

# Traffic Safety Merit Badge





# Merit Badge Requirements

1. Do the following:
  - a. Describe the top 10 mistakes new drivers frequently make. Name the two items you are required by law to carry with you whenever you operate a motor vehicle.
  - b. Describe how alcohol and other drugs affect the human body and why a person should never drink and drive, or drive while under the influence of any mind-altering substances, including prescription drugs, cold medications, and illicit drugs. For the state where you live, find out what is the legal blood alcohol concentration and the consequences for driving while intoxicated or driving under the influence. Find out what the open-container law is in your state.
  - c. Describe at least four factors to be considered in the design of a road or highway. Explain how roadside hazards and road conditions contribute to the occurrence and seriousness of traffic crashes.
  - d. Explain why a driver who is fatigued or distracted should not operate a motor vehicle. List five common distractions, explain how driver distractions contribute to traffic accidents, and tell how drivers can minimize distractions. Describe how volunteer drivers can plan to be alert when transporting Scouting participants.





# Merit Badge Requirements

2. Do the following:
  - a. Demonstrate how to properly wear a lap or shoulder belt . Explain why it is important for drivers and passengers to wear safety belts at all times.
  - b. List five safety features found in motor vehicles besides occupant restraint systems. Describe each safety feature, how each works, and how each contributes to safety.
3. Do the following :
  - a. Using your family car or another vehicle, demonstrate that all lights and lighting systems in the vehicle are working. Describe the function and explain why each type of light is important to safe driving.
  - b. Using your family car or another vehicle, demonstrate how to check tire pressure and identify the correct tire pressure for the vehicle. Explain why proper tire pressure is important to safe driving.
  - c. Demonstrate a method to check for adequate tire tread. Explain why proper tire tread is important to safe driving.
  - d. Demonstrate with a smear-and-clear test if the windshield wiper blades will clear the windshield completely or need to be replaced. Describe instances in good and bad weather when windshield washers are important to safe driving.





# Merit Badge Requirements

## 4. Do the following:

- a. In a location away from traffic hazards, measure with a tape measure - not in a car - and mark off with stakes the distance that a car will travel during the time needed for decision and reaction, and the braking distances necessary to stop a car traveling 30, 50, and 70 miles per hour on dry, level pavement. Discuss how environmental factors such as bad weather and road conditions will affect the distance.
- b. Describe the difference in nighttime visibility between a properly lit bicycle and rider (or a pedestrian) wearing reflective material and a bicycle and rider with no lights (or a pedestrian) dressed in dark clothing, without reflective material.
- c. Explain how color and shape are used to help road users recognize and understand the information presented on traffic and roadway signs. Explain the purpose of different types of signs, signals, and pavement markings.
- d. Describe at least three examples of traffic laws that apply to drivers of motor vehicles and that bicyclists must also obey.







# Merit Badge Requirements

5. Do ONE of the following:

- a. Interview a traffic law enforcement officer in your community to identify what three traffic safety problems the officer is most concerned about. Discuss with your merit badge counselor possible ways to solve one of those problems.
- b. Using the Internet (with your parent's permission), visit five websites that cover safe driving for teenagers. Then, in a group session with at least three teenagers and your counselor, discuss what you have learned.
- c. Initiate and organize an activity or event to demonstrate the importance of traffic safety.
- d. Accompanied by an adult and a buddy, pick a safe place to observe traffic at a controlled intersection (traffic signal or stop sign) on three separate days and at three different times of the day, for 30 minutes on each visit. At this intersection, survey violations that might occur. These violations could include (but are not limited to) running a red light or stop sign, speeding, using a cell phone while driving, or occupants not wearing their seat belts. Count the number of violations. Record in general terms the approximate age of the people you observed. Keep track of the total number of vehicles observed so that you can determine the percentage of compliance vs. violations. Discuss your findings with your merit badge counselor.





# Requirement 1a

Describe the top 10 mistakes new drivers frequently make. Name the two items you are required by law to carry with you whenever you operate a motor vehicle.



# Requirement 1a

## Top 10 Mistakes Young Drivers Make

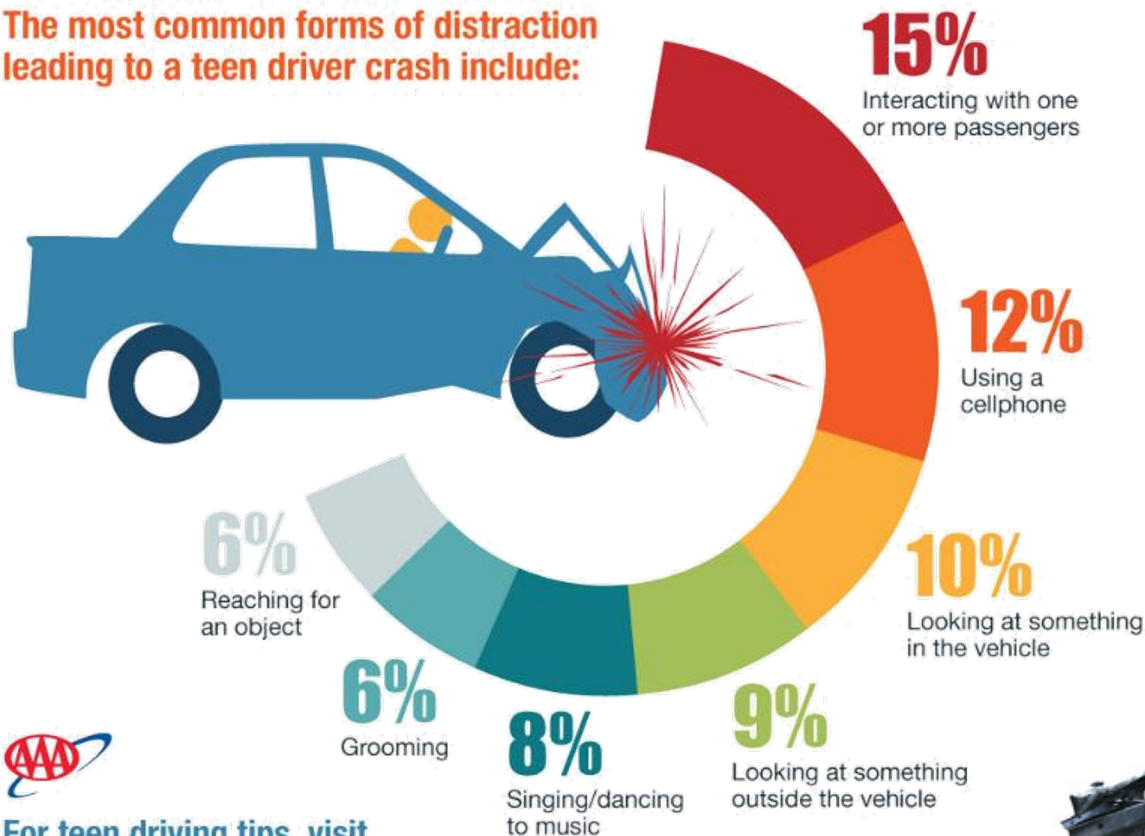
1. Overconfidence.
2. Being distracted behind the wheel. Cell phones, music, food and even text messages can pose serious distractions to drivers.
3. Taking too many risks.
4. Speeding.
5. Overcrowding the car.
6. Driving under the influence.
7. Following too closely.
8. Driving unbuckled.
9. Not being able to handle emergencies.
10. Choosing the wrong car and not maintaining it.



