

CHAPTER 10

DRIVING IN RURAL AREAS

- 10.1 CHARACTERISTICS OF RURAL TRAFFIC
- 10.2 USING BASIC SKILLS IN RURAL AREAS
- 10.3 PASSING AND BEING PASSED ON RURAL ROADS
- 10.4 RURAL SITUATIONS YOU MIGHT ENCOUNTER
- 10.5 SPECIAL DRIVING ENVIRONMENTS

Wide open spaces and less traffic are common in rural areas. After driving for long periods of time, you might mistakenly assume that conflicts will not occur. However, collisions in rural areas account for nearly twice as many highway deaths as collisions in urban areas.

Roadways

Rural roads are constructed of many different types of materials. Some are paved and others not. Shoulders can be wide or narrow, paved or gravel. Road surfaces may be smooth or in very poor condition.

At night, the lack of adequate lighting causes difficulty in seeing. Be alert to potential changes that could arise. Conditions in rural areas can change suddenly with little warning.

Speed

Determining a safe speed is critical for safe rural driving. Speed affects

- your line of sight
- your stopping distance
- your vehicle control
- the amount of damage and injury in the event of a collision

Many rural roads have a speed limit of 55 mph. Some states allow speeds greater than 55 mph. Where conditions require, lower speeds are posted.

There is a difference between safe speeds and posted speeds. Posted speeds are the maximum speeds allowed under ideal conditions. When conditions are not ideal, safe speeds should be used. These are slower speeds. Factors that affect safe speed selection include other highway users, inclement weather, hills, curves, intersections and very narrow roads or lanes. *Always use your common sense and never drive faster than conditions permit.*

Appropriate Speed

The speed you can drive your vehicle depends on the posted speed limit, the road conditions and the weather. The faster your vehicle is going, the more distance it will take to turn, slow or stop. For example, stopping at 60 mph does not take twice the distance it takes at 30 mph as one might think, but over three times the distance. The posted speed limit is the FASTEST speed you can legally drive **under ideal driving conditions**. The following general limits have been set:

- 20 mph in any business district;
- 25 mph in a residential district or school district;
- 45 mph in any suburban district, or for any vehicle pulling another vehicle unless it was designed for that purpose;
- 50 mph on unsurfaced secondary roads from sunset until sunrise, and for all trucks on secondary roads at any time of day;
- 55 mph on all primary roads, urban interstate highways and secondary roads, including unpaved roads from sunrise to sunset; and
- ~~60~~ 65 mph on rural interstate highways.

A lower limit may be set for any conditions listed above.

The maximum speed limit on dirt roads in Iowa is 50 miles per hour at night and 55 during the day

Traffic Controls

Traffic controls—signs, signals, and markings—direct, regulate, inform, and warn drivers. Traffic controls provide advance information and warning of

- hazards that you cannot yet identify
- major intersections ahead
- unusual or hazardous conditions (curves, animal crossings)
- traffic channeled into reduced space

Roadside Hazards

Consider the existing conditions in selecting a safe speed. Rural roads, especially older, narrow, and less traveled ones, present hazards.

Shoulders may be uneven with the edge of the roadway, soft, or narrow. Danger may be only a few feet away.

Bridges, guardrails, bushes or trees may be near the road's edge. Sign posts may only be a few feet away from the actual roadway. A steep slope might run from the shoulder down to a drainage ditch.

Entrances to businesses, homes, or fields are always points of possible conflict. Be alert for these areas. Drivers ahead of you could decide at the last moment to turn right or left.

Trees, shrubs, or piles of plowed or drifted snow create line-of-sight restrictions. Drivers trying to enter the roadway may not be able to adequately see traffic. They may turn out into, or across, your path of travel.

Using Basic Skills in Rural Areas

A seemingly quiet rural traffic scene can change quickly with little or no warning. Risk is present whenever and wherever you drive, but you can manage the level of risk by applying the IPDE Process.

Applying the IPDE Process

Rural driving typically involves driving at higher speeds. The faster you drive, the greater your chance of having a severe collision. You have less time to identify and respond to a situation or hazard. You may be forced to make an emergency response. Sudden responses at higher speeds increase the risk of losing control of your vehicle.

While traveling on rural roads, there are many ways your zones can become closed. To best apply the

IPDE Process, you must manage your speed control. The slower your speed, the more time you have to solve problems. One or two additional seconds can make a great difference in your ability to successfully apply the IPDE Process and manage space. Apply the IPDE Process whenever you drive.

Maintaining vehicle control at higher speeds is more difficult than at lower speeds. It takes longer to stop. Excessive braking or steering can result in a skid and loss of vehicle control.

Drive at a speed where you know you will be able to brake and steer your vehicle without losing control. Assess road conditions and the amount of traction available. Adjust your speed to conditions. Always drive at a speed that allows you to stop or swerve to avoid a collision.

Visual Search Pattern

Remember the orderly visual search pattern described in Chapter 4? Apply those same techniques in rural areas. In your 12–15 second search range look for clues of hazards that have the potential of closing your front zone. Higher rural speeds extend the actual distance covered by your 12–15 second search area compared to lower speeds.

Strive to maintain a 12–15 second visual lead. This is the distance your vehicle will travel in the next 12 to 15 seconds. The higher the speed, the greater that distance will be. Maintaining a 12–15 second visual lead will help you to identify hazards early. It also gives you time to predict and execute an appropriate response.



Where on this road might conflicts occur?

Driving on Two-Lane Roads

Knowing about some common, but important, characteristics of rural roads will help you handle them safely. Some of these characteristics include curves, warning and advisory signs, hills, and intersections.

Curves Rural roads typically have many curves. Collisions occur at curves because speed on the approach is too great. Before approaching a curve, you likely will notice a yellow warning sign that warns of a potential hazard (a curve) ahead. Warning signs are usually placed anywhere from 250 to 700 feet before the actual hazard. A warning sign for a curve has a curved black arrow on it. The sharper the curve of the arrow, the sharper the roadway curve ahead.

Curve warning signs often have **advisory speed signs** posted below

them on the sign post. These indicate suggested travel speeds when conditions are ideal. Follow the recommended speeds, and when conditions are not ideal, use a slower speed. Natural forces work to push you to the outside of the curve when you travel at higher speeds.

When you approach a curve, follow these steps:

1. See the curve in your target area.
2. Check your rear zone.
3. Check your left-front zone for oncoming traffic.
4. Check your right-front zone to determine if it is open or closed to your line of sight and path of travel.
5. Stay in lane position 1.
6. If the curve is sharp, lightly apply your brakes before you turn the steering wheel.

7. As you get closer to the curve, look in the direction the road curves. See if your path of travel is going to be open.
8. Once you are beyond the midpoint of the curve, begin to accelerate gently if conditions permit.
9. Evaluate your new target area and search for zone changes.



What do the signs indicate about the curve ahead?

Intersections In Chapter 7 you learned about how to handle intersections. Follow the same procedures for rural intersections.

Rural intersections can vary a great deal. Some intersections may have traffic lights; others may just have STOP signs. Early identification of traffic controls will help you predict potential conflicts.

A typical rural intersection is one where a side road crosses a main road. The side road will usually have the STOP sign. Tall crops, trees, or shrubs create line-of-sight restrictions that can block the vision of drivers at the edge of, or across from, an intersection.

Hills Unless they have very steep slopes, hills are usually not marked. Hills restrict your line of sight. Slow as you approach the crest of the hill. Take lane position 1 as you crest the hill. Look for oncoming traffic and an escape path to the right.

