



Driving MIND Practice eBook

Professor Mottola's Family Wellness Training

Coaches Habits that Eliminate Human Errors!


Chapter 2

On/Off Target

Introduction to Unstable Critical Seconds



Most **important to preventing crashes** is the use of vision for vehicle placement and car control. Two skills that most drivers need to learn is the use of **reference points** for vehicle placement, and the detection of whether the vehicle is **on or off target**. **Advance the slide when ready.**

A driver's perspective of a road with callouts for reference points. The road is paved with double yellow lines and a metal guardrail on the left. The background shows trees and a utility pole. Two callout boxes are overlaid on the image. The left callout box is light blue with a black border and contains the text: "For this vehicle, the **left tires reference point** is here. This vehicle is in LP2." The right callout box is also light blue with a black border and contains the text: "The **right tires reference point** is here." The text in both callouts is black, with the terms "left tires reference point" and "right tires reference point" in red. A grey rectangular button is visible in the top right corner of the image.

For this vehicle, the **left tires reference point** is here. This vehicle is in LP2.

The **right tires reference point** is here.

We will get practice using side position **reference points** and detecting an **on** or **off target** condition. A “reference point” is seeing some part of the vehicle in relationship to the roadway that shows within a few inches of accuracy exactly where the vehicle is positioned. **Advance the slide when ready.**



When first learning the use of reference points for side position, it is helpful to place a piece of tape to mark each side. The tapes makes it easier for fringe vision to see the position of the vehicle to the roadway and whether the vehicle is on or off target. You can place the tapes on the inside or outside of the windshield. Here, the vehicle is on target.



Is the vehicle on or off target at this moment? Where should you project your central vision and what steering action should you take?



The vehicle is **off target**. **Central vision** should be projected to the target area. Steering to the right will be necessary to get the vehicle back on target.



Is the vehicle on or off target at this moment? Where should you project your central vision and what steering action should you take?



Central vision is directed to the **target area**. The vehicle is **on target**.
Steering is **straight ahead**.



Is the vehicle on or off target at this moment? Where should you project your central vision and what steering action should you take?



Central vision is directed to the **target area**. The vehicle is **off target**.
Steering to the left is needed to get back on target.



Is the vehicle on or off target at this moment? Where should you project your central vision and what steering action should you take?



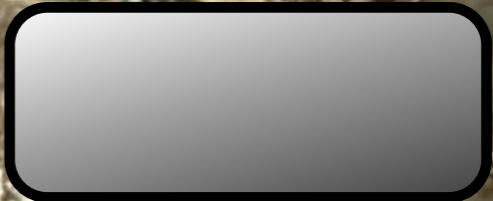
Central vision is directed to the **target area**. The vehicle is **off target**.
Steering to the left is needed to get back on target.



Is the vehicle on or off target at this moment? Where should you project your central vision and what steering action should you take?



Central vision is directed to the **target area**. The vehicle is **on target**.
Steering is **straight ahead**.



Is the vehicle on or off target at this moment? Where should you project your central vision and what steering action should you take?



Central vision is directed to the **target area**. The vehicle is **off target**.
Steering to the right is needed to get back on target.



Is the vehicle on or off target at this moment? Where should you project your central vision and what steering action should you take?



Central vision is directed to the **target area**. The vehicle is **off target**.
Steering to the right is needed to get back on target.

Now, after practicing detecting and correcting an off-target condition, you will learn and practice how to Find, Solve, and Control the **Critical Seconds**.

The “Critical Second”

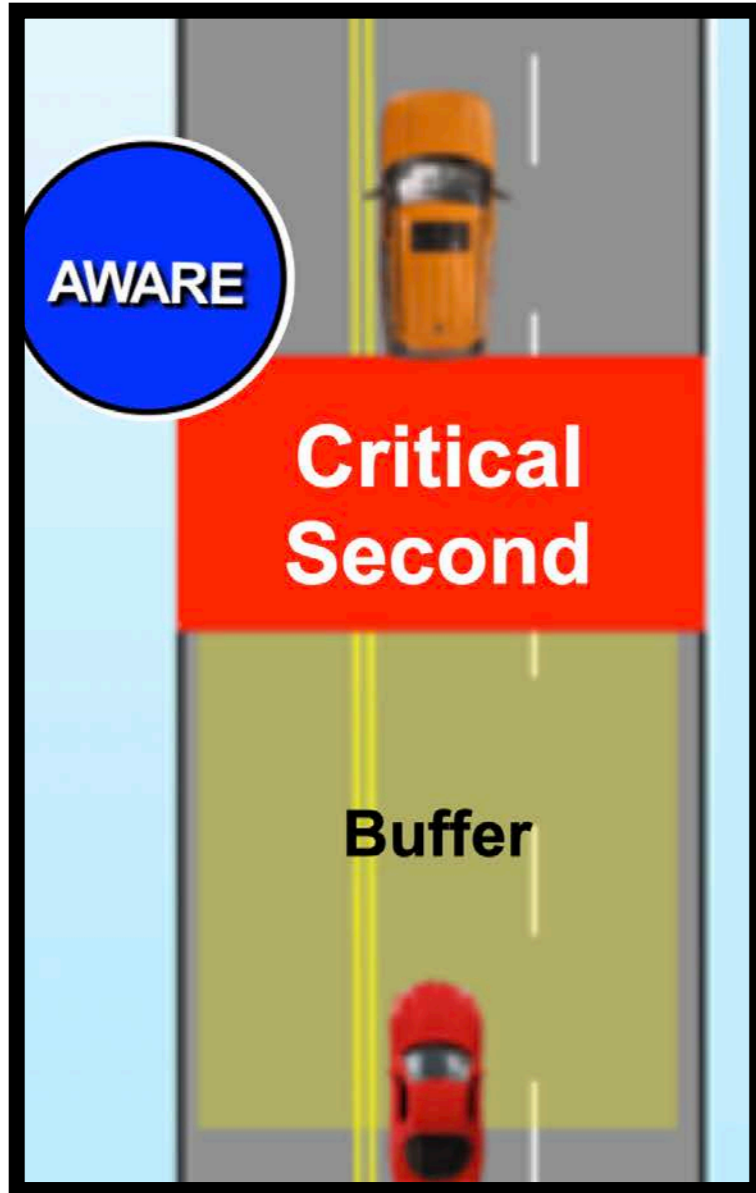
The “**critical second**” is when other vehicles and users of the roadway are within one second of your vehicle.