# Requirement 1a

**6 OUT OF 10** teen crashes involve driver distraction.

The most common forms of distraction leading to a teen driver crash include:



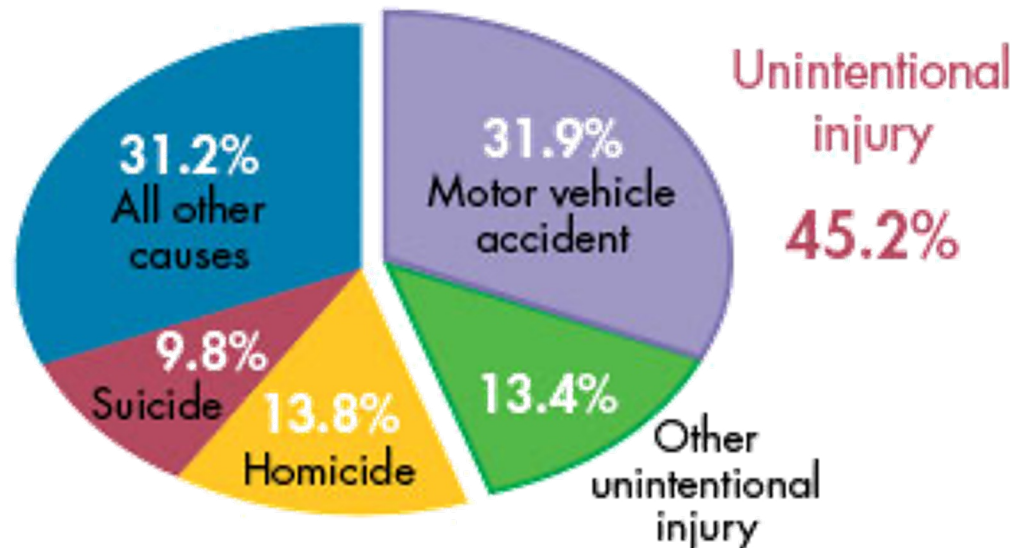
For teen driving tips, visit  
**TeenDriving.AAA.com**





# Requirement 1a

## Leading causes of death, ages 10-18



Because of rounding, figures do not add up to 100%.

Source: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, 2006. Web-based Injury Statistics Query and Reporting System [WISQARS]. [www.cdc.gov/ncipc/wisqars](http://www.cdc.gov/ncipc/wisqars)

© National Center for Children in Poverty ([www.nccp.org](http://www.nccp.org))  
Adolescent Violence and Unintentional Injury in the United States:  
Facts for Policymakers



# Requirement 1a

Two items you are required by law to carry with you whenever you operate a motor vehicle are:

- A current drivers license from the State where you live.
- Proof of insurance on your vehicle.





## Requirement 1b

Describe how alcohol and other drugs affect the human body and why a person should never drink and drive, or drive while under the influence of any mind-altering substances, including prescription drugs, cold medications, and illicit drugs. For the state where you live, find out what is the legal blood alcohol concentration and the consequences for driving while intoxicated or driving under the influence. Find out what the open-container law is in your state.



# Requirement 1b

Short-term effects of alcohol can include:

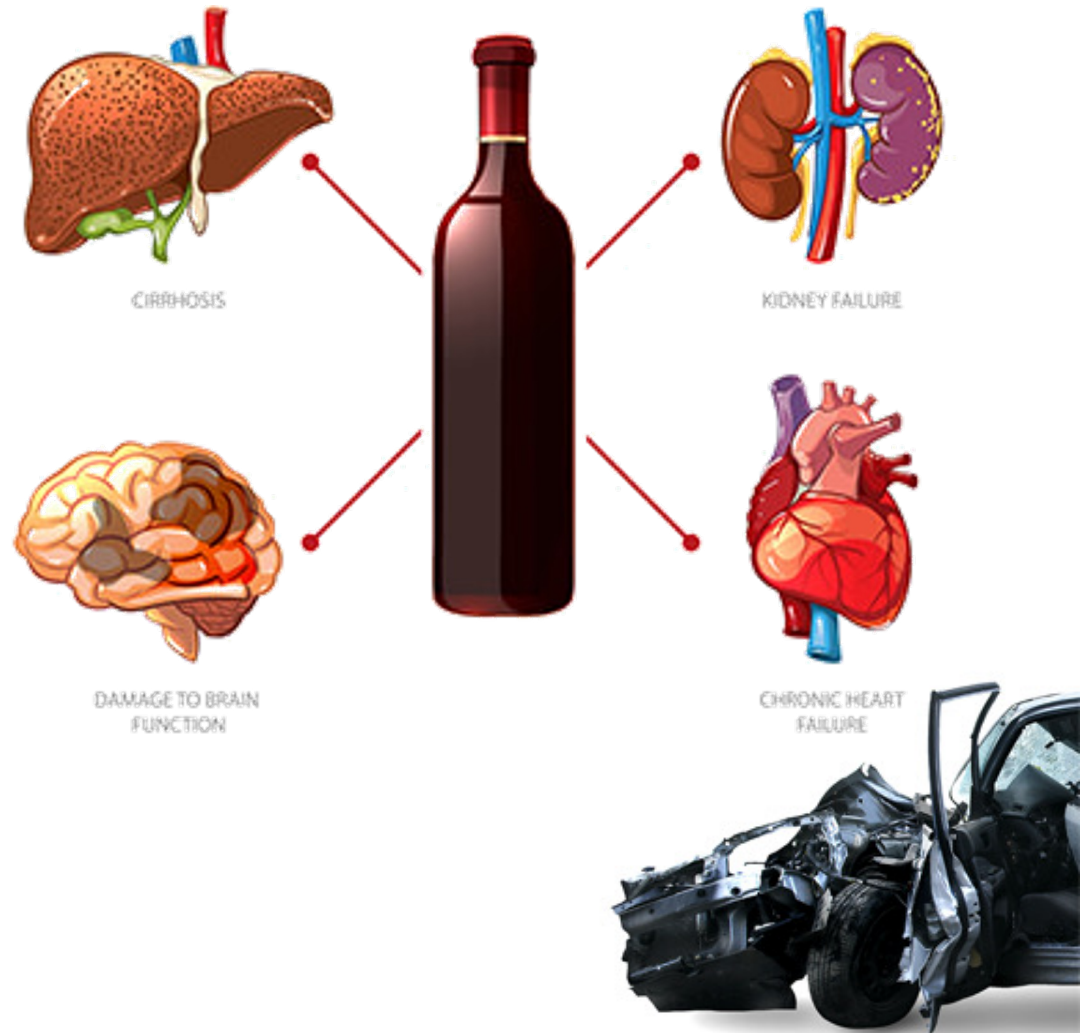
1. Lowered inhibitions, leading to poor social judgment.
2. Trouble concentrating.
3. Loss of coordination.
4. Loss of critical judgement.
5. Dulled perception, especially vision.
6. Mood swings.
7. Slower reaction time.
8. Raised blood pressure.
9. Passing out.
10. Vomiting.





## Long-term effects of excessive drinking may include:

1. Diminished gray matter and white matter in the brain.
2. Memory loss.
3. Loss of attention span.
4. Trouble learning.
5. High blood pressure.
6. Stroke.
7. Kidney failure.
8. Cirrhosis of the liver.



# Requirement 1b

## Dangers of Drinking and Driving.

- Any amount of alcohol in your bloodstream can impact your driving ability.
- The effects of alcohol put you at risk for causing an accident or highway injury.
- Safe driving requires the ability to concentrate, make good judgements and quickly react to situations.



# Requirement 1b

- Blood Alcohol Concentration is the amount of alcohol in the bloodstream.
  1. It is measured by the weight of the alcohol in relation to the blood.
  2. BAC can be measured by breath, blood, or urine tests.
- When your BAC is 0.08% or higher, you're considered legally impaired in all 50 States in the U.S.

**Approximate Blood Alcohol Content (BAC) In One Hour**

Source: National Highway Traffic Safety Administration

Drinks	Body Weight In Pounds								Influenced
	100	120	140	160	180	200	220	240	
1	.05	.04	.03	.03	.03	.02	.02	.02	Possibly
2	.09	.08	.07	.06	.05	.05	.04	.04	
3	.14	.11	.11	.09	.08	.07	.06	.06	Impaired
4	.18	.15	.13	.11	.10	.09	.08	.08	
5	.23	.19	.16	.14	.13	.11	.10	.09	Legally Intoxicated
6	.27	.23	.19	.17	.15	.14	.12	.11	
7	.32	.27	.23	.20	.18	.16	.14	.13	
8	.36	.30	.26	.23	.20	.18	.17	.15	
9	.41	.34	.29	.26	.23	.20	.19	.17	
10	.45	.38	.32	.28	.25	.23	.21	.19	



# Requirement 1b

## Short Term Consequences of a DUI.

1. License suspension for 30 days to a year.
2. Many states have mandatory jail time for a first DUI conviction.
3. Many states allow for temporary or even permanent seizures or confiscation of a DUI offender's vehicle.
4. DUI convictions generally carry fines and fees of several hundred dollars or more.
5. You will have to pay for and complete an alcohol and drug education program, usually referred to as drunk driving school to get your license back.

