



Unit 3

Driving in Different Environments and Situations

Chapter 9

Driving in Urban Traffic

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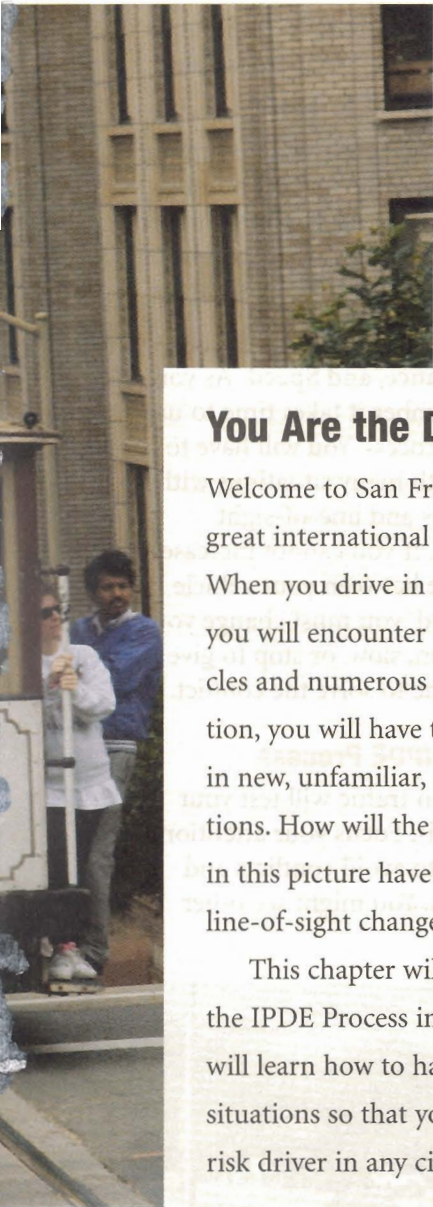
Chapter 13

Handling Emergencies



Chapter 9

Driving in Urban Traffic



You Are the Driver!

Welcome to San Francisco, one of the great international cities of the world. When you drive in this and other cities, you will encounter a wide range of vehicles and numerous pedestrians. In addition, you will have to manage your vehicle in new, unfamiliar, and crowded situations. How will the driver of the red car in this picture have to adjust to zone and line-of-sight changes in this situation?

This chapter will show you how to use the IPDE Process in urban areas. You also will learn how to handle special driving situations so that you can become a low-risk driver in any city.

9.1

Adjusting to Urban Traffic

9.2

Following and Meeting Traffic

9.3

Managing Space in Urban Traffic

9.4

Special Urban Situations



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9.1

Adjusting to Urban Traffic

Objectives

1. Name two factors that can make driving difficult in city traffic.
2. Describe how to use the IPDE Process for city driving.

Once you are comfortable making basic maneuvers and using the IPDE Process, you will be ready to start driving in city traffic. City driving will test your best abilities.

Traffic Complexity

When you drive on a little-used rural road in good weather at a moderate speed, you probably will encounter few critical hazards. However, driving in heavy, fast-moving, city traffic is different and more challenging.

Two main factors make city driving difficult:

- Traffic is more dense in urban areas than it is in rural areas. There are more cars, buses, trucks, and pedestrians per mile.
- City traffic hazards are closer to you than they are in rural areas. Those hazards can quickly block your path.

In rural driving situations, the number of hazards per mile is low; you usually have an adequate “space cushion.” You have time to adjust to

the traffic scene. However, in city driving you may have to respond to several close hazards and possible conflicts at the same time.

Number of Hazards Mile for mile, city roads have the highest number and variety of hazards. Compare the two pictures of the same location on this page. Which situation is harder to handle. Why?

Time, Distance, and Speed As you drive, remember it takes time to use the IPDE Process. You will have to contend with many situations with closed zones and line-of-sight restrictions. If you cannot increase the distance between your vehicle and a hazard, you must change your lane position, slow, or stop to give yourself time to solve the conflict.

Using the IPDE Process

Heavy urban traffic will test your driving skills. Focus your attention on driving to avoid conflicts and distractions. You might see other



The number of urban hazards can vary dramatically.



