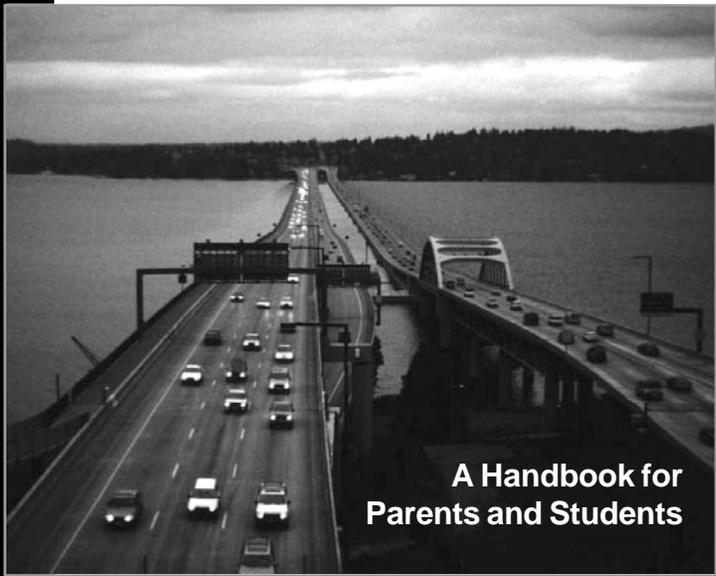


# Behind-the-Wheel Guide



# **Behind-the-Wheel Guide**

## **A Handbook for Parents and Students**

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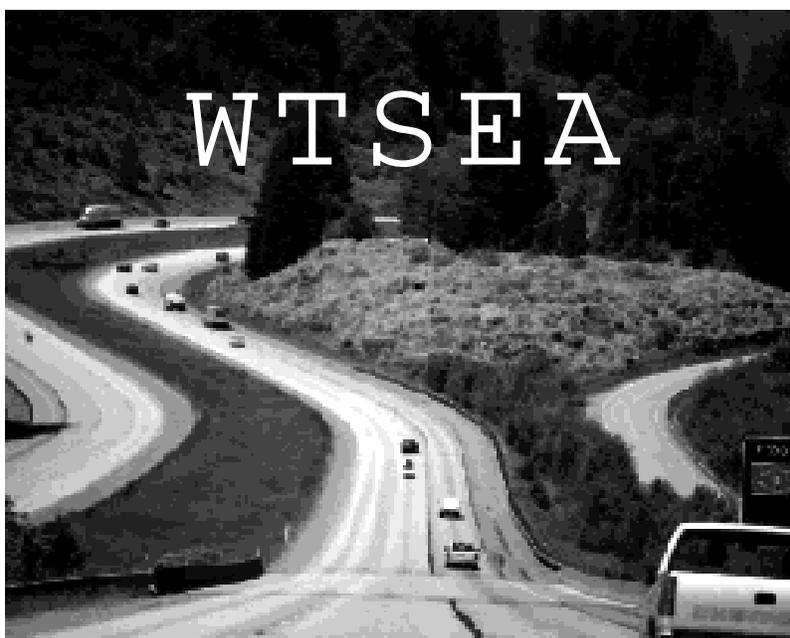
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February 2000

# Behind-the-Wheel Guide

Sample lessons and driving procedures

A handbook for parents and students



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This handbook was created for PC Windows and Macintosh platforms using PageMaker 6.5

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WTSEA would like to extend heartfelt thanks to Frederik Mottola and the National Institute for Driver Behavior. Many instructors, teachers, and members of WTSEA have attended Mr. Mottola's workshops and his teaching strategies have encouraged and supported our educational goals. You will find some of his ideas and strategies in this guide, and we applaud and thank Frederik Mottola for his contributions.

The WTSEA, Central Washington University Safety Center, and the Traffic Safety Education Parent Involvement Task Force emphasize the importance of partnerships between parent, student driver, and the traffic safety education (TSE) teacher. This guide is not meant to replace the TSE teacher but to aid in helping you (the parent and student) have a more successful experience through guided practice.

If you need clarification about this guide, please contact your TSE teacher.

The task force members also thank Dr. Gary Bloomfield for his guidance and for the leadership he has provided to Washington State traffic safety education since 1972.

Our gratitude also goes out to Dr. Ron Hales whose original concept and material paved the way for this document. Throughout his career, Dr. Hales has provided excellence in teaching, knowledge, and consistency in developing and maintaining traffic safety education programs in Washington State. Thank you.

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## List of Terms

### **ABS**

Anti-lock braking system

### **BGE**

Blind zone/glare elimination setting

### **BTW**

Behind-the-wheel

### **IPDE**

Identify, predict, decide, execute

### **LANE POSITIONS**

The five lane positions are pictured on page 218. The three main positions are lane position 1 (center of lane), lane position 2 (left side [3-6]), and lane position 3 (right side [3-6]).

### **LOS**

Line-of-sight

### **POT**

Path-of-travel

### **SPACE AREAS**

Designated numbered positions around the car that identify relationships to the environment or objects. See diagram on page 206. In this guide, space areas are referenced in parentheses.

### **TSE**

Traffic safety education

### **WEA**

Watch, evaluate, act

\* For further information on these terms proceed to the glossary

## Student Driving Log

Recording your student driver's behind-the-wheel practice sessions will help you better assess and analyze your time spent together.

Date	Driving Time (Duration)	BTW Lesson/ Skills Practiced	Driving Environment	Time of Day	Adult's Initials
12/21/99	30 minutes	Lesson 3-parking uphill	Rural county driving	9 AM	<b>JH</b>
12/29/99	30 minutes	Lesson 3-angle parking	Downtown parking lot	3 PM	<b>JH</b>
1/3/00	30 minutes	Lesson 4-lane changing	Downtown city driving	3 PM	<b>DH</b>
1/7/00	30 minutes	Lesson 4-following time	City, hwy, fwy driving	7 PM	<b>JH</b>
1/19/00	30 minutes	Lesson 6-freeways	Interstate fwy driving	11AM	<b>DH</b>

An example of how to use the student driving log follows:  
Your son/daughter's (student's) traffic safety education teacher may have her/his own log sheet.

Use the following pages for your own records.

Please make copies of the next blank student driving log pages.

Good luck.







# Guided Practice

Everyone knows that PRACTICE is the key to developing a new skill into a sound habit. But simply handing over the keys and having a student “drive around” on family errands will not produce the desired habits. Could we create a skilled ice skater in the same way—hand over a pair of ice skates and direct a person to skate around the rink until he/she develops into an Olympic star? Guided practice is essential to developing good driving habits. In guided practice, special attention is paid to what, how, where, and when to practice. A team approach is employed in which the teacher, student, and parent/guardian work together in a coordinated effort. Each person has a specific role.

**Role of the Teacher:**

To teach the correct behavior/skill and the reason for it.

**Role of the Student:**

To be able, first, to describe and perform the correct procedure in proper sequence for each driving behavior/skill. Secondly, the student needs to be able to explain the reason why we do things the way we do. (For example, why we drive with our lights on in the day time.) The student will need to take responsibility for his/her own learning—to listen, study, memorize, and practice.

**Role of the Parent:**

To provide opportunities for the student to practice the desired skills correctly and enough times until the behavior becomes habitual.

This publication is designed to facilitate guided practice. By using this guide, students can practice the same skills taught by the teacher, and parents can check to make sure that practice is being performed correctly.

## A Guide for the Parent

Throughout this guide, traffic safety education will be referred to as TSE and behind-the-wheel, which is the actual driving of the vehicle, will be referred to as BTW.

As a parent of a beginning driver, you play an important role before, during, and after your student has completed the TSE course. You are not expected to replace the TSE teacher, but rather to support, encourage, supplement, and assist in developing habits that will help your student enter the highway transportation system as a responsible driver. There are several ways that you and your student driver can help this process.

---

### 1. During the traffic safety education course:

---

- \* Make yourself available. Set aside time for practice and discussion sessions with your student driver.
- \* Provide a vehicle for practice sessions.
- \* Set a good example when you drive.
- \* Talk to your student and the TSE teacher regularly about how you can help.
- \* Provide regular practice sessions following the suggestions for each lesson.
- \* Respect your student's efforts and feelings; have a positive attitude.
- \* Reinforce the skills taught by the TSE teacher.
- \* Support your student's teacher. If differences of opinion occur, call or visit the TSE teacher for clarification.

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2. After completing the traffic safety education course:

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- \* Provide a minimum of 50 hours of supervised practice BTW with your student.
- \* Provide practice driving time at night and in inclement weather conditions.
- \* Take your student to obtain a license only when you feel the student is ready.
- \* Arrange for limited use of the family automobile.

We believe that all phases of the traffic safety education program are a team effort between the student driver, parent, and the TSE teacher. Because of this, we believe in maintaining an open line of communication.

Please feel free to contact the TSE teacher at any time you feel there is a need or you have a question.

The purpose of this guide is to help parents help their students with BTW lessons.

Most lessons will include an introductory page followed by a checklist of procedures parents can use to track the skills learned. Note pages are provided throughout each lesson.

Each lesson will include prerequisites and skills to be practiced. The prerequisites indicate which concepts have been covered in class, vehicle, and/or simulation instruction and are followed by a listing of skills to be practiced and learned. Most of the lessons have helpful hints for the parent to use when working with the student driver.

The next segment of each lesson lists specific procedures for each skill to be learned. Please direct questions about performing the procedures or the sequence of the procedures to your student's TSE teacher.

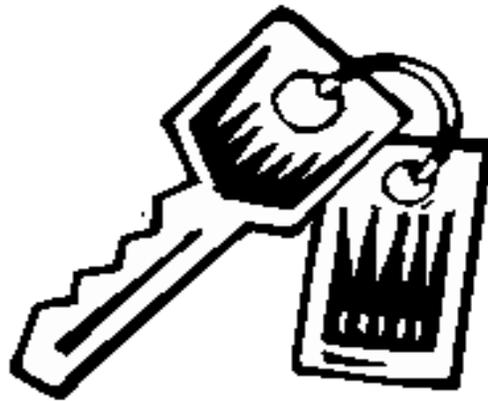
Objectives, driving environment, and common errors are included to help the parent and student understand the purpose of each skill to be learned, appropriate area in which to perform the skill, and behaviors to look for when practicing the skills.

Many of the concepts will be new and unfamiliar to the parent/guardian. Because the information has been introduced in the classroom and then again during the BTW lesson, the student should be familiar with the lesson terminology and concepts. We suggest parents require the student to verbalize/describe the lesson procedures and explain why they are important. We want the student to become responsible and accountable for what he/she has learned.

The lessons are not intended to be practiced only once, but as many times as necessary until the student can perform the skills correctly without hesitation. We recommend at least two hours practice between each scheduled lesson. We wish you much success!



**Pre-Drive Lesson  
(off street)  
Getting to Know Your Vehicle  
and Its Reference Points**



# Pre-Drive/Off Street

## **Title: Pre-Drive Lesson (Off Street)**

### Prerequisites:

1. Student is in the TSE course and has permit.
2. Classroom:  
Module 1 includes vehicle entry; vehicle operating space; prestart; front, rear, and side referencing; "blind spots" (see glossary).
3. Simulation:  
"Starting Right" program.

### Skills to be Practiced:

- Vehicle familiarization.
- Preentry and inspection.
- Entry and prestart procedures.
- Front and rear visual referencing.
- Side visual referencing.
- Locating and operating gauges, controls, and switches.
- Mirror adjustments.
- Discovering blind spots.
- Vehicle maintenance checks.

NOTE: The student will be introduced to the vehicle used in the BTW lessons before actually driving. Use the Lesson 1 checklist to help the student become accustomed to the family vehicle in the same way.





# BTW Lesson 1

Basic Control and  
Introductory Tasks



## **Welcome to Lesson 1**

In Lesson 1 your student will be practicing the fundamentals of starting the car and will, with practice, be able to operate all the controls and devices without any hesitation when directed to do so.

In this lesson your student should practice rear and side visual referencing while moving the vehicle forward and backward in a simple straight line and backing left and right with smooth starts and stops. At the end of the lesson, your student should be able to demonstrate that he/she can properly secure the vehicle.

The first lesson should take place in a parking lot or residential area with little traffic (a place where you are comfortable). This will give you an opportunity to observe how your student responds to your directions and enable you to control the car from the passenger seat.

Give directions well in advance of when you expect your student to perform the maneuver. Be clear and calm. Be positive and give encouragement

Your student should be familiar enough to operate the vehicle controls without looking at them. In the car, ask your student to perform the cockpit drill. Review the vehicle familiarization worksheet with your student and ask your student to identify and adjust the vehicle control devices for you.

Focus on maintaining a steady speed and practice smooth starts and complete stops. Encourage early braking. This will help your student be comfortable and gain confidence.

# BTW Lesson 1 Checklist

Preentry/Approach  
 Key in Hand \_\_\_\_\_  
 Approach Vehicle \_\_\_\_\_  
 Visual Check \_\_\_\_\_  
 Walk Around the Vehicle \_\_\_\_\_  
 Vehicle Maintenance Check \_\_\_\_\_  
 Loose Article Check \_\_\_\_\_

Entry/Prestart  
 Loose Articles Secured \_\_\_\_\_  
 Unlock Door \_\_\_\_\_  
 Close, Lock Door \_\_\_\_\_  
 Key in Ignition \_\_\_\_\_  
 Adjust Seat \_\_\_\_\_  
 Head Restraint \_\_\_\_\_  
 Mirror Adjustment \_\_\_\_\_  
 Safety Belts \_\_\_\_\_

Gauges/Controls, Switches  
 Locate Gauges \_\_\_\_\_  
 Locate/Operate Controls \_\_\_\_\_  
 Locate/Operate Switches \_\_\_\_\_

Starting Engine  
 Check Park Brake \_\_\_\_\_  
 Check Selector Lever "N" or "P" \_\_\_\_\_  
 Set Choke (if needed) \_\_\_\_\_  
 Heel on Floor/Brake \_\_\_\_\_  
 Start Engine \_\_\_\_\_  
 Release Key \_\_\_\_\_  
 Check Gauges \_\_\_\_\_  
 Headlights on 24 Hours \_\_\_\_\_  
 Adjust Accessories (if needed) \_\_\_\_\_

Vehicle in Motion  
 Foot on Brake \_\_\_\_\_  
 Shift to Drive \_\_\_\_\_  
 Release Park Brake \_\_\_\_\_  
 Check Traffic \_\_\_\_\_  
 (mirror, blind spot) \_\_\_\_\_  
 Signal \_\_\_\_\_  
 Visualize Target \_\_\_\_\_  
 Gentle Acceleration \_\_\_\_\_  
 Recheck Traffic \_\_\_\_\_  
 Cancel Signal \_\_\_\_\_

Stopping  
 Check Rear/Front \_\_\_\_\_  
 Set Reference and Target \_\_\_\_\_  
 Control Brake Pressure \_\_\_\_\_  
 (heel on floorboard) \_\_\_\_\_  
 Apply Brake Gradually \_\_\_\_\_  
 Use Visual Reference to Determine  
 Stopping Point \_\_\_\_\_

Securing and Leaving  
 Foot on Brake \_\_\_\_\_  
 Shift to Park (automatic) \_\_\_\_\_  
 Park Brake Set \_\_\_\_\_  
 Accessories Off \_\_\_\_\_  
 Ignition Off \_\_\_\_\_  
 Remove Key \_\_\_\_\_  
 Release Belts \_\_\_\_\_  
 Leave Vehicle \_\_\_\_\_  
 Doors Locked \_\_\_\_\_

Backing Straight  
 Foot on Brake \_\_\_\_\_  
 Reverse Gear \_\_\_\_\_  
 Proper Position \_\_\_\_\_  
 Scan and Visualize Target \_\_\_\_\_  
 Use Appropriate Motion \_\_\_\_\_  
 Decrease Speed to Stop \_\_\_\_\_  
 (keep looking back until stopped)

Backing Left/Right  
 Scan Area \_\_\_\_\_  
 Foot on Brake \_\_\_\_\_  
 Reverse Gear \_\_\_\_\_  
 Release Park Brake \_\_\_\_\_  
 Visual Target \_\_\_\_\_  
 Steering Control \_\_\_\_\_  
 Traffic Checks \_\_\_\_\_  
 Counter Steer to Center \_\_\_\_\_  
 Look to Target Until Stopped \_\_\_\_\_

Lateral Maneuver (turns)  
 Check Traffic Areas \_\_\_\_\_  
 Signal, Check Left or Right Rear \_\_\_\_\_  
 Adjust Speed and Target to Lane  
 Position \_\_\_\_\_  
 Steer to Travel Path \_\_\_\_\_  
 Adjust Speed to Traffic or Curb \_\_\_\_\_  
 Cancel Signal \_\_\_\_\_



# BTW Lesson 1

**Title: Basic Control and Introductory Tasks**

Prerequisites:

1. **Student has completed pre-drive/off street.**
2. **Classroom:**  
**Module 2 includes vehicle entry; vehicle operating space; prestart; starting; moving vehicle forward and backward; front, rear, and side referencing; backing left and right.**
3. **Simulation:**  
**“Starting Right” program or film.**

**Skills to be Practiced:**

- **Preentry and inspection.**
- **Entry and prestart procedures.**
- **Backing straight and stopping.**
- **Identify gauges, controls, switches.**
- **Backing left and right.**
- **Starting the engine.**
- **Front and rear visual referencing.**
- **Placing vehicle in motion—forward.**
- **Side visual referencing.**
- **Off target/on target.**
- **Stopping the vehicle.**
- **Securing the vehicle.**

## BTW Lesson 1 Helpful Hints

1. Be sure to check your student's understanding of the specific tasks that will be practiced.
2. Have your student tell you about the preentry tasks and inspection of the vehicle and why it's important to perform such tasks.
3. Review the checklist to evaluate performance on specific tasks.
4. When backing or pulling forward to a designated area, have your student describe which reference points he/she is using to accomplish the maneuver.
5. Have your student describe a target and visually set one to determine if you are on or off target.
6. Securing the vehicle is an important step in the driving process. Watch that all the steps are done correctly.
7. Encourage your student to tell you the procedures involved in these maneuvers. This will help you to determine if he/she is mentally engaged in the driving process.
8. If necessary, the diagrams and procedures that accompany this lesson could be referred to for clarification. Use them only when the vehicle is stopped and in a parked position.



# Preentry/Approach



1. **KEY IN HAND.**  
(Be aware of possible carjackers.)
2. **APPROACH VEHICLE, BE AWARE OF SPACE AROUND VEHICLE.** (Objects under vehicle or in travel path.)
3. **MAKE VISUAL CHECK AROUND AND INSIDE THE VEHICLE.**  
(Look for loose articles.)
4. **WALK AROUND THE VEHICLE.**  
(Look for fluid leaks, damaged tires, hood closed, etc.)
5. **MAKE MAINTENANCE CHECKS AS NEEDED.**  
(Tire pressure, oil level, brake fluid, etc.)

# Preentry/Approach

## Objective

The student will walk around the vehicle and visually inspect for possible obstructions and mechanical problems without instructor assistance.

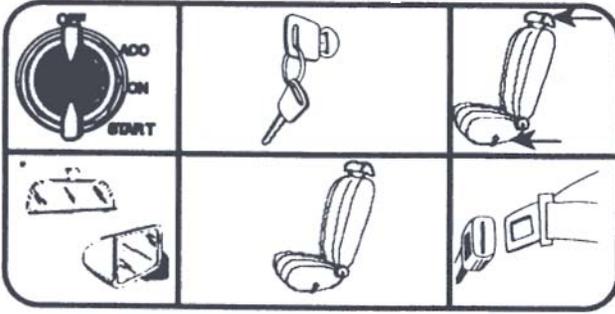
## Driving Environment

- Off-street parking area.
- Low-volume residential area.

## Common Errors

- Not walking around the vehicle.
- Visual checks not made.

# Entry/Prestart



1. PLACE LOOSE ARTICLES IN SECURE AREA (trunk).
2. UNLOCK DOOR.
3. CLOSE AND LOCK DOOR.
4. PLACE KEY IN IGNITION SLOT.
- 5 ADJUST SEAT, HEAD RESTRAINT, AND STEERING WHEEL.
- 6 ADJUST INSIDE AND OUTSIDE MIRRORS.  
(Able to check blind spots easily from driver's seat.)
- 7 FASTEN SAFETY BELTS.

# Entry/Prestart

## Objective

The student will perform all entry/prestart procedures at least once while seated in the car.

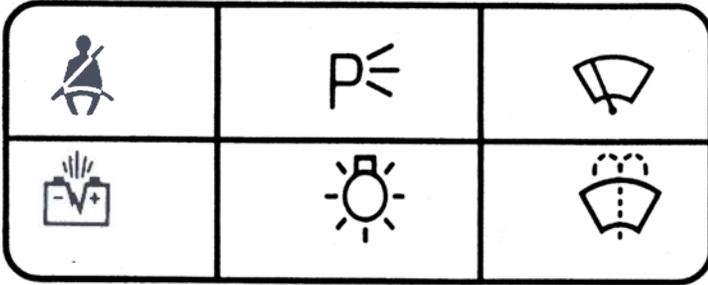
## Driving Environment

- This task can be performed in an off-street area or low-volume area with minimal traffic.

## Common Errors

- Procedures not in correct order.
- Door not locked.
- Safety belt not worn properly.
- Seat not adjusted properly.
- Mirrors not adjusted properly (leans and moves body for use).

