cars will need to lift to allow the pass.

Turn 3

3 Set up for Turn 3 by moving just to the right of center of the track, under hard throttle. Do not go right of the crown of the track. Lift as necessary before you begin the turn-in just before the right gator. Try not to use the brake. Gradually move to mid-track and ride the crown of the pavement thru much of the sweeper. Take advantage of the high crown. As the Turn 3 Apex becomes visible at the very end of the left gator, increase the steering input to cross over the square marker on the center of the track. Smoothly add throttle to stop the rear from slipping out.

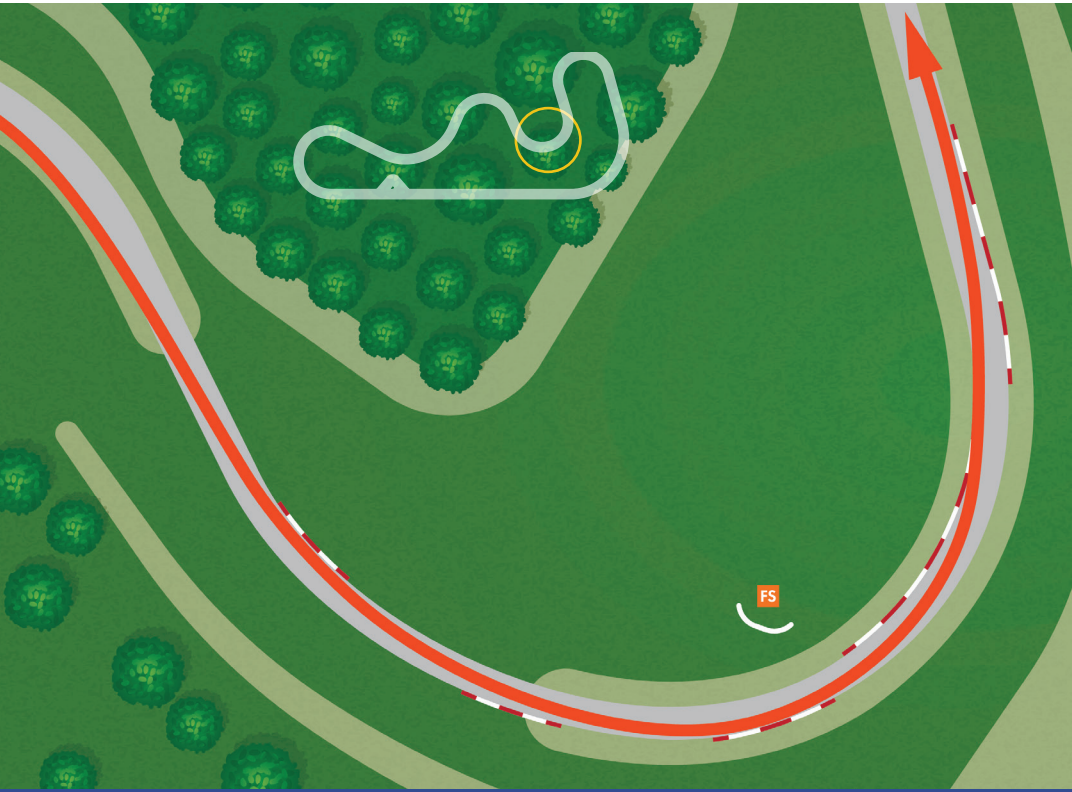


Turn 4



4 As you move past the Turn 3 Apex, set up for Turn 4 by staying hard left, no more than 1 foot from the white line. Brake moderately, then modulate off the brake as you turn in. Stay left, and enter Turn 4 as late as possible, then move to mid-track and gently get on the throttle to stabilize the rear. Avoid the far left side of the track — off camber and lots of marbles. Stay mid-track for about $\frac{3}{4}$ of the turn, until you see the end of the right gator. Then increase steering input to go to the apex at the very end of the right gator and apply power, staying right for 1–2 car lengths, for the set up for Turn 5.