You need to slow when your left- and right-front zones are closed.

drivers using cellular phones. You also will see aggressive drivers who needlessly increase the risk in a situation by challenging other drivers. Some extremely angry or thoughtless drivers will actually charge at others as though they are in a rage. In “road rage” situations, be cool and drop back. Give the angry, distracted, or absent-minded driver distance. You can control these situations by avoiding them.

Study the picture above and think about how you would apply the IPDE Process. As you drive, focus on the IPDE Process in these ways:

- **Identify** Be vigorous in using your visual skills. “Aim high” and look well ahead to your target area. Check your searching ranges to make sure your front zone is open and you have time to spot things like a line-of-sight restriction.

- **Predict** Predict possible points of conflict quickly and gain valuable time to respond.
- **Decide** Always be ready to communicate or adjust your vehicle position by changing speed and/or using distance effectively.
- **Execute** Be ready to use your vehicle’s controls to make smooth low-risk maneuvers in traffic.

Review It

1. What two factors can make city driving difficult?
2. How can you best use the IPDE Process in city driving?



SAFE DRIVING

Studies have shown that using a cellular phone while driving can increase the risk of collision. Drivers should not split their attention between driving and other attention-intensive activities.

Objectives

1. Describe how to use the 3-second following-distance rule.
2. Describe how you can safely manage a tail-gater.
3. List the steps to take to avoid conflicts with oncoming traffic.

You need to maintain an ample space cushion between your vehicle and possible hazards in all driving environments. Managing the space cushion, or distance, between your vehicle and the vehicle ahead is the first step.

Following Others

An adequate following distance has these advantages:

- You can see further ahead to get the “big picture.”
- Others can see you better.
- You have more time to use the IPDE Process.
- You are in a better position to avoid the car ahead if it stops suddenly.

3-Second Following Distance

A 3-second following distance provides a safe space cushion from the vehicle ahead in most normal driving situations. Use these steps to measure your 3-second following distance.

1. Pick a fixed checkpoint on the road ahead. Road marks or shadows make good fixed checkpoints.
2. When the vehicle ahead of you passes your checkpoint, count: “one-thousand-one, one-thousand-two, one-thousand-three,” for your 3-second count.
3. Now, check to see that your vehicle is still short of your fixed checkpoint. If not, slow and add more distance.

Check your following distance frequently. Imagine you are driving the car in the picture below. Do you have a 3-second following distance?

This 3-second technique works well at all speeds for measuring a normal following distance. As your speed increases, so does the distance your vehicle travels during your 3-second count. Thus, when you count off 3 seconds, your following distance will increase at higher speeds.

This 3-second distance is not the total stopping distance you need to avoid hitting a stationary object. A 3-second following distance only protects you from colliding with the vehicle you are following.

Increase your following distance to more than 3 seconds under adverse conditions, or if you need more time to complete the IPDE Process. Maintain extra distance in these situations:



To determine a 3-second following distance, start counting as the rear of the car ahead passes your fixed checkpoint (bridge shadow).

DRIVE RIGHT DID YOU KNOW?

HIGH-MOUNT BRAKE LIGHTS Since September 1, 1985, all new vehicles in the United States have been required to have at least one high-mount brake light. These lights are designed to give following drivers an added warning that you intend to slow or stop. They are effective for alerting the driver to your immediate rear and those further back. Vehicles with high-mount brake lights experience up to 7% fewer rear-end collisions.



- You are just learning to drive. Your ability to use the IPDE Process is not yet fully developed.
- A tailgating driver has closed your rear zone.
- You are approaching a line-of-sight restriction.
- Traction is low.
- You are carrying a heavy load or pulling a trailer.
- The driver ahead seems unsure.
- You are following a motorcycle.

Looking Beyond the Vehicle Ahead

The 3-second rule is only one technique to use when following other vehicles. Also look over, through, and around the vehicle you are following. You can even see the reflection of brake lights on wet pavement by looking under the vehicle ahead. Be alert for brake lights, including high-mount brake lights, as shown in the picture on this page. Always try to anticipate what the driver ahead is

likely to do in response to a changing zone condition.

Areas for Sudden Stops

Be alert in areas where sudden stops can occur. Three high-risk areas where closed zones and sudden stops can happen are

- intersections where drivers may have to stop for traffic or pedestrians
- lanes next to parked vehicles
- business driveways with high-volume traffic

When to Look Away

Imagine driving in an unfamiliar area while also looking for an address. If you are looking away from the road and the driver ahead stops suddenly, you may collide. Take these steps to prevent making this mistake:

- Make sure the zone ahead is stable and open. If you are following another vehicle, increase your following

distance to more than three seconds.