It also is at the moment when a potential change in speed or direction is needed.

It’s the last second before a potential crash!

Find, Solve, and Control “Critical Seconds!”

Learning what the “**Critical Second**” is — and acquiring habits to Find, Solve, and Control it — is the **most important habit** for reducing crash exposure. **Most drivers are merely taught to “*look for hazards.*”** Finding a “hazard” is too late to effectively manage prevention as it calls for immediate reaction. Failures result in crashes, which is a devastating way to learn.





Find, Solve, and Control “Critical Seconds!”

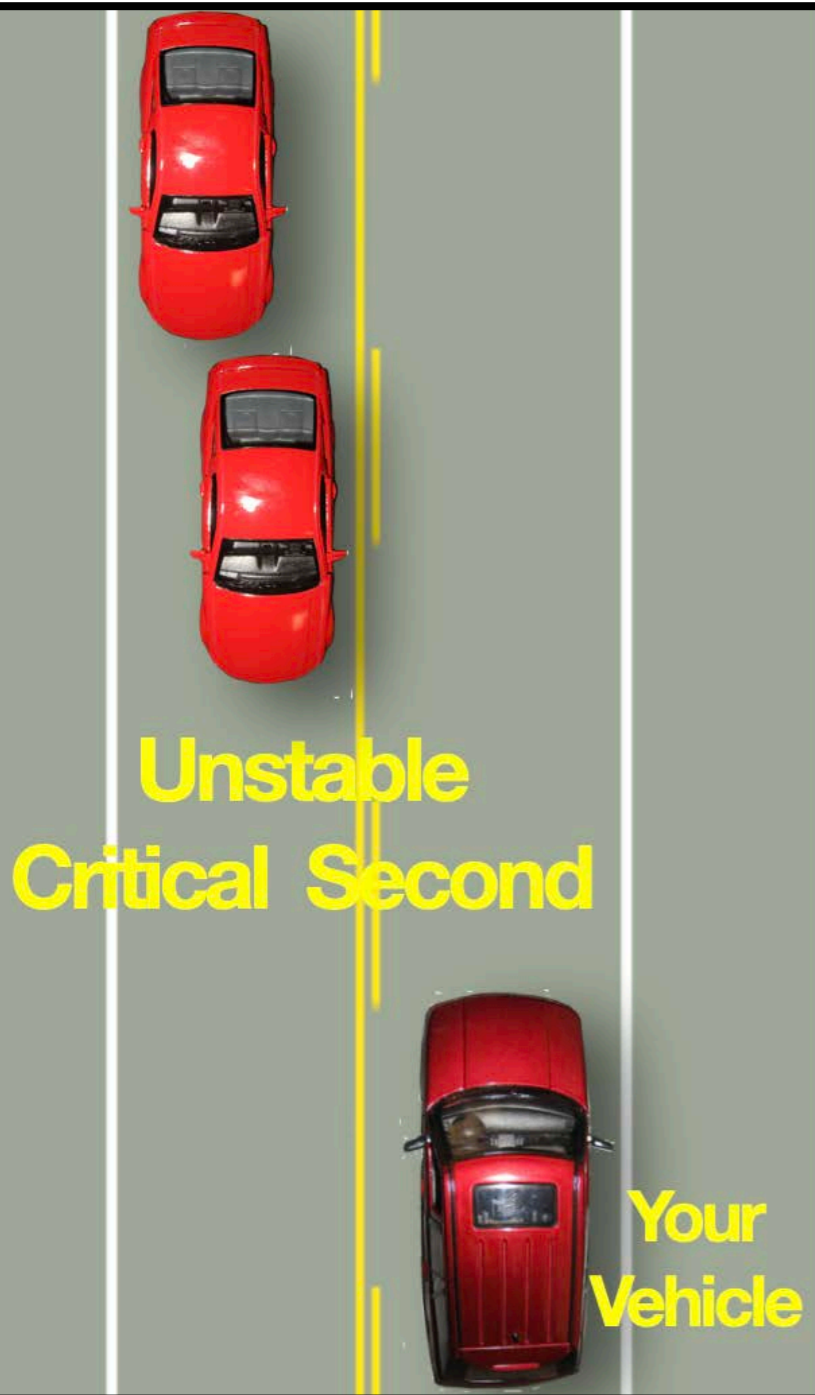
Learning the Zone Control Strategies of “Critical Seconds”

Most common “**critical seconds**” created by other vehicles are those that are in your intended driving path straight ahead. Oncoming vehicles create critical seconds. And, vehicles that will be alongside you create critical seconds.

Find, Solve, and Control “Unstable Critical Seconds!”