Turn 5



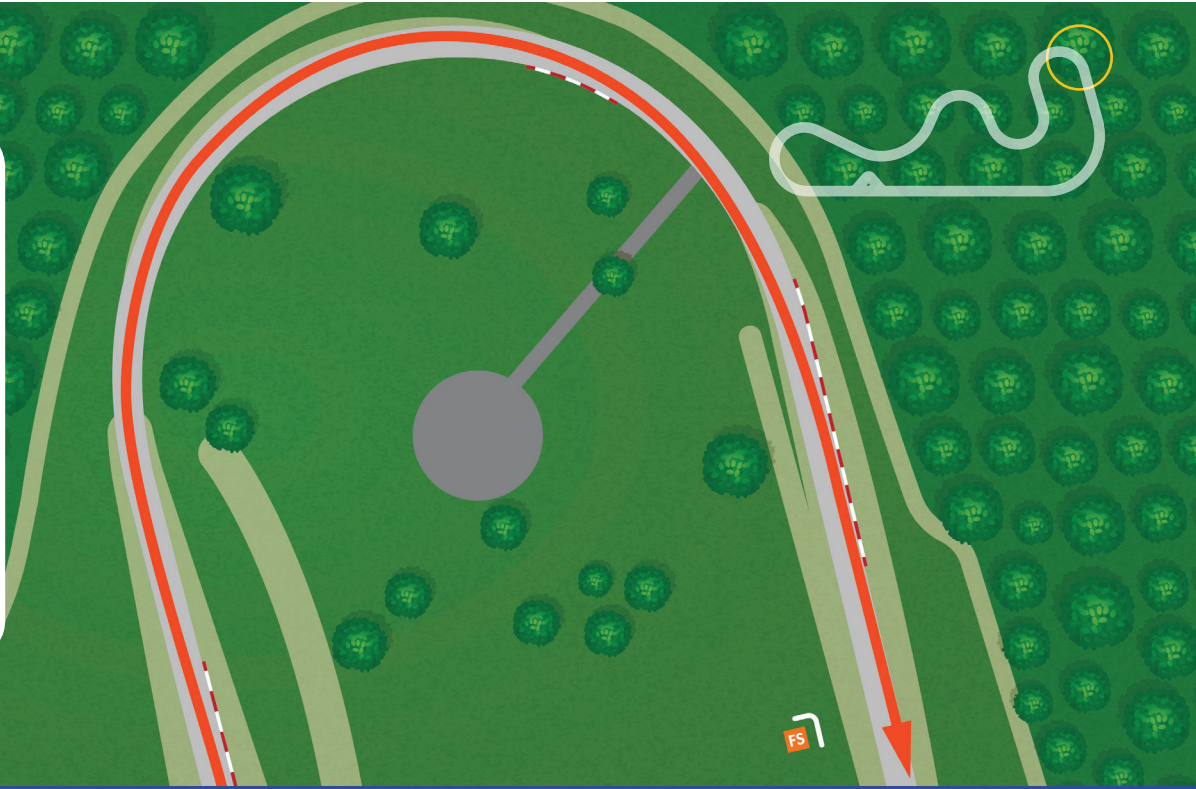
5 This is the most technical area of the track. It is a decreasing radius sweeper, and is best done as a double apex. After Turn 4, gradually cross over to the left side for the first Turn 5 Apex, near the end of the left gator. Continue on a gentle arc, and increase throttle. Cross over the track (ignore the first gator on the right). Approach the second right gator at about the middle. Increase steering input slightly and extend the arc until reaching the very end of the gator. As you do so, squeeze the brakes to set the front end and add more steering. Head to the second Turn 5 Apex, at the very end of the left gator. Smoothly go the full throttle. Track out to the Turn 5 exit at the end of the right gator. Gradually cross back over to the left side to set up for Turn 6.

Turn 6


6 Turns 6 and 7 are best treated as a long sweeper with a super-late apex. Avoid the far-left side of the track. It is markedly off camber and may have lots of marbles. Enter Turn 6 from the left side. Gently squeeze the brakes or lift of the throttle to set the front wheels. Turn in smoothly and use the throttle to maintain balance. Stay mid-track because of the camber.

Turn 7

7 At the middle of the sweeper, start to increase steering input and head to the Turn 7 Apex on the right at a small service road. Smoothly unwind the steering wheel and go to full throttle before the exit at the end of the left gator. Stay left and go up the “hill” to set up for Turn 8/9. The stretch from the Turn 7 exit to the Turn 8 entry is a passing zone. Passing is on right with a point by. Lift, if necessary, to allow faster cars to pass.

