Chapter 6
Complex Situations
Content Notes

Approximate time required to complete this chapter: Three hours

Classroom Concepts:

6.1 Risks
6.2 Pedestrians
6.3 Cyclists
6.4 Motorcycles
6.5 Trucks
6.6 Buses
6.7 Emergency Vehicles
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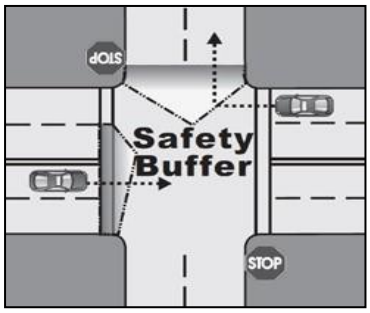
6.1 - Pedestrians

Pedestrian Facts

Interacting with other roadway users, such as pedestrians and bicyclists, can sometimes be challenging. You need to be extra alert when they are present.

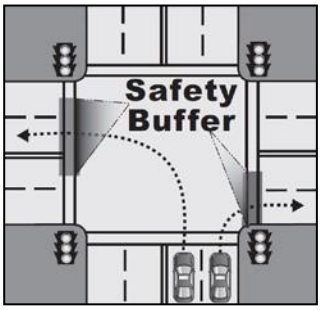
Pedestrians are the most vulnerable of road users and are often not visible to motorists. Many don't tolerate delays and out-of-direction travel and will often take shortcuts where there is no convenient or direct access.

Remember: There is a crosswalk at every intersection regardless of whether or not it is marked by painted lines.



At an intersection where pedestrians are crossing, you must wait until the pedestrians have cleared your lane and the entire next lane before you may go.

If you are turning at a signal, you must stop and wait until pedestrians clear the lane you are turning into, plus 6 feet of the next lane.



You are not required to stop for a pedestrian in a crosswalk if you are traveling along the half of the roadway that is on the other side of a safety island from the pedestrian.

You **must stop and remain stopped** for pedestrians on the sidewalk when entering or leaving an alley, driveway, or private road.

White Canes and Guide Dogs

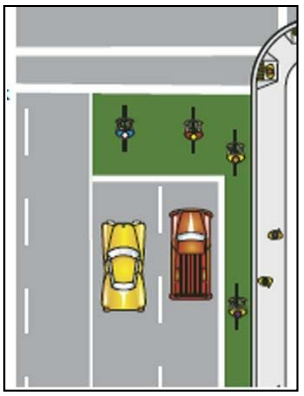
Pedestrians who are blind or partially blind may carry a white cane or use the assistance of a guide dog. You must give the right of way to a pedestrian who is carrying a white cane or using a guide dog. **Stop and stay stopped** if the person is attempting to cross or is in the process of crossing the road. At regulated intersections, remain stopped until the pedestrian has crossed the roadway, even if you have a green light.

6.2 - Cyclists

Cyclist Facts

Bicyclists operate a vehicle and are legitimate road users, but they are slower and less visible than motor vehicles; they are also more vulnerable in a crash than motorists. The same traffic rules and regulations apply to both bicyclists and vehicle drivers. A major problem for drivers is the inability to see bicyclists, especially at night. Sometimes they may be in the blind spot of your vehicle. When you approach a bicyclist, keep on the lookout and slow down. To avoid conflict, drivers of motor vehicles need to know the following rules:

- Do not drive in a bicycle lane. You may cross a bicycle lane when turning or when entering or leaving an alley, driveway, or private road. Do not move into a bicycle lane in preparation for a turn.
- You must yield to bicyclists in a bicycle lane or on a sidewalk before you turn across the lane or sidewalk.
- You must yield to bicyclists at intersections, the same as you do for other types of vehicles.
- When you are traveling at a speed greater than 35 mph, you may only pass a bicyclist by driving to the left when the passing distance is sufficient to prevent contact with the person operating the bicycle if the person were to fall into the driver's lane.
- If you cannot pass safely, you must slow down and remain behind the bicycle until it is safe to pass.
- Operators of motorized wheelchairs, scooters, and personal assistive mobility devices are permitted to use bicycle lanes and paths. These vehicles cannot exceed a speed limit of 15 mph. You must yield to these operators before you turn across the bicycle lane or path.