Learning the Zone Control Strategies of “Unstable Critical Seconds”

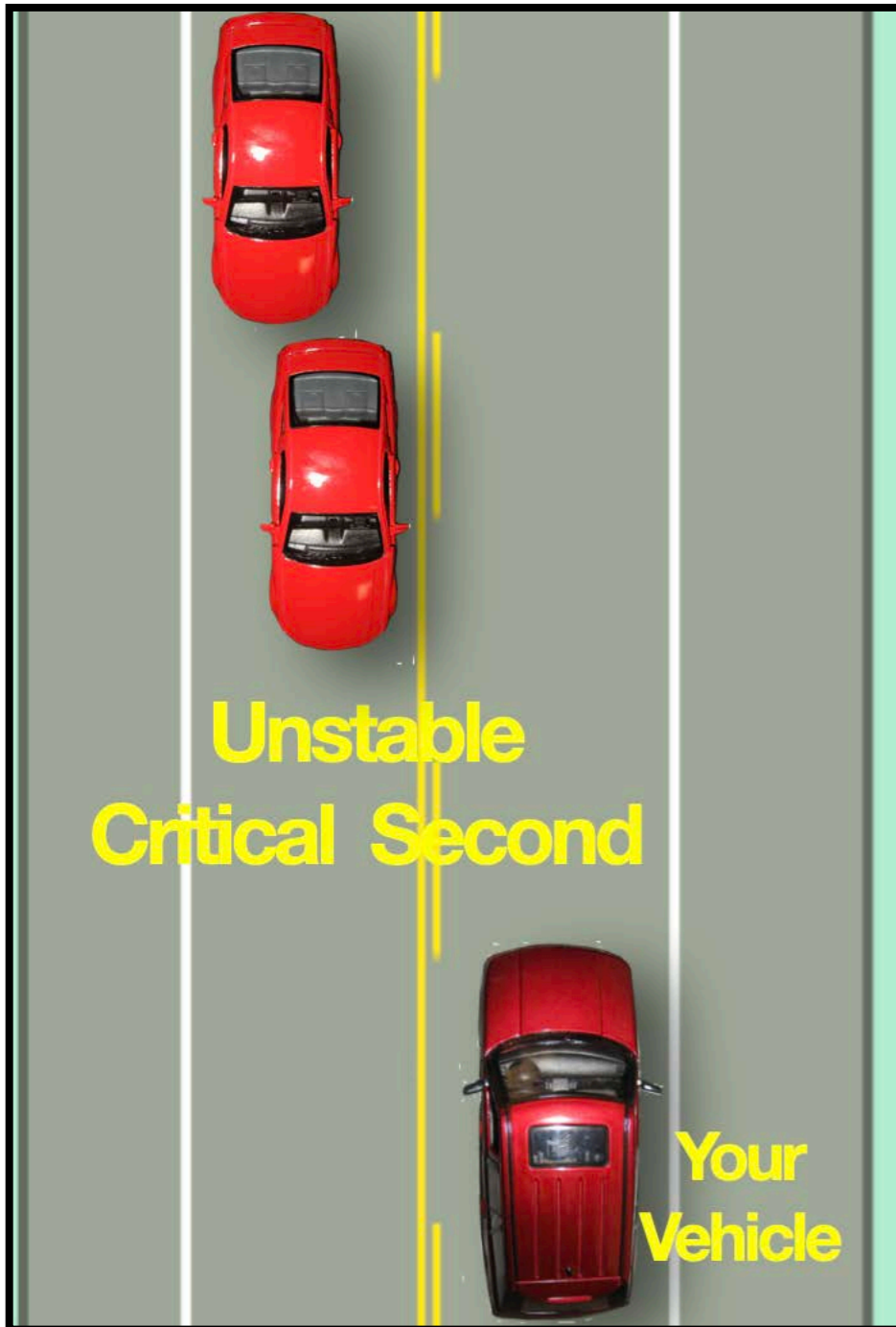
Each driving day you are exposed to hundreds of “critical seconds” some are **stable** and others are **unstable** that may become a problem. In *Family Wellness Training* you will learn how to find, solve, and control the “**unstable**” critical seconds.



Find, Solve, and Control “Unstable Critical Seconds!”

You will learn to Control “Unstable Critical Seconds” at the **4-Second Danger Zone!**

The “4-Second Danger Zone” is when you are four-seconds away from the “critical second,” which creates a “Slow” condition.

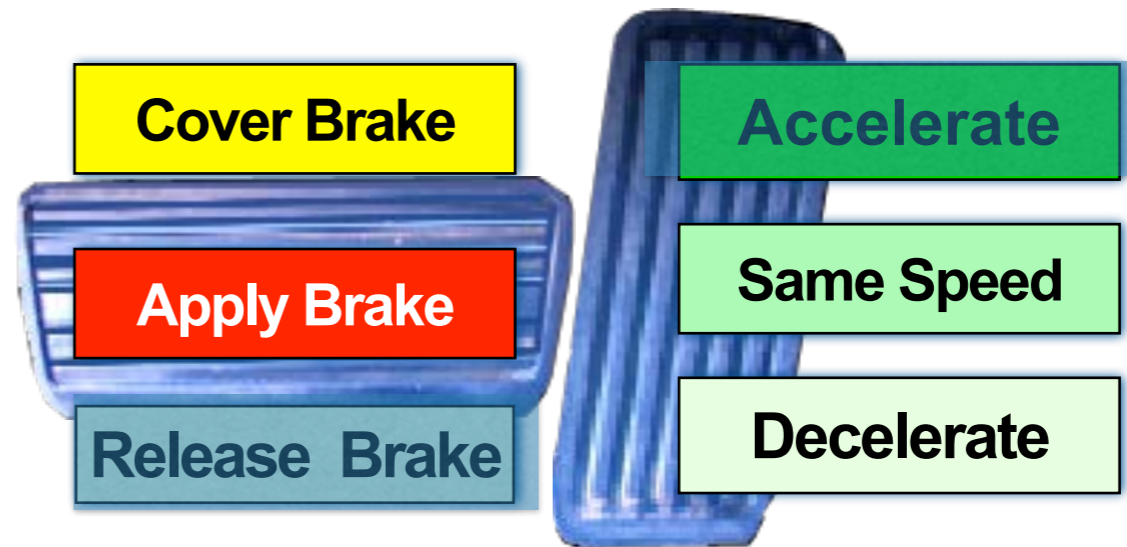




The speed limit sign only tells you how **fast** you can go.

Awareness of “critical seconds” tells you how **slow** you **should** go.