Treat driveways like intersections. Look well in advance for clues of driveways, such as:

- loose gravel projecting into the main road
- electrical, phone, and other utility lines crossing the road
- reflectors marking a driveway
- mailboxes, typically located at the edge of, or across from, a driveway



What type of restriction do the shrubs create? Are there any other hazards?

Following Traffic

Establishing and maintaining at least a 3-second following distance is very important in rural areas. At high speeds, a hazard can quickly develop into a conflict. A 3-second following distance provides you space and time to prevent conflicts under normal conditions.

In special situations, you should increase your following distance to four seconds or more. A longer following distance gives you more control when you are

- being tailgated
- driving on a steep downhill slope
- following a motorcycle
- following a snowplow
- pulling a loaded trailer
- following a large vehicle (truck, motorhome, or bus)
- driving on wet or icy roads

Keeping at least three seconds gives you an open front zone. This helps to give you control over the actions of other drivers. When other drivers do dangerous things, it is less likely to affect you if you are following at a distance of three seconds or more.



If you are driver of the car behind the blue car, in other words, if this is your view over the steering wheel, are you too close?

It is legal for you to pass the blue car as shown in the picture. But is it safe to do so?

Do you see a possible hazard to passing here?

Driving on Multilane Roads

Many rural roads have four or more lanes of traffic. Posted speed limits usually are higher on two-lane rural roads. Unlike interstate highways, multilane roads may have intersections rather than exit and entrance ramps. Some intersections may have a two-lane road crossing a large four-lane road; others may involve two major multilane roads that cross.

Multilane Roadways with Center Lines Some multilane roadways may only have a yellow line (dashed or solid) separating high-speed traffic moving in opposite directions. Drivers should never cross a solid yellow line or double yellow lines except to make a left turn or clear an obstacle blocking their lane. Whenever you cross a yellow line, you are responsible to do so safely.

Rural multilane roads are not controlled access roads like interstates

Divided Roadways Divided roads always have lanes of traffic moving in opposite directions separated in some way. The division may be simply a guardrail or a **median**. A median is an area of ground separating traffic that moves in opposite directions. A median can be a few inches to several feet wide, as seen here.

If you need to cross a multilane highway, cross each half of the multilane road as though it were a one-way street. If a large enough crossover area exists, move into it after you cross the first lanes of traffic. Stop, look for a large enough gap. You will be turning into the fastest lane of traffic, so you may need to look for a gap of six seconds or greater.

Lane Choice Whenever possible, drive in the right lane on a multilane highway, unless signs indicate otherwise. The left lane is usually for passing or preparing to turn left.



Turning at an Intersection When leaving a multilane roadway, turn right from the right lane. When making a left turn, turn from the lane nearest the center line or median strip.

Some intersections may have special turn lanes for right and left turns. To turn, check your rearview mirrors for any possible conflicts in your rear zone. Signal your intention to turn at least five seconds before the actual turn because speeds are much higher on rural multilane roads.

Signaling well in advance gives traffic behind a chance to adjust speed and position to avoid any conflicts. If turning left, keep your wheels straight until you start your turn. If you are hit from behind, you will not be pushed into oncoming traffic.

If you see a vehicle approaching at a high speed from behind, forget your turn, accelerate quickly, and proceed straight ahead across the intersection to avoid being hit from behind. To do this safely, you must be aware of the conditions in the intersection.

Entering a Multilane Road Follow these procedures if you are on a side

road and wish to enter a multilane roadway:

- To turn right, check to the left and right of where your target area is located. Make sure the left, front and right zones will be open. Enter the nearest right lane as you turn. Steer toward your target and accelerate quickly to the prevailing speed. Change lanes only after you clear the intersection and reach the prevailing speed.
- Left turns require larger gaps than right turns. First, cross the lanes on your side of the roadway. Choose a time when no traffic is approaching in the lane just across from the center line. Then turn into the nearest lane. Accelerate more quickly to the prevailing speed than you would for a right turn.

Entering the roadway from a driveway presents problems similar to entering from a side road. Oncoming drivers may not see you due to a line-of-sight restriction. Though drivers on multilane roadways may have advance warning signs of intersections ahead, there rarely are such signs for driveways.



To make a left turn from a side road onto a multilane highway, a median strip provides a safe place to wait for a gap.

10.3

Passing and Being Passed on Rural Roads

Passing on a two-lane road carries a higher level of risk than passing on a multilane road. When you pass on a two-lane rural road, you will be in the same lane as oncoming traffic for a short period of time. Use parts of the IPDE Process to help lower your risk when passing.

Passing

Passing another vehicle is really a three-stage procedure. You decide to pass, prepare to pass, and execute the maneuver.

Deciding to Pass

Before you pass a vehicle, assess your situation. Ask yourself these questions:

- Is it worth it to pass?
- Is it legal to pass?
- Is it safe to pass?

Consider passing only if you can answer “yes” to all of these questions. The major responsibility for passing safely belongs to the driver who is passing.

Preparing to Pass

Take these actions when preparing to pass:

- When you find your front zone closing to less than three seconds, identify the reasons. Is the vehicle ahead going slower than the posted speed limit? Is it likely to be making a turn? If so, hold back and eliminate passing. If conditions indicate you should pass, continue the steps in preparing to pass.
- Check roadway markings and signs ahead. Make certain that passing is legal.
- Look ahead to your target area. Is your line of sight adequate? You may have to move to lane position 2 to get the best view ahead. Is it safe to pass?
- Check the roadway conditions. If traction is limited, you probably should not pass. If you must pass under poor conditions, you will need to accelerate gently and gradually while passing.
- Check the roadway shoulders and sides ahead that might cause the vehicle you are passing to swerve to the left.



BE A SMART DRIVER.

KNOW WHAT YOU ARE ABOUT TO PASS

What appears to be an ordinary dump truck from the rear is actually a trailer with a long tongue being pulled by a dump truck. This can be critical on two lanes roads when passing. Note there is nothing on the back of this trailer to warn the driver following (you) that it is an extra long vehicle or it is "In tow" This type of dump truck/trailer combination is common in Iowa



Another example of a large truck towing a trailer. This photo shows a better view of the length of the trailer tongue. Dump trucks pulling trailers are more common in Iowa especially near quarries. **BE A SMART DRIVER. KNOW WHAT YOU ARE ABOUT TO PASS**

It takes 10 to 15 seconds to actually complete a pass and about 20 to 30 seconds of an unobstructed view of the road ahead to do it safely

- Check your rearview mirrors for any potential conflicts to your rear zone. If a vehicle is rapidly closing in behind you, delay your pass.
- Glance quickly over your left shoulder. Make sure there are no vehicles in your blind spot.
- Check the oncoming traffic lane again. Make sure no vehicles are approaching and there is enough space for you to pass safely. Any approaching vehicles must be at least 20–30 seconds away. You will need 10–15 seconds to complete the pass. ***If in doubt, do not pass.***
- Check ahead for driveways and side roads. Make sure no traffic will be entering the roadway.

Be a smart driver. If in doubt do not pass. Be safe, not sorry.

After you have determined that your left-front zone (the path to be taken) is clear, you are ready to pass. If you identify a problem, slow down and establish at least a 3-second following distance. Repeat the steps to prepare to pass again. In time these steps will become part of your normal driving behavior.