# Gauges, Controls, and Switches



- 1 LOCATE OPERATIONAL GAUGES  
(fuel, oil pressure, speedometer, odometer, etc.).
- 2 LOCATE AND OPERATE CONTROLS  
(foot brake, park brake, steering wheel, accelerator pedal, hazard lights, directional signal, horn, headlights, gear lever, etc.).
- 3 LOCATE AND OPERATE SWITCHES  
(power door, window, etc.).

# Use of Controls and Switches

## Objective

While seated in the vehicle, the student will point to and/or operate relevant gauges, controls, and switches when requested with minimal assistance.

- Be able to operate without checking controls/switches.
- Be able to explain what is wrong and the correct action(s) to take for each warning light/gauge.

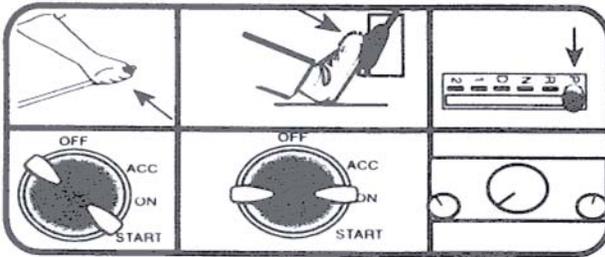
## Driving Environment

- Behind-the-wheel of the vehicle in an off street parking area. (Parked in parking lot or driveway.)

## Common Errors

- Not able to find and/or operate the control devices, gauges, or switches.
- Not using proper hand or foot position.
- Using central vision to locate gas, brake, signal, and steering wheel.

# Starting Engine



1. CHECK THAT PARKING BRAKE IS FIRMLY SET.
2. HEEL ON FLOOR/FOOT ON BRAKE.
3. CHECK SELECTOR LEVER "N" OR "P."
4. SET AUTOMATIC CHOKE IF NEEDED (fuel-injected engine not required).
5. START ENGINE (turn key, check gauges in "on" position).
6. RELEASE KEY WHEN ENGINE IS STARTED.
7. RECHECK GAUGES.
8. TURN HEADLIGHTS ON 24 HOURS DAY OR NIGHT. TURN ON ACCESSORIES AS NEEDED (lights, wipers, defroster, etc.).

# Starting Engine

## Objective

While seated in the car, the student will start and turn off the engine at least twice without assistance.

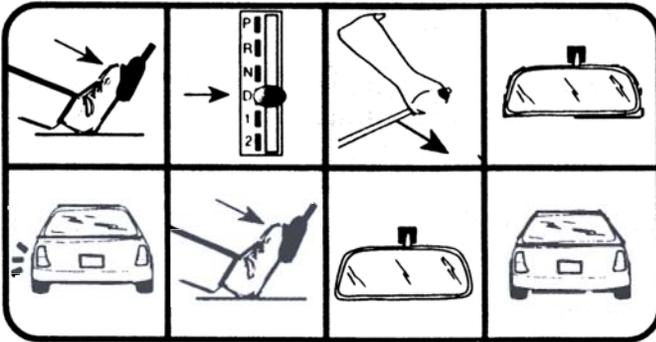
## Driving Environment

- Low-volume residential area.
- Off-street parking area.

## Common Errors

- Holding the key on too long while starting.
- Not holding the key on long enough.
- Heel not on the floor.
- Procedures not in order.
- Failing to check gauges.
- Failing to turn on necessary lights and gauges before getting under way.

# Putting the Vehicle in Motion



1. PRESS THE FOOT BRAKE DOWN
2. SHIFT GEAR SELECTOR LEVER TO DRIVE.
3. RELEASE PARKING BRAKE.
4. CHECK TRAFFIC IN INTENDED PATH AND TO SIDES.
5. PERFORM MIRROR CHECK AND BLIND SPOT CHECK.
6. SIGNAL WHEN CLEAR.
7. VISUALLY TARGET YOUR INTENDED PATH
8. MOVE FOOT TO ACCELERATOR PRESSING GENTLY.
9. RECHECK TRAFFIC.
10. CANCEL SIGNAL.

# Putting the Vehicle in Motion

## Objective

When directed to do so and with minimal assistance, the student will place the vehicle in motion (smoothly) three times.

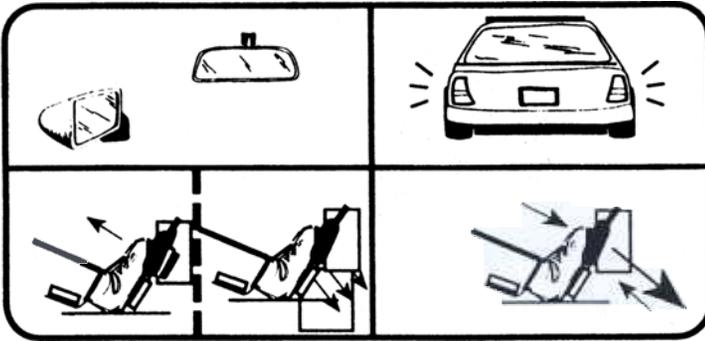
## Driving Environment

- Off-street parking area.
- Low-volume residential area.

## Common Errors

- Heel of foot not on the floor while braking or accelerating.
- Order of procedures not followed.
- Heavy and uneven acceleration.
- Not visually targeting (lane position 1).
- Not checking blind areas (spots and mirrors).
- Failing to signal/late signal.

# Stopping



1. CHECK MIRROR FOR REAR AREA.
2. VISUALLY SET REFERENCE AND TARGET AREA.
3. CONTROL BRAKE PRESSURE  
(heel of foot on floorboard).
4. APPLY BRAKE GRADUALLY  
(graphics show smooth braking by easing up on brake before stopping vehicle).
5. USE VISUAL REFERENCE TO DETERMINE STOPPING POINT  
(front or side).

# Stopping

## Objective

While directed to do so and with minimal assistance, the student will stop smoothly three times using proper braking and visual referencing procedures.

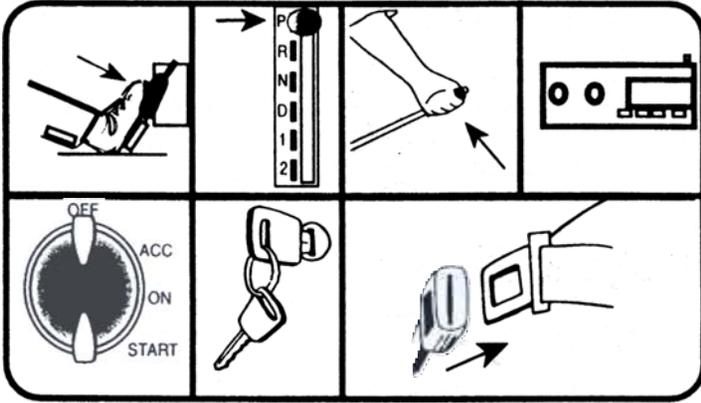
## Driving Environment

- Off-street area.
- Low-volume residential area.

## Common Errors

- Heel not on floor.
- Braking too hard/jerky stop.
- Failing to check rear area in mirror.
- Procedures out of sequence.

# Securing and Leaving Vehicle



- 1 HOLD BRAKE DOWN FIRMLY WITH RIGHT FOOT.
- 2 SHIFT TO PARK OR FIRST GEAR.
- 3 SET PARKING BRAKE
- 4 SHUT OFF ACCESSORIES.
- 5 TURN OFF IGNITION AND REMOVE KEY.
- 6 RELEASE SAFETY BELTS
- 7 CHECK REAR AND LEFT REAR AREAS (4 AND 6), EXIT, AND LOCK DOORS.

# Securing and Leaving Vehicle

## Objective

When directed to do so and with minimal assistance, the student will secure and leave the vehicle following proper procedures.

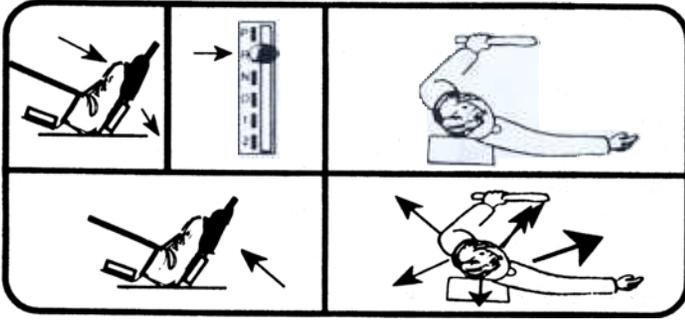
## Driving Environment

- Off-street area.
- Low-volume residential area.

## Common Errors

- Failure to check traffic.
- Not taking keys from the ignition.
- Procedures not in sequence.
- Failure to set park brake.
- Failure to turn off lights and accessories.

# Backing Straight



1. HOLD BRAKE DOWN AND SHIFT TO REVERSE, RELEASE PARK BRAKE.
2. SCAN THE AREA, LOOK OVER RIGHT SHOULDER, SEARCH PATH OF TRAVEL AND TO THE FRONT. PLACE RIGHT ARM ON SEAT FOR STRAIGHT BACKING.
3. PLACE LEFT HAND AT TOP OF STEERING WHEEL (12 o'clock).
4. VISUALLY TARGET REFERENCE POINT TO THE REAR AREA (6).
5. DECREASE BRAKE PRESSURE AND SMOOTHLY MOVE VEHICLE FROM STOPPED POSITION.
6. CHECK TRAFFIC, AREAS LEFT REAR, RIGHT REAR, AND REAR (4-5-6).
7. ACCELERATE GRADUALLY, LOOK AT TARGET, KEEP LOOKING BACK UNTIL STOPPED.

# Backing Straight

## Objective

While directed to do so and with minimal errors, the student will back the car straight toward a specific target at least three times using proper moving and stopping procedures.

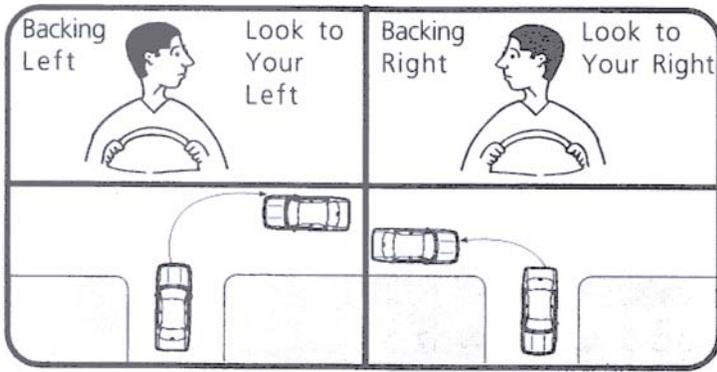
## Driving Environment

- Off-street parking area.
- Low-volume residential area.

## Common Errors

- Speed control too fast or too slow.
- Not looking back until vehicle is stopped.
- Not targeting visually will result in:
  - Path of travel not constant.
  - Incorrect steering techniques.
- Not checking rear areas left rear, rear, right rear (4-5-6).
- Improper body position.

# Backing Left and Right



- 1 SCAN AREA (MIRROR CHECK, BLIND SPOT CHECK) AND USE CORRECT SIGNAL.
- 2 DEPRESS BRAKE, SHIFT TO REVERSE.
- 3 PLACE BOTH HANDS NEAR TOP OF STEERING WHEEL.
4. TARGET AREA TO REAR.
- 5 DECREASE PRESSURE ON BRAKE
- 6 STEER DIRECTION TOWARD TARGET.
- 7 CHECK TRAFFIC.
- 8 COUNTERSTEER TO CENTER POSITION.
- 9 CONTINUE TO TARGET AREA UNTIL STOPPED.

# Backing Left and Right

## Objective

When directed to do so and with minimal assistance, the student will back left or right into or out of a parking area at least two times while maintaining proper speed control and path of travel.

## Driving Environment

- Off-street parking lot.
- Low-volume residential area.

## Common Errors

- Speed is too fast or slow.
- Does not visually target center of rear area (6) which will result in:
  - Poor lane position.
  - Failure to countersteer.
  - Overcorrecting the steering.
  - Turning the wrong direction.
- Fails to recheck the front of the vehicle.



# BTW Lesson 2

Basic Control  
Maneuvering in Limited Space



## Introduction to Lesson 2

In Lesson 2, your student will be practicing right-hand and left-hand turns, moving into and away from the curb and turnabouts, and using referencing points to judge vehicle placement on the roadway. Your student should be able to tell you what the signs, signals, and pavement markings mean.

Your student should practice pulling into and away from the curb using reference points for vehicle placement. Turnabouts should be practiced in a residential area with plenty of driveways and alleys.

## BTW Lesson 2 Checklist

### Left Turns

Traffic Check \_\_\_\_\_  
Signal \_\_\_\_\_  
Check Area 6 \_\_\_\_\_  
Lane Position 2 \_\_\_\_\_  
Reduce Speed \_\_\_\_\_  
Scan/Target \_\_\_\_\_  
Recheck Traffic \_\_\_\_\_  
Reference Points \_\_\_\_\_  
(before, during, after turn)  
Steering Control \_\_\_\_\_  
(while turning and unwinding)  
Target Ahead \_\_\_\_\_  
Lane Position 1 \_\_\_\_\_

### Lateral Move From Curb

Traffic Check Areas 4 and 6  
(left rear and rear)  
Signal, Check Area 4 \_\_\_\_\_  
(left rear)  
Accelerate \_\_\_\_\_  
Target Lane Position \_\_\_\_\_  
Steer \_\_\_\_\_

### Right Turns

Traffic Check \_\_\_\_\_  
Signal \_\_\_\_\_  
Check Area 6 \_\_\_\_\_  
Lane Position 3 \_\_\_\_\_  
Reduce Speed \_\_\_\_\_  
Scan/Target \_\_\_\_\_  
Use Reference Points \_\_\_\_\_  
(for best turn position)  
Speed Control \_\_\_\_\_  
Steering Control \_\_\_\_\_  
(while turning and unwinding)  
Target Ahead \_\_\_\_\_  
(to nearest available lane)  
Lane Position 1 \_\_\_\_\_

### Lateral Move to Curb

Check Intended Path \_\_\_\_\_  
Check Areas 6 and 5 \_\_\_\_\_  
(rear and right rear)  
Signal, Check Area 5 \_\_\_\_\_  
(right rear)  
Reduce Speed \_\_\_\_\_  
Steer to Target \_\_\_\_\_

Speed Adjustments  
Maintain Constant Speed \_\_\_\_  
Adjust to Conditions  
    Accelerator Use \_\_\_\_\_  
    Brake Use \_\_\_\_\_  
Speedometer Checks \_\_\_\_  
Legal Limits \_\_\_\_\_

Lane Control  
Proper Hand Position \_\_\_\_  
Visual Target 20-30 Sec. \_\_\_\_  
Lead Time Scan 12-15 Sec.  
Gradual Steering \_\_\_\_\_  
Use of Lane Positions \_\_\_\_  
Adjusts as Needed \_\_\_\_\_

Turnabout Left  
Check Area 6, Signal \_\_\_\_  
(rear)  
Signal and Turn Left Into Alley  
Move Past Sidewalk and  
Stop With Wheels  
Straight \_\_\_\_\_  
Check Traffic: Areas 4-5-6 \_\_\_\_  
(left rear, right rear, and rear)  
Shift to R \_\_\_\_\_  
Use Visual Reference \_\_\_\_  
Steer to Right and Back Into

Lane Position 3 Straighten  
Wheels, Target Until Stopped  
Shift to D, Signal Left \_\_\_\_\_  
Move to Lane Position 1 \_\_\_\_  
Alley Turnabout Right  
Check Area 6 (rear), Signal \_  
  
Stop Past Alley \_\_\_\_\_  
Use Visual Reference \_\_\_\_  
Check Traffic: Areas 4-5-6 (left  
rear, right rear and rear)  
Shift to R \_\_\_\_\_  
Back Into Alley, Check Area 2  
(left front) from Lane Position 3  
Straighten Wheels, Stop \_\_\_\_  
Shift to D, Signal Left \_\_\_\_\_  
Check Traffic \_\_\_\_\_  
Turn Left Into Nearest Lane \_\_\_\_  
Move to Lane Position 1 \_\_\_\_  
  
Y Turnabout  
Move to Right Shoulder and  
Stop \_\_\_\_\_  
Recheck Traffic, Signal Left \_  
Visually Target Left Curb \_\_\_\_  
Move Slowly, Steer Quickly  
Toward Front Curb \_\_\_\_\_  
Stop With Wheels Straight \_\_\_\_  
Recheck Traffic, Visually Target  
Rear \_\_\_\_\_  
Curb While Backing to Rear  
Curb \_\_\_\_\_  
Steer Left, Stop and Recheck  
Traffic \_\_\_\_\_  
Clear the Area, Move Forward



# BTW Lesson 2

## **Title: Basic Control and Maneuvering in Limited Space**

Prerequisites:

1. **Complete BTW Lesson 1.**

2. Classroom:

Module 2 includes signs, signals, markings, turns, intersections, approach and leaving the curb, backing into and out of alleys, (WEA) Watch, Evaluate, and Act space management.

3. Simulation:

Any of the following programs: “In’s and Out’s of Turns”, “Managing Intersection Maneuvers”, “IPDE Strategy.”

Skills to be Practiced:

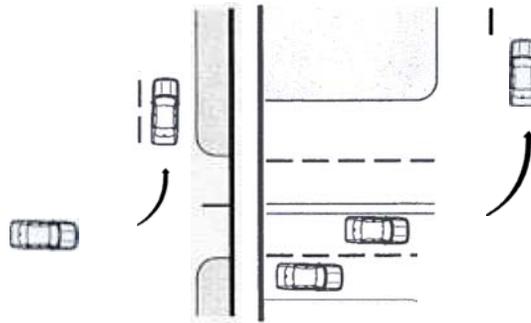
- Lane positioning (see appendix).
- Reference points/zone control.
- Speed and lane adjustment.
- Cover brake.
- Left turns.
- Right turns.
- Lateral move from curb.
- Lateral move to the curb.
- Alley turnabout—left side.
- Alley turnabout—right side.
- Y turnabout.

## BTW Lesson 2 Helpful Hints

1. Check your student's understanding of the specific tasks that will be practiced. Go over the rules of the road in the driver's guide.
2. Have your student tell you about the importance of performing each of these tasks.
3. Review the checklist to evaluate performance on specific tasks.
4. When backing or moving to the curb or to a designated area, have your student describe which reference points she/he is using to accomplish the maneuver.
5. Have your student describe lane positions and how to determine which lane position she/he is in.
6. Starting and securing all the operations and procedures of the vehicle are important steps in the driving process. Watch that all the steps are done correctly and in proper sequence.
7. Encourage your student to tell you the procedures involved in these maneuvers. This will help you to determine if she/he is mentally engaged in the driving process.
8. Check your student's eyes to see that they are looking in the correct direction and at the important features of the driving scene.



## Left Turns



1. SIGNAL INTENTION TO TURN.
2. MOVE TO LANE POSITION 2.
3. CHECK MIRROR AND REDUCE SPEED.
4. SCAN INTERSECTION.
5. RECHECK TRAFFIC, GLANCE RIGHT AND AT INTENDED POINT OF TRAVEL.
6. BEGIN TURNING NEAR STREET CENTER.
7. UNWIND AND ACCELERATE, TARGET PATH-OF-TRAVEL (POT).
8. MOVE TO LANE POSITION 1.

# Left Turns

## Objective

As directed and with minimal assistance, the student will follow proper procedures and perform three left turns.

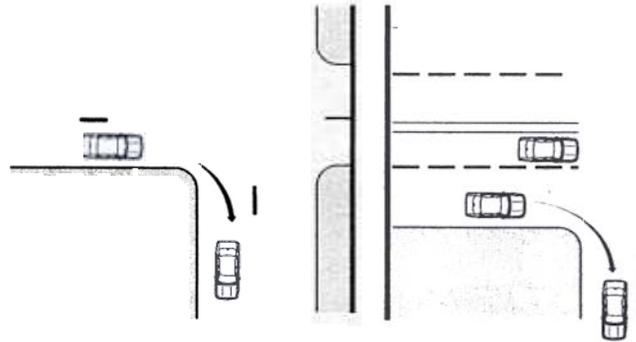
## Driving Environment

- **Low-volume residential area.**
- **Controlled and uncontrolled intersections.**
- **Wide streets—some with pavement markings.**

## Common Errors

- **Speed control.**
- **Improper use of hand-over-hand steering.**
- **Late steering recovery.**
- **Late signal and/or tracking errors.**
- **Confusion regarding right-of-way.**
- **Forgetting to make visual checks.**
- **Improper lane selection.**
- **Turning too early or too late.**
- **Not using turning reference points.**
- **Not targeting.**

## Right Turns



1. SIGNAL INTENTION TO TURN.
2. MOVE TO LANE POSITION 3 (NEAREST CURB).
3. CHECK MIRRORS AND REDUCE SPEED.
4. SCAN INTERSECTION.
5. RECHECK TRAFFIC, GLANCE LEFT, AND TARGET NEW INTENDED PATH OF TRAVEL.
6. TURN AS FRONT IS EVEN WITH BEND OF CURB.
7. UNWIND AND ACCELERATE, LOOKING WELL AHEAD.
8. MOVE INTO NEAREST LANE.