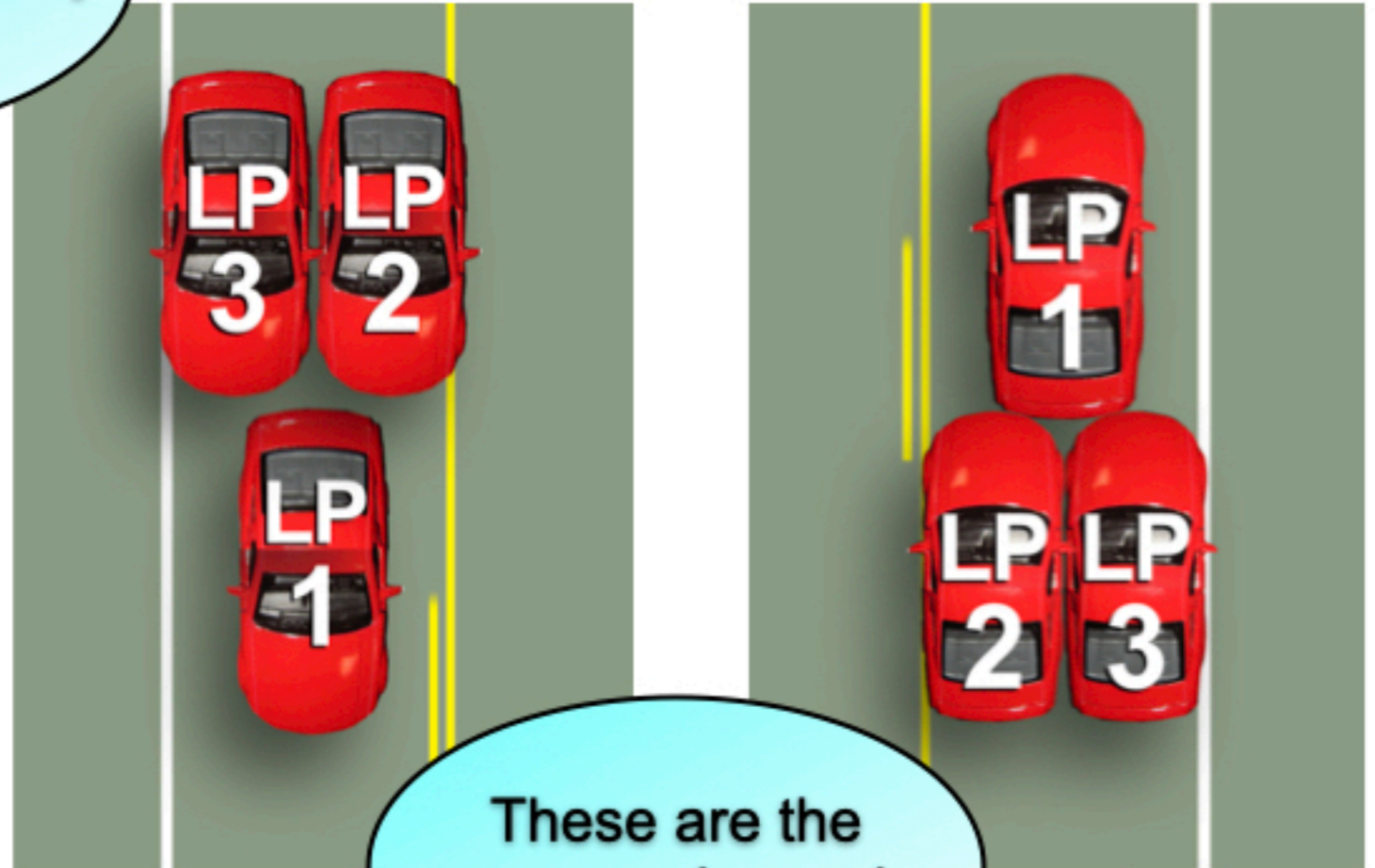
Awareness of
Critical Seconds gives you
these Speed Control Options



You have four speed control options to use during a “slow” condition.

Lane Positions (LPs)

You have five **Lane Position (LP)** choices.



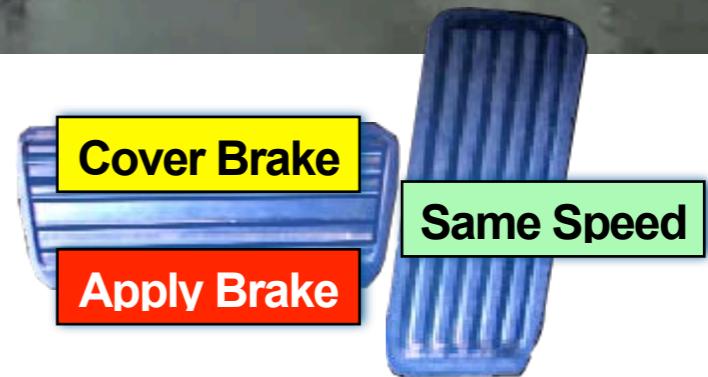
These are the commonly used LPs.



Click on the **“Unstable Critical Second”** that requires 100% attention. The “click” is only for your focus.
Advance the slide when ready.

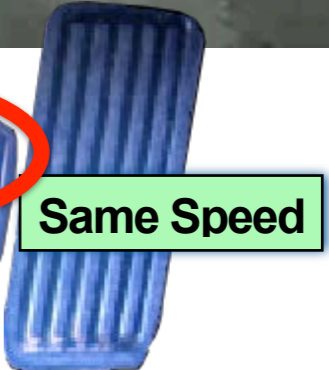


The brake lights indicates that this is an “**unstable critical second.**”
We don’t know why the driver is braking, so that demands 100% attention. Click on the best **Speed Control** and **LP** choice.





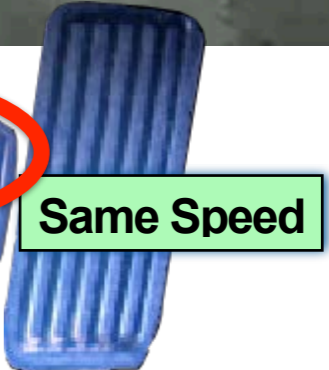
Cover Brake is a good choice. By covering the brake you are getting **your mind engaged**. If you do need to make a sudden stop your stopping distance is cut in half because you won't consume space with perception and reaction time. **LP1** is best.