Executing a Pass on Two-Lane Roads

Follow these steps when passing on a two-lane road:

1. Get in your ready position by keeping at least 3 seconds of following distance.
2. When it is safe to pass, signal for a left-lane change and glance over your left shoulder to check your blindspot.
3. Change lanes smoothly.
4. Accelerate at least 10 mph faster than the vehicle you are passing. *All passing should be done within the speed limit.*
5. Make your final evaluations. If you notice a problem that is within 20–30 seconds ahead, you can still change your mind—provided you have not gone beyond the vehicle you are trying to pass. If it is clear, continue to accelerate to the proper speed.

6. Maintain your speed. Remain in the left lane until you can see two headlights of the vehicle you are passing in your inside rearview mirror.
7. Signal for a right-lane change.
8. Return smoothly to the right lane. Do not slow down.
9. Cancel the signal. Adjust your speed and vehicle's lane position. If you are passing a large truck, you will need more time and space. It is a good idea to make sure that you have at least 30 seconds of clear space when passing a large truck.



STEP ONE

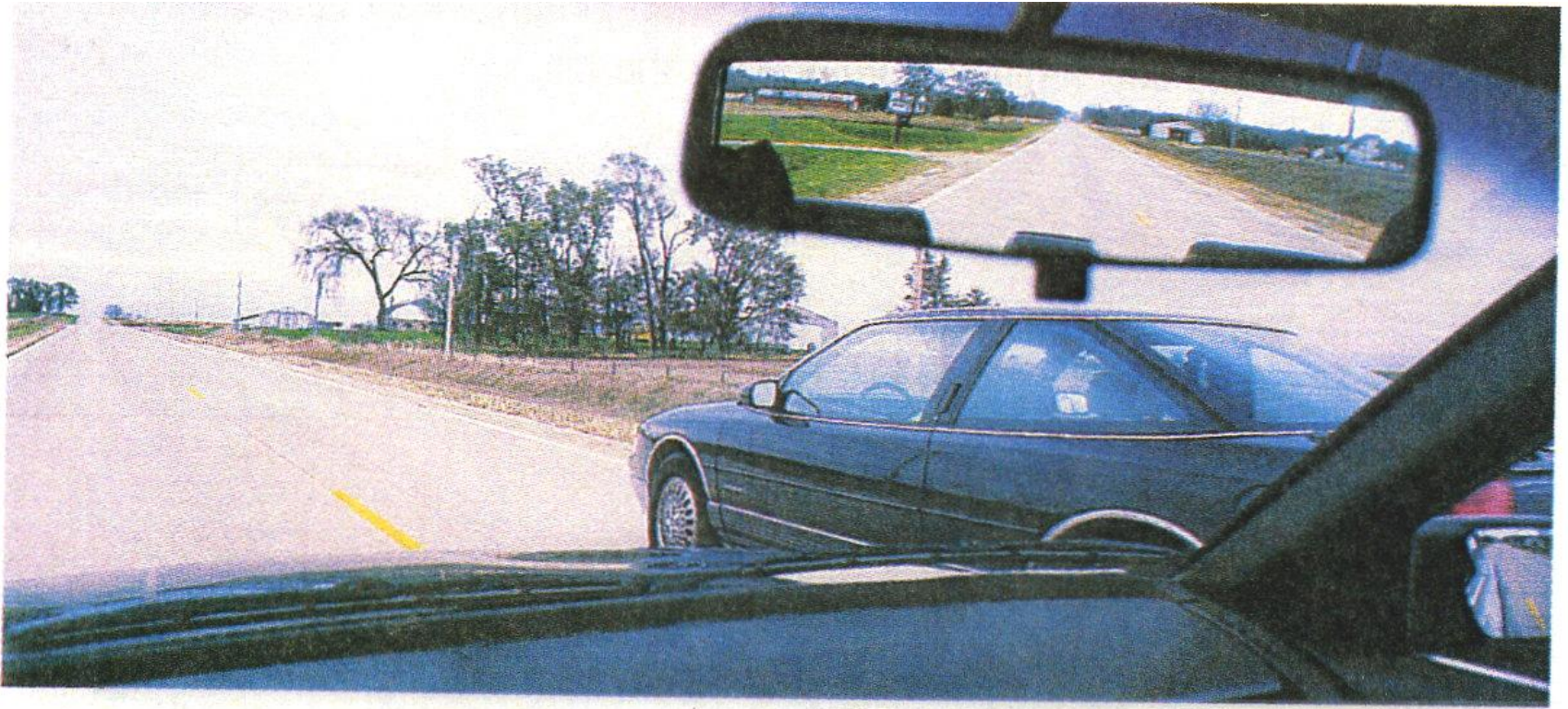
BE SURE THE ROAD AHEAD IS FREE OF ONCOMING TRAFFIC. BE SURE THERE IS NO SOLID YELLOW LINE ON YOUR SIDE OF THE DOTTED CENTER LINE. BE SURE THERE IS NO VEHICLE BEHIND YOU READY TO PASS YOU. USE YOUR LEFT SIGNAL, GLANCE OVER YOUR LEFT SHOULDER TO CHECK YOUR BLIND SPOT.

NOTE: BE A SMART DRIVER. KNOW THE CAPABILITIES OF THE VEHICLE YOU ARE DRIVING. JUDGING THE DISTANCE NEEDED TO MAKE A PASS SAFELY TAKES EXPERIENCE AND PRACTICE. LEARN THIS TECHNIQUE USING CAUTION AND COMMON SENSE. REMEMBER, IF IN DOUBT DO NOT PASS



STEP TWO

IF ALL IS CLEAR, ACCELERATE, PULL INTO THE LEFT LANE AND BEGIN OVERTAKING THE VEHICLE YOU ARE PASSING



STEP 3

MAKE YOUR FINAL EVALUATIONS. LOOK AHEAD AND GLANCE IN YOUR REAR VIEW MIRROR. IF ALL IS CLEAR CONTINUE PASSING. IF THERE IS A PROBLEM, AT THE POINT SHOWN IN THE PICTURE, YOU CAN STILL CHANGE YOUR MIND, REDUCE YOUR SPEED AND PULL BACK IN BEHIND THE CAR YOU WERE INTENDING TO PASS. IF NO PROBLEMS EXIST, PROCEED WITH PASSING, SPEEDING UP SUFFICIENTLY TO MAKE THE PASS



STEP FOUR

YOU HAVE ACCELERATED PAST THE CAR IN THE RIGHT LANE AND YOU CAN SEE THE CAR IN YOUR REAR VIEW MIRROR. USE YOUR RIGHT TURN SIGNAL TO SIGNAL YOUR INTENT TO RETURN TO THE RIGHT LANE AND PULL BACK INTO THE RIGHT LANE. ADJUST YOUR SPEED SO YOU ARE NOT EXCEEDING THE SPEED LIMIT AND YOU HAVE NOT SLOWED DOWN SO MUCH THAT YOU CAUSE THE DRIVER OF THE CAR YOU HAVE JUST PASSED TO HAVE TO HIT HIS/HER BRAKES AND ADJUST HIS/HER SPEED.

No-Passing Situations

No-passing situations are marked by solid yellow lines, as shown in the pictures. Signs can also mark no passing zones. Rectangular white signs on the right side of the road will indicate DO NOT PASS; yellow pennant-shaped signs are on the left side of the road and indicate NO PASSING ZONE. Passing is illegal and unsafe when

- your line of sight is restricted
- space is narrow, and your front zones are closed
- cross-traffic is present, even if no warning signs or lines are present

How do these conditions apply to the following situations?