- Lower your speed even further when you have line-of-sight restrictions.
- Keep your eyes moving; take split-second glances rather than one long look.
- If you have a passenger, ask that person to look for an address.

Being Followed

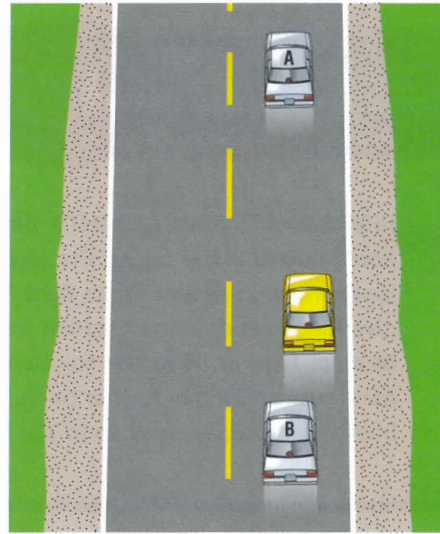
You are in a high-risk closed rear zone situation when someone **tailgates**, or follows too closely. You can take several steps to lower the risk in this type of situation.

Tailgaters Are Hazards

A tailgater is a hazard because if you have to stop fast, the tailgating driver can hit you from the rear. Tailgating drivers often think they can save time or make other drivers go faster. Neither is true.

Managing Tailgaters If you are being tailgated, take these actions to avoid being hit from the rear:

- Increase your following distance to at least four seconds. Imagine you



The yellow car driver has added tailgater protection by using a following distance longer than three seconds.

are driving the yellow car in the picture above. You have identified the tailgating driver and determined your rear zone is closed. By using a following distance of at least four seconds, you have increased your space cushion from the vehicle ahead. If you must slow or stop, you can do it more slowly and give the tailgater more time to respond.

- Move slightly to the right. Look at both pictures on this page. How have the drivers being tailgated helped the tailgating driver to see better?
- Signal early for turns, stops, and lane changes. Flash your brake lights ahead of time to warn a tailgater that you plan to slow or stop. Slow sooner to make a gradual stop.



The driver ahead has moved slightly to the right to allow the tailgater to see traffic farther ahead.

- In extreme situations, change lanes, or pull out of traffic to avoid the tailgater. To reduce stress and risk, your best defense is to avoid tailgaters.

Responding to Oncoming Traffic

If a driver closes your front zone by crossing the center line, you must react instantly. Knowing how to predict and respond to this type of situation ahead of time may give you enough time to avoid a collision.

Reasons for Crossing the Center Line

A driver might cross into your path of travel for these reasons:

- **Driver impairment** A driver might be drowsy, distracted, confused, intoxicated, or ill.
- **Poor judgment** A driver might misjudge speed, distance, or position.
- **Poor visibility** Direct sunlight, blinding headlights, or bad weather can reduce a driver's ability to see.
- **Reduced space** A snowbank, narrow bridge, or an object in or near the road might force a driver across the center line.
- **Sudden moves by others** Children, bicycles, pedestrians, animals, or a vehicle door opening can force a driver to make a last-second move.
- **Vehicle failure** A driver might lose control of a vehicle due to mechanical failure.
- **Turning buses and trucks** Long vehicles need extra room just to make normal turns. Vehicles



You Are the Driver!

If you were driving a car approaching this intersection, what would you predict the driver of the blue car might do?

pulling trailers can create the same situation.

- **Double-Parked Vehicles** Drivers or delivery drivers may park carelessly and close your front zone.

Avoiding Conflicts

If a vehicle comes at you, take these actions to avoid a collision:

- Slow until the other driver can return to the normal lane. You can also slow so that you meet the other driver at a point where there is room to pass.
- Turn on or flash your headlights and blow your horn.
- If your right-front zone is open, move to the right to give the oncoming driver more room. Swerve sharply to an open space on the right if needed.

Review It

1. How many seconds should you use for a normal following distance?
2. What can you do to manage a tailgater safely?
3. How can you avoid a conflict with an oncoming vehicle in your lane?