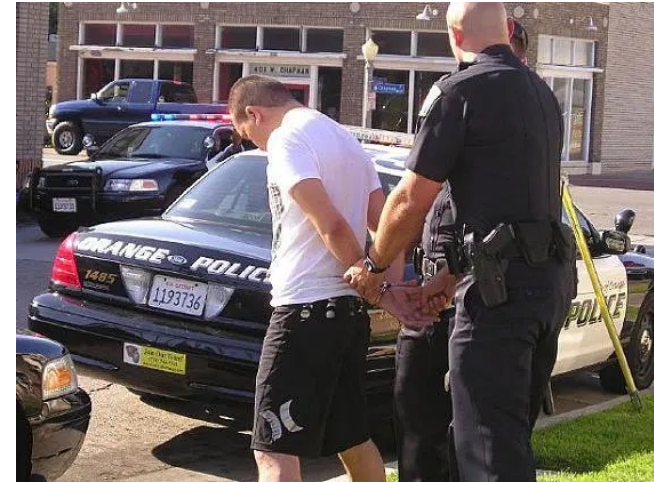




# Requirement 1b

## Long Term Consequences of a DUI

1. Driver's License Revocation for up to two years for a first conviction.
2. Most employers conduct criminal background checks before they hire job applicants and a DUI conviction could thwart your efforts to secure a job.
3. A DUI arrest and conviction can wreak havoc on your work schedule and put your current job at risk.
4. Convicted DUI drivers are considered "high-risk" drivers by insurance companies insurance rates may double or triple for at least several years.
5. Many schools do not accept students who have DUI convictions on their records and scholarships may be revoked or denied.



# Requirement 1b

- **Zero Tolerance Laws** makes it illegal for any driver younger than 21 to operate a vehicle with **any type** of blood alcohol count (BAC).
- Nearly one-third of all deaths of 15- to 20-year-olds are the result of a motor vehicle crash and about 35 percent of those fatalities are alcohol-related



# Requirement 1b

## UNDERAGE DRINKING and driving can be 1 deadly ride

1

EVERY DAY,  
AT LEAST ONE  
16- TO 20-YEAR-OLD  
DRIVER WITH A  
BLOOD ALCOHOL  
CONCENTRATION  
OF .08% DIES.<sup>1</sup>

17X

TEENS WITH A BLOOD ALCOHOL  
CONCENTRATION OF .08% ARE 17 TIMES  
MORE LIKELY TO DIE IN A CAR ACCIDENT  
THAN WHEN THEY HAVEN'T BEEN DRINKING.<sup>2</sup>

1 IN 3

TEENS WHO DRIVE HAS DRIVEN  
AFTER USING ALCOHOL.<sup>3</sup>



1 IN 5 TEENS

HAS RIDDEN WITH A DRIVER  
WHO HAS BEEN DRINKING.<sup>3</sup>

1 IN 5 TEEN DRIVERS

INVOLVED IN A FATAL CRASH HAS ALCOHOL IN HIS OR HER SYSTEM.<sup>4</sup>



Keep your teens safe. Talk to them about the dangers of underage drinking.  
Help prevent underage drinking. Visit <https://www.StopAlcoholAbuse.gov>



<sup>1</sup> FARS data analysis, <http://www.lihs.org/lihs/topics/fars>, <sup>2</sup> <http://www.cdc.gov/Vitalsigns/TeenDrinkingAndDriving/index.html>  
<sup>3</sup> <http://www.cdc.gov/mmwr/pdf/ss/ss6304.pdf>, <sup>4</sup> <http://www.cdc.gov/features/VitalSigns/teendrinkinganddriving/index.html>



# Requirement 1b

## Open Container Law

- Most States have open-container laws that prohibit the driver or other occupants of a vehicle from having open containers of alcohol in the passenger compartment of the vehicle.
- Penalties can include fines, community service, and jail.





# Requirement 1b

The Bottom Line: Alcohol and Drugs Kill!





# Requirement 1c

Describe at least four factors to be considered in the design of a road or highway. Explain how roadside hazards and road conditions contribute to the occurrence and seriousness of traffic crashes.



# Requirement 1c

## Four Factors to Consider in the Design of a Roadway.

1. Uniformity – Roads should have the same type of signage from State to State.
2. Speed – Determine safe speeds for curves, passing, intersections.
3. Roadside Hazards – Does it need a traffic light, guard rails, signage.
4. Roadway Safety Features – Reflective signs, lighting, crosswalks, painted lanes, passing lanes, rumble strips.





# Requirement 1c

## Roadside Hazards

- Unexpected hazards can cause drivers to lose control of their vehicles. This happens quite frequently when a driver swerves to avoid a hazard. The driver loses control of the vehicle, creating a situation that results in a crash.



# Requirement 1c

## Roadside Hazards

- For more than one-third of all highway fatalities, the side of the road is a contributing factor.
- Various factors can cause a vehicle to leave the roadway, including distractions, vehicle malfunctions, traffic situations, and poor road conditions.
- Many roads are lined with trees, signs, posts, guardrails, or other structures that can mean death or injury for a motorist.







# Requirement 1d

Explain why a driver who is fatigued or distracted should not operate a motor vehicle. List five common distractions, explain how driver distractions contribute to traffic accidents, and tell how drivers can minimize distractions. Describe how volunteer drivers can plan to be alert when transporting Scouting participants.



# Requirement 1d

## Impact of Drowsiness on Driving

- Driving while drowsy is similar to driving under influence of alcohol:
- Drivers' reaction times, awareness of hazards, and ability to sustain attention all worsen the drowsier the driver is
- Driving after going more than 20 hours without sleep is the equivalent of driving with a blood-alcohol concentration of 0.08% – the U.S. legal limit
- You are three times more likely to be in a car crash if you are fatigued



# Requirement 1d

The most common causes of distracted driving.

- Talking and texting. People who use their cell phones to talk or text while driving are by far the most common reason for distracted driving accidents.
- Eating or drinking.
- Adjusting music or controls.
- Applying makeup.
- Talking to passengers.
- Not looking at the road.
- Handling children or pets.
- Zoning out.



# Requirement 1d

- A driver must always remain alert and be ready to deal with the unexpected.
- It is essential to give driving your full attention and keep all distractions to a minimum.

## THE THREE TYPES OF DISTRACTED DRIVING AND HOW TO AVOID THEM

 VISUAL	 MANUAL	 COGNITIVE
		
<p>Keep your <b>eyes on the road.</b></p> <p><b>Pull over to read directions.</b></p> <p>Put your <b>phone in "Do Not Disturb" mode.</b></p>	<p>Keep your <b>phone out of reach.</b></p> <p><b>Make all adjustments before driving.</b></p> <p><b>Don't reach for items while driving.</b></p>	<p><b>Avoid phone calls, even hands-free.</b></p> <p><b>Stay focused on the road.</b></p> <p>Keep your <b>emotions in check.</b></p>



# Requirement 1d

## Volunteers Driving Scouts

- Be Prepared; know where you are going.
- Pull over to use the cell phone.
- Don't text or adjust the radio.
- Get plenty of rest; don't drive tired.
- Stop and get out of the vehicle to eat.
- Passengers can make calls or assist to decrease any unnecessary distractions.
- As a passenger, "Don't distract the driver."







## Requirement 2a

Demonstrate how to properly wear a lap or shoulder belt . Explain why it is important for drivers and passengers to wear safety belts at all times.



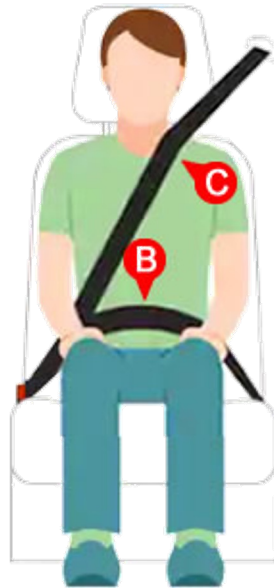
# Requirement 2a

How to properly wear a seatbelt:

**Twisted Seat Belts**



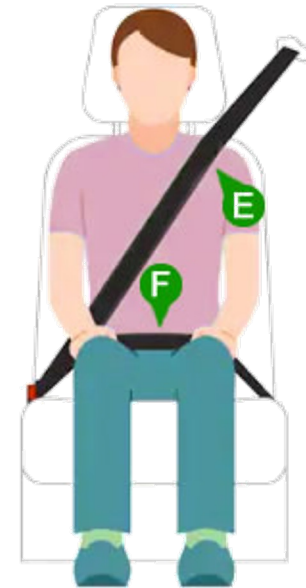
**Badly Positioned Seat Belts**



**Incorrectly Fitted Seat Belts**



**Correctly Fitted Seat Belts**



# Requirement 2a

Why it is important to wear a seatbelt.