# Right Turns

## Objective

As directed and with minimal assistance, the student will follow proper procedures and perform three right turns.

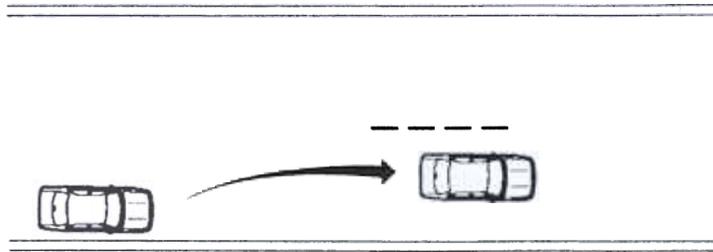
## Driving Environment

- Low-volume residential area.
- Controlled and uncontrolled intersections.
- Wide streets—some with pavement markings.

## Common Errors

- Speed control.
- Improper use of hand-over-hand steering.
- Late steering recovery.
- Late signal and/or tracking errors.
- Not moving to the right side of lane.
- Confusion regarding right-of-way.
- Forgetting to make visual checks.
- Improper lane selection.
- Improper targeting.

## Lateral Maneuver—Away From Curb



1. CHECK TRAFFIC IN AREAS LEFT REAR AND REAR (4 and 6) AND PATH-OF-TRAVEL (POT).
2. SIGNAL, CHECK LEFT REAR (AREA 4).
3. ACCELERATE, TARGETING TO LANE POSITION 1.
4. STEER TO TRAVEL PATH.
5. ACCELERATE TO SPEED OF TRAFFIC.
6. CANCEL SIGNAL.

# **Lateral Maneuver—Away From Curb**

## **Objective**

When directed and without assistance, the student will follow proper procedures and move the car at least three times from a right side stopped position into the traffic lane.

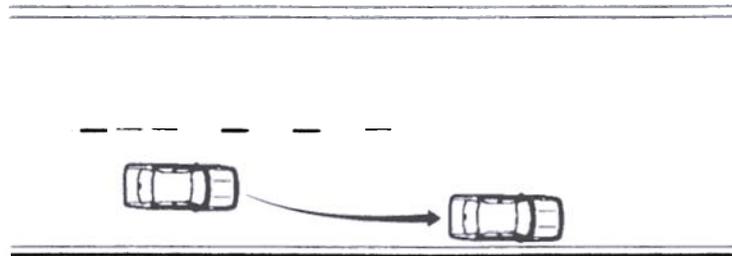
## **Driving Environment**

- Off-street area or low-volume residential area with minimal traffic.
- As the student gains experience, perform the maneuver in moderate and heavy traffic.

## **Common Errors**

- Not following procedures.
- Blind spot checks in wrong area.
- Failure to check blind area.
- Poor speed control.
- Failure to signal or cancel signal.

## Lateral Maneuver—Move to Curb



1. CHECK INTENDED PATH AND TRAFFIC IN AREAS RIGHT REAR AND REAR (5 and 6).
2. SIGNAL, CHECK RIGHT REAR (area 5).
3. APPLY BRAKE PRESSURE; TARGET CENTER OF INTENDED PATH (lane position 3).
4. REDUCE SPEED WHILE MOVING TO CURB, USE 3-6 INCH REFERENCE.
5. STOP AND SECURE CAR.

## **Lateral Maneuver—Move to Curb**

### **Objective**

When directed and without assistance, the student will follow all procedures and move the car at least three times from lane position 1 to lane position 3 using 3-6 inch reference points.

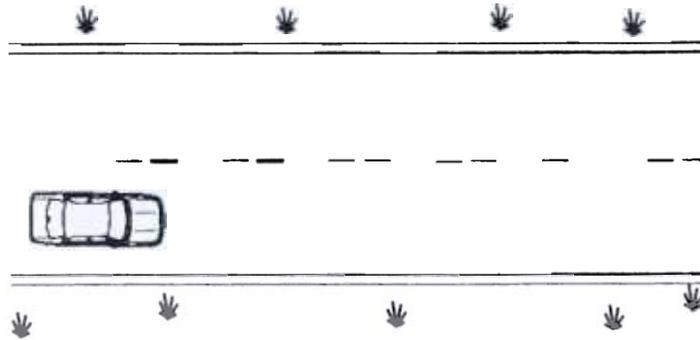
### **Driving Environment**

- This task can be performed in an off-street area or low-volume area with minimal traffic.
- As the student progresses, this can be performed in moderate and heavy city traffic.

### **Common Errors**

- Procedures not in correct order.
- Not using 3-6 inch reference points when visually targeting.
- Too fast or slow.
- Forgetting to check right rear area (5).
- Improper targeting (aiming at curblines without central vision).
- Reducing speed too early and not signaling.
- Steering while checking blind spot.
- Leaning/turning head too far to check blind spot.
- Not using mirrors.

## Speed Adjustments



1. MAINTAIN CONSTANT SPEED WITH OPEN SPACE AREAS.
2. MAKE ACCELERATOR AND BRAKE CHANGES FOR CLOSED OR CHANGING SPACE AREAS.
3. ADJUST SPEED TO FLOW OF TRAFFIC AND CONDITIONS.
4. MAKE OCCASIONAL SPEEDOMETER CHECKS.

# **Speed Adjustments**

## **Objective**

While driving in light volume to complex traffic, the student will maintain a constant speed and make adjustments according to changing traffic conditions.

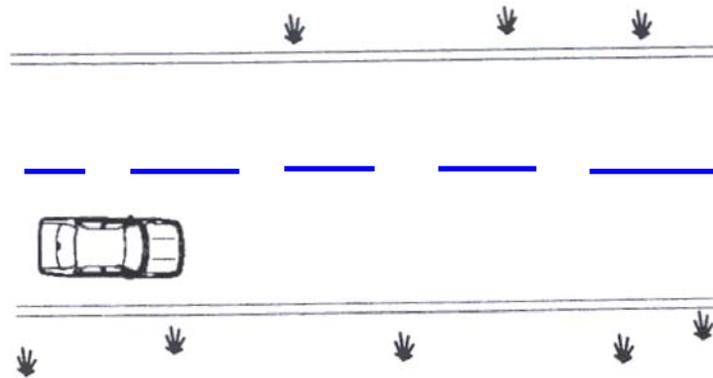
## **Driving Environment**

- Low-volume residential areas.
- Various road conditions of moderate to heavy traffic.

## **Common Errors**

- Inconsistent speed.
- Speed too fast.
- Speed too slow.
- Improper foot position on accelerator.
- Improper lane position and/or control.
- Staring at speedometer versus quick glances.
- Failing to adjust speed for hills, curves, etc.

## Lane Control



1. POSITION BOTH HANDS AT 3/9 OR 8/4.\*
2. VISUALLY TARGET PATH OF TRAVEL 20-30 SECONDS AHEAD.
3. KEEP EYES MOVING SCANNING AND SEARCHING 12-15 SECONDS AHEAD.
4. MAKE GRADUAL STEERING CORRECTIONS.
5. PLACE VEHICLE IN PROPER LANE POSITION BY USING CENTRAL VISION FOR TARGETING AND FRINGE VISION FOR REFERENCE POINTS.

\* 3/9 and 8/4 refer to the numbers on the face of a clock. Your hand position should be in the same place as the respective clock numbers.

# Lane Control

## Objective

The student will maintain the car in proper lane positions (1-2-3) while driving straight and turning on various types of roads and intersections.

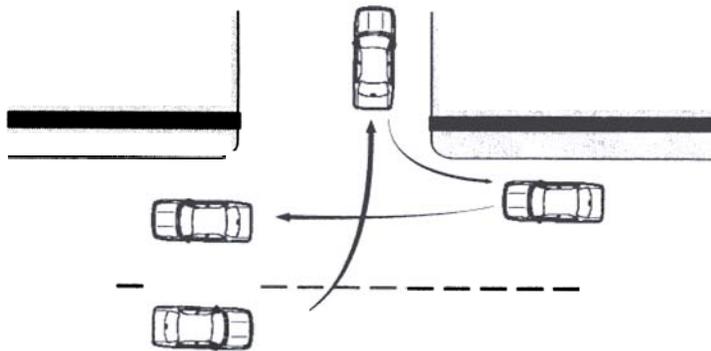
## Driving Environment

- Low-volume residential areas to complex traffic and multiple lane roads.

## Common Errors

- Improper hand position on the wheel.
- Not targeting 20-30 seconds ahead and searching 12-15 seconds for traffic conditions.
- Abrupt or repeated steering corrections.
- Over- or understeering actions.
- Fixed stare.
- Drifting.
- Not using eyes properly.
- Inability to maintain a given lane position (1-2-3).

## Alley Turnabout—Left Side



1. CHECK REAR AREA (6), SIGNAL LEFT, AND TURN INTO DRIVEWAY.
2. MOVE PAST SIDEWALK AND STOP WITH WHEELS STRAIGHT.
3. CHECK LEFT REAR, RIGHT REAR, AND REAR AREAS (4-5-6) AND SHIFT TO REVERSE, STOPPING AT LEGAL STOPPING LOCATION AND CHECK FOR CLEAR TRAFFIC.
4. VISUALLY TARGET NEAREST LANE.
5. STEER RIGHT AND MOVE INTO LANE (POSITION 3).
6. CHECK LEFT FRONT AREA (2) WHILE STEERING.
7. STRAIGHTEN WHEELS, TARGET UNTIL STOPPED.

# Alley Turnabout—Left Side

## Objective

When directed and with minimal assistance, the student will follow proper procedures and perform left side alley turnabout at least twice.

## Driving Environment

- Low-volume residential areas.
- Areas with and without sidewalks.
- Wide streets.
- Adequate number of alleys available.
- Adequate and limited line of sight.

## Common Errors

- Improper lane position in the alley.
- Improper steering while backing.
- Fails to stop before entering the street.
- Improper targeting.
- Backs into the wrong lane.
- Speed too fast.
- Fails to check left front area (2) when turning.
- Fails to keep looking in the rear area (6) until the car is stopped.
- Too wide or too short on turn.
- Fails to stop and yield to approaching traffic/pedestrians.



# Alley Turnabout—Right Side

## Objective

When directed and with minimal assistance, the student will execute a right side alley turnabout at least twice.

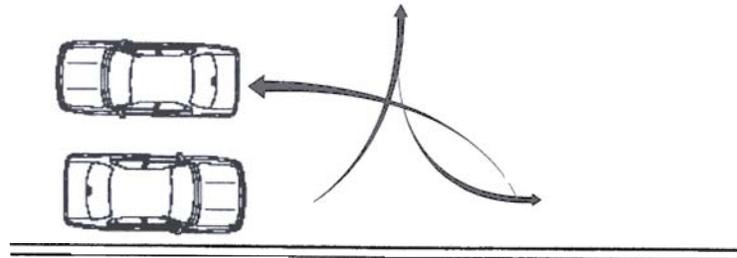
## Driving Environment

- Low-volume residential area.
- Wide streets with or without sidewalks.
- Adequate number of alleys.
- Various types of line-of-sight limits.

## Common Errors

- Not making blind area checks while approaching the curb.
- Fails to check rear area (6) for traffic.
- Not using reference points for turning.
- Improper steering techniques.
- Speed too fast.
- Not checking left front area (2).
- Not centered in the alley.
- Fails to keep looking back until stopped.
- Forgets to shift to drive before leaving.
- Forgets to stop at legal stopping location.
- Not targeting correctly.

## Y Turnabout



1. PERFORM A LATERAL MANEUVER TO THE RIGHT SHOULDER AND STOP.
2. RECHECK TRAFFIC, SIGNAL LEFT.
3. VISUALLY TARGET LEFT CURB.
4. MOVE SLOWLY, STEERING SHARPLY TOWARD THE LEFT.
5. JUST PRIOR TO REACHING THE CURB TURN WHEELS SHARPLY TO THE RIGHT AND STOP (use front alignment reference).
6. SHIFT TO REVERSE AND CHECK TRAFFIC.
7. VISUALLY TARGET TO REAR, BACK TOWARD OPPOSITE SIDE OF STREET, STEERING SHARPLY TO THE RIGHT.
8. JUST BEFORE REACHING OPPOSITE CURB, STEER SHARPLY LEFT AND STOP.
9. CLEAR AREA, SHIFT TO DRIVE, MOVE FORWARD INTO LANE POSITION 1.

# Y Turnabout

## Objective

When directed and with minimal assistance, the student will demonstrate at least twice the proper procedures for a Y turnabout.

## Driving Environment

- Low-volume residential area.
- Narrow streets or dead end roads.
- Adequate visibility available.

## Common Errors

- Speed control.
- Not checking traffic.
- Not using front reference points.
- Dry steering.
- Improper steering control.
- Improper wheel position.
- Not signaling.
- Not checking traffic.
- Not targeting to rear when backing.
- Confusing gas/brake, steering, or shifting coordination.



# BTW Lesson 3

Basic Control



## Introduction to Lesson 3

In this lesson, your student should be aware of the space it takes to operate a vehicle and where the vehicle is in relation to other vehicles and objects. Your student will practice uphill, downhill, angle, and perpendicular parking.

To practice uphill and downhill parking, it is best to find a residential area with low volumes of traffic with different inclines.

Angle and perpendicular parking should be practiced in a parking lot with emphasis on moving into and out of the parking space from both the left-hand and right-hand side of the driveway. Particular emphases should be placed on using reference points for vehicle placement and checking all areas for traffic.

## BTW Lesson 3 Checklist

### Uphill Parking

Check Intended Path \_\_\_\_\_

Check Traffic Areas 5 and 6 \_

(right rear and rear)

Signal, Check

Area 5 (right rear) \_\_\_\_\_

Use Reference Points \_\_\_\_\_

Stop 6-8" From Curb \_\_\_\_\_

Shift to Neutral \_\_\_\_\_

Roll Back, Turn Wheel \_\_\_\_\_

Secure Vehicle \_\_\_\_\_

Check Traffic Areas 4 and 6 \_

(left rear and rear)

Signal, Check Area 4 (left rear)

Move Vehicle Into Lane \_\_\_\_\_

Steering and Speed Control

### Downhill Parking

Check Intended Path \_\_\_\_\_

Check Traffic Areas

5 and 6 \_\_\_\_\_

(right rear and rear)

Signal, Check Area 5 \_\_\_\_\_

(right rear)

Use Reference Points \_\_\_\_\_

Stop 6-8" From Curb \_\_\_\_\_

Speed Control Neutral \_\_\_\_\_

Turn Wheels Right \_\_\_\_\_

Stopped Position \_\_\_\_\_

Secure Vehicle \_\_\_\_\_

Shift to Reverse \_\_\_\_\_

Back Vehicle \_\_\_\_\_

Check Traffic Areas

4 and 6 \_\_\_\_\_

(left rear and rear)

Shift to Drive \_\_\_\_\_

Signal, Check Area 4 \_\_\_\_\_

(left rear)

Move Vehicle Into Lane \_\_\_\_\_

Angle Parking Entering  
Check Intended Path \_\_\_\_\_  
Check Traffic Area 6 (rear) \_\_\_  
Signal and Reduce Speed \_\_\_  
Target Path of Travel \_\_\_\_\_  
Use Visual Reference \_\_\_\_\_  
Steering/Speed Control \_\_\_\_\_  
Check Areas 2 and 5 \_\_\_\_\_  
(left front and right rear) \_\_\_\_\_  
Position Center of Lane \_\_\_\_\_  
Stopping Position \_\_\_\_\_

Angle Parking Leaving  
Traffic Check \_\_\_\_\_

Back Slowly \_\_\_\_\_  
Recheck Traffic \_\_\_\_\_  
Speed Control \_\_\_\_\_

Steering Control \_\_\_\_\_  
Visual Reference \_\_\_\_\_  
Back to Lane Position 1 \_\_\_\_\_

Look in Area 6 (rear) Until  
Stopped \_\_\_\_\_  
Shift to D, Proceed \_\_\_\_\_

Perpendicular Parking Entering  
Check Intended Path \_\_\_\_\_  
Check Traffic Area 6(rear) \_\_\_  
Target Path of Travel \_\_\_\_\_  
Move to Position 4 \_\_\_\_\_  
Signal \_\_\_\_\_  
Use Visual Reference \_\_\_\_\_  
Steering Control \_\_\_\_\_  
Check Areas 2 and 5 \_\_\_\_\_  
(left front and right rear)  
Speed Control \_\_\_\_\_  
Center of Lane \_\_\_\_\_  
Stopping Position \_\_\_\_\_

Perpendicular Parking Leaving  
Traffic Check Areas 4-5-6 \_\_\_  
(left rear, right rear,  
and rear)  
Back Slowly \_\_\_\_\_  
Recheck Traffic \_\_\_\_\_  
Speed Control \_\_\_\_\_  
Visual Reference for Turning  
Steering Control \_\_\_\_\_  
Back Into Lane Position 1 \_\_\_  
Look in Area 6 (rear) Until \_\_\_  
Stopped \_\_\_\_\_  
Shift to D, Proceed \_\_\_\_\_

## Introduction to Lesson 3

In this lesson, your student should be aware of the space it takes to operate a vehicle and where the vehicle is in relation to other vehicles and objects. Your student will practice uphill, downhill, angle, and perpendicular parking.

To practice uphill and downhill parking, it is best to find a residential area with low volumes of traffic with different inclines.

Angle and perpendicular parking should be practiced in a parking lot with emphasis on moving into and out of the parking space from both the left-hand and right-hand side of the driveway. Particular emphases should be placed on using reference points for vehicle placement and checking all areas for traffic.

## BTW Lesson 3 Checklist

Uphill Parking	Downhill Parking
Check Intended Path _____	Check Intended Path _____
Check Traffic Areas 5 and 6 _ (right rear and rear)	Check Traffic Areas 5 and 6 _____ (right rear and rear)
Signal, Check Area 5 (right rear) _____	Signal, Check Area 5 _____ (right rear)
Use Reference Points _____	Use Reference Points _____
Stop 6-8" From Curb _____	Stop 6-8" From Curb _____
Shift to Neutral _____	Speed Control Neutral _____
Roll Back, Turn Wheel _____	Turn Wheels Right _____
Secure Vehicle _____	Stopped Position _____
Check Traffic Areas 4 and 6 _ (left rear and rear)	Secure Vehicle _____
Signal, Check Area 4 (left rear)	Shift to Reverse _____
Move Vehicle Into Lane _____	Back Vehicle _____
Steering and Speed Control	Check Traffic Areas 4 and 6 _____ (left rear and rear)
	Shift to Drive _____
	Signal, Check Area 4 _____ (left rear)
	Move Vehicle Into Lane _____
	Steering and Speed Control _

Angle Parking Entering  
Check Intended Path \_\_\_\_\_  
Check Traffic Area 6 (rear) \_\_\_  
Signal and Reduce Speed \_\_\_  
Target Path of Travel \_\_\_\_\_  
Use Visual Reference \_\_\_\_\_  
Steering/Speed Control \_\_\_\_\_  
Check Areas 2 and 5 \_\_\_\_\_  
(left front and right rear) \_\_\_\_\_  
Position Center of Lane \_\_\_\_\_  
Stopping Position \_\_\_\_\_

Angle Parking Leaving  
Traffic Check \_\_\_\_\_

Back Slowly \_\_\_\_\_  
Recheck Traffic \_\_\_\_\_  
Speed Control \_\_\_\_\_

Steering Control \_\_\_\_\_  
Visual Reference \_\_\_\_\_  
Back to Lane Position 1 \_\_\_\_\_

Look in Area 6 (rear) Until  
Stopped \_\_\_\_\_  
Shift to D, Proceed \_\_\_\_\_

Perpendicular Parking Entering  
Check Intended Path \_\_\_\_\_  
Check Traffic Area 6(rear) \_\_\_  
Target Path of Travel \_\_\_\_\_  
Move to Position 4 \_\_\_\_\_  
Signal \_\_\_\_\_  
Use Visual Reference \_\_\_\_\_  
Steering Control \_\_\_\_\_  
Check Areas 2 and 5 \_\_\_\_\_  
(left front and right rear)  
Speed Control \_\_\_\_\_  
Center of Lane \_\_\_\_\_  
Stopping Position \_\_\_\_\_

Perpendicular Parking Leaving  
Traffic Check Areas 4-5-6 \_\_\_  
(left rear, right rear,  
and rear)  
Back Slowly \_\_\_\_\_  
Recheck Traffic \_\_\_\_\_  
Speed Control \_\_\_\_\_  
Visual Reference for Turning  
Steering Control \_\_\_\_\_  
Back Into Lane Position 1 \_\_\_  
Look in Area 6 (rear) Until \_\_\_  
Stopped \_\_\_\_\_  
Shift to D, Proceed \_\_\_\_\_



# BTW Lesson 3

## **Title: Basic Control**

Prerequisites:

1. Completed BTW Lesson 2

2. Classroom:

Module 3 includes managing space, parking, and space areas between vehicles and other hazardous intersections. It also includes reduced-risk parking up and downhill and angle and perpendicular parking.

3. Simulation:

“Search and Identify and Anticipate Hazards”  
and/or “Decide and Act, Backing, Turnabouts and Parking.”