9.3

Managing Space in Urban Traffic

Objectives

1. Describe how far ahead you should look in city traffic.
2. Tell how to cover the brake.
3. Explain how to select the proper lane for driving.

When driving in urban traffic, you must respond to a wide variety of situations. Unfamiliar streets, line-of-sight restrictions, small zones created by narrow lanes, and high-density traffic all make your driving task difficult. To manage these situations, you will need to use your best skills combined with a positive, heads-up, alert attitude.

Looking Ahead While Staying Back

How far ahead should you look to make sure you are aiming high enough while driving in the city? In addition to looking around your vehicle, look a block or more ahead. By looking far ahead to your target area to protect your path of travel, you will be able to spot zone problems in time to adjust your speed and/or position as needed.

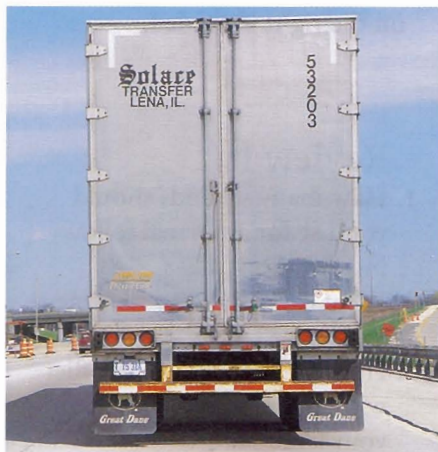
Imagine you are the driver following the truck in these pictures. Maintain a safe following distance of three seconds or more to have a good view of the road ahead. By doing so, you can identify and predict possible points of conflict. You also will be able to better manage the distance between your vehicle and the truck ahead.

Approaching Traffic Signals

Look at your target area to detect traffic signals. By doing so, you will have more time to respond.

If the light is red, slow and be ready to stop. If the signals on your street are synchronized to work together, you should be able to drive at or near the speed limit for several blocks as lights turn green.

If the light is green when you first see it, predict it will change



The truck creates a line-of-sight restriction ahead because you are tailgating.



View of road ahead with 3 or more seconds of following distance.



The flashing DON'T WALK signal is a warning that your green signal is about to turn yellow.

soon. A traffic light that has been green and will soon turn yellow is called a stale green light. Watch for a DON'T WALK pedestrian signal that has started to flash like the one in the top picture on this page. This signal warns you that the light is about to turn yellow. If the signal is flashing, you must decide if you have time to drive through the intersection safely before the light turns yellow. Your decision will depend on your distance to the intersection and your speed.

Never speed up to get through a green light before it changes. At any speed, you will reach a point-of-no-return, or a point where you must start braking if you are going to stop before the intersection. If you were the driver in the bottom picture, could you stop before the light turns red? How might a tail-gater force you into a collision?

Covering the Brake

You can maintain a normal speed if you are driving into a stable, hazard-free traffic situation. But, if you are driving into a scene like the one shown on the top of page 184, you might have to stop quickly. To get



In this changing zone situation, you need to check your speed, distance, and other traffic when deciding whether to stop.



Be ready for doors to open at the last second.

ready to stop, you need to **cover the brake**. Take your foot off the accelerator, and hold it over the brake pedal. You can use this technique whenever you sense a possible conflict. This could cut your reaction time and help you avoid a collision.

When you cover your brake, make sure not to rest your foot on

the brake pedal, or **ride the brake**. When you do so, your brakes heat up and wear faster. In addition, your brake lights stay on, confusing drivers behind you. Only flash your brake lights to warn drivers behind you when you know you are going to slow or stop.

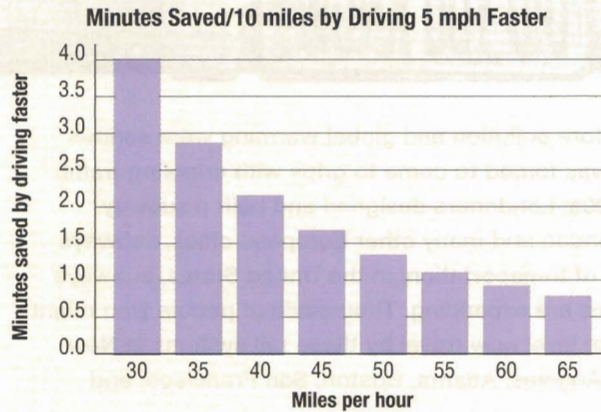
Take these actions to identify and respond to the risk of parked vehicles:

- Cover your brake and move left in your lane to lane position 2.
- Look for drivers through the windows of parked vehicles.
- Be alert for the parked vehicles' brake lights, exhaust, or wheels turned out.
- Lightly tap your horn if needed.
- Be ready to stop or swerve. Swerve only if your left-front zone is open.