- Among drivers and front-seat passengers, seat belts reduce the risk of death by 45%, and cut the risk of serious injury by 50%.
- Seat belts prevent drivers and passengers from being ejected during a crash.
- People not wearing a seat belt are 30 times more likely to be ejected from a vehicle during a crash.
- It's the Law.





## Requirement 2b

List five safety features found in motor vehicles besides occupant restraint systems. Describe each safety feature, how each works, and how each contributes to safety.





# Requirement 2b

## Safety Features in Motor Vehicles

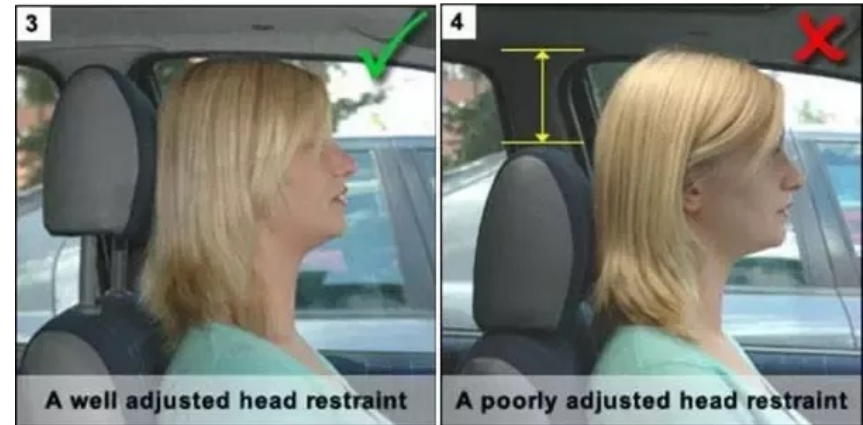
- Air Bags – A car's airbags will deploy in a crash and cushion both the driver and passengers from common impact points, like the steering wheel, dash, and sides of the vehicle.
- Traction and Stability Control – helps the vehicle's tires from losing contact with the road to prevent sliding or skidding.
- Rear-view cameras – Improves the rearward view and can assist drivers in detecting persons or objects in the path of a backing vehicle.



# Requirement 2b

## Safety Features in Motor Vehicles

- Head Restraints – Designed to prevent an occupant's head from being snapped back (whiplash) if a vehicle is rear-ended.
- Antilock brakes – Prevents the wheels from locking when you hit the brakes quickly. Locked wheels can cause the car to spin out on a slippery surface, making it impossible for you to steer.
- Shatter resistant glass. Shatter resistant glass provides a windshield that breaks into numerous, harmless pieces in the event of an accident.





## Requirement 3a

Using your family car or another vehicle, demonstrate that all lights and lighting systems in the vehicle are working. Describe the function and explain why each type of light is important to safe driving.

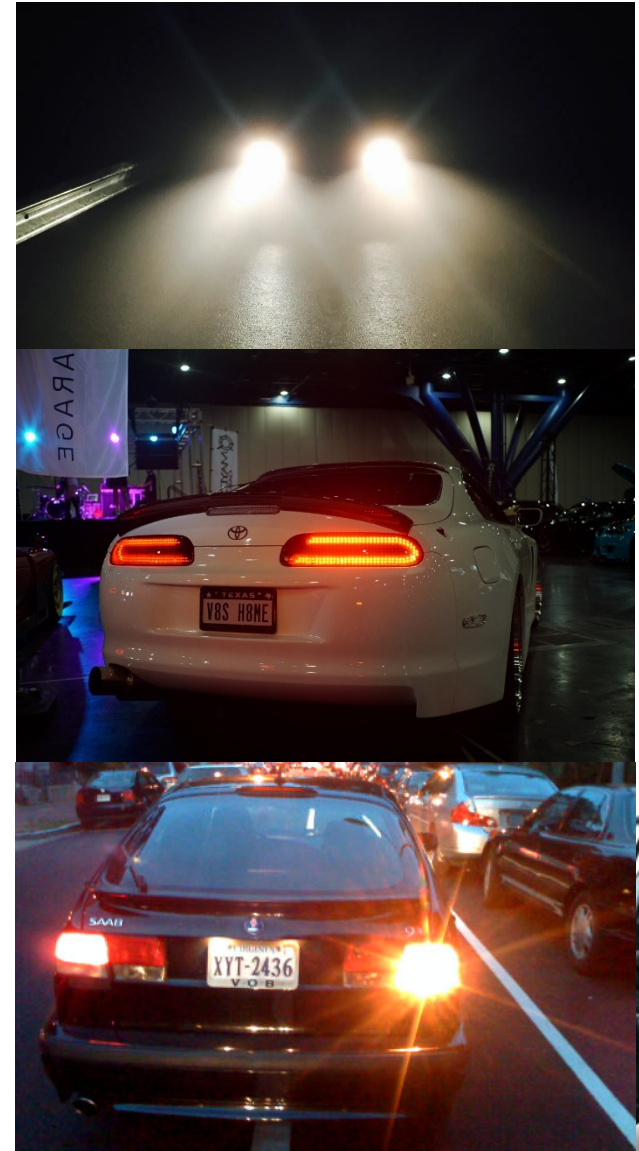




# Requirement 3a

## Vehicle Lighting Systems

- Headlights – located on the front of vehicles are there to enable drivers to see at night. They are also used to notify other drivers of your presence in foggy conditions when visibility may be very low.
- Taillights – show the rear edge of the vehicle to allow other drivers to appropriately gauge the size and shape of the car. In addition, they allow other vehicles to see the car in inclement weather such as rain or snow.
- Turn Signals – let other motorists know your intentions while driving a vehicle when changing lanes, turning, or making other maneuvers while driving.





# Requirement 3a

## Vehicle Lighting Systems

- Brake Lights – warn drivers behind you when you're slowing down.
- Back-up Lights – are used to warn other vehicles and people around the car that the vehicle is about to move backwards. The reverse lights also provide some illumination when the car is backing up.
- Hazard Lights – are a pair of intermittent flashing indicator lights that flash in unison to warn other drivers that the vehicle is a temporary obstruction.





## Requirement 3b

Using your family car or another vehicle, demonstrate how to check tire pressure and identify the correct tire pressure for the vehicle. Explain why proper tire pressure is important to safe driving.



# Requirement 3b

## How to Check Tire Pressure.

1. Unscrew the cap on the valve stem.
2. Press the tire gauge against the valve stem making a "flat" connection that seals completely. Swiftly remove the gauge from the tire's valve stem after the stick pops or the dial moves.
3. Read the gauge to determine if the pressure is within recommended limits.
4. If the tire pressure is lower than recommended, inflate the tire with an air compressor commonly found at gas stations and service centers.
5. After adding air, repeat steps 2 and 3 to determine if the tire pressure is now within limits.
6. If the tire pressure is higher than recommended, release air from the tire. Most tire pressure gauges have a small nub on the backside that is designed to be pressed into the center of the valve stem, releasing air.
7. If you've released some air, repeat steps 2 and 3 to determine if you need to add or remove air from the tire.





# Requirement 3b

How to identify the correct tire pressure for a vehicle.



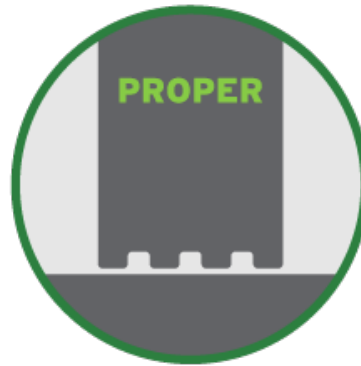
You will find the manufacturer's optimum or recommended tire pressure for your car on a sticker in the door jamb, or in your owner's manual.



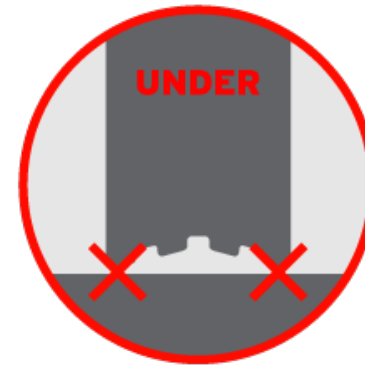
# Requirement 3b



- TRACTION
- + DAMAGE
- + HARSH, LOUD



- + TRACTION
- + RESPONSE
- + PERFORMANCE
- + SAFETY



- RESPONSE
- PERFORMANCE
- SAFETY

## Why is proper tire pressure important for safe driving?

- Appropriately inflated tires provide better vehicle handling.
  - When tire pressure is too low or too high the vehicle is not able to maintain the right amount of traction on the road, and driving gets more dangerous.
- Under or over-inflated tires can increase tire wear.
- Proper tire inflation improves fuel efficiency.