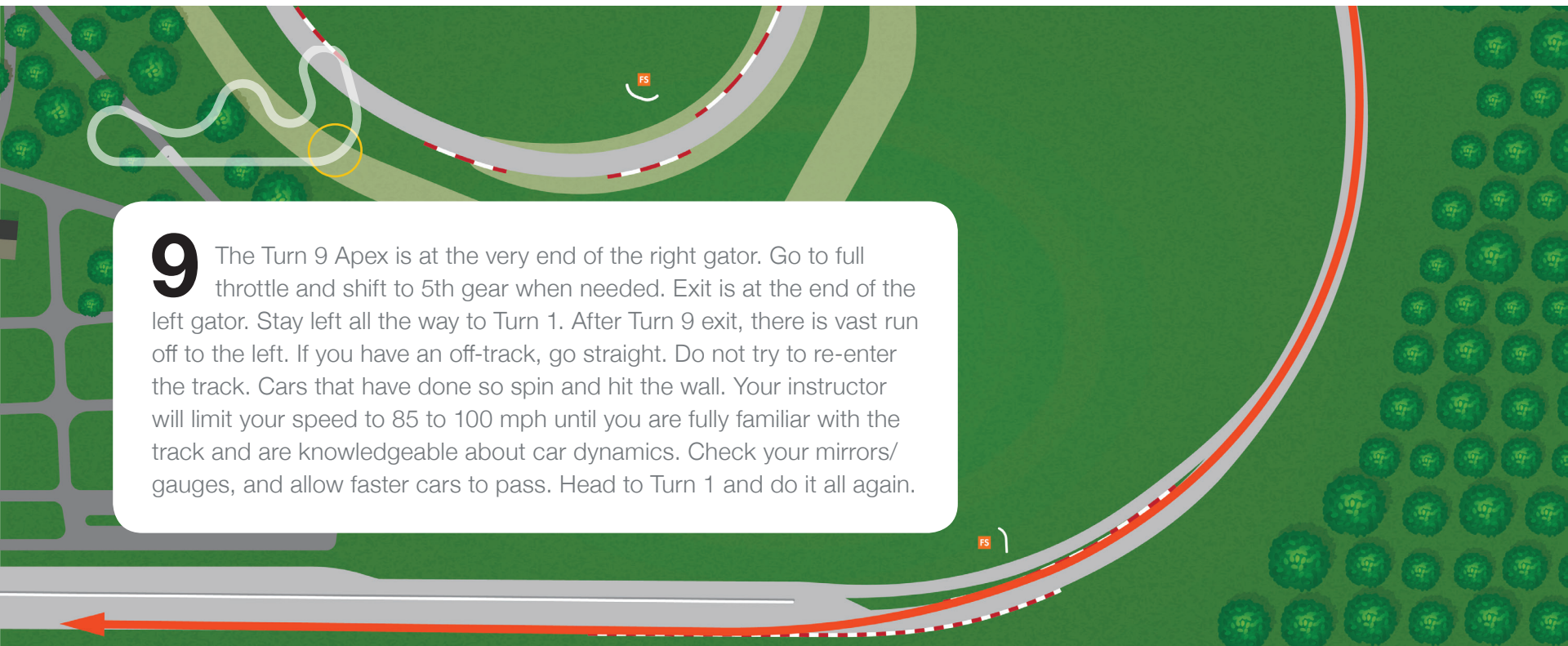


Turn 8



8 Turns 8 and 9 are best treated as a very long, high-speed sweeper with a super-late apex. The left side of the track will have lots of rubber marbles after turn-in. Avoid. Very slippery. Approach from the extreme left with full throttle. Lift slightly or smoothly squeeze the brakes as you top the small hill. Start the turn-in where the track pavement starts to bend. Have patience. Look for a patch in the pavement before the pit entrance; the car should be centered over the patch. Stay just to the left of the painted marks for the pit entrance. Add throttle smoothly after the patch to settle the rear.

Turn 9



9 The Turn 9 Apex is at the very end of the right gator. Go to full throttle and shift to 5th gear when needed. Exit is at the end of the left gator. Stay left all the way to Turn 1. After Turn 9 exit, there is vast run off to the left. If you have an off-track, go straight. Do not try to re-enter the track. Cars that have done so spin and hit the wall. Your instructor will limit your speed to 85 to 100 mph until you are fully familiar with the track and are knowledgeable about car dynamics. Check your mirrors/gauges, and allow faster cars to pass. Head to Turn 1 and do it all again.

For Initial Track Entry Only



Leave the hot pits when directed by the starter. Do not cross the blend line. Look for oncoming traffic. Stay to extreme right thru Turn 1. Merge into traffic and pick up the line for Turn 2.



Porsche Club of America



Glossary



The following is an explanation of some of the terms instructors use to help you navigate the track. If he uses other terms, or if you are not sure how to apply each term, be sure to ask. Effective communication is essential.

TERM	DEFINITION
Apex	A point on the inside of a turn where the car is closest to the inside of the turn. Apexes may be at the geometric center of a turn; “early,” before the geometric center; or “late,” after the center. The ideal apex allows the maximum open throttle until the next braking point.
Braking – modulation	After very firm braking, gradual release of the brakes.
Braking – squeeze	Gently apply brakes to slow car slightly and to shift weight and traction to the front wheels.
Braking – threshold	Very firm application of the brakes up to the point at which the wheels lock up (or at which ABS is activated).
Braking – trail	Light brake pressure while in a turn to shift weight and traction to the front wheels, and to allow rear wheels to drift toward the outside of the turn.



Glossary



TERM	DEFINITION
Decreasing radius turn	A turn that gets tighter and tighter.
Entry (Turn-in)	Point at which driver initiates turning into a corner. Usually at the far outside of a turn.
Exit (Track-out)	Point at which driver is no longer actively turning the car. Usually at the far outside of a turn.
Gator (rumple strip, curb, zebra, etc.)	Raised curbing along the side of the track. Usually painted red/white; blue/white. Usually heavily textured.
Oversteer	The car seems to turn more than expected from the amount of steering input. Rear end is not gripping.
Sweeper	A long, fast, more-or-less-constant radius turn.
Throttle – modulation	After full throttle, gradual decreased throttle to maintain constant speed and weight distribution.
Understeer	The car seems to turn less than expected from the amount of steering input. Front wheels are not gripping.