While driving past parked vehicles, watch for doors that might



Adjust your speed early as you enter a town after driving on a highway.



Look at the graph to see how much time you save by driving 5 mph faster for 10 miles. Is driving faster worth it?

open unexpectedly, as shown in the top picture on left page. Try to drive at least one car door's width away from parked vehicles. Otherwise, reduce speed.

Adjusting Speed

Imagine that you have been driving for an hour on a highway. You are just entering the town shown in the bottom picture on left page. The speed limit is 25 mph. However, traffic conditions should tell you to adjust your speed, and drive even slower.

Blending into traffic is one of the most common city driving skills you will need. Use these techniques to select your best driving speed:

- Drive with the traffic flow.
- Stay within the speed limit.
- Adjust speed and position ahead of time for other drivers who might block your way.

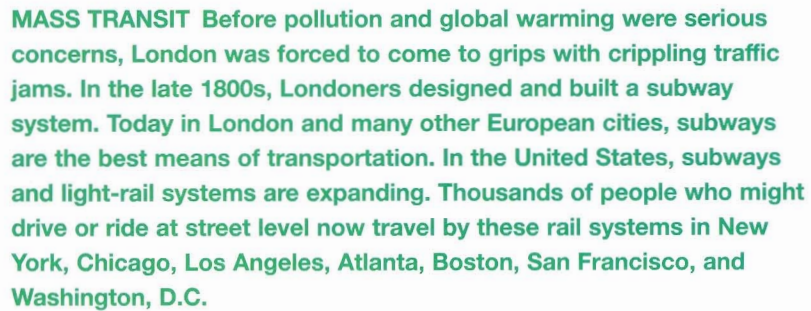
Look at the graph and driver pictured on this page. If you are as hurried as this driver, remember this: You only save a few seconds by driving even 5 mph faster. And, the time savings are less and less at higher speeds.

Selecting the Best Lane

When driving in multilane traffic, you will use different lanes at different times. Select the lane or zone with the fewest number of hazards.

The left lane is usually for faster traffic. But at times, traffic can be held up by drivers waiting to turn left. These left-turning drivers can be a problem when only two lanes are going in your direction.

If your street has multiple lanes going your way, choose the lane where the traffic flow is smoothest. Imagine driving the yellow car in the picture on the next page. Why is the center lane the best for drivers going straight?



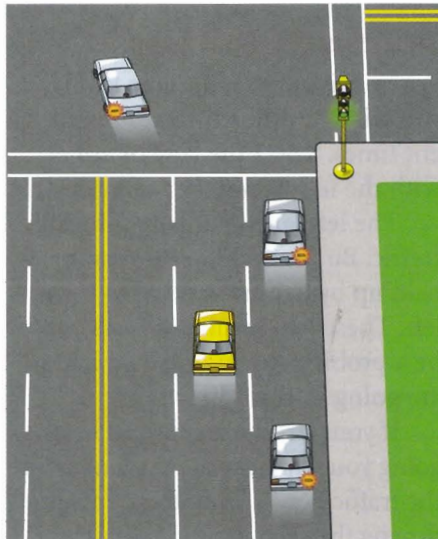
- Increase your following distance to more than three seconds in heavy traffic.

- Adjust your speed and lane position as needed to stay out of other drivers' blind-spot areas.
- Move to another lane if your front zone closes.

Once you start driving in a lane, try to stay in that lane. If you must change lanes, follow these steps:

- Repeat this procedure if you need to change more than one lane.

At times, you might decide to **overtake**, or pass, a vehicle ahead. To overtake another vehicle, use the lane-changing procedure and drive



Through traffic should use the center lane to avoid slowdowns or stops.



Carpooling saves time and fuel. It also reduces traffic and parking problems.

past the slower moving vehicle. Signal briefly and return to your lane when both headlights of the vehicle you have passed appear in your inside rearview mirror. You will learn more about the procedures for passing in Chapter 10.