## Requirement 3c

Demonstrate a method to check for adequate tire tread. Explain why proper tire tread is important to safe driving.



# Requirement 3c

## Checking Adequate Tire Tread.

- The penny test and quarter test for tire tread depth both work the same way: stick the coin into your tire's tread head-first and if you can see the top of the president's head then you need new tires.
- The quarter test gives a depth of 4/32 and is replacing the penny test which gives a depth of 2/32.
- Minimum legal tread depth in most states is 2/32.
- Unfortunately, 2/32 may be too late if you drive in rain or snow.
- Using the quarter test informs you of the need to replace your tires before it becomes too dangerous.



# Requirement 3c

## Tire Tread Depth is Very Important For Safe Driving.

- A tire that lacks the proper tread depth won't be able to properly grip the road.
- A tire that can't hold onto the road will slide and take longer to brake.
- Without the proper tread depth, your chances of getting into an accident also increase.





## Requirement 3d

Demonstrate with a smear-and-clear test if the windshield wiper blades will clear the windshield completely or need to be replaced. Describe instances in good and bad weather when windshield washers are important to safe driving.





# Requirement 3d

Windshield wipers are important for providing a clear, unobstructed view.

- Impaired vision while driving is extremely dangerous -and is a contributing factor in as many as 90% of all accidents.
- The main purpose of a windshield wiper blade is to keep your vision clear while driving.
- Faulty wiper blades can be ineffective and even smear your windshield, potentially creating visibility issues.



# Requirement 3d

- Wiper blades should be replaced every six months to a year or as soon as you notice a difference in driving visibility.
- When wiper blades no longer make proper contact with the windshield surface, they can begin to squeak, chatter, skip, smear or streak reducing driving visibility.

## HOW TO TELL WHEN YOUR WIPERS NEED REPLACEMENT



### **STREAKING**

Cracked and hardened rubber leaves bands of water

**CHATTERING**  
Rubber develops a set or curve that causes blade to skip and vibrate



**SQUEAKING**  
Rubber does not move quietly across the glass

**SPLIT RUBBER**  
Blades have visible cracks and splits in the rubber edge



**SMEARING**  
Age or physical damage that results in unwiped areas

# Requirement 3d



- Windshield washer fluid is used in cleaning the windshield of road grime or salt spray with the windshield wiper while the vehicle is being driven in order to improve visibility.





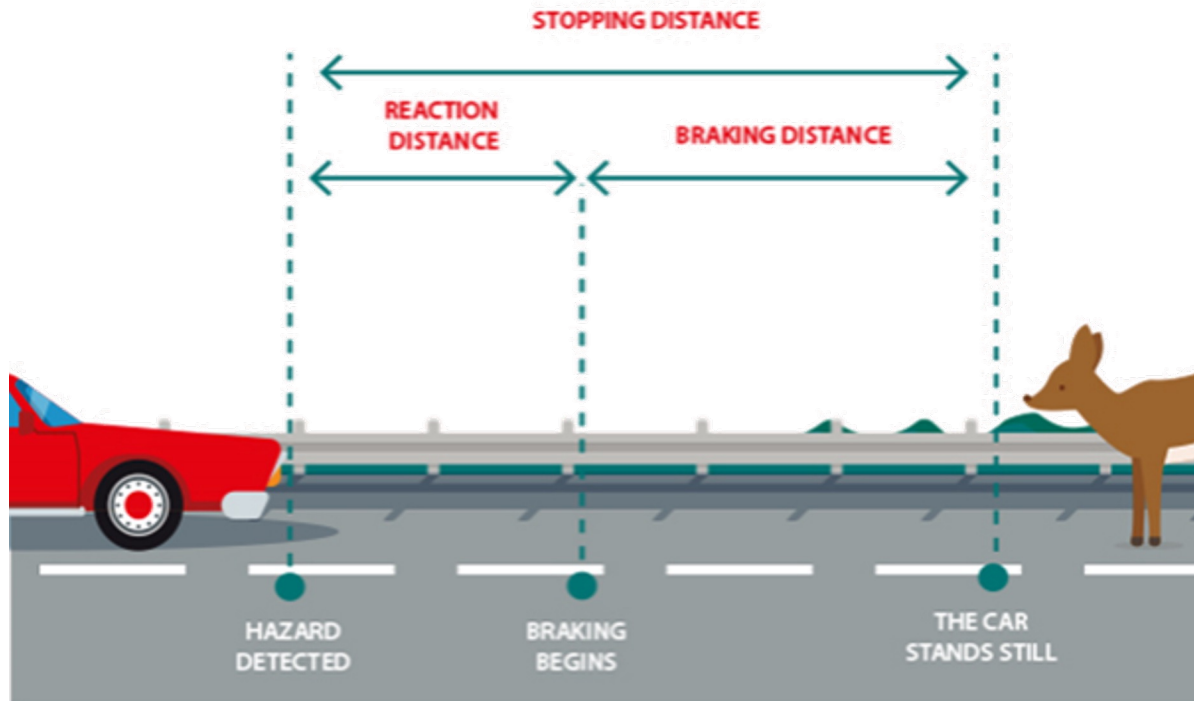
## Requirement 4a

In a location away from traffic hazards, measure with a tape measure - not in a car - and mark off with stakes the distance that a car will travel during the time needed for decision and reaction, and the braking distances necessary to stop a car traveling 30, 50, and 70 miles per hour on dry, level pavement. Discuss how environmental factors such as bad weather and road conditions will affect the distance.





# Requirement 4a



# Requirement 4a

## STOPPING DISTANCES

20mph  
(32km/h)



= 12 metres (40 feet)  
or 3 car lengths

THINKING DISTANCE

BRAKING DISTANCE

Average car length = 4 metres (13 feet)

30mph  
(48km/h)



= 23 metres (75 feet)  
or 6 car lengths

40mph  
(64km/h)



= 36 metres (118 feet)  
or 9 car lengths

50mph  
(80km/h)



= 53 metres (175 feet)  
or 13 car lengths

60mph  
(96km/h)



= 73 metres (240 feet)  
or 18 car lengths

70mph  
(112km/h)



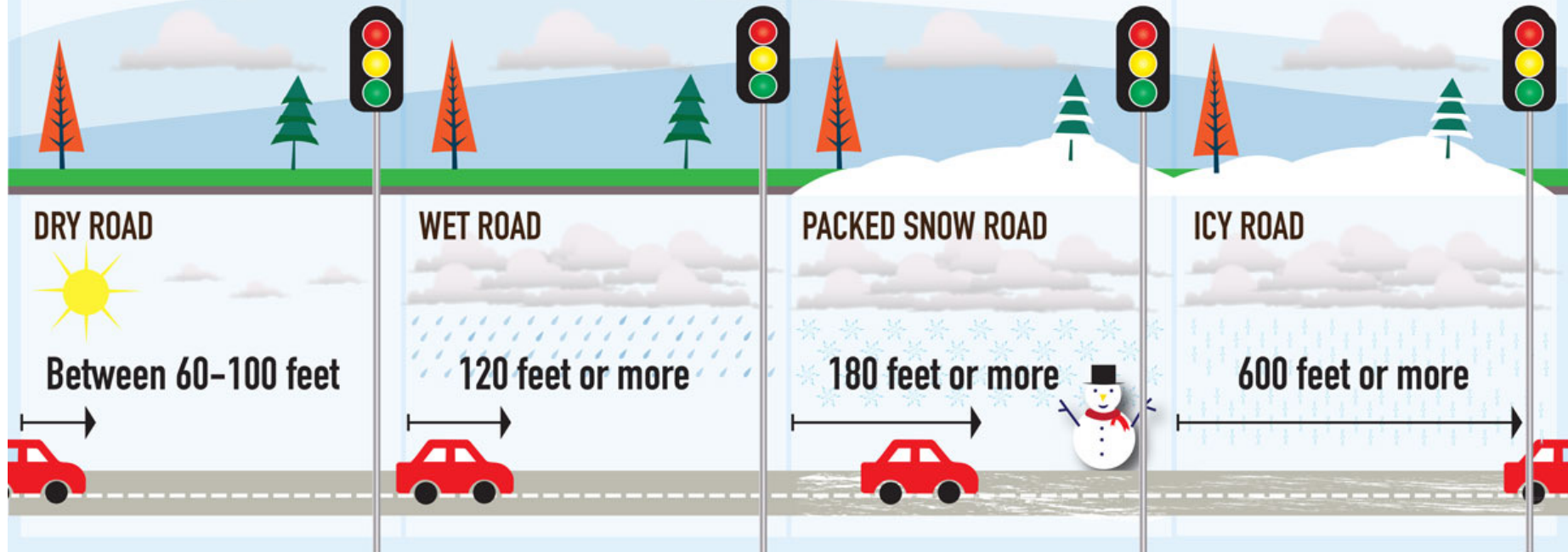
= 96 metres (314 feet)  
or 24 car lengths



# Requirement 4a

## STOPPING DISTANCE IN DIFFERENT WEATHER

For a car traveling 35 mph, the thinking and braking distance increases as weather worsens.