Skills to be Practiced:

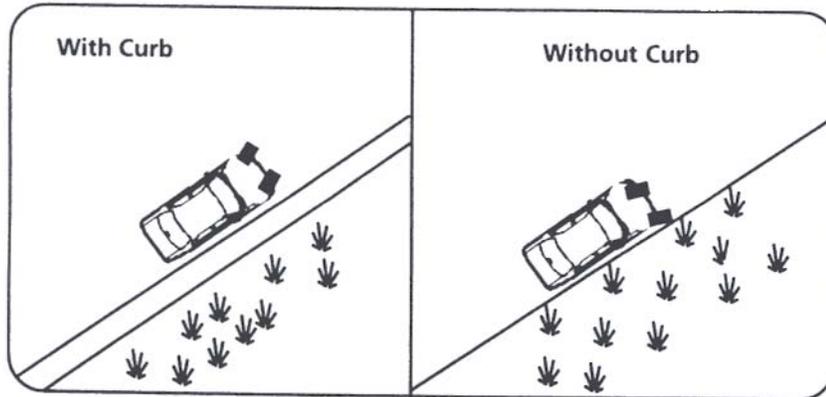
- Uphill parking.
- Downhill parking.
- Reference points.
- Speed control.
- Angle parking.
- Perpendicular parking.
- Space management.

## **BTW Lesson 3 Helpful Hints**

1. Be sure to check your student's understanding of the specific tasks that will be practiced.
2. Preread about the different parking maneuvers and discuss where on your drive route they can be practiced.
3. Review the checklist to evaluate performance on specific tasks.
4. Our parking maneuvers are set up to be used with reference points. Go over the reference points needed for the parking maneuvers.
5. Checking the vehicle's "space" areas is an important step to driving defensively. Continual traffic checks are needed when maneuvering into parking areas.
6. Encourage your student to tell you the procedures involved in these maneuvers. This will help you to determine if she/he is mentally engaged in the driving process.



## Parking Uphill



1. CHECK INTENDED PATH AND TRAFFIC IN THE RIGHT REAR AND REAR AREAS (5 and 6).
2. SIGNAL, CHECK RIGHT REAR AREA (5).
3. MANEUVER TO THE CURB. USE REFERENCE POINTS FOR 3-6". TARGET LANE POSITION 3.
4. STOP AND SHIFT TO NEUTRAL.
5. RELEASE SLIGHT BRAKE PRESSURE AND TURN WHEELS FULL LEFT WITH A CURB AND RIGHT WITHOUT CURB (let vehicle slowly roll until touching curb).
6. SECURE VEHICLE.
7. WHEN LEAVING, CHECK TRAFFIC, SIGNAL CHECK LEFT REAR AREA (4).
8. VISUALLY TARGET AND MOVE INTO TRAFFIC.

# Parking Uphill

## Objective

When directed and with minimal assistance, the student will follow proper procedures and park uphill at least twice.

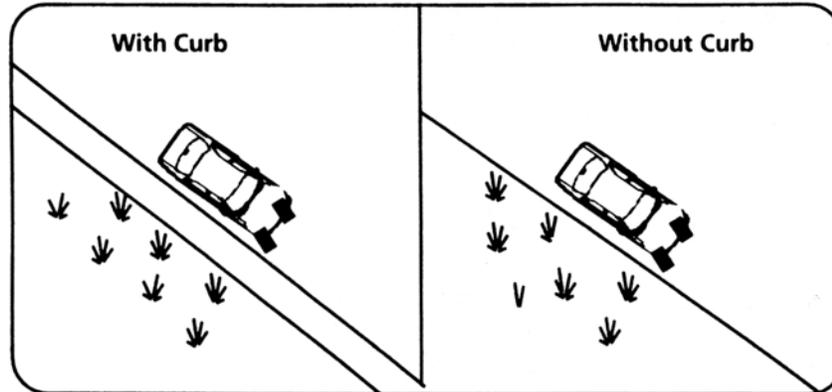
## Driving Environment

- Low-volume residential area.
- Hills progressing from slight to steep inclines.
- Streets with and without curbs.
- Adequate sight distance.
- Three to four blocks of space for repeated practice.

## Common Errors

- Not using reference points properly.
- Forgets to check right rear and left rear areas (4 and 5).
- Improper wheel direction.
- Uses dry steering.
- Speed too fast while backing.
- Fails to shift to neutral.
- Not setting brake before shifting.
- Aiming at curb/poor targeting.

## Parking Downhill



1. CHECK INTENDED PATH AND TRAFFIC IN AREAS 5 AND 6 (right rear and rear) AND TARGET LANE POSITION 3.
2. SIGNAL, CHECK RIGHT REAR AREA (5).
3. USE REFERENCE POINTS FOR 3-6".
4. MOVE TO CURB AND STOP.
5. LET VEHICLE CREEP FORWARD WHILE TURNING WHEELS SHARPLY RIGHT UNTIL TIRE TOUCHES CURB/SHOULDER.
6. SET PARKING BRAKE AND SHIFT TO PARK.
7. WHEN LEAVING, SHIFT TO REVERSE, RELEASE PARK BRAKE, CHECK TRAFFIC, EASE BACK AND STRAIGHTEN WHEELS.
8. SHIFT TO DRIVE, SIGNAL AND CHECK LEFT REAR AREA (4).
9. VISUALLY TARGET AND MOVE INTO TRAFFIC.

# Parking Downhill

## Objective

When directed and with minimal assistance, the student will follow proper procedures and park downhill at least twice.

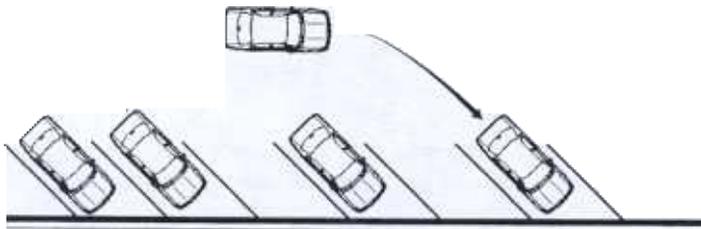
## Driving Environment

- Low-volume residential area.
- Hills progressing from slight to steep declines.
- Streets with and without curbs.
- Adequate sight distance.
- Three to four blocks of space for repeated practice.

## Common Errors

- Not using reference points.
- Failure to check left rear and rear areas (4 and 6).
- Too far from curb.
- Speed too fast.
- Allows right front tire to strike the curb.
- Forgets to shift to reverse for backing.
- Dry steering.
- Not looking back while backing.
- Forget to shift back into drive.
- Aiming at curb/poor targeting.

## Angle Parking—Entering



1. VISUALLY TARGET INTENDED PATH.
2. CHECK REAR AREA (6) FOR TRAFFIC.
3. SIGNAL, MOVE INTO LANE POSITION 2, AND REDUCE SPEED.
4. USE FRONT LIMITATION REFERENCE POINTS, TURN WHEEL QUICKLY, TARGET CENTER OF PATH (refer to diagram).
5. CONTROL SPEED, CHECKING AREAS FOR CLEARANCE.
6. POSITION IN CENTER OF SPACE.
7. STRAIGHTEN WHEELS.
8. STOP THE VEHICLE BY USING REFERENCE POINTS.
9. SECURE VEHICLE.

# Angle Parking—Entering

## Objective

When directed and with minimal assistance, the student will demonstrate proper procedures while entering angle parking twice to the right and twice to the left.

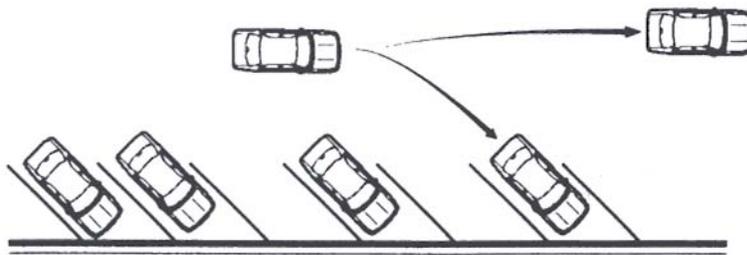
## Driving Environment

- Any off-street marked parking areas.
- Spaces for parking left and right.
- Angle parking spaces in complex urban traffic areas.

## Common Errors

- Failure to signal.
- Not moving to lane position 2.
- Speed too fast.
- Tires strike the curb/bumper over line.
- Not using reference points.
- Not checking left front and right rear areas (2 through 5).
- Poor targeting.
- Not securing vehicle correctly.

## Angle Parking—Leaving



1. CHECK TRAFFIC IN LEFT REAR, RIGHT REAR, AND REAR AREAS (4-5-6).
2. SHIFT TO REVERSE, BACK SLOWLY.
3. RECHECK TRAFFIC.
4. USE REFERENCE POINTS TO DETERMINE WHEN TO STEER (bumpers even).
5. BACK INTO LANE POSITION 1.
6. CHECK AREAS AROUND VEHICLE.
7. CONTINUE LOOKING IN REAR AREA (6) UNTIL STOPPED.
8. SHIFT TO DRIVE, MOVE FORWARD.

# Angle Parking—Leaving

## Objective

When directed and with minimal assistance, the student will demonstrate proper procedures while leaving angle parking twice to the right and twice to the left.

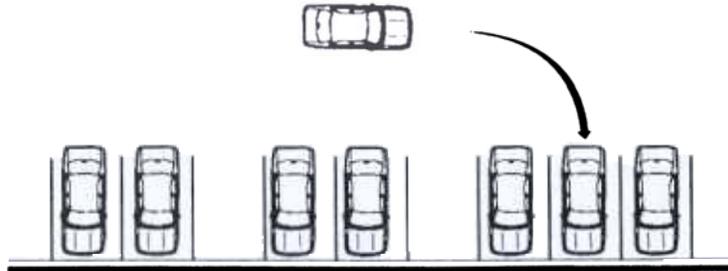
## Driving Environment

- Any off-street marked parking areas.
- Spaces for parking left and right.
- Parking spaces in a complex urban traffic areas.

## Common Errors

- Not checking left front and right rear areas (2 through 5).
- Not looking in rear area (6) while backing.
- Speed too fast.
- Steering errors.
- Not using reference points.
- Only using mirrors while backing.

## Perpendicular Parking—Entering



1. VISUALLY TARGET PARKING SPACE.
2. CHECK TRAFFIC IN REAR AREA (6).
3. MOVE TO LANE POSITION 2.
4. SIGNAL AND USE VISUAL FRONT LIMITATION REFERENCE POINT FOR ENTERING PARKING SPACE.
5. STEER SHARPLY WHILE PROCEEDING SLOWLY.
6. CHECK AREAS FOR CLEARANCE.
7. STRAIGHTEN WHEEL WHEN CENTERED.
8. VISUALLY TARGET AND USE VISUAL REFERENCE FOR FRONT POSITION.
9. SECURE VEHICLE.

# Perpendicular Parking—Entering

## Objective

When directed and with minimal assistance, the student will demonstrate at least two times proper procedures while approaching and entering perpendicular parking spaces from the right and left side.

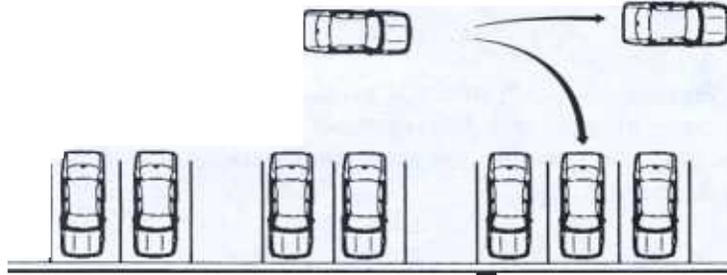
## Driving Environment

- Off-street areas where perpendicular parking spaces are available and marked.
- Space for parking right and left.

## Common Errors

- Failure to signal upon approach.
- Not moving to lane position 2.
- Speed too fast.
- Not steering quickly enough.
- Not using reference points for entering or leaving.
- Not checking areas to front or rear.
- Not targeting.
- Not securing vehicle correctly.

## Perpendicular Parking—Leaving



1. TRAFFIC CHECK IN LEFT REAR, RIGHT REAR, AND REAR AREAS (4-5-6).
2. SHIFT TO REVERSE, BACK SLOWLY.
3. RECHECK TRAFFIC.
4. USE VISUAL REFERENCE FOR TURNING (bumpers even).
5. BACK INTO LANE POSITION 1 WHILE CHECKING AREAS.
6. CHECK REAR AREA (6) UNTIL STOPPED.
7. SHIFT TO DRIVE, MOVE FORWARD.

# Perpendicular Parking—Leaving

## Objective

When directed and with minimal assistance, the student will demonstrate proper procedures at least twice while leaving perpendicular parking spaces both to the right and left.

## Driving Environment

- Off-street areas where perpendicular parking spaces are available and marked.
- Spaces for parking left and right.

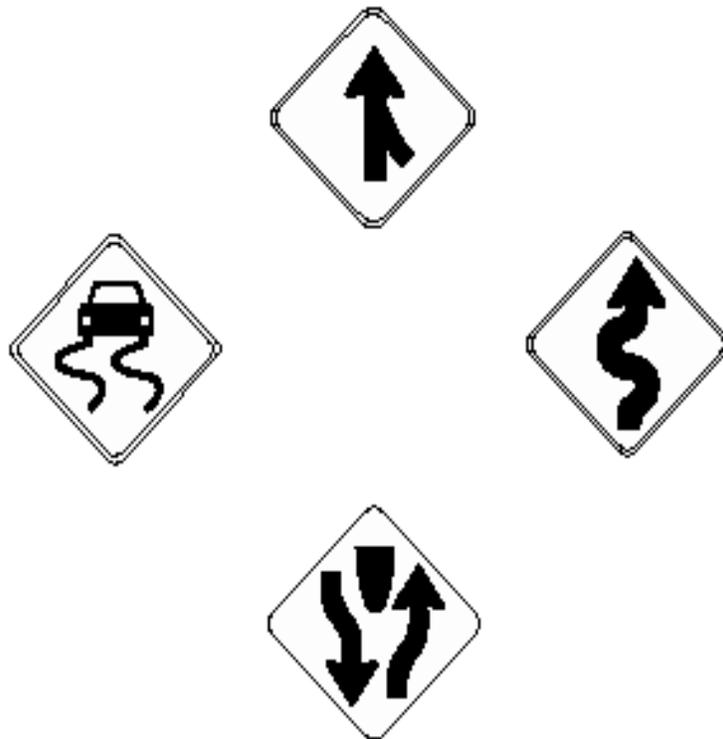
## Common Errors

- Not steering sharply enough.
- Not checking front and rear areas.
- Failure to use reference points for space management.
- Not checking areas for traffic and other vehicles.
- Speed too fast.
- Not looking behind while backing or until stopped.



# BTW Lesson 4

## Basic Control/Traffic Mix



## Introduction to Lesson 4

In this lesson, pick a residential area for your student to practice basic maneuvers, including right-hand and left-hand turns, lane changes, and following time. As your student progresses, you should move from light to moderate traffic areas. Special attention should be given to following time and space management in all traffic environments. Students should use the concept of targeting to identify potential problems that could affect the control of their line-of-sight, path-of-travel (LOS/POT).

Your student will begin the task of practicing parallel parking in Lesson 4. Choose a low-volume parking lot or residential area for this maneuver. Repeat the lesson as many times as it takes for your student to develop smoothness and consistency when doing this parking maneuver.

## BTW Lesson 4 Checklist

Parallel Parking (Entering)	Right/Left Turns
Visual Target Area 6 (rear) _____	Visual Target POT _____
Appropriate Blind Spot Check _____	Check Area 6 (rear) _____
Signal and Check Area 5 _____	Check Areas 4 or 5
Reference Points _____	(left rear or right rear) _____
Stopped Position, Bumpers _____	Lane Position 2 or 3 _____
Area 6 (rear) Check _____	Speed Control _____
Reverse, Back Slowly _____	Visual Scan _____
Steering Control:	Recheck Traffic _____
Right, Straight, Left _____	Steering Control Using Front
Speed Control _____	Limitation Reference Points _____
Center Vehicle _____	Target New POT and Unwind As
	Needed _____
Parallel Parking (Leaving)	Move to Nearest Lane and Move to
Visually Target and Back Up _____	Lane Position 1 _____
Wheels Turned Left _____	
Shift to Drive _____	Lane Changing
Mirror, Area 4 (left rear)	Traffic Check and Targets POT _____
Check _____	Signal and Check Areas 4 or 5 _____
Signal _____	(left rear or right rear)
Check Areas 4 and 5 _____	Target POT _____
(left rear and right rear)	Steering Control to New Lane _____
Arm Signal _____	Proper Lane Position _____
Check Areas 3 and 4 _____	Speed Control _____
(right front and left rear)	
Move Into Traffic _____	Following Time
Target POT _____	Select Spot _____
Move to Lane Position 1 _____	Count From First Vehicle to
	Own Vehicle _____
Scanning Skills	Adjust Speed _____
Target 20-30 Seconds _____	
12-15 Second Minimum _____	
Keep Eyes Moving _____	
Identify Controls, Users, _____	
Conditions _____	
Check Mirrors _____	



# BTW Lesson 4

## **Title: Basic Control/Traffic Mix**

Prerequisites:

**1. Complete BTW Lesson 3**

**2. Classroom:**

Module 3 includes managing intersections, left and right turns, parallel parking, lane changing in a low to moderate traffic flow environment.

**3. Simulation:**

“Search and Identify and Anticipate Hazards”,  
“IPDE Strategy”, “Decide and Act, Backing,  
Turnabouts and Parking.”

Skills to be Practiced:

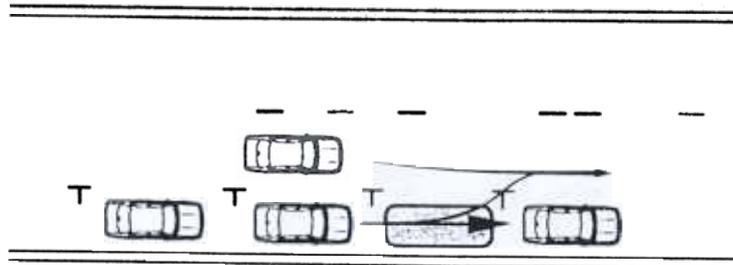
- Parallel parking.
- Reference points.
- POT and LOS.
- Managing space and visibility.
- Changing lanes.
- Following distance.
- Left and right turns.

## BTW Lesson 4 Helpful Hints

1. Choose a driving area that has a low volume of traffic.
2. Left turns will be easier at first because there are less sight restrictions to the left side.
3. Review the checklist to evaluate performance on specific tasks.
4. Continue to practice turns, giving less instruction as the skills enhance.
5. Checking the vehicle's "space" area is an important step to driving defensively. Continual traffic checks are needed when maneuvering into your new travel paths.
6. Encourage your student to tell you the procedures involved in these maneuvers. This will help you to determine if she/he is mentally engaged in the driving process.
7. Work on getting into the correct lane positions when entering and when exiting a turn.
8. Provide opportunity for the use of reference points during the parking process. This will facilitate the learning process if used correctly.



## Parallel Parking—Entering



1. VISUALLY TARGET, SIGNAL FOR A LATERAL MANEUVER TO THE RIGHT, CHECK TRAFFIC IN REAR AREA (6), STOP 2-3 FEET FROM FRONT CAR, LINE UP REAR BUMPERS USING VISUAL REFERENCE.
2. CHECK REAR AREA (6), SHIFT TO REVERSE.
3. BACK SLOWLY, TURN FULL RIGHT.
4. STRAIGHTEN WHEEL USING VISUAL REFERENCES.
5. TURN WHEELS SHARP LEFT AS BUMPERS ARE EVEN.
6. STRAIGHTEN WHEELS WHILE BACKING, VISUAL TARGET REAR AREA (6), LOOKING OVER THE SHOULDER.
7. STOP, SHIFT TO DRIVE, MOVE FORWARD TO CENTER THE CAR.

# Parallel Parking—Entering

## Objective

When directed and with minimal assistance, the student will approach and enter parallel parking spaces at least three times.

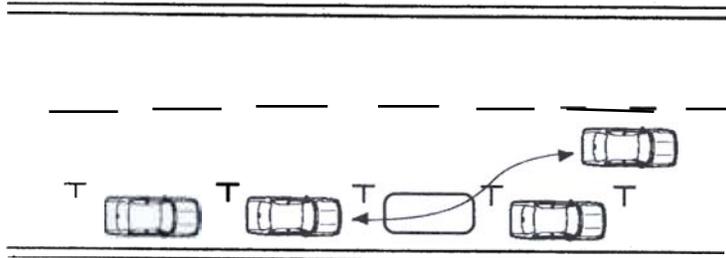
## Driving Environment

- Light and complex city traffic.
- Initial parking can be practiced in a parking lot or a residential low-volume area.

## Common Errors

- Not checking rear area (6).
- Late signaling on approach.
- Not using reference points for judging distance and car placement.
- Speed too fast.
- Not using reference points and/or side mirror.
- Not shifting to “drive” after backing up.
- Not shifting to “reverse” after stopping.
- Not targeting.

## Parallel Parking—Leaving



1. SHIFT TO REVERSE AND TAKE THE BACKING POSITION.
2. VISUALLY TARGET TO THE REAR, BACK SLOWLY, AND STOP USING REFERENCE POINTS (turn wheels to the left before stopping).
3. SHIFT TO DRIVE GEAR.
4. CHECK MIRRORS.
5. SIGNAL AND CHECK RIGHT REAR AREA (5).
6. USE ARM SIGNAL (if signals are blocked).
7. CHECK RIGHT FRONT AND LEFT REAR AREAS (3 and 4).
8. VISUALLY TARGET AND STEER FULL LEFT.
9. STRAIGHTEN WHEELS WHEN THE RIGHT FRONT MIRROR IS EVEN WITH THE BACK BUMPER OF THE FRONT CAR.
10. PROCEED INTO LANE POSITION 1.