No Passing on Roads Going Uphill

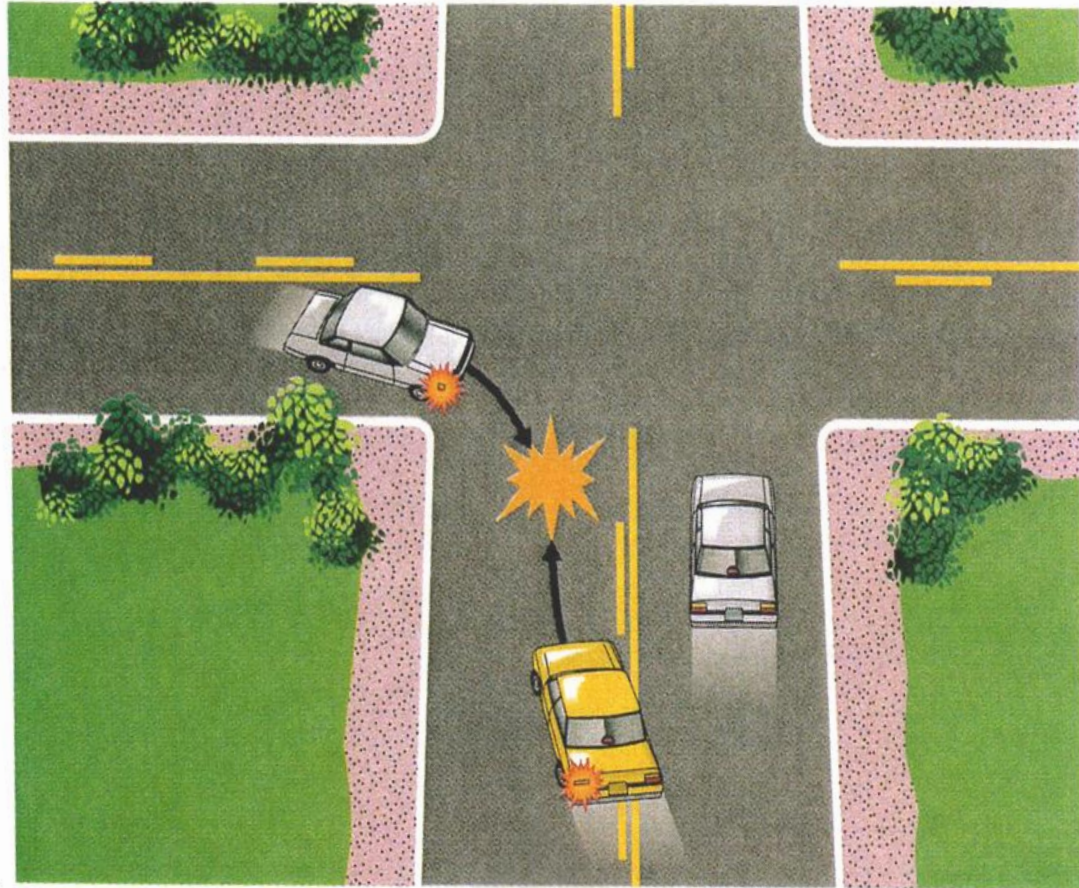
Passing is not allowed within 700 to 1,000 feet before the top of a hill. Notice that the driver of the yellow car in the top picture has too great a restricted line of sight to pass safely.



The solid yellow line means that drivers in the right lane must not pass. They would be unable to see vehicles coming over the hill.

Be a smart driver Be sure you have enough of an unrestricted view to pass safely. You need a 20 to 30 second view of the road ahead to pass.

No Passing at Intersections Passing is illegal within 100 feet of an intersection. Slow down when approaching an intersection.



Passing at or near an intersection is dangerous. A driver turning from the crossroad might enter your lane.

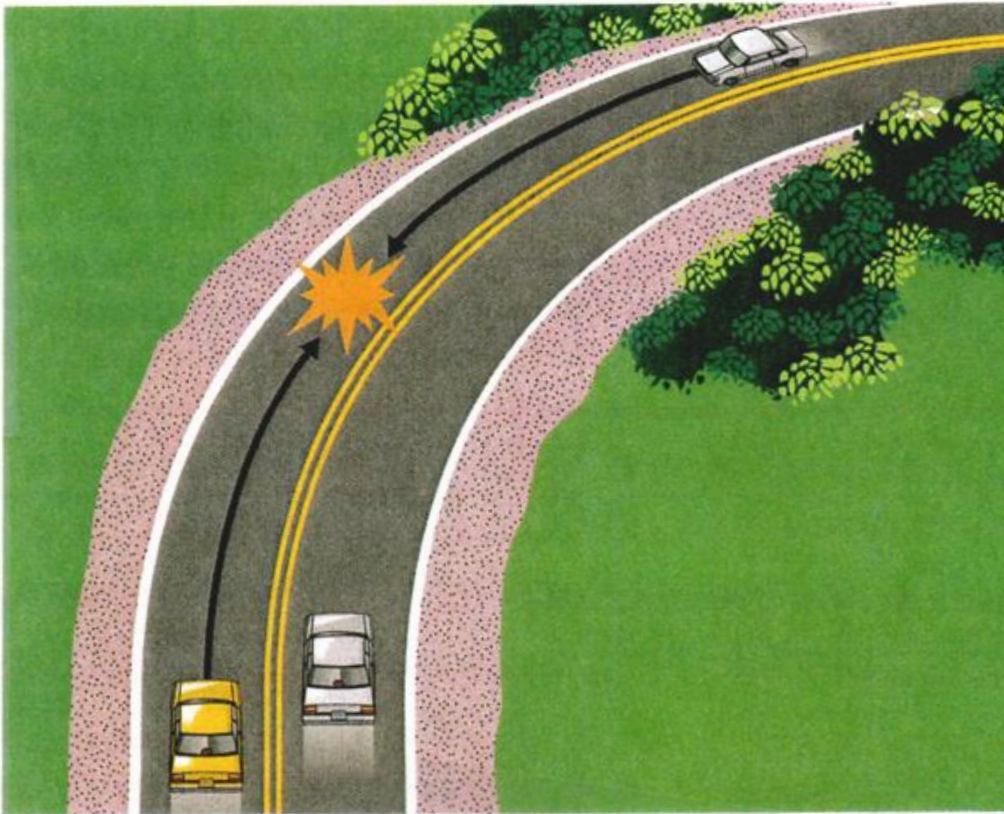
Other No-Passing Situations

There are other situations where passing is prohibited or should not be attempted. Examples include:

- Within 100 feet before a railroad crossing.
- On a two-lane bridge or underpass.
- On curves, where your line of sight is so restricted you can not see around the curve.
- When the vehicle ahead is traveling at or near the speed limit. Remember, **most passing should not require a driver to exceed the posted speed limit.**
- When your line of sight is limited by fog, snow, or rain.
- When several vehicles are ahead of you, pass only one vehicle at a time.
- When you cannot complete a pass before the start of a no passing zone
- Any time oncoming traffic is too close.
- When you will be stopping or turning soon.



Do not pass on bridges and near underpasses, since they might not have shoulders to provide escape areas.



Passing is illegal in both lanes around this curve.

Be a smart driver.
Be sure you have enough
of an unrestricted view to
pass safely. You need a
20 to 30 second view of
the road ahead to pass
safely.

Passing on rural multilane roads is generally pretty safe but be careful of “highway hypnosis” on rural four lane roads where there is not much traffic.