## Requirement 4b

Describe the difference in nighttime visibility between a properly lit bicycle and rider (or a pedestrian) wearing reflective material and a bicycle and rider with no lights (or a pedestrian) dressed in dark clothing, without reflective material.



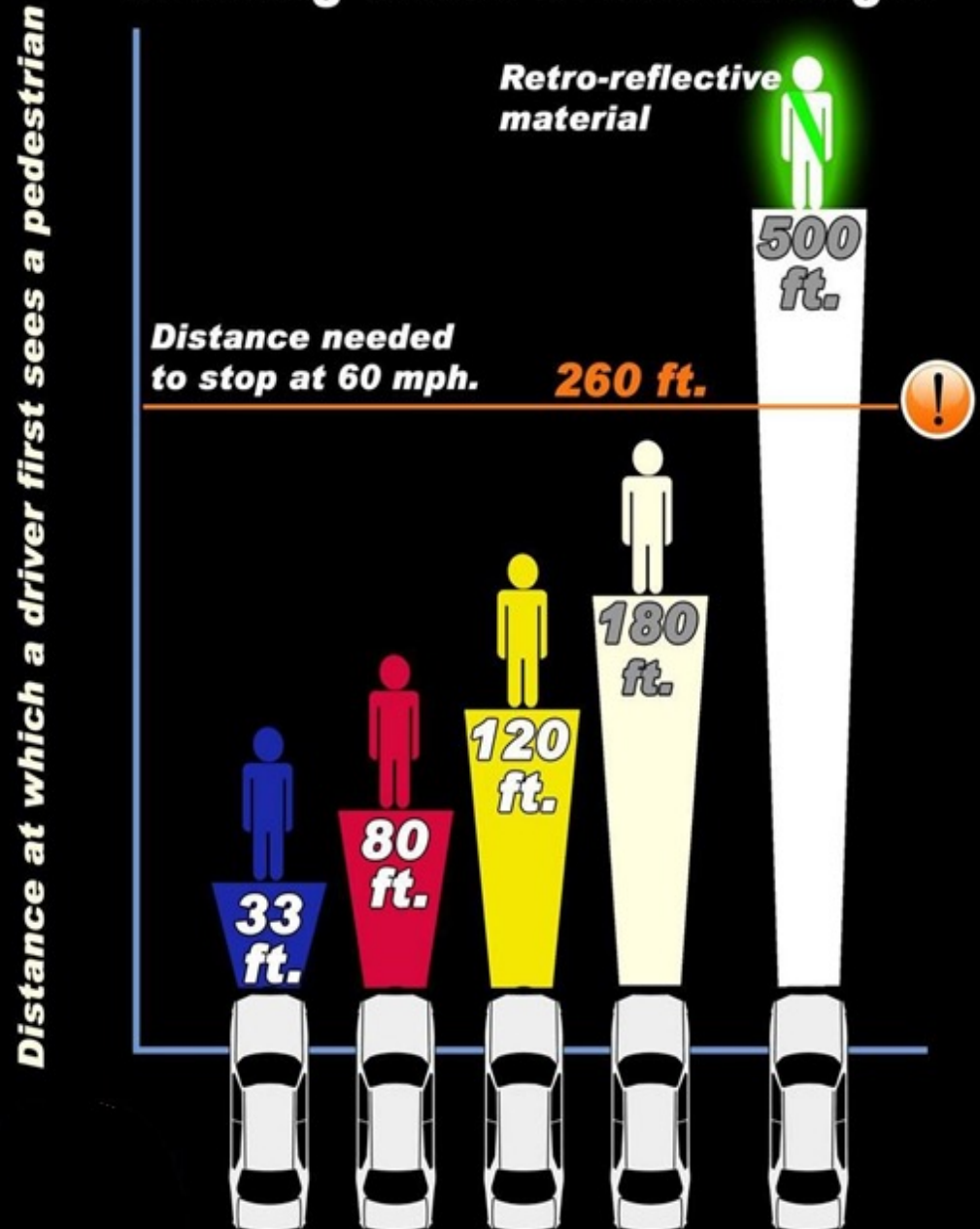


# Requirement 4b

- Help other road users to see you.
- When it is dark, use reflective materials (example. armbands, sashes, waistcoats, jackets, footwear), which can be seen by drivers using headlights up to three times as far away as non-reflective materials.



## ***Distances of Nighttime Visibility... Wearing white is not enough!***



# Requirement 4b

- Biking at night is much more dangerous than riding during the day.
- If you must ride after dark, make sure your bike has reflectors and a bright light on both the front and rear.
- Wear reflective clothing, and don't assume that motorists can see you.





## Requirement 4c

Explain how color and shape are used to help road users recognize and understand the information presented on traffic and roadway signs. Explain the purpose of different types of signs, signals, and pavement markings.