# Parallel Parking—Leaving

## Objective

When directed and while following proper procedures, the student will leave parallel parking space at least three times with little or no cues.

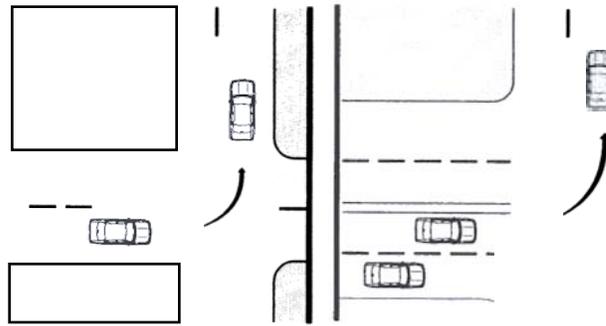
## Driving Environment

- Light to complex city traffic.
- Initial parking can be practiced in a parking lot or a residential low-volume area.

## Common Errors

- Not making area checks.
- Not steering fast enough.
- Failed to shift to “drive” after backing up.
- No arm signal if required.
- Not checking right front and left rear areas (3 and 4).
- Trying to exit without first backing up.

## Left Turns



1. VISUALLY TARGET POT, SIGNAL INTENTION TO TURN.
2. CHECK REAR AREA (6), CHECK LEFT REAR AREA (4).
3. REDUCE SPEED, MOVE TO LANE POSITION 2.
4. SCAN INTERSECTION AND SPEED CONTROL.
5. RECHECK TRAFFIC, GLANCE RIGHT.
6. STEERING CONTROL USING FRONT LIMITATION REFERENCE POINTS.
7. TARGET NEW POT AND UNWIND AS NEEDED.
8. MOVE TO LANE POSITION 1.

# Left Turns

## Objective

As directed and following proper procedures, the student will perform three left turns with minimal assistance.

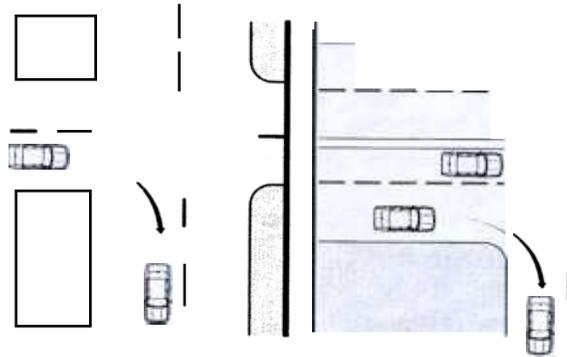
## Driving Environment

- **Low-volume residential area.**
- **Controlled and uncontrolled intersections.**
- **Wide streets—some with pavement markings.**

## Common Errors

- **Speed control.**
- **Improper use of hand-over-hand steering.**
- **Late steering recovery.**
- **Late signal and/or tracking errors.**
- **Confusion regarding right-of-way.**
- **Forgetting to make visual checks.**
- **Improper lane selection.**
- **Turning too early or too late.**
- **Not using turning reference points.**
- **Not targeting.**

## Right Turns



1. VISUALLY TARGET POT, SIGNAL INTENTION TO TURN.
2. CHECK REAR AREA (6), CHECK RIGHT REAR AREA (5).
3. REDUCE SPEED, MOVE TO LANE POSITION 3.
4. SCAN INTERSECTION AND SPEED CONTROL.
5. RECHECK TRAFFIC, GLANCE LEFT AND INTO INTENDED POT.
6. STEERING CONTROL USING FRONT LIMITATION REFERENCE POINTS.
7. TARGET NEW POT AND UNWIND AS NEEDED.
8. MOVE TO LANE POSITION 1.

# Right Turns

## Objective

As directed and following proper procedures, the student will perform three right turns with minimal teacher assistance.

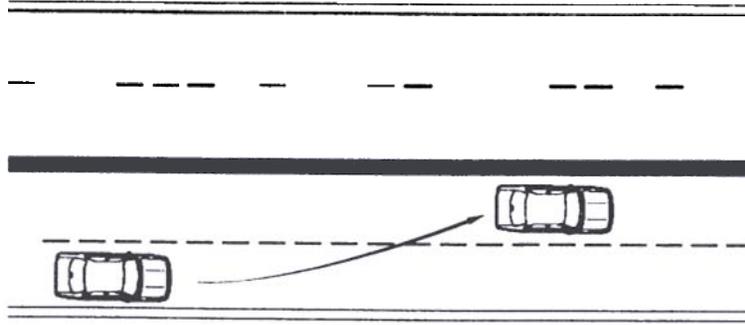
## Driving Environment

- Low-volume residential area.
- Controlled and uncontrolled intersections.
- Wide streets—some with pavement markings.

## Common Errors

- Speed control.
- Improper use of hand-over-hand steering.
- Late steering recovery.
- Late signal and/or tracking errors.
- Not moving to the right side of lane.
- Confusion regarding right-of-way.
- Forgetting to make visual checks.
- Improper lane selection.
- Improper targeting.

## Lane Changing



1. VISUALLY CHECK TRAFFIC AND TARGET POT.
2. SIGNAL AND CHECK LEFT REAR OR RIGHT REAR AREAS (4 or 5).
3. TARGET INTENDED POT.
4. STEERING CONTROL TO NEW LANE.
5. PROPER LANE POSITION.
6. PROPER SPEED CONTROL.

# Lane Changing

## Objective

When directed and following the correct procedures, the student will demonstrate proper space, gap, speed, POT, and communication selection while performing two left and two right lane change maneuvers without cues.

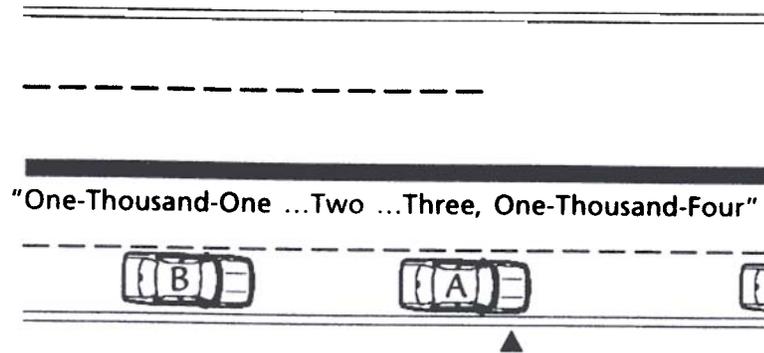
## Driving Environment

- Light to heavy city traffic.
- Multiple lane roads.
- Moderate speed limits.
- Lane markings and traffic-controlled intersections.

## Common Errors

- Not targeting POT.
- Making lane changes in intersections.
- Forgetting to check left rear or right rear areas (4 or 5).
- Turning the wheel while making blind spot checks.
- Too much steering input.
- No adequate gap or space while changing lanes.
- Procedures out of order.
- Not signaling/cancelling signal.
- Unnecessary slowing.
- Not checking mirrors.

## Following Time



1. SELECT FIXED SPOT ON OR NEAR ROADWAY ▲.
2. WHEN FRONT VEHICLE (A) PASSES SPOT, ▲  
COUNT ONE-THOUSAND-ONE, ONE-THOUSAND-TWO, ETC.
3. CAR B SHOULD NOT REACH THE SAME SPOT ▲  
BEFORE 4 SECONDS.
4. IF TOO CLOSE, GRADUALLY REDUCE SPEED.
5. WITH BAD ROAD CONDITIONS, INCREASE TIME TO  
5-6 SECONDS.

# Following Time

## Objective

While driving and with minimal assistance, the student will demonstrate a minimum 4 second following time at 30 mph or less throughout BTW Lessons 3-9.

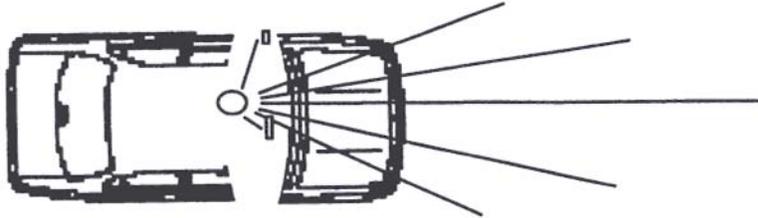
## Driving Environment

- Light to complex city traffic.
- Multiple lane roadways.
- Rural two lane highways/and limited access highways.
- Areas with traffic control devices.

## Common Errors

- Not targeting far enough ahead.
- Counting too fast.
- Not adjusting speed or position to maintain proper following time.

## Scanning Skills



1. VISUALLY TARGET 20-30 SECONDS ON OPEN HIGHWAY.
2. SCAN 12-15 SECONDS AHEAD FOR HAZARDS.
3. VISUALLY SEARCH FROM SIDE TO SIDE, LOOKING FOR HAZARDS THAT COULD AFFECT SPEED OR POSITION.
4. DON'T FIXATE ON OBJECT FOR MORE THAN 2 SECONDS.
5. LOOK FOR HIGHWAY USERS, TRAFFIC CONTROLS, AND ROADWAY CONDITIONS.
6. CHECK THE REAR ZONE (AREA 6) BEFORE SLOWING, STOPPING, TURNING, AND WHEN ENTERING INTERSECTIONS.
7. SCAN EVERY INTERSECTION; LOOK 45½ LEFT, FORWARD, AND 45½ RIGHT (when stopped, look 90½).
8. SCAN INSTRUMENTS AND GAUGES.

# Scanning Skills

## Objective

While driving and with minimal assistance, the student will demonstrate proper visual scanning skills at each on-street lesson.

## Driving Environment

- Residential, low-volume areas to complex city and freeway traffic.
- Rural, two-lane traffic.

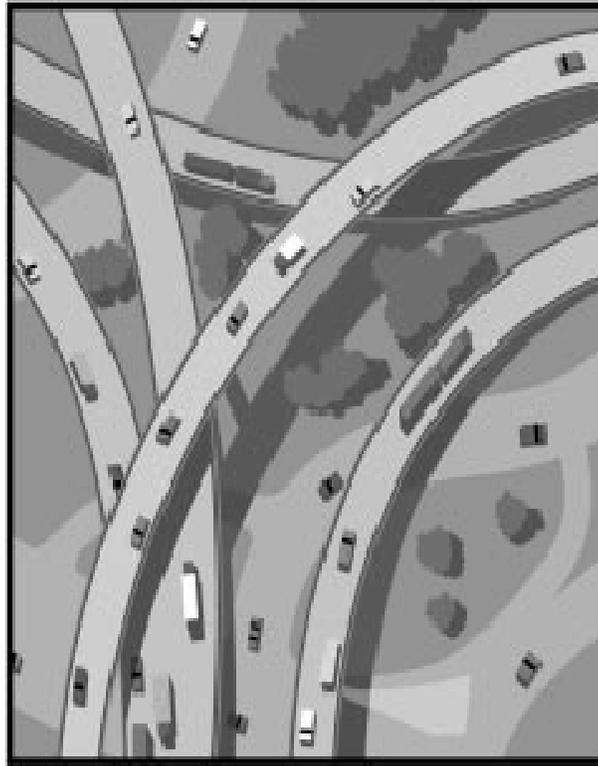
## Common Errors

- Not looking at least one block or 12 seconds ahead.
- Not visually targeting through turns and other basic maneuvers.
- Not checking mirrors when speed or position is to change or has changed.
- Not making occasional checks of the instrument panel.
- Not identifying traffic controls, highway users, and roadway conditions 12-15 seconds ahead.
- Not scanning intersections.
- Fixed stare/tunnel vision.
- Drifting while scanning off target.



# BTW Lesson 5

## Traffic Flow



## Introduction to Lesson 5

Driving situations become more complex in this lesson. This lesson will include rural roadways, passing and being passed, railroad crossings, and curves and hills.

It is important that your student practice lane and speed control when approaching hills, curves, and other situations where hazards need to be identified. Your student should practice passing other cars that are going under the speed limit as well as procedures for being passed. Visual scanning and targeting skills are important on this drive since your student will need to identify open and closed areas and make speed adjustments when needed. Students will need to practice the proper following distance in order to adjust to other vehicles. Other adjustments will be made for weather conditions and traffic control signs.

## BTW Lesson 5 Checklist

- Following Time
  - Select Fixed Object \_\_\_\_\_
  - Count Time From Vehicle \_\_\_\_\_
  - Ahead to Own Vehicle \_\_\_\_\_
  - Adjust Speed \_\_\_\_\_
  
  - Scanning Skills
  - Target 20-30 Seconds \_\_\_\_\_
  - 12-15 Second Minimum \_\_\_\_\_
  - Keep Eyes Moving
  - Identify Traffic Controls,
  - Other Users and
  - Roadway Conditions \_\_\_\_\_
  - Check Mirrors \_\_\_\_\_
  
  - Speed Adjustments
  - Maintain Constant Speed \_\_\_\_\_
  - Adjust to Conditions
  - accelerator use \_\_\_\_\_
  - brake use \_\_\_\_\_
  - Speedometer Checks \_\_\_\_\_
  - Legal Limits \_\_\_\_\_
  
  - Lane Control
  - Proper Hand Position \_\_\_\_\_
  - Visual Target 20-30 Sec \_\_\_\_\_
  - Lead Time Scan 12-15 sec \_\_\_\_\_
  - Gradual Steering \_\_\_\_\_
  - Use of Lane Positions \_\_\_\_\_
  - Adjust as Needed \_\_\_\_\_
- Passing
  - Check Ahead 20-30 Sec. \_\_\_\_\_
  - Check Area 6 (rear) \_\_\_\_\_
  - Signal \_\_\_\_\_
  - Check Area 4 (left rear) \_\_\_\_\_
  - Change Lanes \_\_\_\_\_
  - Cancel Signal, Target \_\_\_\_\_
  - Accelerate \_\_\_\_\_
  - Signal \_\_\_\_\_
  - Check Area 6 (rear)
  - Check (headlights) \_\_\_\_\_
  - Check Area 5 (right rear) \_\_\_\_\_
  - Change Lanes \_\_\_\_\_
  - Cancel Signal, Adjust Speed
  
  - Being Passed
  - Check Ahead (area 1) \_\_\_\_\_
  - Check Areas 6 and 4 (rear and left rear) \_\_\_\_\_
  - Speed Adjustment \_\_\_\_\_
  - Lane Position \_\_\_\_\_
  - Awareness of Conflicts \_\_\_\_\_



# BTW LESSON 5

## **Title:Traffic Flow**

Prerequisites:

**1. Complete BTW Lesson 4.**

**2. Classroom:**

Module 4 includes mixing with traffic on rural roadways, passing and being passed, visual referencing and space management, approaching railroad crossings and curves and hills.

**3. Simulation:**

“Rural Roadways” and “Space Cushions” simulation program. “The Margin of Safety” 16mm film.

Skills to be Practiced:

- Proper following time.
- Visual targeting 20-30 seconds.
- Scanning skills.
- Passing vehicles.
- Being passed.
- Speed and lane positioning.
- Roadside emergency stops.

## BTW 5 Helpful Hints

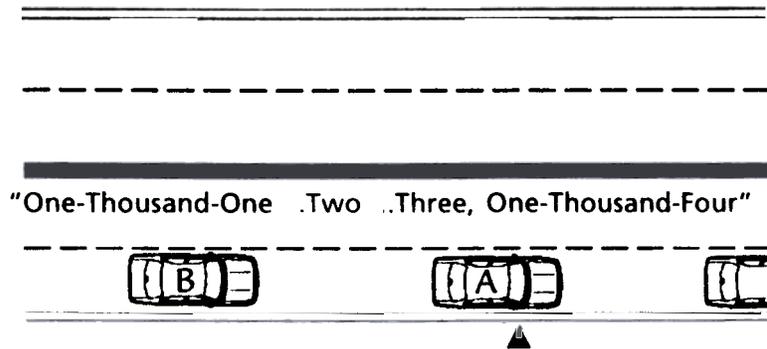
1. Defensive driving is an important part of what we do. But actively seeking out information is of primary importance. Far too often we scan incorrectly the areas near and around travel paths or we fail to see potential problems.

Commentary driving will help the student practice scanning skills while also providing verbal feedback to the parent.

2. Remember that mirrors relay only a small area of information to you. You must check blind spot areas by turning your head and looking.
3. Quiz your student on the following concepts before the lesson and then demonstrate during the lesson: targetting, visual lead time (distance), scanning, blind spot checks, mirror checks, and intersection checks.
4. Continual traffic checks are needed when maneuvering into limited space areas. Monitor the student to ensure the traffic checks are being made.
5. Certain reference points can help when aligning your vehicle at intersections in order to get the best sight line. Review these reference points and vehicle positions.



## Following Time



1. SELECT FIXED SPOT ON OR NEAR ROADWAY ▲
2. WHEN FRONT VEHICLE (A) PASSES SPOT ▲ ,  
COUNT ONE-THOUSAND-ONE, ONE-THOUSAND-  
TWO, ETC.
3. CAR (B) SHOULD NOT REACH THE SAME SPOT ▲  
BEFORE 4 SECONDS.
4. IF TOO CLOSE, GRADUALLY REDUCE SPEED.
5. WITH BAD ROAD CONDITIONS, INCREASE TIME  
TO 5-6 SECONDS.

# Following Time

## Objective

While driving and with minimal assistance, the student will demonstrate a minimum 4 second following time throughout BTW Lessons 3-9.

## Driving Environment

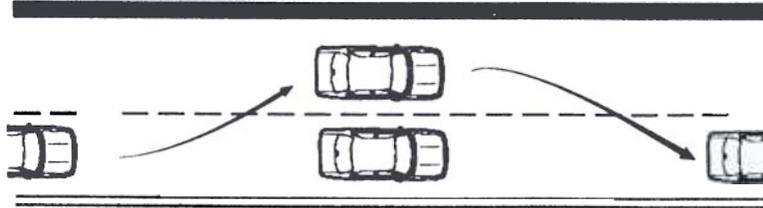
- Light-to-complex city traffic.
- Multiple lane roadways.
- Rural two-lane highways.
- Areas with traffic control devices.

## Common Errors

- Not targeting correctly the intended travel path (12-15 seconds).
- Counting too fast.
- Not adjusting speed or position to maintain proper following time.
- Confusion over when to begin or to finish counting.

# Passing

Is the Pass: SAFE, LEGAL, NECESSARY?



1. DETERMINE IF PASSING IS NECESSARY.
2. LOOK AHEAD 20-30 SECONDS FOR POSSIBLE CONFLICTS.
3. CHECK MIRRORS FOR FOLLOWING VEHICLES (AREA 6).
4. SIGNAL FOR LEFT LANE CHANGE AND BEGIN ACCELERATING.
5. CHECK LEFT REAR AREA (4) FOR OTHER VEHICLES.
6. CHANGE LANES AND REACH "POINT OF DECISION."
7. OVERTAKE VEHICLE 10-15 MPH FASTER THAN VEHICLE BEING PASSED.
8. SIGNAL AND CHECK RIGHT REAR AREA (4), MAKE RIGHT LANE CHANGE WHEN BOTH HEADLIGHTS ARE VISIBLE IN THE REARVIEW MIRROR.
9. CHECK RIGHT REAR AREA (5).
10. CANCEL SIGNAL, RESUME SAFE AND LEGAL SPEED.

# Passing

## Objective

When directed or as the opportunity occurs and with minimal assistance, the student will demonstrate proper procedures while passing another vehicle at least twice.

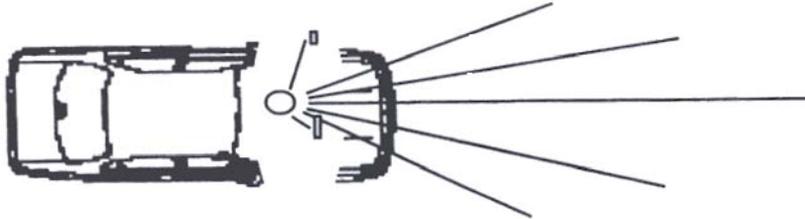
## Driving Environment

- Two-lane rural highway.
- Multiple-lane roads with moderate to high speeds.
- Freeway roads.

## Common Errors

- Not looking 20-30 seconds ahead.
- Speed too slow while passing.
- Forgets to cancel signal after changing lanes.
- Moves back to the right lane before seeing both headlights in the mirror.
- Failure to signal, check mirrors, or make blind spot checks.
- The student does not determine the risk vs. gain.
- The student accelerates too soon before lane changing.
- Infringes upon following time with vehicle being passed.
- Failure to reevaluate passing maneuver at point of decision.
- Failure to return to safe and legal speed.