Highway hypnosis is covered in chapter 11, section 5, page 238

Passing on Multilane Roads

You need to be cautious on a multi-lane highway with only a center line to separate traffic. Check all lanes going in your direction before you pass on a multilane roadway. Make sure that no one will move into your front zones taking away your path of travel. The vehicle you intend to pass should be going several miles per hour slower than you.

Generally, all passing should be done in the left lane. Passing on the right is often illegal. Sometimes, it becomes necessary to use the right lane to pass a vehicle. Remember the procedures for passing and follow them every time you pass.



Being Passed

If you are the passing driver, you have the majority of the responsibility for passing safely. However, you also have responsibilities when being passed.

You must be aware that another vehicle is passing, even when the driver of the vehicle fails to properly warn you. Check your mirrors often to identify vehicles approaching from the rear.

When another vehicle passes, it may help to move to lane position 3. By doing so, you provide an extra space cushion and provide the passing driver with a better view ahead.

If the passing driver is having a difficult time trying to pass, slow down to help that driver. *Intentionally speeding up while being passed is illegal.* Only speed up when the driver has decided not to pass and drops back. This will quickly open a space behind you.



Glance regularly into your mirror to see if a car is about to pass you.

10.4

Rural Situations You Might Encounter



The vehicle has closed your front zone. Is it safe to pass in this situation?

Slow-Moving Vehicles

A **slow-moving vehicle** is one that is unable to travel at highway speed. Most tractors and other large farm machinery can only travel at lower speeds. They are not designed, nor intended, as means for personal transportation.

Identify slow-moving vehicles as early as possible. The sooner you do, the more time you have to respond. Apply the IPDE Process. Most slow-moving vehicles have an orange and red triangular sign like the one in the picture.

When driving at a higher speed, you will rapidly close in on a slow-moving vehicle. If you find yourself closing to less than three seconds, be aware that you may have a problem. Slow down and prepare to pass when it is safe to do so. Stay far enough behind and in a lane position that gives you the ability to check for oncoming traffic.

Slow Moving Vehicle Sign

A reflective orange triangle on the rear of a vehicle means it is traveling less than 30 mph. You may see this sign on road work equipment, on farm vehicles, or horse-drawn wagons or carriages. It shows up as a solid orange triangle by day and a hollow red triangle at night.



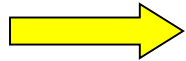
Animals

Animals can be a problem on rural roads. They can easily become frightened and dart out into your path. Each year millions of dollars in property damage occur when animals and motor vehicles collide.

Hitting a large animal can result in damage to your vehicle, and serious injury or death to you, your passengers, and the animal. In areas where large wild animals are common, reduce your speed and search a much wider area than usual. If you see one animal, anticipate the presence of more.

You may see warning signs where large animals are common. If you see an animal warning sign, let it serve as a clue, and do the following:

This is true with deer. Watch for a second deer following the first deer.



- Evaluate your left- and right-front zones for line-of-sight restrictions from which animals could enter.
- Check your rear zone to determine if you will be able to slow or stop quickly.
- Check your left-front zone to see if it will be open for an escape path.

If you happen to observe one or more animals crossing the road, stop well in advance. Be patient and wait until it is clear to proceed. Do not get out and attempt to hurry any stragglers across the road. You are much safer in your vehicle.

When a smaller animal suddenly appears in your front zone, you may be tempted to brake hard or swerve. Follow the same procedures as above. Be careful not to risk a more serious collision by trying to avoid the animal.



Swedish road sign

A BASIC RULE OF DRIVING IS “DON’T
VEER FOR DEER”

D.M. police officer dies after SUV hits rail, rolls

Sean Wissink, 35, leaves a wife, two children and fond memories of his trademark laugh.

By **ABBY SIMONS**
REGISTER STAFF WRITER

A 10-year veteran of the Des Moines Police Department died Sunday morning after a traffic accident he was in while driving to catch a plane to New Mexico for anti-terrorism training.

Senior Police Officer Sean Wissink, 35, died after he lost control of the city-owned sport utility vehicle he was driving on Iowa Highway 141 one mile north of Grimes. In-

vestigators believe that about 3:30 a.m. he swerved to avoid a deer, causing the vehicle to hit a guardrail and roll several times down a steep embankment.

Wissink was driving from his home in Granger to Des Moines.



Wissink

Those who knew Wissink said he was a jokester with a radiant personality and an unmistakable laugh.

Wissink, who was wearing a seat belt, was flown by helicopter to Iowa Methodist Medical Center in Des Moines, where he later was pronounced dead.

Television reports said the officer was thrown from the vehicle. That was not reported in this article, however.

The officer was officially listed as killed in the line of duty.

UPDATE

It was reported on the WHO Channel 13 6 a.m. news on either February 21 or 22 that investigators now believe Officer Wissink may have been trying to avoid debris in the roadway.

Channel 13 also reported in the same newscast that Officer Wissink's vehicle was traveling 81 miles per hour at the time of the mishap.

(Remember our discussion about airbag computers and what information they gather and hold?)

REMEMBER THE TWO 19 YEAR OLD
YOUNG MEN FROM THE BROOKLYN
VICTOR AREA WHO DIED TRYING TO
AVOID A DEER LAST JANUARY?



KCCI 8
STOCKS

MEREDITH

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5:33
11°

AVAILABLE ONLINE AT KCCI.COM

Meeting Oncoming Traffic

Meeting traffic on two-way roads can be dangerous. Very little space separates you from oncoming traffic. With traffic moving at higher speeds, a head-on collision can cause serious damage, injury, or death.

If you identify an oncoming vehicle, check your right-front zone for an alternate path of travel and for line-of-sight restrictions. Try to adjust your timing to have the oncoming vehicle approach you when you have the least problem in your right-front zone.

Use these guidelines for selecting a place to meet oncoming traffic.

- Separate the hazards in or next to your path of travel. Adjust your speed to deal with only one hazard at a time. In most situations slowing down is your best action. Imagine the hazard is a narrow bridge as in the picture. You judge that you might meet the approaching vehicle just about the time you approach the hazard. By slowing down and letting the approaching vehicle clear the hazard first, you separate the hazards.
- Meet where the most space is available. When you must meet oncoming traffic, try to select a location where you have an open right-front zone to move into if you need to swerve to avoid conflict.
- If you are meeting a line of vehicles, slow down and move into lane position 3 to provide a little more space between you and the approaching vehicles.

Oncoming drivers may cross into your lane on rural roads for several reasons. Examples include:

- a blowout, hitting or swerving to avoid a pothole or other debris on the road
- an unexpected loss of traction due to ice, snow, rain, or mud
- a distraction
- an impairment due to alcohol, other drugs, or medications
- an impairment due to illness or fatigue
- a vehicle failure

Meeting Slow-Moving Vehicles

When you see a slow-moving vehicle or stopped vehicle in your left-front zone, check to the rear of the vehicle for a passing vehicle. The passing driver may not see you. If you are applying the IPDE Process, you will check your right-front zone and move into lane position 3, or onto the road shoulder if necessary. Always know where you have an open zone into which you can move. If you do not have an open zone, brake enough to create space for yourself or the passing driver.

Meeting at Night

Be alert when driving at night. You need to be aware of vehicles in the distance. Keep your windshield clean.

At night, headlights shining over the crest of a hill can warn you of an approaching vehicle. If you have your high beams on, switch them to low beam anytime you are within 500 feet of an approaching vehicle. Do not look directly into the headlights of the approaching vehicle; you could be temporarily blinded, especially if their headlights are on high beam. Glance instead to the right edge of the road. There is often a white line to help you maintain position in your lane.