**4-Seconds
Separation
Space**

By having **4-Seconds Separation Space** you have a buffer between you and any actions the driver ahead takes. If the driver ahead slams on the brakes and catches you by surprise you have time and space to take controlling actions. **Drivers without separation space have no options!**

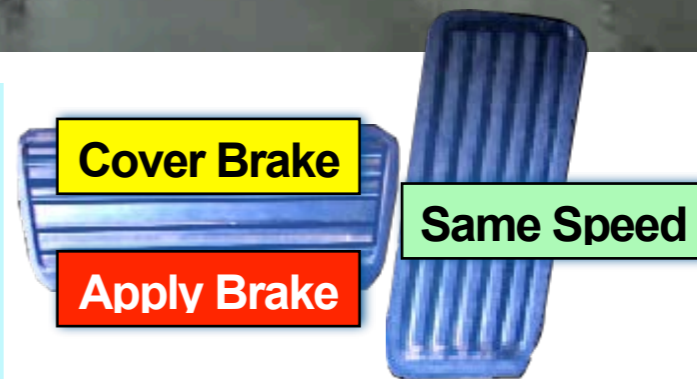




Click on the **“Unstable Critical Second”** that requires 100% attention. The “click” is only for your focus.
Advance the slide when ready.



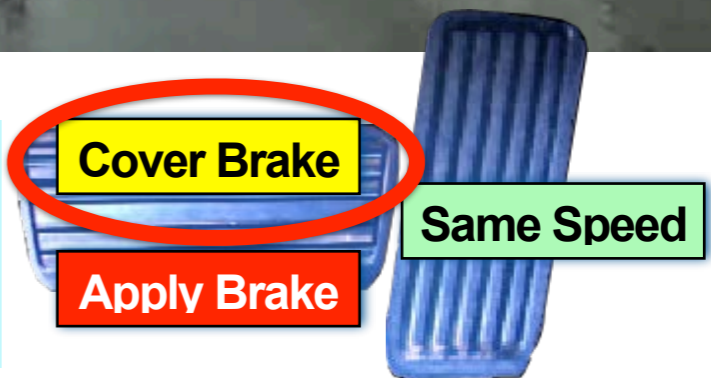
This driver creates an unstable critical second that demands 100% attention. Is she attempting to make a left turn, or is she distracted and drifting into your lane. Can you be courteous and give her space to turn? **What speed control option** should you take at this moment?





This driver stops to allow the truck to turn.

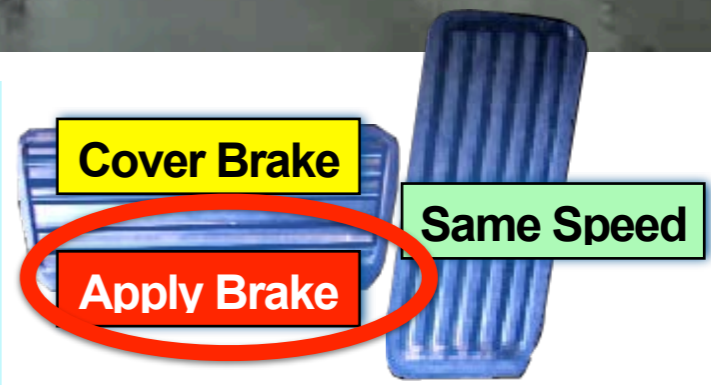
Cover the brake and look for additional information at this moment. What **speed control option** should you take if the driver to your left stops to let the truck make a left turn?





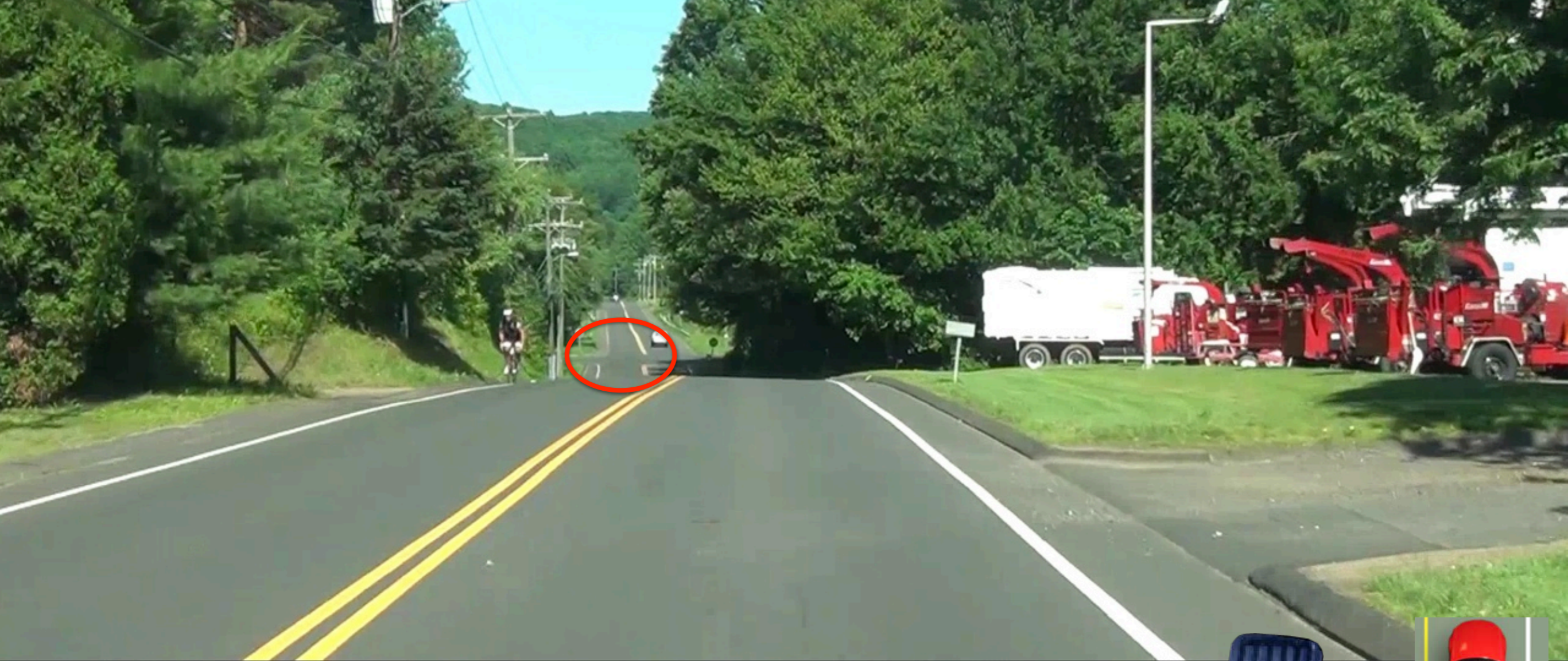
This driver stops to allow the truck to turn.