Bike Boxes

The bike box helps prevent collisions between motorists and bicycles at intersections. It is typically a painted box on the road with a white bicycle symbol inside. Bicycle lanes approaching and leaving the box may also be painted.

As a driver, you must stop for a traffic signal behind the bike box. Do not stop in the box. Bicyclists will move into the box, in front of your vehicle or other traffic, at the intersection. No right turns are allowed at these intersections when the traffic signal is red. If turning right on a green light, you must signal and watch for bicyclists on the right.

Sharrow

A bicycle sharrow, two chevrons painted above a bicycle symbol on the road, indicates the lane is shared. Vehicle or bicycle traffic may be in the lane. Although you should always be on the lookout for bicyclists, this serves as an additional warning to watch out for bicycles in the lane.

Follow the link below to obtain a copy of Oregon Pedestrian, Bicycle and Driver Rules.
http://www.oregon.gov/ODOT/TS/pages/bicyclistsafety.aspx

6.3 - Motorcycles

Motorcycle Facts

- About 80% of reported motorcycle crashes result in injury or death
- Cars turning across a motorcyclist's path account for about 18% of all motorcycle collisions
- Motorcyclists with less than 6 months experience on their bikes account for more than half of all collisions involving motorcycles
- Motorcycle riders who do not wear helmets are 40% more likely to sustain a fatal head injury in a motorcycle crash than riders who do wear helmets
- About 65% of collisions involving motorcycles occur in or near intersections

Drivers are more likely to be involved in a collision with a motorcycle when…

- The person driving the car/pickup/truck is turning to the left
- The motorcyclist is riding in the blind spot of the larger vehicle
- Conditions of the roadway reduce traction: wet roadway, wet painted lines, potholes, or railroad tracks
- The motorcyclist is forced to take an unexpected action
- Larger vehicle creates a line-of-sight problem that blocks the motorcyclist from the driver's view

Following Space

When following a motorcycle or truck, you need to keep more than the normal 4 seconds of following time. Keep at least 5 seconds, and if the weather is bad, keep even more. More space means more safety. Motorcyclists use various lane positions to deal with hazardous road conditions like potholes, uneven pavement, and railroad tracks that can make a rider lose control. As with any vehicle, always stop behind a motorcycle so you can see the back tires touch the pavement. Closer is too close when stopped.

Motorcyclist Crossing Railroad Tracks

Railroad tracks are a special problem for motorcyclists. Motorcycle tires can get caught in the grooves of the crossing, causing the motorcyclist to lose balance. A cyclist should cross railroad tracks as close to a right angle as possible, as long as this does not cause the cyclist to enter another lane.

Motorcyclists Carrying Passengers

A motorcycle carrying two people requires extra caution from other drivers. Be alert for a difference in acceleration, braking, and turning when a motorcyclist is carrying a passenger. A passenger can create balance and control problems for the cyclist by leaning the wrong way in curves and turns.

Sharing the Road

Motorcyclists should use all of their skills and techniques to reduce the risks of conflicts. However, nothing the cyclist does should diminish the caution other drivers must practice near motorcyclists. Remember you must always be ready to yield to motorcyclists.

Learners considering getting a Motorcycle Endorsement

- Go to http://team-oregon.org/ find out where to take a class, when the classes are offered, and much more.
- Or call 1-800-545-9944

6.4 - Trucks

Truck Facts

Motorcycles and trucks differ in size and maneuverability but crowding either trucks or motorcycles can have devastating consequences for everyone.

- 72% of all goods in the U.S. are delivered by a semi-truck. That works out to about 60,000 pounds per American every year.
- Trucks can be up to 120 feet long, about eight times as long as the average car. Big trucks can weigh up to 60 tons, equivalent to the weight of 40 – 60 cars. There are about 5.6 million semi-trailers registered for use in the U.S., almost three times the number of semi-trucks (semi-trailer must be connected to a semi-truck). Trailers are typically 53 feet long.

Don't Hang Out in the No Zone

The "No Zone" represents the danger areas around trucks and buses where crashes are more likely to occur. Some No Zones are actual blind spots or areas around trucks and buses where your car "disappears" from the view of the drivers. These blind spots are the Side No Zone, Rear No Zone, and Front No Zone areas. The right-side blind spot is doubly dangerous because trucks and buses make wide right turns. Knowing the No-Zones can save your life!