Adjust your speed and position to allow the hazards to separate.

Railroad Crossings

Many railroad crossings do not have complete controls (flashing lights and gates). In rural areas, trains travel at high speeds. Be alert for railroad-crossing warning signs. Slow and check left and right before crossing. Never cross a railroad crossing until you know it is absolutely safe to do so. **Remember, when a vehicle and a train collide, the train always wins.**



Not all railroad crossings have lights and gates.

Trains are much heavier than automobiles. A fully loaded coal train can weigh 16,000 tons (32 million pounds) and can take up to a mile or more to stop. Because of the long stopping distances **TRAINS ALWAYS HAVE THE RIGHT-OF-WAY**

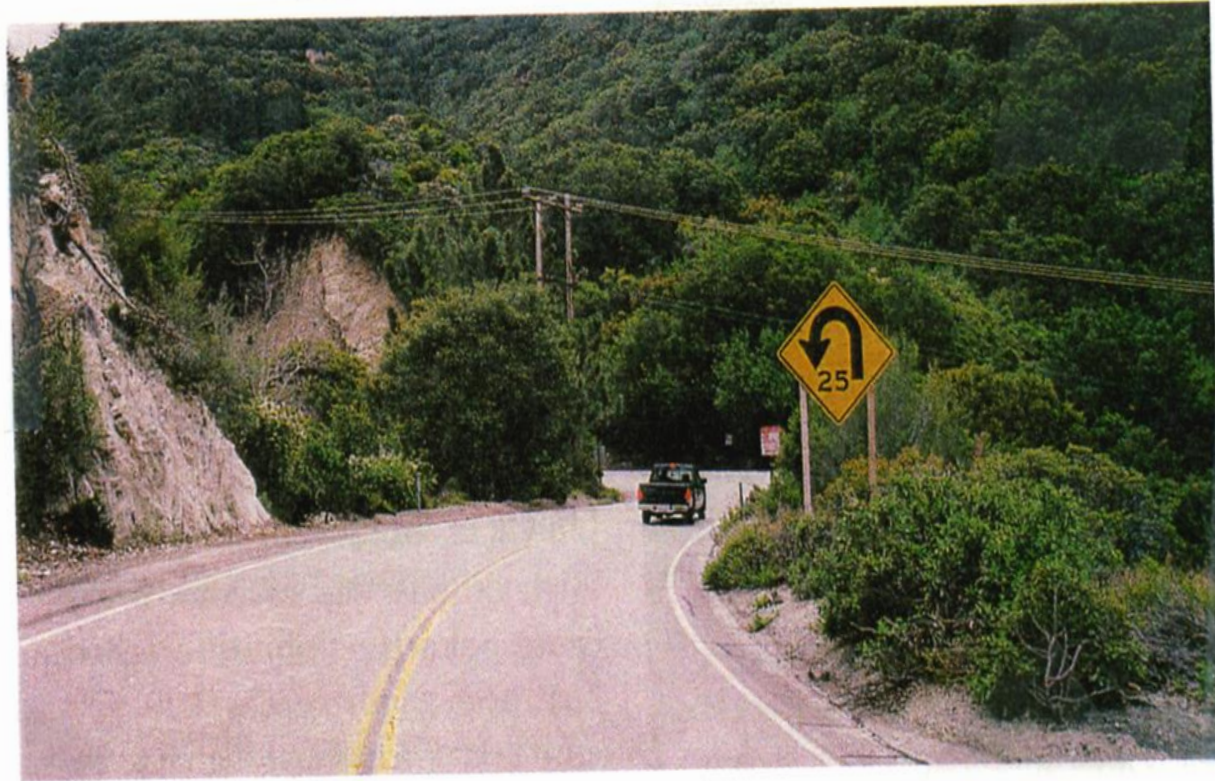
10.5

Special Driving Environments

Mountain Driving

Mountain driving presents more problems and special situations than driving in flatter areas. The effects of gravity are constantly at work. Gravity will make your vehicle go faster when going downhill, and slow your vehicle when going uphill.

Mountain roads often zigzag across a mountain with a series of sharp turns called **switchbacks**. A switchback bends sharply in the opposite direction. In the picture, the sign warns that a switchback is ahead.



At the switchback this road reverses direction.

Driving Up a Mountain

Accelerate steadily when driving uphill to maintain speed because gravity is pulling your vehicle downhill. If the slope is steep, you might need to downshift to a lower gear. An automatic transmission vehicle will downshift by itself. On extremely steep inclines, when extra power is needed, you may need to manually shift an automatic transmission vehicle into a lower gear (LOW 1 or LOW 2).

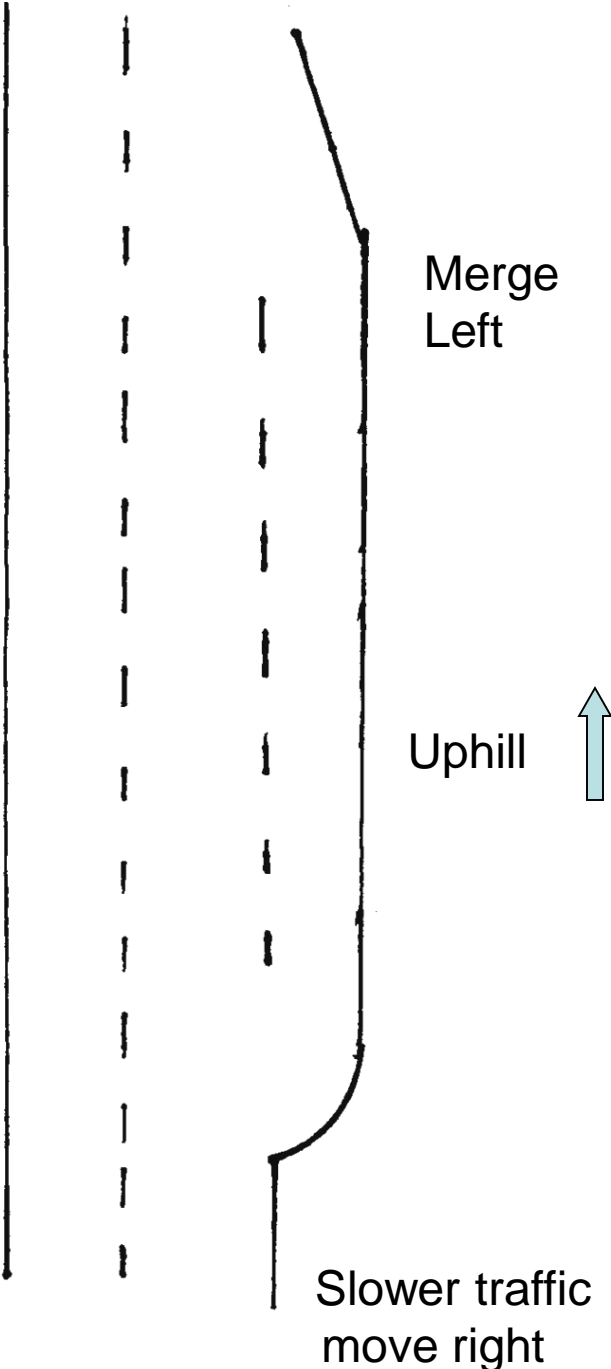
When you can't see around a curve, reduce your speed, move into lane position 1, and tap your horn. Evaluate your path of travel through the curve. An oncoming vehicle could cross into your lane because it has built up too much downhill speed before the curve. Driving too fast is a leading cause of collisions in the mountains.