You would want to **apply the brake** and be prepared to take a hard braking action if the truck begins to make the turn. What often happens is the truck driver only sees an opportunity to turn and your vehicle may be blocked by the vehicle in the left lane.





Click on the **“Unstable Critical Second”** that requires 100% attention.
Advance the slide when ready.



The bicyclist creates an **unstable critical second** that needs to be managed. You should look for an oncoming vehicle that may swerve away from the bicyclist into your POT. What **Speed** and **LP** is best?

Cover Brake

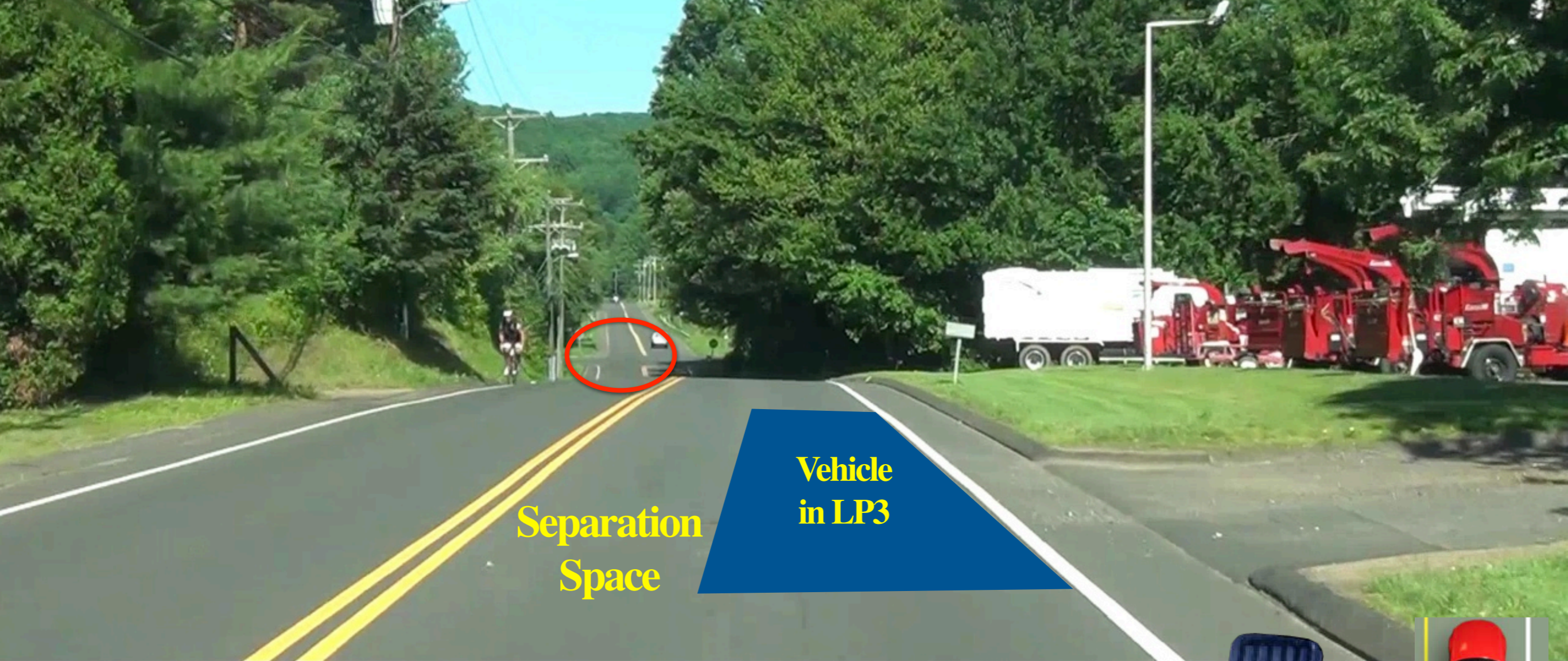
Apply Brake

Same Speed

LP 1

LP 2

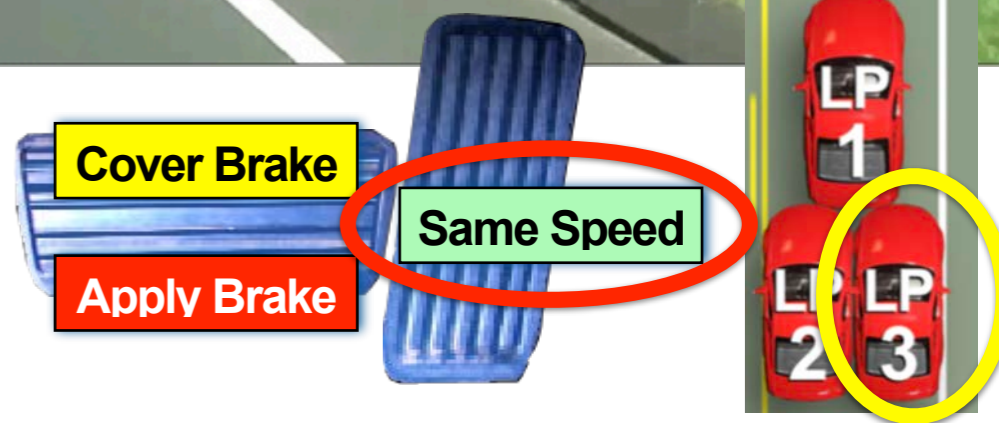
LP 3



Separation
Space

Vehicle
in LP3

You can keep the **same speed** while you are looking for an oncoming vehicle. If there is an oncoming vehicle you would adjust speed to prevent being alongside the bicyclist and the oncoming vehicle at the same time. **LP3** provides you with separation space to the side.





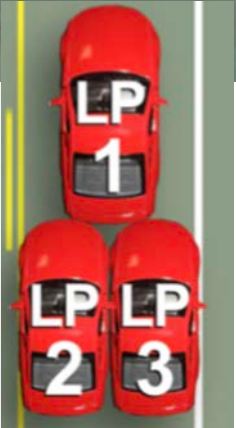