Passing in a city can be dangerous. You must be alert for pedestrians, cross traffic, signals, and an endless number of line-of-sight restrictions.

If you must overtake another moving vehicle on a two-lane two-way street, make sure you can do so safely and legally. It is illegal to pass at intersections or over double-yellow center lines.

Special Traffic Lanes

To help move rush-hour travel, many cities now have special lanes for bus and/or carpool drivers.

Drivers who travel alone must use the regular, more crowded, slower lanes. By using these special lanes, people, as shown in the picture above, ride together to save time and fuel, and to reduce pollution and parking problems.

Review It

1. How far ahead should you look in city traffic?
2. How do you cover your brake?
3. How do you select the best lane on a multilane street?

Objectives

1. Describe the procedure for turning left or right from a one-way street.
2. Explain how to warn a driver who is driving the wrong way on a street.

You will encounter a wide range of situations in city driving. By using the IPDE Process, you will be ready to adjust to each situation ahead of time.

Driving on Two-Way Streets

Most city roadways are two-way streets with one lane going in each direction. Other streets have two or more lanes going in the same direction.

Many city intersections do not have traffic controls. You cannot be sure what other drivers will do as you approach an uncontrolled or blind intersection.

Some intersections have special left-turn lanes. If you turn left at an uncontrolled intersection, you must yield to oncoming traffic.

Driving on One-Way Streets

One-way streets can move a greater volume of traffic with fewer conflicts than two-way streets. Generally, one-way streets are less congested than two-way streets, so fewer conflicts occur.

Identifying One-Way Streets

When you come to an unfamiliar street, first determine if it is a one-way street. These clues can help you identify a one-way street:

- ONE WAY signs are posted on most one-way streets.
- All moving traffic and parked vehicles point in the same direction.
- Broken white lines are used to separate lanes.
- Most traffic signs will be facing the same direction. If you are driving on a street and the signs are facing the other way, you probably are going the wrong way on a one-way street.

Entering One-Way Streets

Imagine you are driving the yellow car in the top picture on the opposite page. To enter the one-way street, turn from the right lane to the nearest right lane.

To make a left turn onto a one-way street, position your vehicle in the nearest left lane. Make a sharp

You Are the Driver!

Imagine you are approaching this intersection. What clues identify this as a one-way street?



left turn into the nearest lane going left. Signs are used to alert you when your street is about to become a one-way street.

Lane Choice on One-Way Streets

If you plan to drive on a one-way street for a distance, try to avoid a lane that is next to parked vehicles. A parked vehicle could pull out and close your front zone. Each parked vehicle creates a line-of-sight restriction. If a center lane is available, use it to reduce possible conflicts.

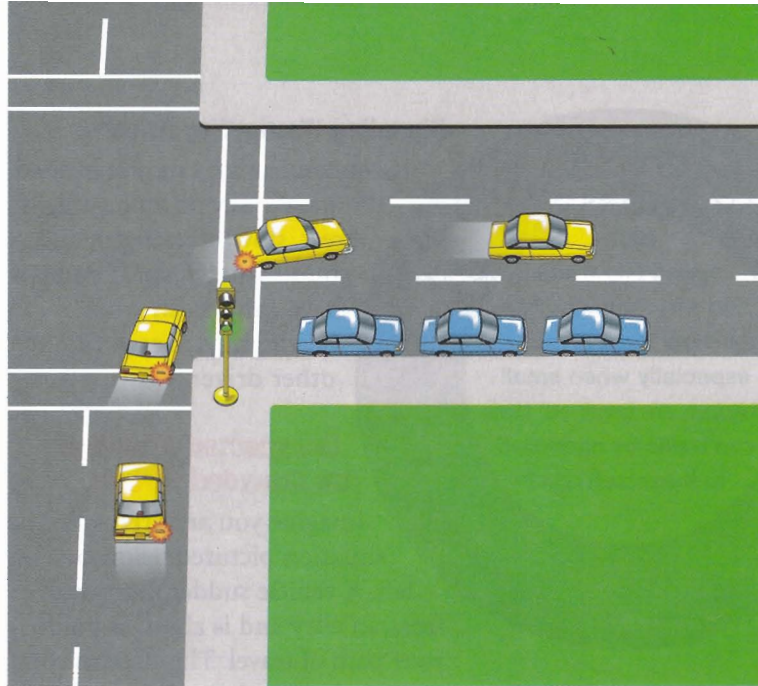
When you plan to turn, position your vehicle ahead of time. Move into the right or left lane at least one block before your turn.