Loaded trucks, recreational vehicles (RVs), and vehicles pulling trailers move more slowly up mountain roads. Follow these vehicles at their speeds and maintain at least a 4-second following distance. Some mountain roads have locations called **pull-out areas** where an additional right lane is provided for slower-moving vehicles. When slower-moving vehicles move into such areas, it allows faster-moving vehicles an opportunity to safely pass and proceed.

You may encounter drivers who are unaware of the use of pull-out lanes.

It may be necessary to communicate with the driver of the vehicle ahead of you so that you will be able to pass safely.

A pull-out lane
viewed from
above.



Driving Down a Mountain

Unless you do something to resist it, gravity will pull your vehicle faster and faster downhill. Downshift *before* you start traveling downhill, regardless of the type of transmission in your vehicle. Never coast downhill in NEUTRAL, while depressing the clutch, or in OVERDRIVE because the vehicle will speed up and you might lose control.

Adjust your speed with an occasional use of the brakes. Do not ride your brakes, because doing so can overheat them and make them fade. If you are braking often, shift to a lower gear; your transmission can help slow you down and can reduce the need to brake as much. Finally, keep your speed low enough to maintain control and stay in your lane.

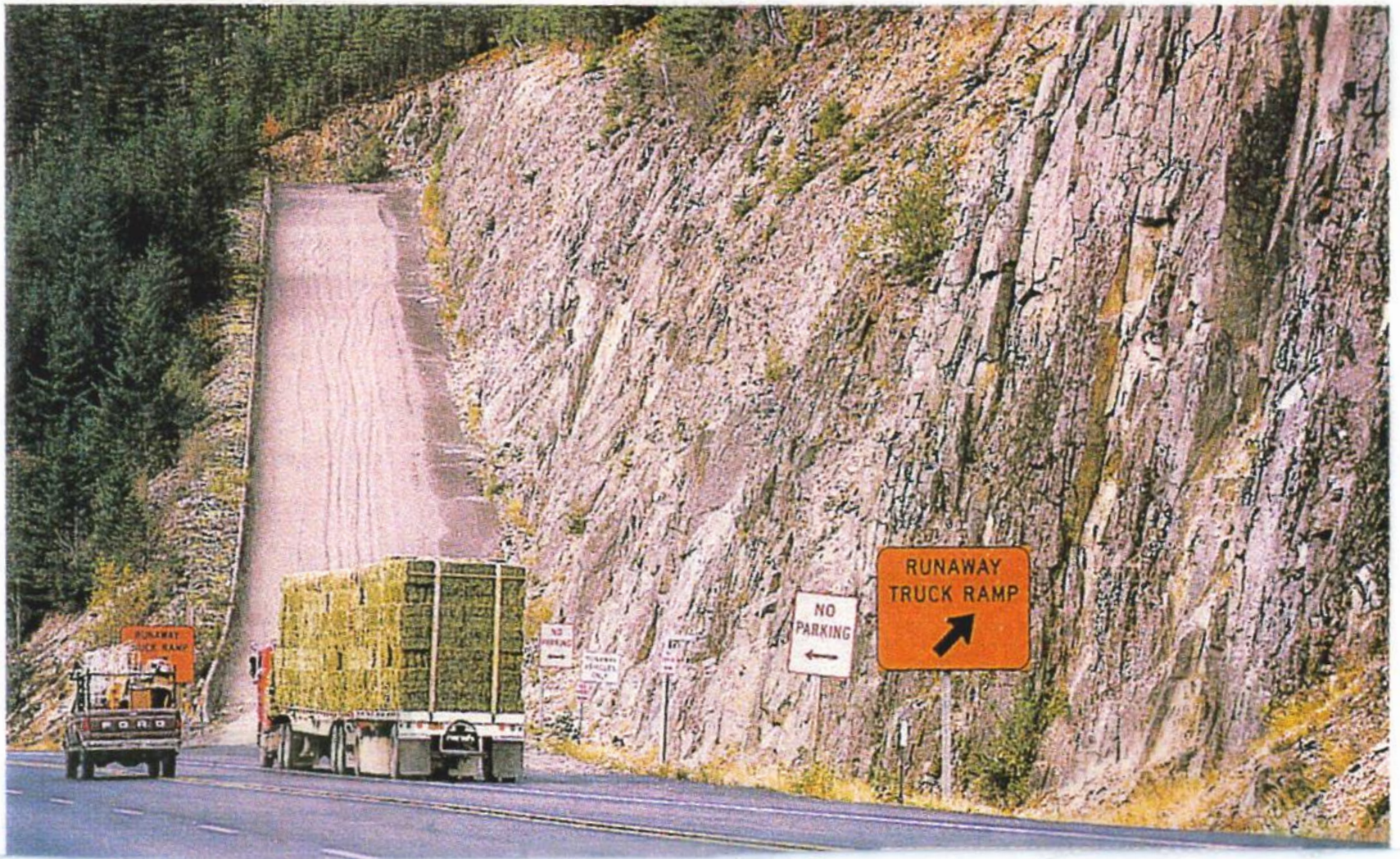
Large vehicles can experience serious brake problems going downhill, especially on long steep downgrades. Some mountain roadways have **runaway vehicle ramps**, as the picture on the next page shows. Runaway ramps provide a place for vehicles, especially large trucks, to safely get out of traffic and stop when their brakes are no longer effective.

Automatic transmission vehicles:

- Do not use overdrive
- Shift to 3 or 2 before you start down the hill
- Use your brakes intermittently to avoid overheating the brakes

Manual transmission vehicles:

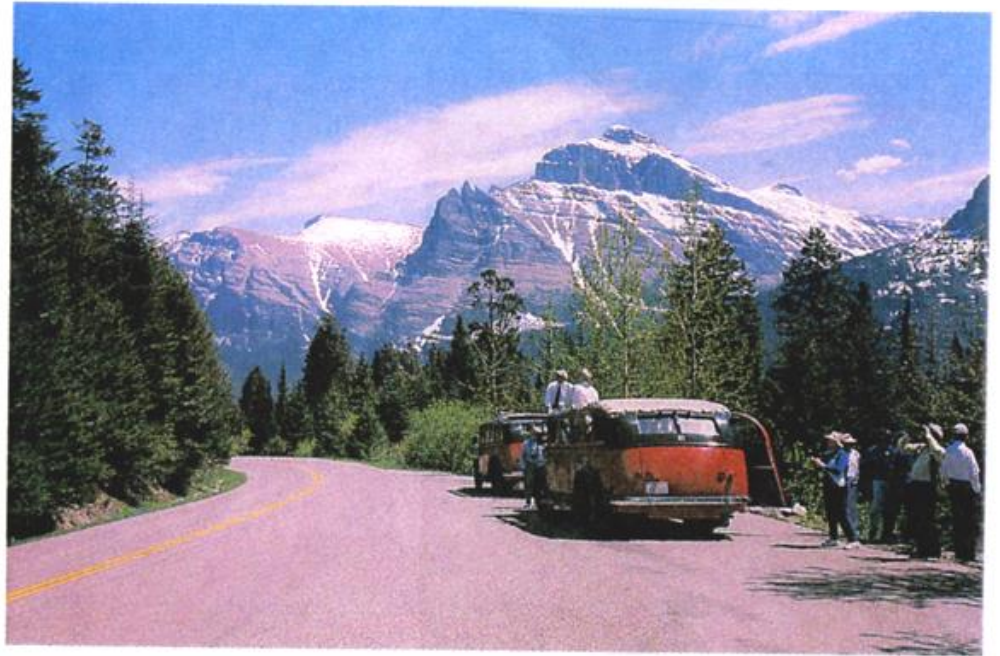
- Shift out of overdrive
- Use 3rd gear and, on the steepest hills, 2nd gear
- Use your brakes intermittently to avoid brake fade (caused by overheating)



Be a smart driver. Watch for trucks behind you as you drive down a steep grade. If you are in the right lane of a multilane road and a truck behind you appears to be a runaway, move to the left lane so that the truck can use the right lane in order to have access to the runaway truck ramp. If you are on a single lane road and a truck appears to be a runaway, move to the shoulder to allow the truck to pass you.