Click on the **“Unstable Critical Second”** that requires 100% attention.

Advance the slide when ready.



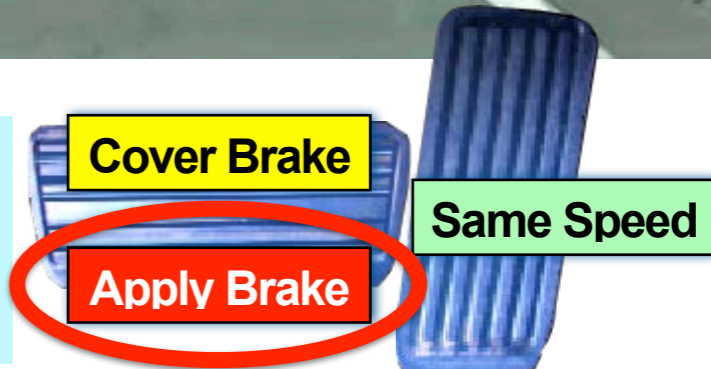
The pedestrian creates an **unstable critical second** that needs to be managed. Which **speed control** is best?

Cover Brake
Apply Brake
Same Speed





Apply the brake is required. The pedestrian is in a marked crosswalk. The law in most states requires drivers to stop and yield the right away to the pedestrian.



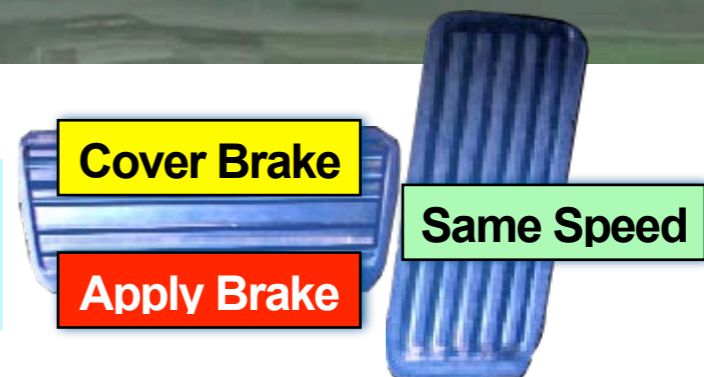


Click on the **“Unstable Critical Second”** that requires 100% attention.

Advance the slide when ready.

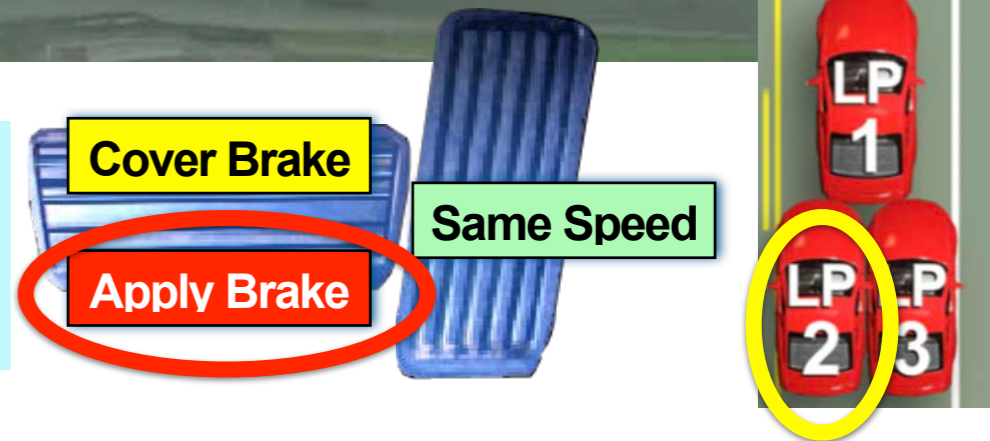


The driver exiting the truck creates an **unstable critical second** that needs to be managed. Which **Speed Control** and **LP** is best?





Apply the brake is best to reduce speed and to change the timing so that the oncoming car is not alongside you as you pass the truck.
LP2 provides the best separation from the truck.



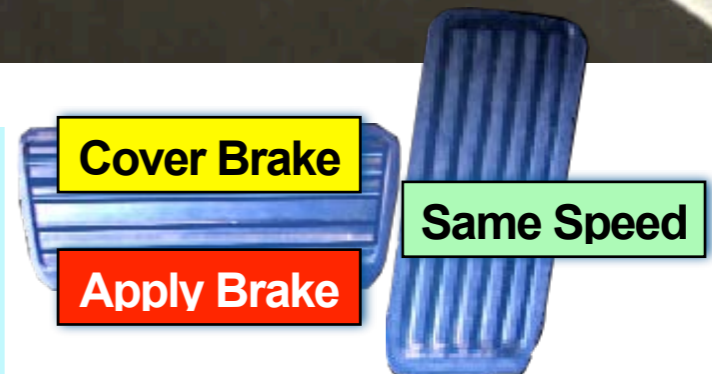


Click on the **“Unstable Critical Second”** that requires 100% attention.