Passing a Large Truck

Before you attempt to pass a truck, make sure that you first know its size. Some trucks have two or even three trailers. It's easy to misjudge the length of these "longer combination vehicles," especially at night or in severe weather. If you commit to a pass without correctly assessing how long it will take you to get by the truck, you may find yourself stuck facing oncoming traffic with no escape route. You should also consider the type of terrain you are on when passing a truck. On an upgrade, trucks often lose speed, making them easier to pass than on a level roadway. On a downgrade, a truck's momentum will cause it to go faster. Some steep hills contain run-off areas to help big trucks that are having difficulty braking. These run-off areas usually occur before a curve or at the bottom of a long hill, and they allow high-speed vehicles to continue off the road and up a hill, using gravity and sometimes a soft road surface to slow down the vehicle. These areas are usually restricted to use by trucks and other large vehicles. For more information about the No-Zone and safety around large vehicles go to http://www.sharetheroadsafely.org/

6.5 - Buses

School Buses

School buses have flashing amber and flashing red lights near the top of the bus on the front and rear and are equipped with a stop arm that extends out from the left side of the bus near the driver's window. The stop arm will be extended when the red lights begin to flash. School bus drivers turn on flashing amber lights to warn other traffic that the bus is about to stop on the road to load or unload children. Drivers should get ready to stop. When the red lights begin to flash, drivers meeting or overtaking the bus from either direction must stop before reaching the bus. Drivers must remain stopped until the bus driver turns off the flashing red lights. The school bus stop law applies on any roadway with two or more lanes of traffic. There is one exception to the law: If you are on a divided highway with two roads separated by an unpaved median strip or barrier, you must stop only if you are on the same side of the road as the bus. A painted median strip or a center lane used only for left turns does **not** create two separate roads. Where this

situation exists, **all** lanes of traffic must stop. School bus drivers may report vehicles that improperly pass school buses. The report may be forwarded to the local law enforcement agency for investigation. All school buses and some school activity vehicles must stop at railroad crossings. The driver must open the bus door and be sure the tracks are clear before proceeding.

Church and Worker Buses

Flashing amber and red lights also are permitted on church buses used to carry children and on buses used to transport workers. If these buses are equipped with these lights and use either the flashing amber or red lights, other drivers must get ready to stop the same as for school buses.

Public Transit Buses

Public transit buses often pull to a curb to load or unload passengers. To help protect these buses and their passengers when they re-enter a traffic lane, drivers of other vehicles approaching from the rear must yield when a bus driver signals to re-enter a traffic lane and there is an electric sign flashing “yield” on the back of the bus. Police may cite a driver who does not yield right of way to the bus.

6.6 - Emergency Vehicles

Yielding to Emergency Vehicles

You must yield right of way to emergency vehicles, such as fire trucks, police vehicles, and ambulances, when these vehicles approach you from any direction using a light or siren. When you see or hear an emergency vehicle warning, you **must** immediately drive as close as is safely practical to the right-hand edge or curb of the road, clear of any intersection, and **STOP**. Stay stopped until the emergency vehicle has passed or until a police officer tells you to move.

Following Emergency Vehicles

Follow no closer than 500 feet behind an emergency vehicle answering an alarm. Do not drive or park in a way that interferes with emergency vehicles responding to an emergency.

Approaching an Emergency Vehicle or Tow Truck

If you are on a road with two or more lanes of traffic and you approach an emergency vehicle, tow truck, or roadside assistance vehicle that is stopped with warning lights on, you must change lanes so you do not drive next to the stopped vehicle. If making a lane change is unsafe or you are on a road with one lane in each direction, you must reduce your speed by at least 5 miles per hour under the posted speed limit and give the emergency vehicle as much room as safely possible. When you approach emergency scenes, slow down and be prepared to stop. Do not drive over unprotected fire hoses unless directed to do so by a fire department official or law enforcement officer at the scene.

6.7 - Work Zones

Work Zone Facts

Work zones can be very dangerous for all vehicles, especially when traveling on the highway. It is important to be alert and prepared to slow down or stop in a work zone. Slowing down and allowing others to merge will ensure a safe passage through work zones.

- Drivers not paying attention are the biggest cause of work zone crashes.
- Speeding is the next biggest problem.
- Over 40% of work zone crashes happen in the transition zone before the work area.
- Drivers are the most frequent fatality in work zone crashes.