# Requirement 4c

## Shape and Color of Traffic Signs

- Regulatory Signs



- Warning Signs





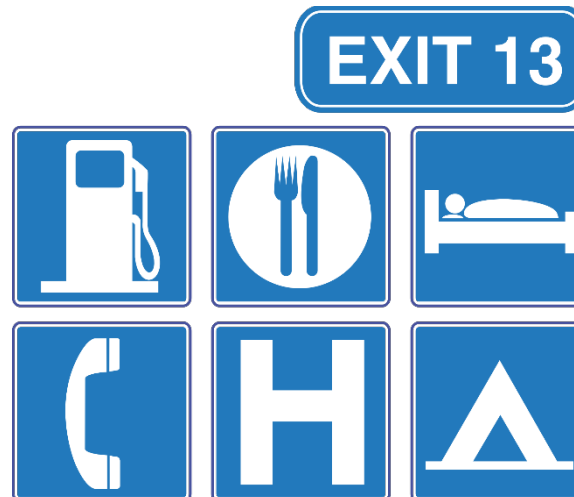
# Requirement 4c

## Shape and Color of Traffic Signs

- Guide Signs



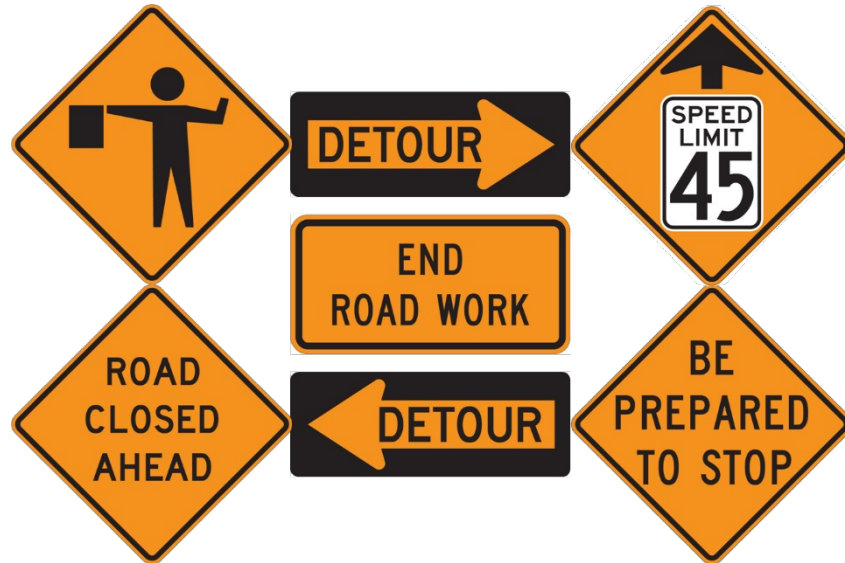
- Service Signs



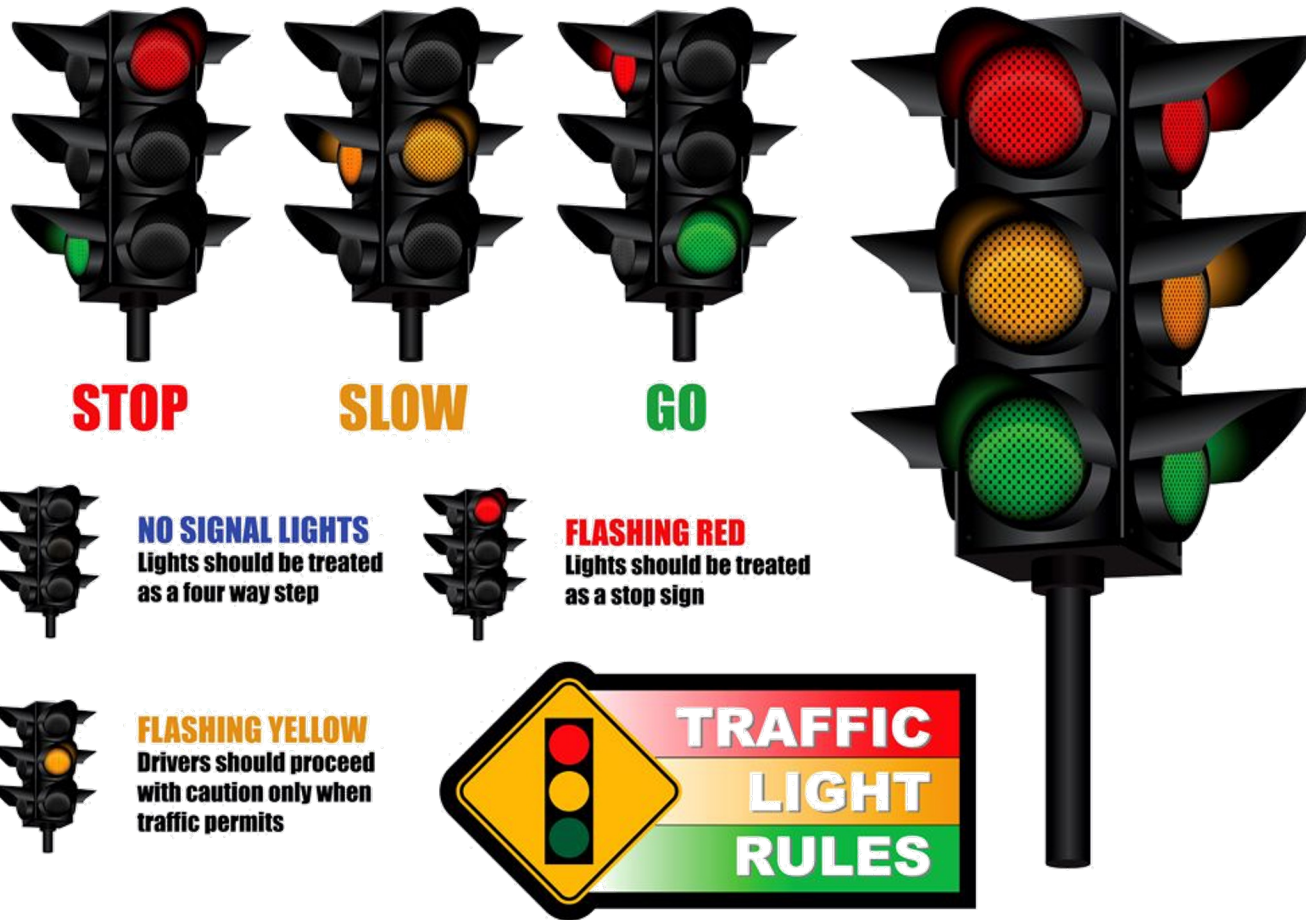
# Requirement 4c

## Shape and Color of Traffic Signs

- Work Zone Signs



# Requirement 4c

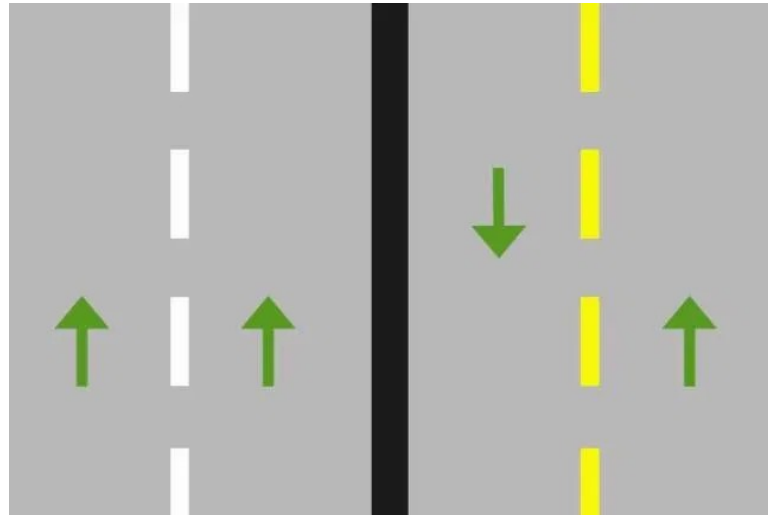


The traffic light is one of the most common signals on the road. Traffic signals control the flow of traffic through intersections. Red means stop, yellow means caution, and green means go.



# Requirement 4c

## Pavement Markings



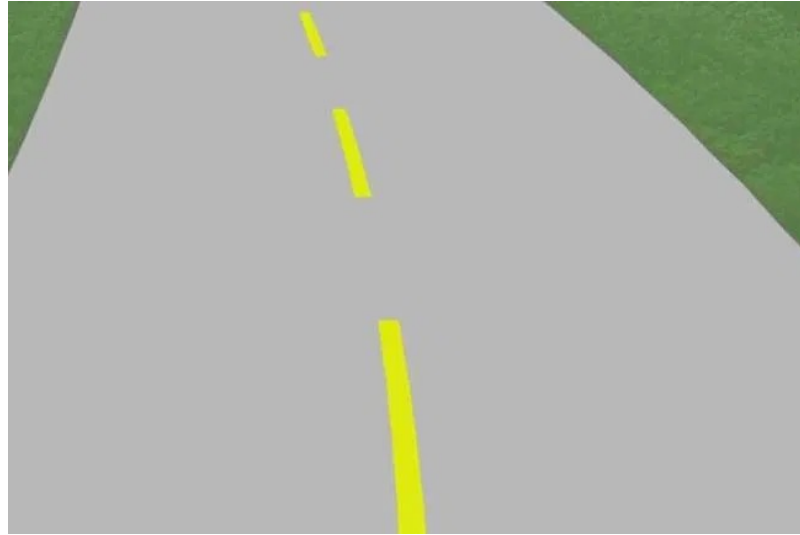
Yellow lines separate traffic in opposite directions and white lines separate traffic lanes moving in the same direction.





# Requirement 4c

## Pavement Markings



**A normal broken yellow line** marks a two-direction passing zone. Traffic traveling in either direction may pass other vehicles with care and when the way ahead is clear.



# Requirement 4c

## Pavement Markings

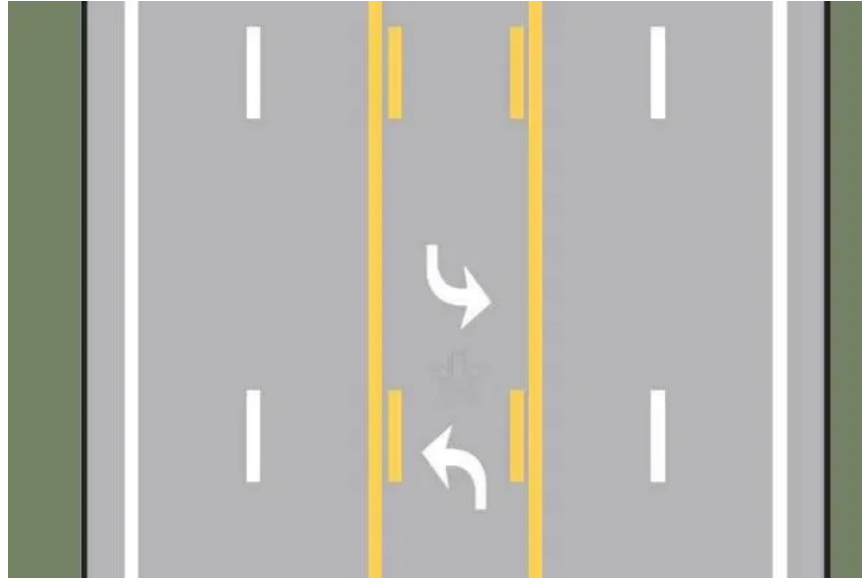


Where there is **one solid yellow line and one broken yellow line**, traffic traveling adjacent to the broken line may pass other vehicles with care, but traffic traveling adjacent to the solid line is prohibited from passing.