Leaving One-Way Streets

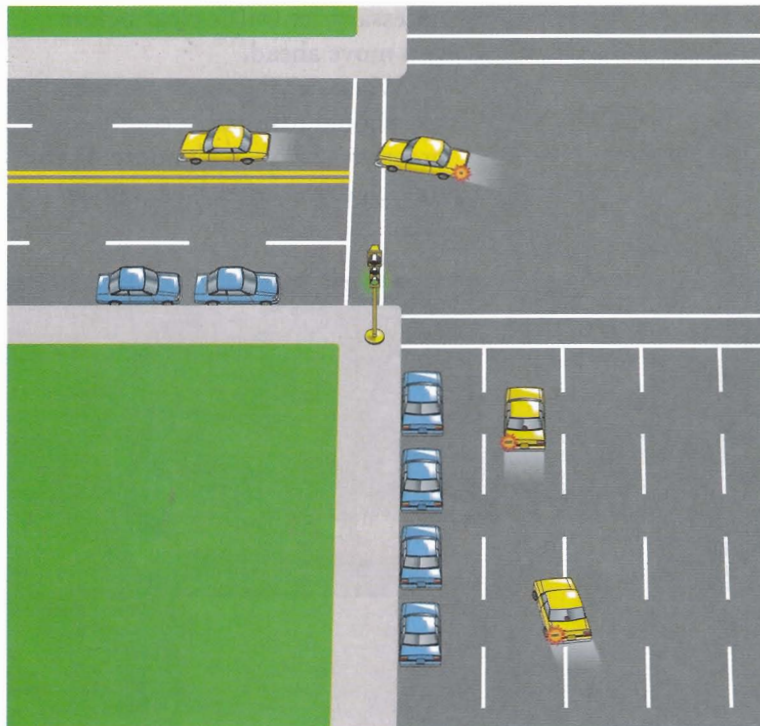
Imagine you are driving the yellow car in the picture on the right. To turn left from your one-way street, position your vehicle in the far left lane ahead of time. To turn right, position your vehicle in the far right lane ahead of time. Complete your turn by entering the nearest lane going your way.

On some one-way streets, the outside lane may be for turns only. On other one-way streets, you can turn into a multilane street from more than one lane. Road markings or overhead signs will direct you.

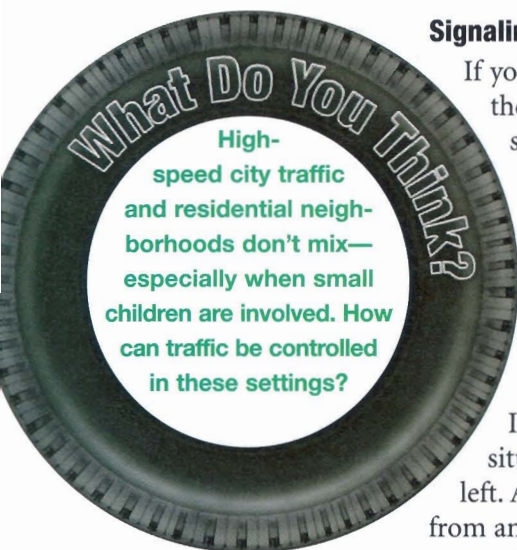
You will need to adjust when a one-way street turns into a two-way street. Your left lane might end. Signs or lights will warn you when a one-way street is about to change to a two-way street.



To turn right onto a one-way street, turn from the far right lane into the first available right lane.



To turn left from a one-way street, turn from the far left lane to the first available lane going left.



Signaling Wrong-Way Drivers

If you encounter a vehicle headed the wrong way on a one-way street, slow, steer right, and sound your horn. If you have time, flash your headlights to warn the other driver.

Unexpected Situations on Crowded Streets

Imagine you are driving in the situation pictured below on the left. A vehicle suddenly emerges from an alley and is about to enter your path of travel. The street is so narrow that you have little room to maneuver.

Slow and cover your brake to maintain a safe path of travel. If necessary, let traffic clear before you move ahead.