Work Zone Driving Tips:

1. Stay Alert and Minimize Distractions

- Work zones are busy places where construction vehicles and workers are always moving.
- Stay alert and stay on the safe path that is designated throughout the work zone.
- Avoid work zones altogether by using alternate routes when possible.
- If you can't avoid work zones, allow for more time to travel, slow down, and consider sharing a ride with someone to reduce congestion.
- Dedicate your full attention to the roadway.
- Avoid changing the radio station, using a mobile phone, eating, or other distractions that can remove your concentration from the road.

2. Keep Your Headlights On 3. Pay Attention to the Road

- "Listen to the signs."
- Watch brake lights on vehicles ahead.
- Watch traffic around you and be prepared to react.

3. Merge into the Proper Lane

- Merge well before you reach the lane closure.
- Be aware that traffic patterns can change daily.
- Merge smoothly. Aggressive drivers can be extremely dangerous while driving in work zones. Work zones require time and courtesy. For a smooth passage through work zones, allow others to merge in front of you.
- Be especially considerate to trucks. They require more space to merge and are the least maneuverable vehicles on the road.
- Remember, trucks have large blind spots, making it difficult to see cars squeezing in close to the front and sides of their truck.

4. Don't Tailgate

5. Obey the Posted Speed Limit

- Workers may be present just feet away.
- Fines may be doubled for moving traffic violations.
- Be prepared to slow down further if conditions indicate the need.

6. Change Lanes Safely

- Change lanes only where pavement markings indicate and only when traffic conditions permit.

7. Follow Instructions from Flaggers

8. Expect the Unexpected

- Workers, work vehicles, or equipment may enter your lane without warning.
- Other vehicles may slow, stop, or change lanes unexpectedly.

9. Be Patient

Take Your Cues From Trucks:

Work zones often pop up suddenly. If you are not paying attention to the signs, you could find yourself in a serious crash. Trucks can be great indicators of trouble or traffic slowing down ahead. Trucks have a height advantage and can see ahead of traffic. Paying attention to a truck's brake lights is a good signal of a slow down or work zone ahead. Truck drivers know the stopping limitations of their trucks and pay close attention to traffic. Take your cues from trucks and you'll be prepared.

Four Parts of a Construction Work Zone:

Advanced warning

In the Advanced Warning area, you will see signage telling you there is a work zone ahead. It tells you if there is a flagger and other important information. It also provides an early warning so motorists have ample time to adjust to the change

Transition

The Transition area is where the majority of crashes occur. It is the area where vehicles make the lateral move to the open lane/lanes of traffic; road markings indicate detours and provide direction for required maneuvers so motorists can get accustomed to the new traffic pattern before traveling through the actual work area.

Work/Buffer area

The Buffer area is the space between the flagger and/or transition area and the actual work being performed. Cones, barrels, and concrete barriers provide some protection for highway workers, equipment, and passing motorists.

End of Work Zone

End Construction is the end of the work area, but a sign saying end of work or end of construction is not required.

Procedures when driving through construction zones:

1. Watch for orange signs that indicate construction zones.
2. Proceed with extreme caution.
3. Drive at the posted speed.
4. Watch out for workers.
5. Do not change lanes or pass in construction work zones.

Oversized Vehicles

Be prepared to share the road with a number of special purpose vehicles. Snowplows can be expected in winter months. When mobile homes are being transported, they often are preceded and followed by vehicles that carry a “Wide Load” sign. Use extra caution when meeting or passing such vehicles. Allow extra space to increase sight distance. Use caution when passing. In rural areas, large, slow-moving farm machinery should be expected. Farm machinery is allowed to cross or drive on roads to get to a field or back to the farm. Farm machinery and vehicles traveling at 25 mph or less must display a slow-moving vehicle emblem when using a public highway. This emblem is an orange triangle surrounded on each side by a strip of red. Be prepared to adjust speed or position upon seeing this sign. Pass with caution and remember that the operator of the farm machinery cannot hear approaching vehicles. Farm equipment is not usually equipped with turn signals.

6.8 - Railroad Crossings

Railroad crossings are very dangerous intersections. In a collision between a train and a vehicle, the train always wins.