## Scanning Skills



1. VISUALLY TARGET 20-30 SECONDS AHEAD ON OPEN HIGHWAY.
2. SCAN 12-15 SECONDS AHEAD FOR HAZARDS.
3. VISUALLY SEARCH FROM SIDE TO SIDE, LOOKING FOR HAZARDS THAT COULD ENTER INTENDED PATH OF TRAVEL.
4. DON'T FIXATE ON OBJECTS FOR MORE THAN 2 SECONDS; MAKE A RETURN GLANCE TO PATH-OF-TRAVEL AFTER EVERY VISUAL CHECK.
5. CHECK SPEEDOMETER AND INSTRUMENT PANEL.
6. LOOK FOR OTHER HIGHWAY USERS, TRAFFIC CONTROLS, AND ROADWAY CONDITIONS.
7. LOOK FOR CHANGES IN YOUR LINE-OF-SIGHT AND PATH-OF-TRAVEL (LOS-POT).
8. CHECK MIRRORS BEFORE/AFTER SLOWING, TURNING, AND ENTERING INTERSECTIONS EVERY 5-8 SECONDS AND WHEN A ZONE CHANGE OCCURS.

# Scanning Skills

## Objective

While driving and with minimal assistance, the student will demonstrate proper visual scanning skills throughout each on-street lesson.

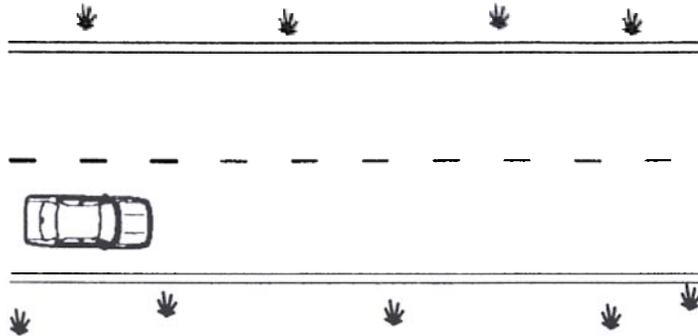
## Driving Environment

- Residential, low-volume areas to complex city and freeway traffic.
- Rural two-lane traffic.

## Common Errors

- Not looking at least one block or 12 seconds ahead.
- Not visually targeting through turns and other basic maneuvers.
- Not checking mirrors when speed or position is to change or has changed.
- Not making occasional checks of the instrument panel.
- Not identifying controls, users, and roadway conditions 12-15 seconds ahead.
- Novice drivers tend to look at items without actually perceiving their importance.
- Fixed stare (tunnel vision).
- Not scanning intersections.

## Speed Control



1. MAINTAIN CONSTANT SPEED WITH OPEN SPACE AREAS AROUND THE VEHICLE.
2. MAKE ACCELERATOR AND BRAKE CHANGES FOR CLOSED OR CHANGING SPACE AREAS.
3. ADJUST SPEED TO THE FLOW OF TRAFFIC AND CONDITIONS.
4. MAKE OCCASIONAL SPEEDOMETER CHECKS.

# Speed Control

## Objective

While driving in light volume to complex traffic, the student will maintain a constant and safe speed according to changing traffic conditions.

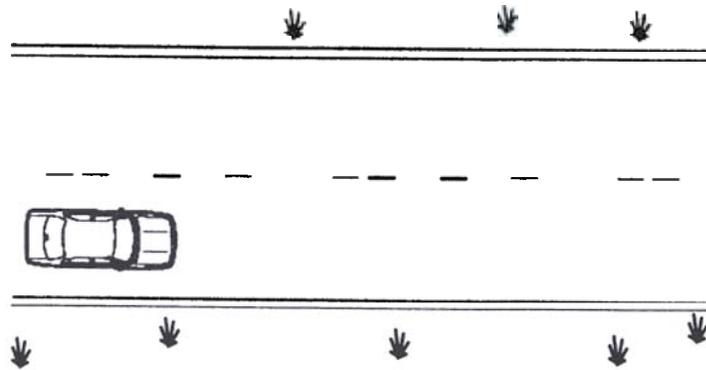
## Driving Environment

- Low-volume residential areas.
- Various road conditions of moderate to heavy traffic.

## Common Errors

- Inconsistent speed.
- Speed too fast.
- Speed too slow.
- Improper foot position on accelerator.
- Staring at speedometer vs. quick glances.
- Failing to adjust speed for hills and curves.

# Lane Control



1. POSITION BOTH HANDS AT 3/9 OR 8/4.
2. VISUALLY TARGET PATH OF TRAVEL 20-30 SECONDS AHEAD (targeting area).
3. KEEP EYES MOVING, SCANNING AND SEARCHING 12-15 SECONDS AHEAD.
4. MAKE GRADUAL STEERING CORRECTIONS.
5. PLACE VEHICLE IN PROPER LANE POSITION BY USING CENTRAL VISION FOR TARGETING AND FRINGE VISION FOR REFERENCE POINTS.

# Lane Control

## Objective

The student will maintain the vehicle in proper lane positions (1 through 5) while driving straight and turning at various types of roadways and intersections.

## Driving Environment

- Low-volume residential areas to complex traffic and multiple lane roads.

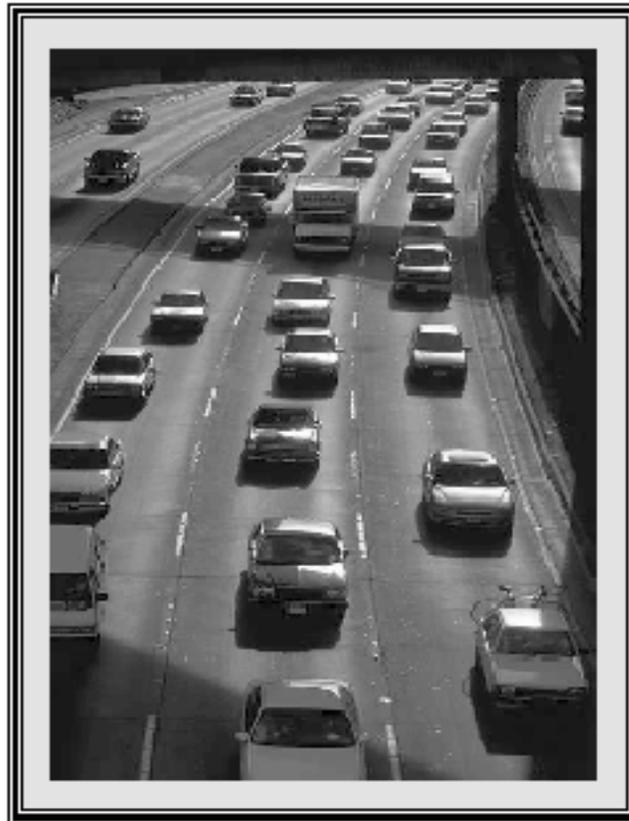
## Common Errors

- Improper hand position on the wheel.
- Not targeting 20-30 seconds ahead and searching 12-15 seconds for traffic conditions.
- Abrupt or repeated steering corrections.
- Over- or understeering actions.
- Incorrect lane positions.
- Tendency to drift while scanning off target.



# BTW Lesson 6

## Traffic Flow/Freeways



## Introduction to Lesson 6

In this lesson, your student will be practicing merging onto and exiting from the freeway; passing and being passed; managing time, space and visibility; and using scanning skills.

Your student should practice entering and exiting on various types of freeway interchanges. The key is to enter the flow of traffic and maintain speed until your student gets off the freeway at the exit ramp.

When driving on the freeway, have your student drive at the speed of the traffic flow. If the traffic flow is going too fast, drive in the right lane to eliminate anxiety.

It is important that your student master the task of entering and exiting the freeway efficiently and comfortably before moving on to lane changing and overtaking on the freeway.

Once you are comfortable with your student's progress entering and exiting the freeway, it is time for your young driver to practice lane changes, passing, and being passed.

Scanning is the key to success in practicing this lesson. Your student will need to be aware of conditions ahead, behind, and beside his/her vehicle at all times.

It is important for your novice driver to scan way ahead (20 to 30 seconds) to be aware of the immediate path of travel his/her vehicle will be occupying.

Make sure your student is continually checking his/her mirrors and blind spot areas. Check behind and beside the driver's vehicle before moving back into the original lane of travel he/she was previously driving in.

Good space management is another essential key. Maintaining a following time of at least 4 seconds is of primary importance at high speed. Attention should also be paid to keeping the side and rear space areas open.

## BTW Lesson 6 Checklist

### **Merging:**

Check Traffic Ahead and Behind \_\_\_\_\_  
Locate Gap \_\_\_\_\_  
Signal \_\_\_\_\_  
Accelerate \_\_\_\_\_  
Recheck Traffic \_\_\_\_\_  
Merge and Adjust Speed \_\_\_\_\_  
Cancel Signal \_\_\_\_\_  
Adjust Speed and Following Time \_\_\_\_\_

### **Lane Changes/Overtaking:**

Traffic Check and Target POT \_\_\_\_\_  
Signal and Check Areas 4 or 5 (left rear or right rear) \_\_\_\_\_  
Target New POT \_\_\_\_\_  
Steering Control to New Lane \_\_\_\_\_  
Proper Lane Position \_\_\_\_\_  
Speed Control \_\_\_\_\_

### **Exiting:**

Select Proper Lane \_\_\_\_\_  
Check Traffic in Area 6 (rear) \_\_\_\_\_  
Signal \_\_\_\_\_  
Check Area 5 (right rear) \_\_\_\_\_  
Move Into Lane \_\_\_\_\_  
Speed Control \_\_\_\_\_  
Cancel Signal \_\_\_\_\_



# BTW Lesson 6

## **Title: Traffic Flow/Freeways**

Prerequisites:

**1. Complete BTW Lesson 5**

**2. Classroom:**

Module 5 relates to high-speed multi-lane merging, lane changing, overtaking, exiting, space management and area control.

**3. Simulation:**

“Limited Access Highway” or other related programs.

This includes the freeway driving “Gaining Expressway

Confidence” 16 mm film.

Skills to be Practiced:

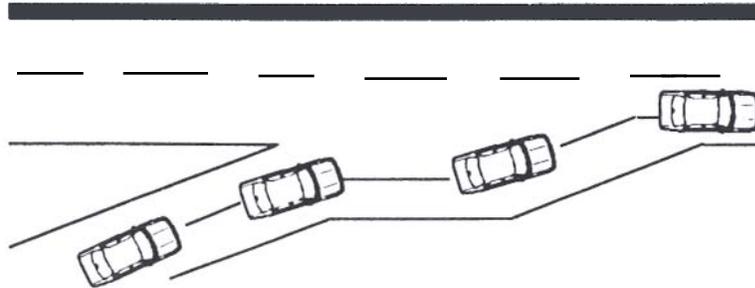
- Merging onto a freeway.
- Exiting from freeway.
- Managing time, space, visibility.
- Passing.
- Being passed.
- Scanning skills.
- Lane control.
- Lane changing.

## BTW Lesson 6 Helpful Hints

1. Check your student's understanding of the specific task that will be practiced. Reference the procedure sheet that accompanies this guide.
2. This practice session will place more responsibility on the student driving with minimal assistance from you.
3. Have predetermined destinations set in advance. Have a plan of various places that you need to go (e.g., grocery store, bank, post office, clothing store). This will require that the driver make decisions regarding the most efficient route to take.
4. You may use the checklist as a guide to evaluate performance.
5. Emphasize positive performances to build confidence.
6. Encourage commentary driving throughout the drive.
7. The student should be asked to demonstrate reference points for vehicle positioning. Also, visual targeting 20-30 seconds in advance and using line of sight and path of travel need to be practiced.
8. Practice sign recognition and navigation skills by directing the student to take you to destinations by following the freeway guide signs. ("Take me north to Seattle ... Now take me south to Portland.")
9. Begin with straight entrance ramps on diamond interchanges and then proceed to more complex interchanges such as cloverleaf/weave lanes.



## Merging Onto Freeway



1. CHECK TRAFFIC AHEAD AND BEHIND.
2. CHECK REAR AND LEFT REAR AREAS (6 and 4).
3. LOCATE GAP AND SIGNAL.
4. ACCELERATE AND RECHECK TRAFFIC.
5. MERGE AND ADJUST SPEED.
6. CANCEL SIGNAL, CHECK REARVIEW MIRROR.
7. TARGET AHEAD, ESTABLISH A PROPER FOLLOWING TIME.

# Merging Onto Freeway

## Objective

When directed and with minimal assistance, the student will perform proper procedures for merging into traffic at least two times.

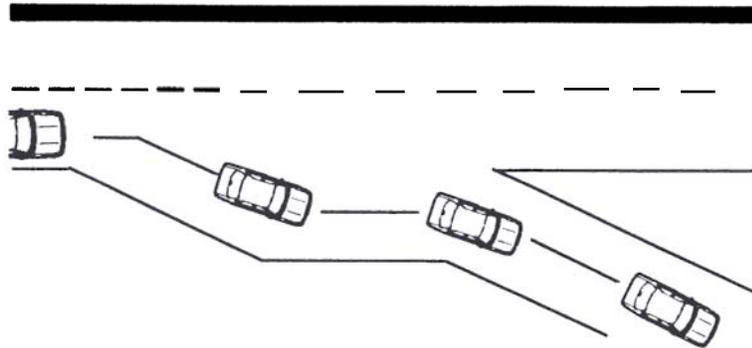
## Driving Environment

- A variety of freeway entrance ramps (diamond, clover-leaf, trumpet, etc.).
- Weave lane entrances.
- Freeway rest areas.

## Common Errors

- Speed too slow.
- Poor judgment of space and gaps in traffic.
- Failure to signal or cancel signal.
- Not performing blind spot checks in right rear area (5).
- Jerky, abrupt, or excessive steering.
- Crossing the solid white line/merging too early.
- Not maintaining awareness ahead and behind while locating a gap.
- Drifting while making visual checks.

## Exiting Freeway



1. VISUALLY TARGET AND SELECT PROPER LANE FOR EXITING.
2. VISUALLY CHECK REAR AREA (6).
3. SIGNAL, CHECK RIGHT REAR AREA (5), AND MOVE INTO DECELERATION LANE.
4. MAINTAIN SPEED UNTIL OFF THE FREEWAY IF THERE IS SUFFICIENT SPACE.
5. REDUCE TO POSTED SPEED AFTER ENTERING DECELERATION LANE/ EXIT RAMP.
6. CANCEL SIGNAL.
7. ADJUST SPEED AND POSITION IN PREPARATION FOR STOPPING AND/OR ENTERING ANOTHER ROADWAY.

# Exiting Freeway

## Objective

When directed and with minimal assistance, the student will perform at least twice, proper procedures for exiting from the freeway.

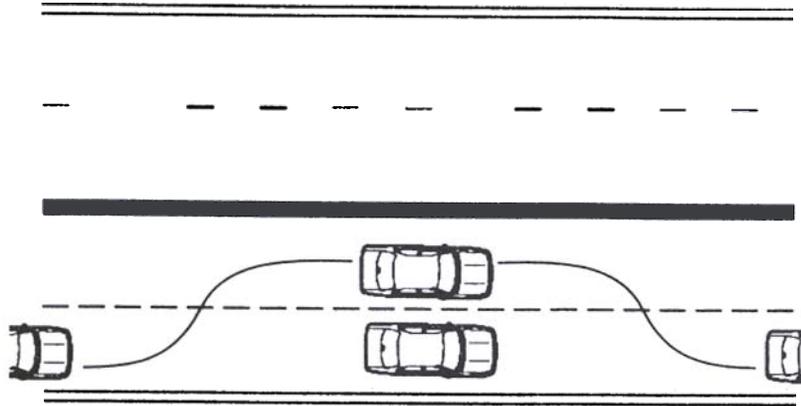
## Driving Environment

- Exit ramps from freeways.

## Common Errors

- Reducing speed too soon.
- Not checking rear and right rear areas (6 and 5).
- Braking on the freeway when not necessary.
- Not visually targeting to identify exit area in advance.
- Velocitation (the sensation that you are going slower than you really are).
- Not checking speedometer.

## Lane Changing/Overtaking



1. CHECK TRAFFIC AHEAD, BEHIND, AND IN THE INTENDED PATH OF TRAVEL.
2. SIGNAL AND CHECK BLIND SPOT IN DIRECTION OF LANE CHANGE.
3. TARGET NEW PATH-OF-TRAVEL.
4. STEER SLIGHTLY TO MOVE INTO NEW LANE WHILE MAINTAINING SPEED.
5. CANCEL SIGNAL.
6. ESTABLISH SAFE LANE POSITION, SPEED, AND FOLLOWING TIME.
7. IF OVERTAKING AND RETURNING TO ORIGINAL LANE, PROCEED AHEAD UNTIL BOTH HEADLIGHTS ARE VISIBLE IN THE REARVIEW MIRROR, THEN:
8. CHECK MIRRORS, SIGNAL AND CHECK BLIND SPOT.

# Passing

## Objective

When directed or as the opportunity occurs and with minimal assistance, the student will demonstrate proper procedures while lane changing or overtaking another vehicle at least three times.

## Driving Environment

- Limited access roadways: freeways, expressways, divided highways.

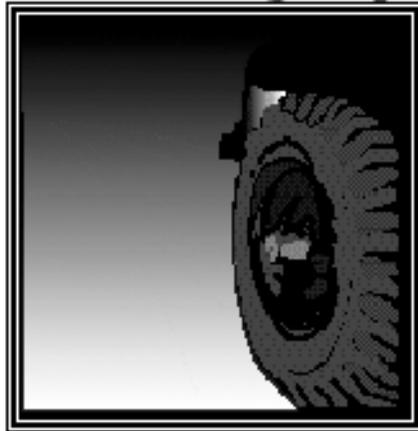
## Common Errors

- Not looking 20-30 seconds ahead.
- Speed too slow while overtaking.
- Forgets to cancel signal after changing lanes.
- Moves back to lane before seeing both headlights in the rearview mirror.
- Failure to make blind spot checks.
- Turning the wheel while making blind spot checks.
- Jerky, abrupt, or excessive steering.
- Not aware of other vehicles moving into the same lane you are in.



# BTW Lesson 7

## Emergency Procedures



## Introduction to Lesson 7

During this lesson, your student will be exposed to several emergency situations that could happen while driving a vehicle. Emergency situations are one of the most difficult lessons for parents to practice with their students and should be practiced in a parking lot or low-volume residential area.

The following emergency situations should be discussed at length along with the actions required to alleviate the situation should it happen: engine failure, headlight failure, brake failure, stuck accelerator, off-road recovery, head-on collision threat, loss of forward vision (hood pops up), threshold braking, and fire under the hood.

### BTW Lesson 7 Checklist

Engine Failure

Shift to Neutral \_\_\_\_\_

Restart Engine \_\_\_\_\_

Shift to Drive \_\_\_\_\_

Visual Check \_\_\_\_\_

Accelerate to Clear Intersection \_\_\_\_\_

If Engine Fails to Start, Steer to Safe Area \_\_\_\_\_

Stop and Secure Car \_\_\_\_\_

Headlight Failure

Press Dimmer Switch \_\_\_\_\_

Turn Indicator \_\_\_\_\_

Hazard Light \_\_\_\_\_

Check Traffic \_\_\_\_\_

Reduce Speed and Use Markings to Guide \_\_\_\_\_

Move Off Road \_\_\_\_\_

Secure Vehicle \_\_\_\_\_

Brake Failure

Pump Brake \_\_\_\_\_

Shift to Lower Gear \_\_\_\_\_

Use Parking Brake Without Locking \_\_\_\_\_

Look for Way Out \_\_\_\_\_

Secure Vehicle \_\_\_\_\_

Stuck Accelerator  
Visually Check Areas 6  
(rear) \_\_\_\_\_  
and 1 (front) \_\_\_\_\_  
Turn Off Ignition \_\_\_\_\_  
Shift to Neutral \_\_\_\_\_  
Visually Targets \_\_\_\_\_  
Reduce Speed \_\_\_\_\_  
Move to Safe Area \_\_\_\_\_  
Secure Vehicle \_\_\_\_\_

Off-Road Recovery  
Steering Control \_\_\_\_\_  
Reduce Speed \_\_\_\_\_  
Slight Brake \_\_\_\_\_  
Straddle Road \_\_\_\_\_  
Select Return \_\_\_\_\_  
Traffic Check  
Area 4 (left rear) \_\_\_\_\_  
Signal \_\_\_\_\_

Sharp Steer Left \_\_\_\_\_  
Countersteer Right \_\_\_\_\_  
Cancel Signal \_\_\_\_\_  
Adjust Speed \_\_\_\_\_

Head-On Collision Threat  
Find Escape Route \_\_\_\_\_  
3-9 Hand Position (gripping  
firmly)  
Steer and Countersteer \_\_\_\_\_  
Reduce Speed \_\_\_\_\_

Loss of Forward Vision  
Look Out Window \_\_\_\_\_  
Look Under Hood \_\_\_\_\_  
Check Traffic Behind \_\_\_\_\_  
Move Off Road \_\_\_\_\_  
Secure Vehicle \_\_\_\_\_  
Emergency Flashers \_\_\_\_\_

Threshold Brake  
Check Areas 6 (rear)  
and 1 (front) \_\_\_\_\_  
Brake Pressure  
to Near Lockup \_\_\_\_\_  
Heel on Floor \_\_\_\_\_  
Modulate Pressure  
With Toes \_\_\_\_\_  
Repeat as Needed \_\_\_\_\_  
Steer to Open Lane \_\_\_\_\_



# BTW Lesson 7

**THIS IS AN OPTIONAL LESSON**

Parent/Guardian May Choose Not to Practice

## **Title: Emergency Procedures**

Prerequisites:

1. **Complete BTW Lesson 8.**
2. Classroom:  
Module 7, vehicle maintenance, avoiding and minimizing impact, and vehicle malfunctioning
3. Simulation:  
“Crash Avoidance II Program” and “Handling Emergencies and Crash Avoidance” 16 mm film.