Advance the slide when ready.

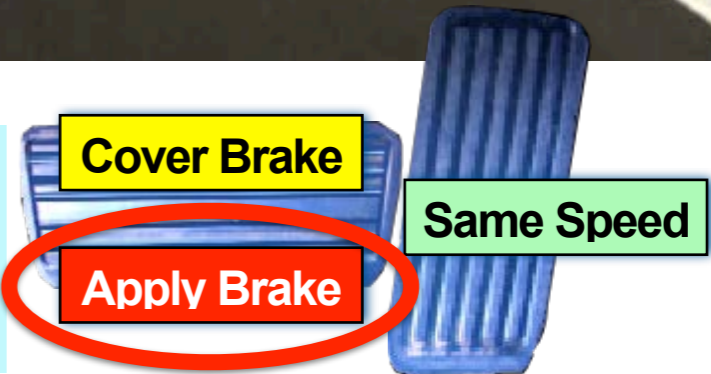


This driver with the right signal light on and being in LP3 creates an **unstable critical second** that needs to be managed. What is the best **Speed Control** and **LP** to use?





Apply brakes gives you separation from the vehicle making a lane change. And, it's an opportunity to be courteous to help the driver complete a safe lane change. **LP3** will give you the best side separation.



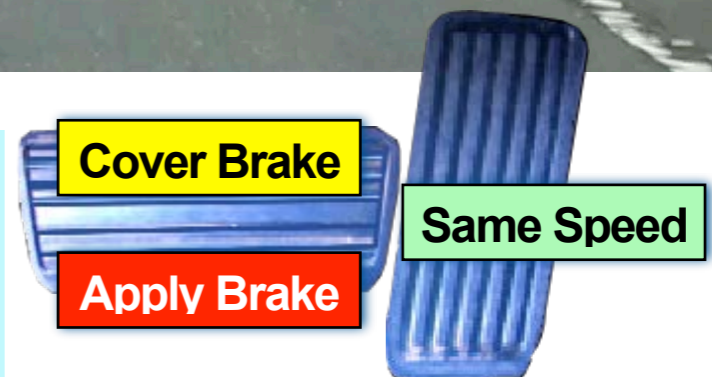


Click on the **“Unstable Critical Second”** that requires 100% attention.

Advance the slide when ready.

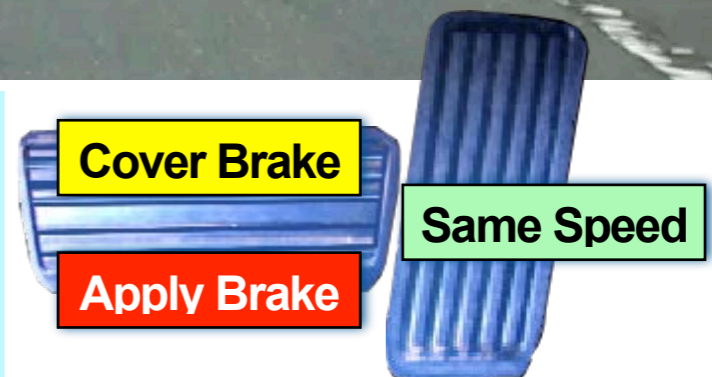


The unstable critical second is the second before reaching the **apex of the curve** and the **downgrade**. What **Speed Control** and **LP** should you use before you reach the apex of the curve?





Apply the brake before reaching the apex of the curve. The apex of the curve is the midpoint where energy of motion enters a new direction. Applying the brake until you pass the apex provides you with the best traction control. **LP2** is good when there are no oncoming vehicles.





Click on the **“Unstable Critical Second”** that requires 100% attention.
Advance the slide when ready.



This **driver entering your POT** creates an unstable critical second. You don't know if he is going to accelerate to speed of traffic, or not. Which **Speed Control** and **LP** should you take at this moment?

Cover Brake
Apply Brake

Same Speed





Cover the brake is best. It will put your mind and foot in a ready position in case that driver makes a sudden slowdown. **LP1** or **LP3** would be good. **LP2** should not be used with the oncoming truck.

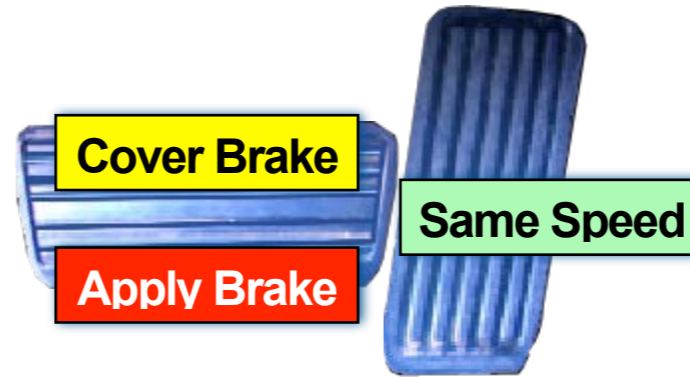


Same Speed



Deliberate Practice of Repetitions into Habits

Use this “**Practice eBook**” to get dozens of repetitions seeing on/off target conditions and finding Unstable Critical Seconds. Choose the speed control and LP options you would take if you were the driver.



It is best to practice while being a **pedestrian** or a **co-driver** where 100% attention can be focused on evaluating conditions. Practice on several different occasions until the evaluations start to become automatic. Go back and review these eBook pages if needed for clarification. When you feel these evaluations taking place with ease, go to this link to take a quiz and acquire more strategies for deliberate practice.

[Family Wellness Training - 01](#)