About every 3 hours a person or a vehicle is hit by a train. http://oli.org/

Some facts: According to the National Highway Traffic Safety Administration (NHTSA) at U.S. DOT:

- Three out of four crashes occur within 25 miles of a motorist's home. Fifty percent of all crashes occur within five miles of home.

What if your vehicle stalls on the Railroad Tracks?

Weather, driver, or roadway conditions may cause a vehicle's engine to stall while crossing railroad tracks. Take these actions if your vehicle stalls on the track: If a train is coming, get out immediately and move quickly away from the tracks in the direction from which the train is coming. If you run in the same direction the train is traveling, when the train hits your car, you could be injured by flying debris. Call your local law enforcement agency for assistance. http://oli.org/

No One Thinks They are Going to be in a Railroad Crossing Collision

No one should take chances with trains. Statistics show that more people die in railroad crossing collisions than in airplane crashes. In fact, more than 50% of all collisions occur at railroad crossings that are equipped with automatic warning devices. Collisions occur when people do not yield the right of way to a train. Trains run on a track. They cannot swerve out of the way and they cannot stop quickly. It takes a train going 55 mph with 100 cars more than a mile to stop; therefore, it is up to the driver of a car to yield the right of way to a train.

Optical Illusion

It is difficult to judge the speed of an approaching train because of the optical illusions that fool the eye. The parallel tracks that seem to converge on the horizon, combined with the angle from which one sees the train and its large size, make the train seem to be further from the crossing than it really is. The size of the approaching train seems to change very slowly, which makes drivers think that the train is farther away and moving more slowly than it actually is.

Physiological Effects

Train engineers are powerless to stop a collision and must watch it occur. They have to live with the effects of this tragic event, and it is not an easy thing. Poor judgment of drivers, inattentiveness, and failure to understand the rules of the road also cause car-train collisions. Many cases have occurred where people were not paying attention and failed to see the train approaching. In 25% of all collisions, the driver has run into the side of the train. Sometimes at night it is hard to see a train approaching a crossing because there are no lights. Drivers always need to be cautious and pay attention to the early warning road signs and lower their speed. Most collisions occur within 25 miles of the driver's home. People drive over the same tracks day in and day out and just do not realize the potential danger.

There are many safety procedures that drivers can use to protect themselves from collisions with trains. The basic rule for all crossings, as set by Operation Lifesaver, is STOP LOOK LISTEN & LIVE. There are many types of warning devices for rail-grade crossings, some are explained below.

Railroad Crossing Controls

Include signs, warning lights, signals, roadway markings, lowered crossing gates, or a combination of these. Warning signs are usually posted well in advance of the tracks, anywhere from 200 to 800 feet, telling you to slow down and be prepared to stop. Most railroad crossings in North America do not have a full set of controls. Uncontrolled RR crossings, which are usually found in the more rural parts of the country, need to always be treated as though there is a yield sign. Railroad crossings in rural environments are less likely to include electronic controls because of the high cost of supplying electricity to distant, widely scattered crossings (although in some areas, solar power is being used). In some open areas with little human activity, these crossings may not be controlled at all. Rural railroad crossings are also more dangerous than urban ones because trains tend to move faster in the countryside than they do in or around cities.

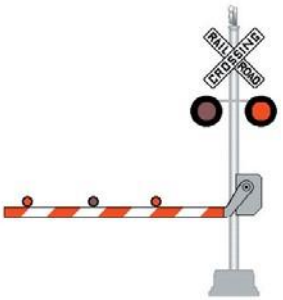
Advanced Warning Sign

This sign is placed ahead of crossings and warns the driver of a potential danger. At crossings, the danger is the approaching train that cannot stop to avoid a collision with the vehicle. Slow down to see if a train is coming. Roll down your window, turn down your radio, air conditioner, or heater, quiet your passengers, and listen.

Pavement Markings

These are usually painted on the road close to a crossing as a reminder. One sign you will always see where a rail-grade crosses a public highway is the **Crossbuck Sign.** It marks the crossing and serves the same purpose as the yield sign. Where more than one set of tracks occur at a railroad crossing, signs are usually posted to inform the driver how many tracks there are. There may be more than one track with two or more trains moving on it, so you need to look and listen carefully. Besides looking and listening, you sometimes have to stop at a railroad crossing. If there is a stop sign, you must come to a complete stop before proceeding across the tracks.