Skills to be Understood:

- Engine failure.
- Headlight failure.
- Brake failure.
- Stuck accelerator.
- Off-road recovery.
- Tire blow out/flat.
- Threshold braking.
- Activation of ABS.

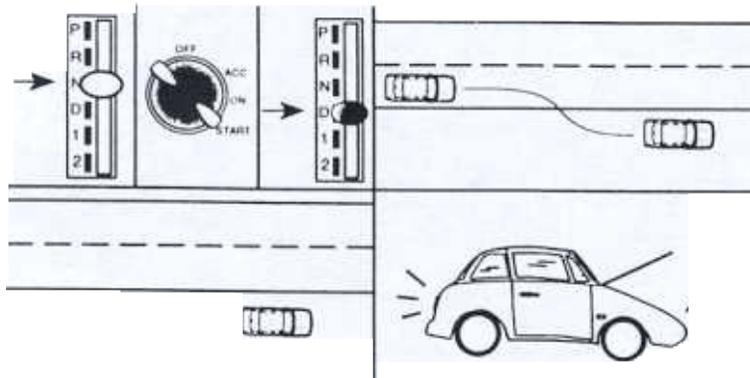
The procedures in this lesson are of a complex nature. To practice these lessons may put the driver, parent, and other vehicle users in a high-risk situation. If you feel that you must practice these, please use an empty parking lot clear of vehicle and pedestrian traffic.

## **BTW 7 Helpful Hints**

1. Choose a practice area that will be out of the way of other vehicles.
2. Go over the procedures before attempting them in the car.
3. Adult passenger should be ready at any time to assist if needed.
4. You may use the checklist as a guide to evaluate performance.
5. Be sure to emphasize positive performances to build confidence.
6. Provide opportunities for the student to practice multiple times to habituate skill.
7. If necessary, the diagrams and procedures could be referenced as clarification. Use them only when the car is stopped in a parked position.
8. Encourage commentary driving throughout the drive.



## Engine Failure



1. SHIFT TO NEUTRAL (AVOID BRAKING).
2. RESTART ENGINE.
3. SHIFT TO DRIVE.
4. MAKE VISUAL CHECKS.
5. ACCELERATE TO CLEAR INTERSECTION.
6. IF ENGINE WILL NOT START, STEER TO SAFE AREA.
7. STOP AND SECURE CAR, THEN TURN ON FLASHERS.

# Engine Failure

## Objective

When directed and with minimal assistance, the student will perform proper procedures for assimilated engine failure at least twice.

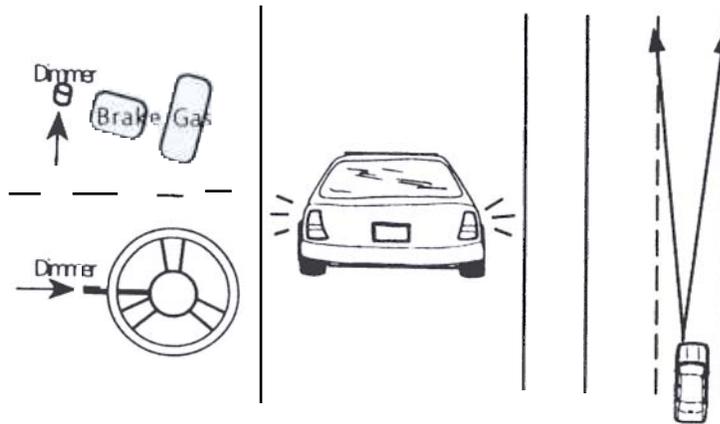
## Driving Environment

- Off-street parking lot.
- Low-volume residential area.
- Conditions of good visibility.

## Common Errors

- Looking down while shifting and restarting.
- Attempting to restart without shifting to neutral.
- Improper hand position while shifting.
- Braking/slowing prematurely.
- Not maintaining steering control.

## Headlight Failure



1. PRESS DIMMER SWITCH FOR DOUBLE CHECK.
2. TURN ON TURN INDICATORS OR HAZARD LIGHTS.
3. RECHECK TRAFFIC AND REDUCE SPEED.
4. USE CENTER OR SIDE-LANE MARKINGS TO STEER OFF ROADWAY TO A STOP.

# Headlight Failure

## Objective

When directed and with minimal assistance, the student will perform proper procedures for a headlight failure at least twice.

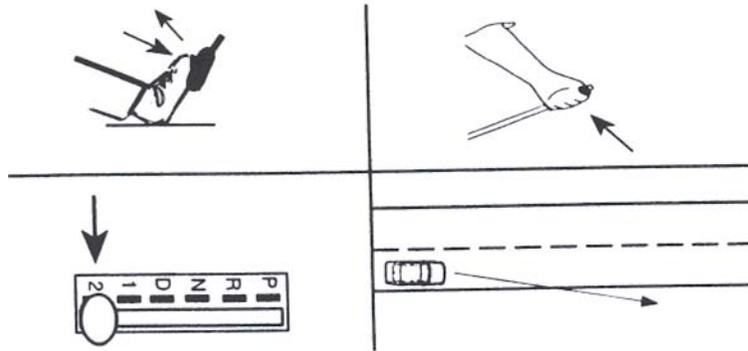
## Driving Environment

- Off-street parking lot.
- Low-volume residential area.
- Night time with conditions of poor visibility.

## Common Errors

- Fails to press dimmer switch.
- Takes eyes off path of travel longer than 1 second.
- Forgets to turn on hazard lights or directional signals.
- Unable to operate dimmer switch, hazard light switch, etc., without looking at them.

## Brake Failure



1. PUMP BRAKE PEDAL RAPIDLY.
2. SHIFT TO LOWEST GEAR POSSIBLE  
(according to speed).
3. APPLY PARKING BRAKE WITHOUT LOCKING.
4. LOOK FOR A SAFE PLACE TO GO.
5. MOVE TO SAFE AREA, STOP AND SECURE CAR.

# Brake Failure

## Objective

When directed and with minimal assistance, the student will perform procedures for a simulated brake failure at least twice.

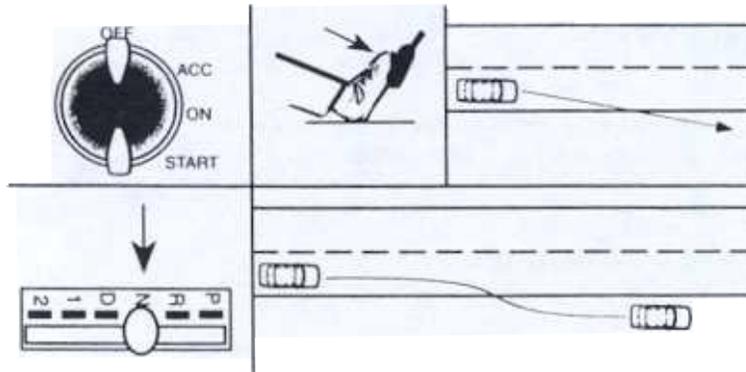
## Driving Environment

- Off-street parking lot.
- Low-volume residential area.

## Common Errors

- Takes eyes off path of travel longer than 1 second.
- Applies brake too fast/hard, locks brake.
- Forgets to shift to a lower gear.
- Fails to apply brake release while activating E-brake.

## Stuck Accelerator



1. CHECK FRONT AND REAR AREAS (1 THROUGH 6).
2. TURN OFF IGNITION AND SHIFT TO NEUTRAL.
3. VISUALLY TARGET OPEN AREA FOR ESCAPE.
4. REDUCE SPEED.
5. MOVE TO SAFE AREA, STOP AND SECURE VEHICLE.

# Stuck Accelerator

## Objective

When directed and with minimal assistance, the student will perform proper procedures for a simulated stuck accelerator at least twice.

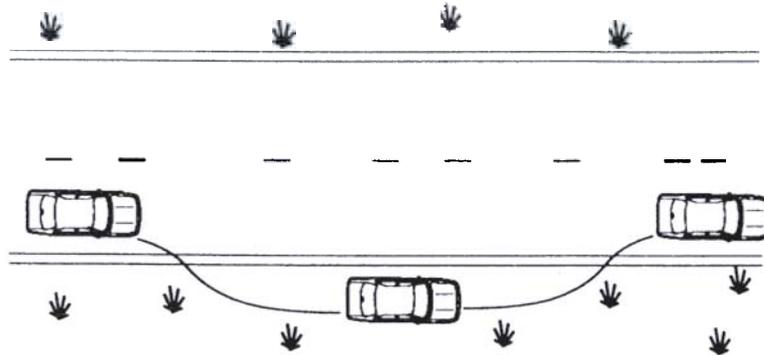
## Driving Environment

- Off-street parking lot.
- Low-volume residential area.

## Common Errors

- Wrong hand position while shifting to neutral.
- Takes eyes off path of travel longer than 1 second.
- Fails to dislodge accelerator pedal.
- Tries to restart engine instead of turning off.
- Fails to check traffic behind.

## Off-Road Recovery



1. HOLD STEERING WHEEL FIRMLY AND STEER STRAIGHT.
2. LET UP ON ACCELERATOR AND BRAKE GENTLY TO 5-10 MPH.
3. POSITION VEHICLE SO IT STRADDLES PAVEMENT EDGE.
4. SELECT LEVEL SPOT FOR RETURN.
5. CHECK LEFT REAR AREA (4).
6. SIGNAL AND STEER SHARPLY TO LEFT.
7. COUNTERSTEER WHEN RIGHT FRONT TIRE TOUCHES PAVEMENT.
8. CANCEL SIGNAL AND MOVE AHEAD.

# Off-Road Recovery

## Objective

When directed and with minimal assistance, the student will perform proper procedures for off-road recovery at least twice.

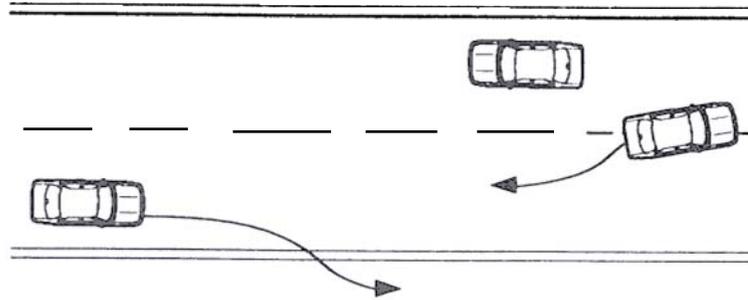
## Driving Environment

- Off-street parking lot with drop off shoulder area.
- Adequate space for recovery without reducing speeds below 25 mph.

## Common Errors

- First reaction is to steer sharp or brake hard.
- Not firm control of steering wheel.
- Braking too hard on loose gravel.
- Not steering sharp left for reentry.
- Late in counter steering.
- Forgets to check traffic prior to reentry.
- Fails to make blind spot check.

## Head-On Collision Threat



1. VISUALLY TARGET OPEN AREA AND FIND ESCAPE.
2. GRIP STEERING WHEEL FIRMLY.
3. USING 3-9 OR 4-8, STEER CAR TO OPEN AREA.
4. COUNTERSTEER AND THEN MOVE WHEEL TO *CENTER STEER*.
5. REDUCE SPEED USING CONTROLLED BRAKING.

# Head-On Collision Threat

## Objective

When directed and without assistance, the student will perform at least three times proper procedures for avoiding a simulated head-on collision threat.

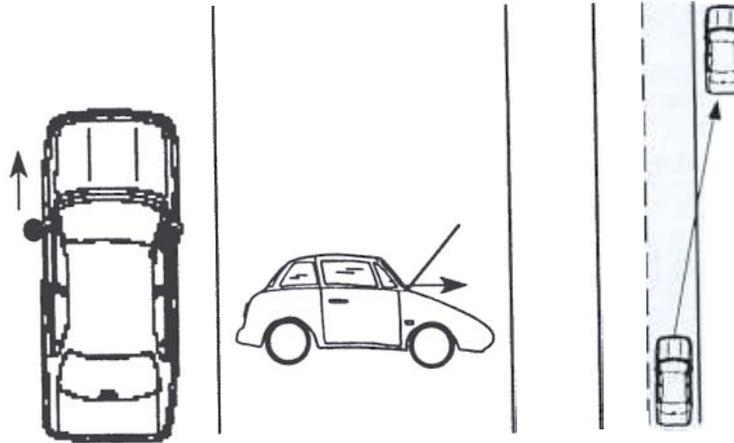
## Driving Environment

- Off-street parking area or driving range at least 200' x 200'.

## Common Errors

- Selects wrong escape path.
- Uses hand-over-hand instead of 3-9 or 4-8 steering.
- Loses grip on steering wheel.
- Takes eyes off path of travel.
- Locks wheels.

## Loss of Forward Vision



1. ROLL DOWN WINDOW LOOKING OUT AND/OR AROUND HOOD.
2. LEAN DOWN LOOKING BETWEEN DASH AND HOOD.
3. VISUALLY TARGET FOR OPEN AREA.
4. CHECK REAR AND RIGHT REAR AREAS (5 and 6), SIGNAL, AND STEER OFF ROADWAY TO OPEN AREA.
5. STOP AND SECURE CAR.

# Loss of Forward Vision

## Objective

When directed and with minimal assistance, the student will perform proper procedures for a simulated loss of forward vision situation at least twice.

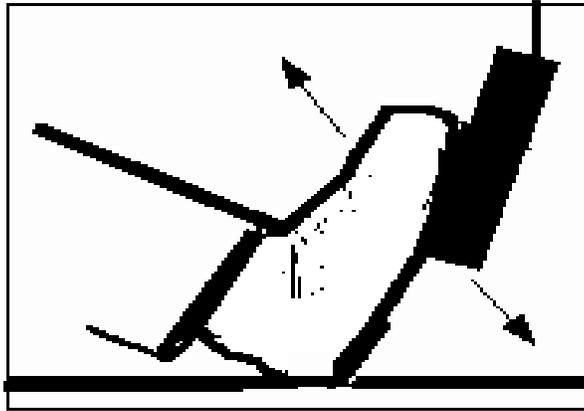
## Driving Environment

- Off-street parking lot.
- Low-volume residential area.
- Good visibility.

## Common Errors

- Loss of steering control while looking between the dash and hood.
- Not anticipating the need for windshield wipers.
- Forgetting to roll down window before attempting to look.

## Threshold Brake



1. CHECK FRONT AND REAR AREAS (1 and 6).
2. WITH HEEL ON FLOOR, APPLY PRESSURE TO NEAR LOCKUP USING TOES.
3. MODULATE PRESSURE WITH TOES UP AND DOWN 1-2 PERCENT AS NEEDED.
4. REPEAT BRAKING AND TOE MODULATION AS NEEDED.
5. STEER TO OPEN AREAS AS NEEDED.

# Threshold Brake

## Objective

When directed, the student will bring the car to a quick stop at least twice while maintaining control using the threshold braking technique.

## Driving Environment

- Residential area.
- Very little traffic.
- Good visibility in the front and rear.

## Common Errors

- Not checking rear area.
- Locking brakes.
- Releasing brake pressure when moderately lifting heel off floor.



# BTW Lesson 8

Destination Drive



## Introduction to Lesson 8

In Lesson 8, your student will be driving to destinations preset by both of you. Your student should be able to demonstrate to you how to navigate through town to certain destinations safely and legally. You may want to make use of a city map first and plan your route. Then, in time, have the student driver plan a route incorporating many of the city's landmarks.

## **BTW Lesson 8 Checklist**

The objective of the destination drive is to have the student perform mental tasks and driving maneuvers as she/he moves from the start to end of a destination. The student will be able to demonstrate her/his ability to make timely decisions and apply safe and best practices in controlling her/himself and the vehicle.

For this reason, the BTW checklist needs to be developed by the teacher/parent to reflect the student's mental and physical skills during this destination drive. Determine a route evaluation that most efficiently allows the student to complete the lesson.

Use the other checklists in this guide as a model when you develop the destination drive checklist.



# BTW Lesson 8

## **Title: Destination Drive**

Prerequisites:

**1. Completed BTW Lessons 1 through 6.**

**2. Classroom:**

Module 6 includes complex traffic, lane changing, lane selection, intersections, following, being followed, merging and entering traffic, parking and maneuvering in limited spaces, destination driving.

**3. Simulation:**

“Destination Driving” and “Dealing With Distractions”  
16 mm film.

Skills to be Practiced:

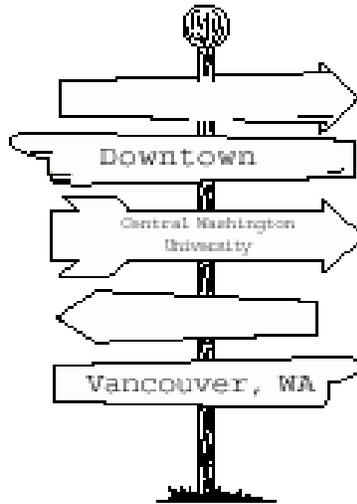
- Destination driving.
- Lane changing.
- Intersections.
- Leaving and entering traffic.
- Following time.
- Commentary driving.
- Space management.
- Parallel parking.
- Reference points.
- Angle parking and perpendicular parking.
- LOS/POT (line-of-sight/path-of-travel).

## BTW 8 Helpful Hints

1. Be sure to check your student's understanding of the specific tasks that will be practiced.
2. This practice session will place more responsibility on your student to drive with minimal verbal assistance from you.
3. Have predetermined destinations set in advance. Plan to go to various places that will require the driver to make decisions regarding the most efficient route to take (e.g., grocery store, bank, post office, clothing store).
4. Use previous checklists as examples to create your own checklist.
5. Emphasize positive performances to build confidence in your student.
6. Provide opportunities for the student to practice basic maneuvers throughout the drive: parallel parking, angle parking, perpendicular parking, hill parking, backing, and turnabouts.
7. If mistakes are made, give assistance but be sure to give the opportunity for more practice.
8. Encourage commentary driving throughout the practice.
9. The student should be asked to demonstrate reference points for vehicle positioning when parking. Visual targeting 20-30 seconds in advance while being aware of line-of-sight/path-of-travel restrictions should be practiced.



## Destination Drive 8



1. PREPARE CAR FOR DEPARTURE.
2. DRIVE TO DESIGNATED DESTINATION USING MOST DIRECT AND EFFICIENT ROUTE.
3. WATCH, EVALUATE, AND ACT FOR REDUCED RISK DRIVING.
4. PERFORM MANEUVERS AS DIRECTED.
5. MANAGE SPACE, TIME, AND VISIBILITY.
6. STOP AND SECURE CAR.
7. ON COMPLETION OF THE DRIVE, SECURE VEHICLE AND REVIEW PERFORMANCE.

# Destination Drive

## Objective

When directed, the student will drive the vehicle to the designated destination while using the WEA process for reduced risk driving.

## Driving Environment

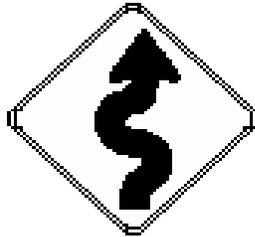
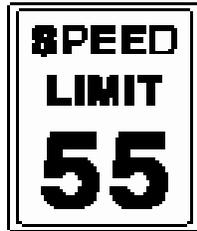
- Light-to-complex city traffic.
- Controlled and uncontrolled intersections.
- One-way streets.
- Areas for various parking maneuvers.
- Various destinations as planned.

## Common Errors

- Knowledge of most efficient route.
- Location of planned destination.
- Not using reference points for parking.
- Not following learned procedures.



## BTW Evaluation



Remember, the road test is a culmination review and analysis of what your student has learned while driving behind the wheel. The teaching of behind-the-wheel procedures and skills should cover much more information than what can be included on an evaluation test.

## Evaluation: Road Test

On the next few pages are examples of road tests. Some are familiar and others may be new to you. Choose one of the score sheets and review what will be assessed. Upon completion of the test discuss the student's performance and provide feedback when needed. Retake the test using a different format. The practice will lessen anxiety and help prepare for the test administered by the Department of Licensing (DOL).

1. Select a route that includes all of the tasks on the score sheet. Check with the TSE teacher for suggestions on a possible route.
2. Review the purpose of this drive. The student will be given the opportunity to perform tasks that will be similar to those required for the DOL exam.
3. Tell the student that he/she is to drive straight unless given the direction to turn.
4. The student should be informed that you are there to evaluate and not teach. Any task that is not performed correctly will be reviewed at the end of the drive. Time should be provided later for additional practice if needed.
5. Direct the student to prepare for the drive.
6. Direct the student to drive along the selected route. Evaluate the performance using a score sheet or one provided by the TSE teacher.
7. Be prepared to prompt or provide assistance if there is a hazard that is creating risk and the driver is not aware of it. But try to minimize the prompts and only use if necessary. Comments on good performance may help if the student seems to be nervous.
8. Upon completion of the route, the car should be returned to the starting point where a review of the test can take place. Review the tasks that were not performed well and that need more practice.
9. Tally up points to determine the score.

# Road Test

## **Title: Road Test**

Prerequisites:

1. Completion of all modules and drive lessons.
2. Classroom:  
Module 8 and successful completion of all in-car drives 1-8 as taught by the TSE teacher.
3. Simulation:  
“Crash Avoidance II.”