# Requirement 4c

## Pavement Markings



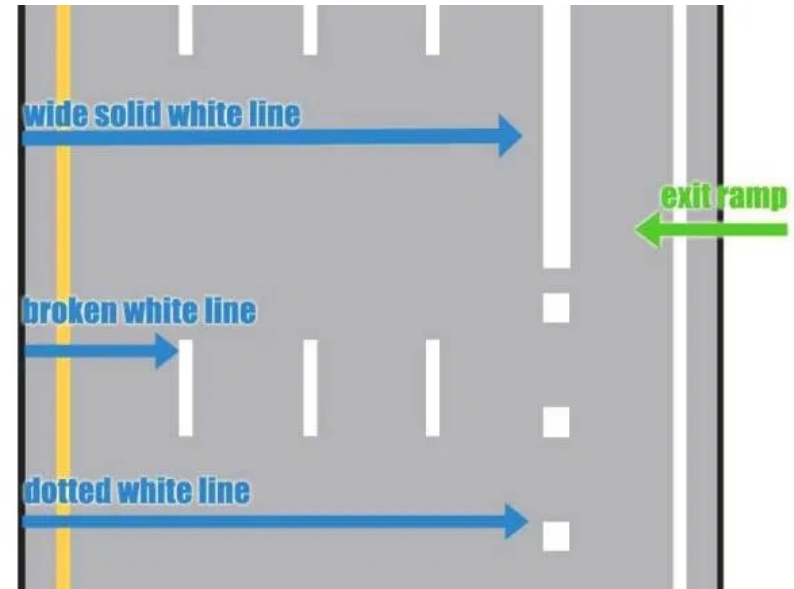
A center lane with a normal broken yellow line and a normal solid yellow line on each side indicate a **two-way left-turn lane**. This lane is used by traffic in either direction as part of a left-turn maneuver.



# Requirement 4c

## Pavement Markings

- **Dotted white lane lines** separate a through lane from deceleration or acceleration lane, or a through lane that becomes a mandatory exit or turn lane.
- **A normal broken white line** separates lanes where you are permitted to change lanes. Cross the lane line markings with care.
- When **normal or wide solid white lines** are painted between travel lanes, you should stay in your lane. The solid line means that crossing the line marking is discouraged. You should only change lane when it is necessary to avoid an incident.
- The solid white lane line marking is often used to separate a through lane from an added mandatory turn lane at intersections. Once you have entered your lane, don't change your mind in the last second.





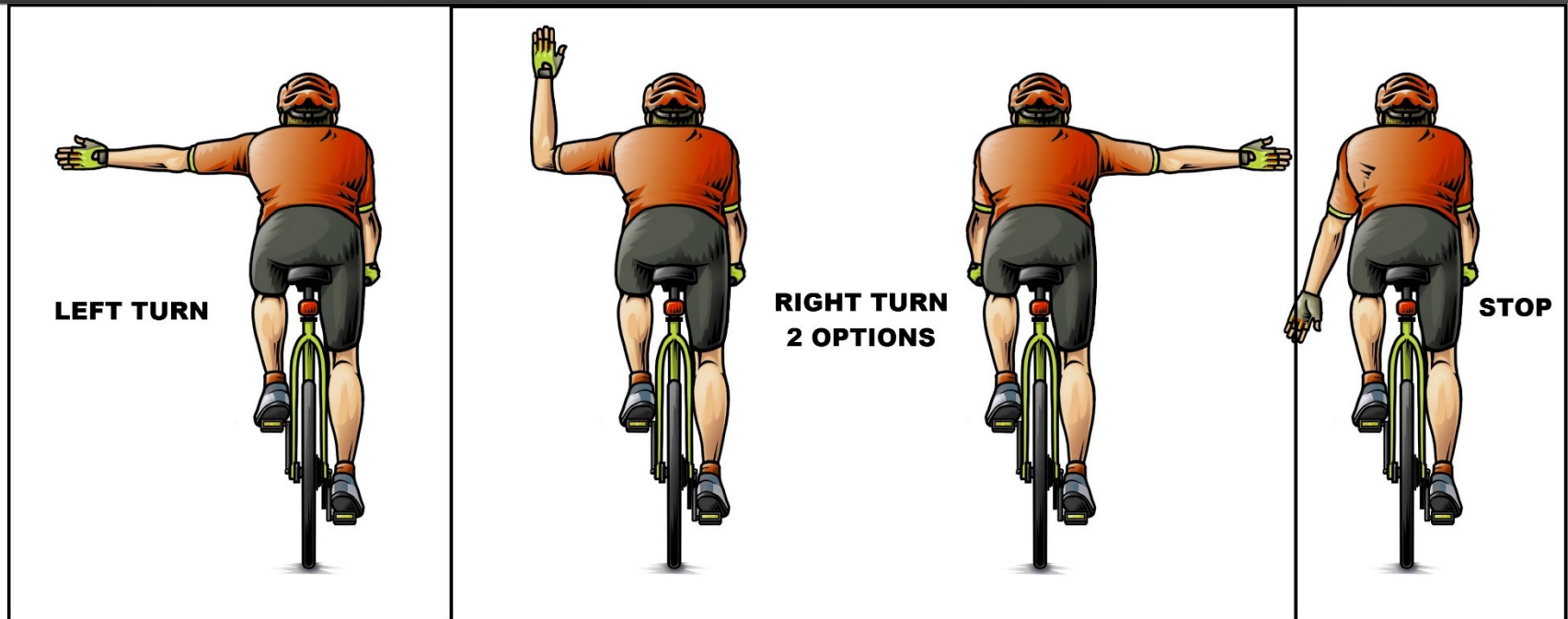


## Requirement 4d

Describe at least three examples of traffic laws that apply to drivers of motor vehicles and that bicyclists must also obey.



# Requirement 4d



- All states require cyclists to follow the basic rules of the road when riding a bicycle on a roadway.
- Like any vehicle operator, a bicyclist must ride with traffic, obey basic traffic laws, stop at stop signs and red lights, and follow all traffic control devices.
- Cyclists should communicate intentions to drivers as much as possible using hand signals whenever turning or stopping, but assume that those signals might not be understood by every driver.





# Requirement 5a

5. Do ONE of the following:
  - a. Interview a traffic law enforcement officer in your community to identify what three traffic safety problems the officer is most concerned about. Discuss with your merit badge counselor possible ways to solve one of those problems.



# Requirement 5a

## Traffic safety problems

- Distracted driving
- Speeding
- Seatbelt use
- Driving under the influence
- Failure to obey traffic signals or yield right of way.
- Driving too close.







# Requirement 5b

5. Do ONE of the following:
  - b. Using the Internet (with your parent's permission), visit five websites that cover safe driving for teenagers. Then, in a group session with at least three teenagers and your counselor, discuss what you have learned.



# Requirement 5b

Five Websites that discuss safe driving for teenagers.

[Teen Driving – NHSTA](#)

[Teen Driving – National Safety Council](#)

[Partners for Safe Teen Driving](#)

[Teen Drivers – CDC](#)

[The AAA Guide to Safe Teen Driving](#)

**Teen  
Driving**  
Keep Them Safe





# Requirement 5c

5. Do ONE of the following:

- c. Initiate and organize an activity or event to demonstrate the importance of traffic safety.





# Requirement 5d



## 5. Do ONE of the following:

- d. Accompanied by an adult and a buddy, pick a safe place to observe traffic at a controlled intersection (traffic signal or stop sign) on three separate days and at three different times of the day, for 30 minutes on each visit. At this intersection, survey violations that might occur. These violations could include (but are not limited to) running a red light or stop sign, speeding, using a cell phone while driving, or occupants not wearing their seat belts. Count the number of violations. Record in general terms the approximate age of the people you observed. Keep track of the total number of vehicles observed so that you can determine the percentage of compliance vs. violations. Discuss your findings with your merit badge counselor.