Weather in the Mountains

Fog, snow, and ice can make mountain driving even more difficult. Some mountain roads become blocked with excessive snow. Weather conditions can suddenly change in the mountains. If weather conditions are poor, call the highway department or state police hotline. Tune your radio to frequencies that update travelers on weather and road conditions. These frequencies are often identified on blue driver-service signs along the side of the road.



Viewpoints provide a place for slower vehicles to move out of traffic so faster traffic can proceed.

Be a smart driver. Know that when you drive through the mountains you can encounter rapidly changing weather conditions. At lower elevations the weather may be warm and sunny but as you drive to the higher elevations you could encounter snow, sleet, ice, etc., within a short period of time after leaving the lower elevation. What appears to be a nice, sunny drive in the mountains as in the picture could become treacherous quickly. Snowstorms occur as late as June and as early as September in the higher elevations. You may even find the road closed except to vehicles with tire chains.

Effects of Altitude on Drivers

High altitudes can affect the driver, causing shortness of breath, faster heartbeat, and headache. Lower amounts of oxygen at higher altitudes can reduce concentration and cause drowsiness. Effects can be worse for tired drivers. Do not drive if you feel these effects or are tired.

Many of the problems associated with cars in high altitudes have been reduced

Fuel injected vehicles have a barometric sensor to help adjust the fuel/air ratio

Fuel pumps of fuel injected vehicles are in the tank and run at higher pressures to help minimize vapor locking

To help minimize vapor locking during high altitude driving avoid ethanol blended fuel if you can.

Overheating can still occur even with the most modern and newest vehicles. Watch the light or gauge closely

Effects of Altitude on Vehicles

The thin mountain air can affect your vehicle's engine. Climbing power is reduced. Acceleration can become sluggish. The temperature of the water in your radiator may increase significantly and could cause overheating. If your air conditioner is on, turn it off.

Check your gauges and warning lights often. If the temperature light comes on, safely pull over and stop to let the engine cool. Turning on your heater may help circulate some of the heat built up in the engine.

Engines can get extremely hot when driving in mountains. When you shut off your engine, vapor lock occurs. The engine will not start because the fuel cannot be pumped in a gaseous state. Allow the engine to cool. Then try restarting it.

If you do a lot of mountain driving, have your vehicle serviced regularly for maximum performance.

Desert Driving

Deserts are often hotter and larger than most drivers realize. Desert driving is hard on the driver, the car, and the roadway. Always prepare yourself and your vehicle in advance.

Effects of Heat on Drivers

Intense daytime heat can cause great stress on you when driving long distances. The sameness of the scenery can lull you into a false sense of security. The glare from the intense sun can reduce your vision.

To help reduce the effects of hot desert driving, you should

- wear good quality sunglasses to help reduce the effects of sun glare
- plan more frequent stops and change drivers often
- carry an ample supply of water

Be a smart driver. Never underestimate desert driving. The temperatures in the desert may reach 140 degrees or more at road level. Heat is tougher on a car than cold. Watch the gauges. Slow down and turn off the air conditioner if the engine starts to overheat.

Effects of Heat on Vehicles

Extensive desert driving requires more frequent vehicle service. Battery fluids should be checked daily if the battery is not self-contained. Radiator fluids should be checked at every fuel stop.

~~Never remove the radiator cap from a hot radiator.~~

The steam and hot fluid could burn you. Check the fluid level in your radiator recovery tank. If you must check the level in the radiator, wait until your engine cools.

Check tire pressure regularly. Tire pressure will increase as you drive. Do not reduce the tire pressure below the lowest recommended pressure. A tire with low air pressure will run hotter, which could result in tire failure.

NEVER REMOVE THE CAP FROM A HOT RADIATOR

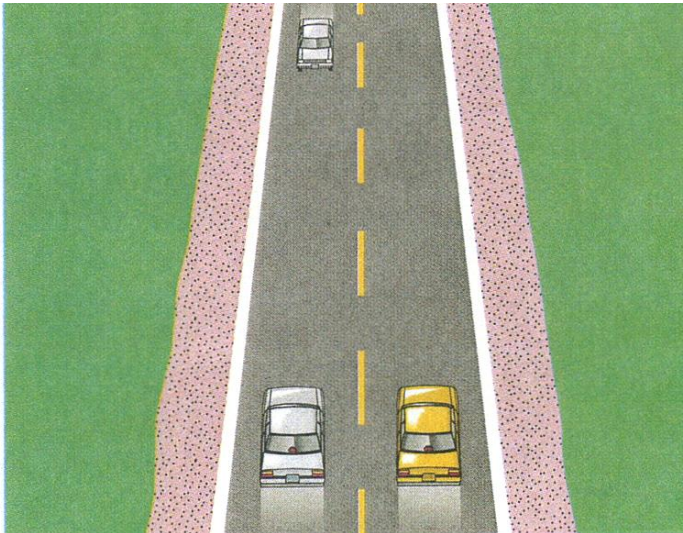
All vehicles have coolant recovery bottles. They are plastic and the level of the coolant can be seen through it. They have min/max lines or an add line for reference.

Always use a 50/50 mixture of antifreeze and water. Add just water only in an emergency

DECISION MAKING



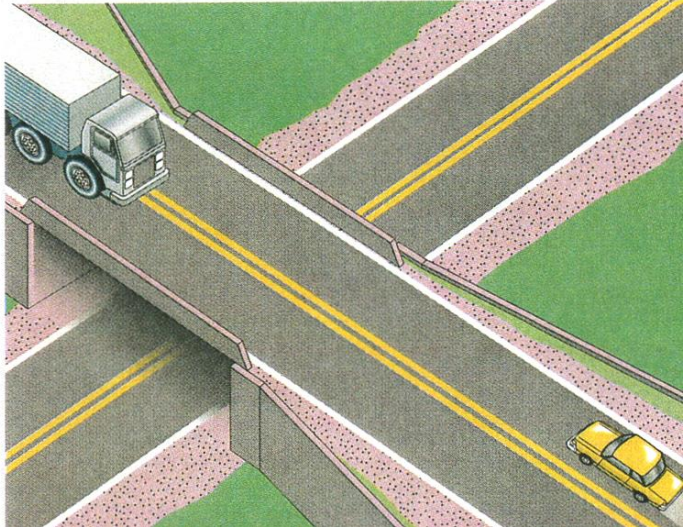
1. What hazards do you see? Which zones are open? How would you respond to avoid the hazards?



2. You are driving the yellow car, and a car is attempting to pass you. What should you do to help the passing driver?



3. You are approaching a curve. What do you identify and predict? What actions should you take to safely handle the situation ahead



4. You are driving the yellow car. What possible conflicts do you identify? What should you do?