When driving on city streets, you should maintain a continuous orderly visual search pattern. Even though drivers may have a green



You might not be able to see a pedestrian in front of a vehicle that is stopped at a green light.

light, they are required to stop for a pedestrian as this driver in the right picture has done.

Angle or parallel parking is allowed on most streets. If you must drive close to parked vehicles, be alert for possible conflicts. At the first hint of movement from a vehicle or pedestrian, slow, stop, or move to another lane.



If you cannot move left, be prepared to stop.

Review It

1. What lanes should you use when making a right or left turn from a one-way street?
2. What can you do if another driver approaches you from the wrong direction on a one-way street?

Chapter 9

Review

Reviewing Chapter Objectives

1. Adjusting to Urban Traffic

1. What are the two main factors that make driving difficult in the city? (176)
2. How do you use the IPDE Process for city driving? (177)

2. Following and Meeting Traffic

3. How do you use the 3-second following-distance rule? (178)
4. How can you safely manage a tailgater? (180)
5. What steps should you take to avoid conflicts with oncoming traffic? (181)

3. Managing Space in Urban Traffic

6. How far ahead should you look when driving in city traffic? (182)
7. What should you avoid doing when covering the brake? (184)
8. How do you select the proper lane for driving on a multilane street? (186)

4. Special Urban Situations

9. What is the procedure for turning left or right from a one-way street? (188–189)
10. How can you warn a driver who is driving the wrong way on a one-way street? (189–190)

Projects

Individuals

Investigate Research local newspapers to find articles about accidents that have been caused by drivers running red lights. Are some intersections mentioned more often than others? Compare your results with those of your classmates.

Observe Traffic As a passenger in a vehicle, look for signs of “road rage” in drivers of other vehicles. Also look for signs of distracted or absent-minded drivers. Make a list of the actions you observe. Discuss your findings with your class.

Groups

Investigate Research alternate transportation systems found in large cities. Each group member should research a different city and make a list of all the transportation systems available in that city. Note similarities and differences among the transportation systems listed. Prepare a group report that contains each group member’s findings.

Use Technology Use the Internet to find street maps of large cities in the United States. Each group member should research a different city and observe whether there are more one-way streets or two-way streets in that city. Compare your findings with those of others in your group.

Chapter 9 Review

Chapter Test

Check Your Knowledge

Multiple Choice Copy the number of each sentence below on a sheet of paper. Choose the letter that best completes the statement or answers the question.

1. While driving in urban situations,
 - (a) keep your vehicle close to others.
 - (b) cover the brake pedal.
 - (c) be ready to reduce speed and change vehicle position.
 - (d) maintain the posted speed.
2. The 3-second following distance technique
 - (a) should be decreased in adverse conditions.
 - (b) is safe for most conditions.
 - (c) is the same as total stopping distance.
 - (d) is not safe at speeds over 40 mph.
3. You can avoid being hit by a tailgater if you
 - (a) increase your following distance to four seconds or more.
 - (b) move to the left side of your lane.
 - (c) look in the rearview mirror and warn the tailgater.
 - (d) keep steady pressure on the brake.
4. It is illegal to pass another vehicle
 - (a) over a broken lane marker.
 - (b) at an intersection.
 - (c) on a multilane street.
 - (d) on a one-way street.

Completion Copy the number of each sentence below. After each number, write the word or words that complete the sentence correctly.

5. To give yourself adequate time to react to a hazard, you should _____ your speed.
6. Urban streets and roads have the highest number of _____ per mile.

Review Vocabulary

Copy the number of each definition in List A. Match the definition in List A with the item it defines in List B.

List A

7. take your foot off the accelerator and hold it over the brake pedal to be ready to brake quickly
8. rest your foot on the brake
9. pass the car ahead
10. follow another vehicle too closely

List B

- a. overtake
- b. ride the brake
- c. tailgate
- d. cover the brake

Think Critically

Write a paragraph to answer each question.

1. Driving in urban traffic can be a challenge. What characteristics of urban traffic make driving more difficult than in other environments?
2. You are driving in the right-hand lane of a one-way street. You discover that you need to make a left-hand turn at the next light. What should you do?
3. What are some advantages of driving on one-way streets?



1. How long should it take this car to pass by the speed limit sign?



2. You are following this truck. How can you improve your line-of-sight view ahead?



3. What clue do you have to indicate this is not a stale green light?



4. What can you do to alert this oncoming driver and avoid trouble?