Flashing Lights



As soon as the lights begin to flash, it is time to stop because a train is approaching. Have patience and stop. Wait for the train to pass. Some crossings have automatic gates. Gates come down across the lane to block the drivers from driving across the tracks of an approaching train. **NEVER DRIVE AROUND A GATE!** It is against the law and will cost you more than a ticket— you could lose your life. If you suspect a signal is malfunctioning, call the 1-800 number posted on or near the crossing signal or your local law enforcement agency.

Trains and Cars Don't Mix

Never race a train to the crossing. Even if you tie, you lose. The train you see is closer and faster moving than you think. If you see a train approaching, wait for it to go by before you proceed across the tracks.

Be aware that trains cannot stop quickly. Even if the locomotive engineer sees you, a freight train moving at 55 miles per hour can take a mile or more to stop once the emergency brakes are applied. That's 18 football fields!

Do not get trapped on the tracks. Proceed through a highway rail-grade crossing only if you are sure you can completely clear the crossing without stopping. Remember, the train is three feet wider than the tracks on both sides.

At a multiple track crossing waiting for a train to pass, watch out for a second train on the other tracks, approaching from either direction.

When you need to cross train tracks, go to a designated crossing, look both ways, and cross the tracks quickly without stopping. Remember it isn't safe to stop closer than 15 feet from a rail. **Always expect a train!** Freight trains do not follow set schedules.

Safety Tips

The only safe place to cross is at a designated public crossing with either a crossbuck, flashing red lights, or a gate. If you cross at any other place, you are trespassing and can be ticketed or fined. Cross tracks ONLY at designated pedestrian or roadway crossings.

Railroad tracks, trestles, yards, and equipment are private property and trespassers are subject to arrest and fine. If you are in a rail yard uninvited by a railroad official, you are trespassing and subject to criminal prosecution; you could be injured or killed in a busy rail yard.

It can take a mile or more to stop a train, so a locomotive engineer who suddenly sees someone on the tracks will likely be unable to stop in time. Railroad property is private property. For your safety, it is illegal to be there unless you are at a designated public crossing.

Trains overhang the tracks by at least three feet in both directions; loose straps hanging from rail cars may extend even further. If you are in the right-of-way next to the tracks, you can be hit by the train.

Do not cross the tracks immediately after a train passes. A second train might be blocked by the first. Trains can come from either direction. Wait until you can see clearly around the first train in both directions.

Flashing red lights indicate a train is approaching from either direction. You can be fined for failure to obey these signals. Never walk around or behind lowered gates at a crossing, and DO NOT cross the tracks until the lights have stopped flashing and it's safe to do so.

Do not hunt, fish, or bungee jump from railroad trestles. There is only enough clearance on the tracks for a train to pass. Trestles are not meant to be sidewalks or pedestrian bridges! Never walk, run, cycle, or operate all-terrain vehicles (ATVs) on railroad tracks, right-of-way, or through tunnels.

Do not attempt to hop aboard railroad equipment at any time. A slip of the foot can cost you a limb or your life.

Be aware that trains do not follow set schedules. Any Time is Train Time!

Operation Lifesaver offers **cyclists** seven tips for safety near train tracks:
Crossing tracks on a bicycle requires caution and extra attention! Narrow wheels can get caught between the rails. If possible, walk - don't ride - across. Always cross at a 90-degree angle.

Motorcyclists crossing railroad tracks. Railroad tracks are a special problem for motorcyclists. Motorcycle tires can get caught in the groves of the crossing, causing the motorcyclist to lose balance. A cyclist should cross railroad tracks as close to a right angle as possible, as long as this does not cause the cyclist to enter another lane.
Use only designated railroad crossings. The only legal and safe place to cross railroad tracks is at a designated public crossing with a crossbuck, flashing red lights, or a gate. Crossing at any other location is trespassing and illegal.

Turn off music and remove earphones at all rail crossings. Music can be a deadly distraction near the tracks - preventing you from hearing an approaching train.

Wet train tracks can be slippery. Dismount and walk your bike across the tracks. Step over the tracks - not on them - to avoid slipping.

Watch out for the second train. Wait after the first train passes until you can see clearly in both directions.

If you see a train coming, wait! Flashing lights or a lowering gate means a train is approaching. Do not proceed until the gates go completely up and the lights go off. It is illegal to go around lowered gates, whether on a bike, on foot, or in a vehicle.