Skills to be Evaluated:

- Destination driving.
- Lane changing.
- Intersections.
- Leaving and entering traffic.
- Following time.
- Commentary driving.
- Space management.
- Parallel parking.
- Reference points.
- Angle parking.
- LOS/POT.

# Road Test Score Sheet 1

(guides refer to literature by Frederik Mottola)

3 POINTS EACH

SCORE \_\_\_\_\_

\_\_\_ Basic Skill Technique (guide 3) \_\_\_\_\_  
\_\_\_ Accelerating \_\_\_ Braking \_\_\_ Steering \_\_\_ Shifting

\_\_\_ Reference Point Usage (guide 5)  
\_\_\_ Targets \_\_\_ Target Area \_\_\_ Targeting Path (guide 9)  
\_\_\_ Target Area to Target Area Searching (guide 12)  
\_\_\_ LOS/POT detection (12 seconds, or more, ahead) (guide 14)  
\_\_\_ Identifying Open/Closed Zones (guide 14)  
\_\_\_ Searching Intersections (left, front, right zones) (guide 17)  
\_\_\_ Searching Into Curves and Over Hills (guide 25)  
\_\_\_ Lane Position Usage (guide 21)  
\_\_\_ Straight - with left and right zone changes  
\_\_\_ Curves - approach, apex, exit positions  
\_\_\_ Rear Zone Control (unstable, closed, open) (guide 18)  
\_\_\_ Inside mirror (moving, stops, turns)  
\_\_\_ Outside mirrors \_\_\_ convex mirrors (danger zone)  
\_\_\_ Over the shoulder checks \_\_\_ tailgater \_\_\_ pacer \_\_\_ charger  
\_\_\_ Following Time/Space (guide 26)  
\_\_\_ Closure rate on approach \_\_\_ moving at same speed  
\_\_\_ When stopped, see tires \_\_\_ before moving delay 2 seconds  
\_\_\_ Communication and Courtesy (guide 16)  
\_\_\_ Timing \_\_\_ Technique \_\_\_ Commitment

-----

\_\_\_ A--Alert Switch  
\_\_\_ B--Before Acting Check Other Zones  
\_\_\_ C--Create Time/Space Management  
\_\_\_ Commentary Driving  
\_\_\_ Start with OK speeds and position \_\_\_ LOS/POT zone change  
\_\_\_ Say and use ABCs to Zone Control  
\_\_\_ Repeat Process

## Road Test Score Sheet 2

STARTING	4	LANE TRAVEL	4
Danger Potential		Danger Potential	
STOP SIGNS/TRAFFIC LIGHTS	4	Congestion Potential	2
Danger Potential		FOLLOWING	4
Congestion Potential	2	Danger Potential	
BACKING	4	Congestion Potential	2
Danger Potential		PASSING	4
Lack of Skill	2	Danger Potential	
PARALLEL PARKING	4	Congestion Potential	2
Danger Potential		RIGHT OF WAY	4
Congestion Potential	2	Danger Potential	
Lack of Skill	2	Congestion Potential	2
PARK/START ON HILL	4	LEFT TURNS	6
Danger Potential		Danger Potential	
Congestion Potential	2	Congestion Potential	3
Lack of Skill	2	Lack of Skill	3
TRAFFIC CONTROL DEVICES	4	RIGHT TURNS	6
Danger Potential		Danger Potential	
Congestion Potential	2	Congestion Potential	3
TRAFFIC SIGNAL LIGHTS	4	Lack of Skill	3
Danger Potential		GENERAL DRIVING	4
Congestion Potential	2	PERFORMANCE	
MECHANICAL OPERATION	4	Danger Potential	
Danger Potential		Congestion Potential	2
Lack of Skill	2		

REASON FOR DISQUALIFICATION:

VIOLATION

STUDENT

ACCIDENT

PARENT/GUARDIAN

COMMENTS:

Add up all points missed and subtract from 100.

Score 1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

Areas of needed practice \_\_\_\_\_

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## Road Test Score Sheet 3

1. \_\_\_\_\_ GET DRIVER-VEHICLE READINESS.
2. \_\_\_\_\_ MAKE SMOOTH, GRADUAL STOPS.
3. \_\_\_\_\_ USE REFERENCE POINTS TO KNOW EXACTLY WHERE YOUR CAR IS POSITIONED.
4. \_\_\_\_\_ BEFORE PUTTING YOUR FOOT ON THE GAS PEDAL, SEE THAT THE TARGETING PATH IS CLEAR.
5. \_\_\_\_\_ VISUALIZE WHERE THE VEHICLE WILL BE 12-15 SECONDS BEFORE IT ARRIVES THERE.
6. \_\_\_\_\_ BECOME ALERTED TO CHANGES TO LOS/POT.
7. \_\_\_\_\_ WHEN YOUR LOS/POT BECOMES RESTRICTED, REDUCE YOUR SPEED.
8. \_\_\_\_\_ GET DRIVER-VEHICLE READY.
9. \_\_\_\_\_ ADJUST SPEED AND POSITION TO KEEP EMPTY SPACE TO THE SIDE.
10. \_\_\_\_\_ BEFORE ENTERING ANY INTERSECTION, CHECK THAT THE LEFT, FRONT, AND RIGHT ZONES ARE CLEAR.
11. \_\_\_\_\_ WHEN YOUR FOOT GOES ON THE BRAKE, CHECK THE REARVIEW MIRROR.
12. \_\_\_\_\_ BEFORE MOVING YOUR VEHICLE TO EITHER SIDE, CHECK YOUR BLIND SPOTS.
13. \_\_\_\_\_ KEEP 4 SECONDS OF FOLLOWING TIME FROM THE FRONT VEHICLE
14. \_\_\_\_\_ WHEN STOPPED BEHIND A VEHICLE, SEE ITS REAR TIRES TOUCHING THE ROAD.
15. \_\_\_\_\_ REDUCE STRESS BY BEING COURTEOUS WHILE DRIVING, RATHER THAN COMPETITIVE.

# Road Test Score Sheet 4

(guides refer to literature by Frederik Mottola) SCORE \_\_\_\_\_

\_\_\_ Precision Turns (guide 6)

\_\_\_ side position      \_\_\_ searching intersection  
\_\_\_ forward position      \_\_\_ looking into turns

\_\_\_ Approach to Intersections (guide 17)

\_\_\_ see open/closed zones      \_\_\_ check rear zones  
\_\_\_ searching left, front, right \_\_\_ lane position/speed control  
\_\_\_ staggered, legal safety stop

\_\_\_ Timing Arrival for Open Zones (guide 20, 28)

\_\_\_ traffic lights    \_\_\_ stopped traffic    \_\_\_ side zones

\_\_\_ Left Turn at Green Lights (guide 20)

\_\_\_ rear      \_\_\_ gap      \_\_\_ path \_\_\_ light

\_\_\_ Precision Lane Change (guide 22)

\_\_\_ evaluate zones and blind spots \_\_\_ move to lp2 or lp3\*  
\_\_\_ make final blind spot check \_\_\_ enter new lane in lp2 or lp3

\_\_\_ Approach to Curves (guide 25)

\_\_\_ see curve in target area      \_\_\_ left curve: lp3, lp1, lp1\*  
\_\_\_ check all zones for los/pots \_\_\_ identify types  
of tailgaters

\_\_\_ Getting On/Off Highways (guide 34)

\_\_\_ slowest speed on entrance ramp  
\_\_\_ evaluate gap to enter highway  
\_\_\_ effective speed on acceleration lane  
\_\_\_ getting off: plan ahead, test brakes

\_\_\_ Perpendicular Parking (guide 23)

\_\_\_ side position \_\_\_ forward position  
\_\_\_ 45 degree target, go forward  
\_\_\_ evaluate alignment to space  
\_\_\_ back to pivot point, turn wheel

\_\_\_ Hill Stops and Starts (guide 23)

\_\_\_ Parallel Parking (guide 29)

\* lp refers to lane position.









# Glossary

#### Act

The last step of the WEA system of driving that occurs as the driver makes lane position, speed control, and communication adjustments.

#### Angle parking

Process of using reference points to position a vehicle diagonally to the curb with the bumper 0-3 inches from the curb.

#### Anti-lock brakes

A braking system that allows for steering and braking without losing vehicle balance.

#### Commentary driving

Using two or three words, the student verbally identifies other highway users, road conditions, and traffic controls that could affect speed or position in the projected path of travel at least one block ahead in the city or 12-15 seconds on the highway.

#### Controlled braking

A technique for applying brake pressure to slow or stop the vehicle without locking the wheels.

#### Covering the brake

Putting the foot just above the brake pedal, ready to apply pressure if needed.

#### Decide

The third step of the IPDE process in which the driver selects the best action(s) as well as when and where to take them to avoid conflicts and reduce risk.

#### Destination driving

The process of giving the student a specific location he/she will drive to, without assistance, using the most direct, efficient, and safe route.

#### Dry steering

Turning the steering wheel without moving the vehicle. Prematurely wears out steering, front suspension, and tires.

#### Evaluate

To examine and judge carefully: the second step in the WEA system in which drivers evaluate options before acting.

#### Evasive or bump-to-bump steering

Emergency steering technique used to quickly steer around an object in your path. Without removing hands from the steering wheel, turn the wheel so that the wrists touch each other, then turn the wheel in the opposite direction until the wrists touch again. Return the wheel to center position.

#### Execute

The fourth step of the IPDE process in which a driver performs proper vehicle control responses by steering, making speed adjustments, etc.

#### Following time

Time recommended to follow another vehicle in the intended path of travel. Pick out an object near the road surface. When the vehicle ahead passes that object, start counting "one thousand-one," "one thousand-two," etc., until the front of your car reaches that point. For speeds under 30 mph, the minimum time with good road conditions is 2 seconds. For speeds above 30 mph, maintain 4 seconds (more for adverse conditions) of following time.

#### Hand-over-hand steering

Method of turning the steering wheel in which one hand crosses over the other as each releases to provide smooth, consistent steering wheel movement.

#### Hand position

Placement of the hands at 9 and 3 (or 8 and 4) o'clock for best balance.

#### Identify

The first step of the process in which a driver looks for real or potential hazards that could affect speed or position.

#### IPDE

A process of space management using the steps of identifying, predicting, deciding, and executing.

#### Lane change

Moving the vehicle from one lane to another using proper space management procedures.

#### Lane position

Five lane positions are pictured on page 218. The three main positions are lane position 1 (center of lane), lane position 2 (left side [3-6]), and lane position 3 (right side [3-6]).

#### Limited use

Determining the use and restricted use of the family vehicle for the novice driver. Usually involves a written contract to be signed by both student and parent.

#### Loose articles

Items in the car that could become flying objects in a collision if hard braking (threshold) is required to avoid a collision.

#### LOS

Line-of-sight. The distance you can see ahead in the direction you are looking.

#### Parallel parking

Parking where the vehicle lines up parallel or going the same direction as the curb. When parallel parking, the vehicle must be within 12 inches of the curb.

#### Perpendicular parking

Parking the vehicle at a right angle (to a curb or parking stripe) using visual reference points for entering and leaving.

#### Predict

The second step of the IPDE process in which the driver, after identifying a hazard, predicts what might happen.

#### Pump brake

A rapid up and down movement of the brake pedal for use only if the brake system has failed (to regain brake pressure, not a braking technique).

#### Point of decision

The driver of the passing vehicle has entered the passing lane and is in the left rear zone of the vehicle being passed. At this point the driver of the passing vehicle has better visibility and has time to reevaluate and make a decision whether to complete the pass or abort it.

#### POT

Path-of-travel. The space your vehicle occupies as you travel.

#### Reference points

Positions (points of reference) of the vehicle that assist the driver in determining when to start turning, vehicle limitations, or where the vehicle is actually located.

#### Search/Scan

Keep the eyes moving from 12-15 seconds in target area to side to side, rearview mirror and the instrument panel, to the target area.

#### Slide-hand/push-pull steering

Turning the steering wheel with a sliding hand movement. Provides best control since the hands do not have to leave the wheel and the arms are not crossed.

#### Space

Area around the vehicle.

#### Space areas

Designated numbered positions around the car that identify relationships to the environment or objects. See diagram on page 206.

#### Staggered stop

Stopping when the white line disappears visually under the hood. This allows extra space for left-turning vehicles.

#### Stopping position

Stopping behind a vehicle in a position that allows you to see its rear tires touching the pavement

#### Threshold braking

Moving the right foot from the accelerator in order to brake as rapidly as possible and then squeeze the brake without having the tires skid.

#### Thrust acceleration

To quickly push down on the accelerator pedal to increase speed to avoid a collision. Used instead of braking or steering.

#### Trail braking

Slight braking pressure that does not change the speed, but maintains balance and control while turning.

#### Turnabouts

The process of turning into or out of an alley or driveway using reference points for best positioning.

#### Watching

The first step of WEA system of space management that allows a driver to look for high-risk situations and gain information.

#### WEA

A space management system which includes the process steps of watching, evaluating, acting.





# Diagrams

These pages of diagrams include information on technological changes, vehicle engineering, current research information, and new and less well-known techniques and strategies. The engineering advancements that have taken place in recent years are described and shown with the rationale of why they are mentioned and taught. If you have questions, please feel free to ask your TSE teacher.

## Air Bags and Seat Placement



With the advent of the air bag and its deployment at about 200 mph, it is imperative that the driver and passenger be at least 11 to 12 inches away from the steering wheel or dashboard.

Remember that your seat has adjustments for the seat movement and the back placement and many steering wheels come with a tilt option. For those who have difficulty in reaching the pedals, extensions are available for better foot placement and control.

## Air Bags and Steering Wheels

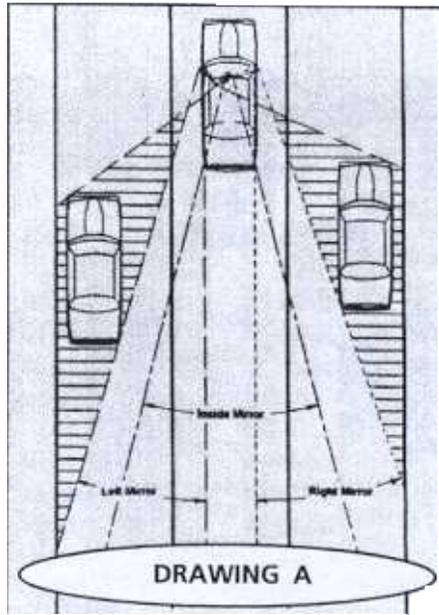
With the development of the air bag, much has changed in how we think of safety in automobiles. This safety device must be approached with knowledge and respect.

Consider our hand placement on the steering wheel. "10 and 2" is no longer the standard operating procedure. Air bags deploy at around 200 mph. Anything in the way of the deploying bag will be propelled, injured, or broken. The air bag is used to soften the ride-down effect of the body before it comes to a stop. If hands and arms are covering the steering wheel at the time of deployment, the chances are you will be injured.

The alternative is to train yourself to grasp the steering wheel between "9 and 3" and "8 and 4," with the thumbs lightly resting on the face or side of the steering wheel.



## Outside Mirror Placement

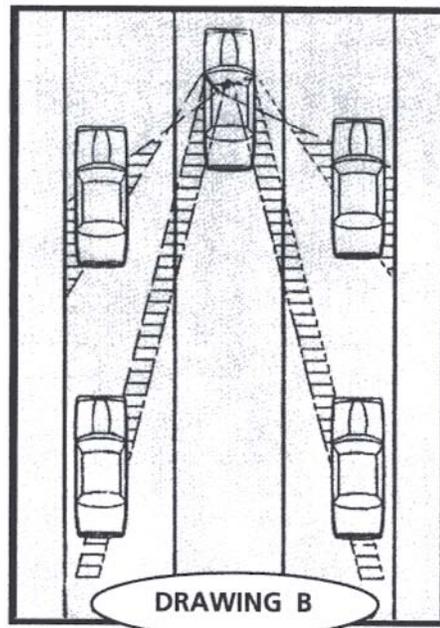


Drawing A shows the field of vision of both the inside and outside mirrors. Notice that the blind zones to the left and right are able to conceal a vehicle which counts for the high number of lane change/merge crashes.

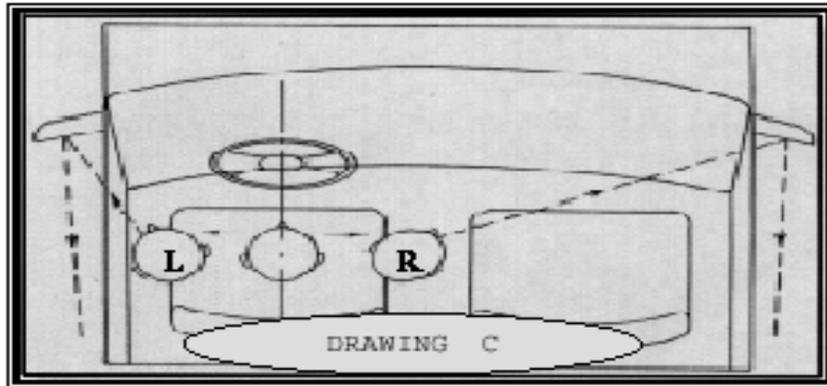
## New "BGE" Mirror Placement

Drawing B shows the blind zones greatly reduced to the left and the right and provides the driver with an enhanced mirror view, thus nearly eliminating the blind spots.

This setting of the mirrors is called the "blind zone/glare eliminating setting (BGE).



## The New BGE Setting



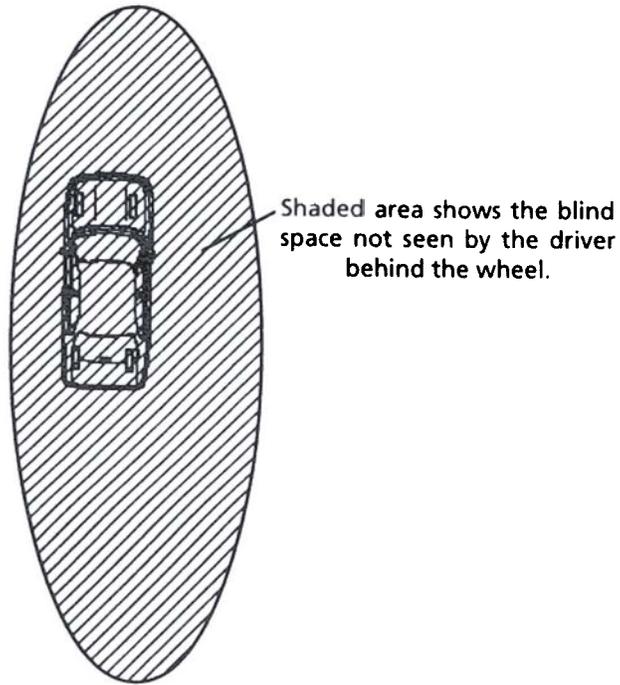
The new BGE setting requires you to widen your usual mirror placement about 15 degrees. This setting not only lessens your blind spot area and lets you see more with your mirrors, but also eliminates the night glare of the headlights of the vehicle following you.

To set the outside left mirror to the new BGE setting, simply place your head against the side window as seen in Drawing C. Then set the mirror to see the side of the car as you would normally see it. To set the outside right mirror, position your head in the middle of the car and adjust the right mirror as you normally would see it.

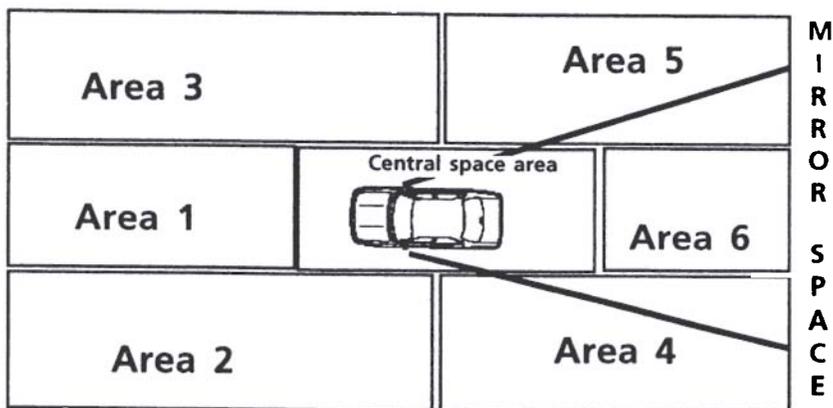
It will take time to overcome your previous habits and accept the new way, but it will happen. Perseverance will reward you with a new dimension in driving which will enhance your safety and comfort.

Adapted from *A Simple Way To Prevent Blind Zone Accidents*, George Platzer, consulting engineer and SAE member.

## Vehicle Operating Space and the Car's "Footprint"

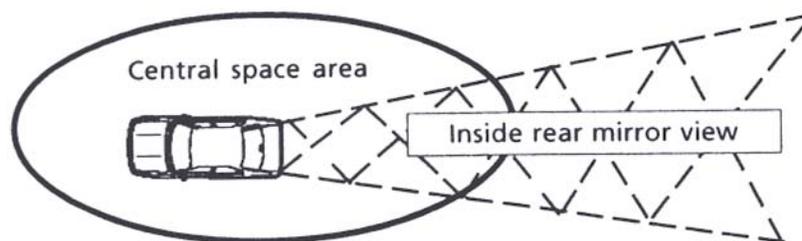
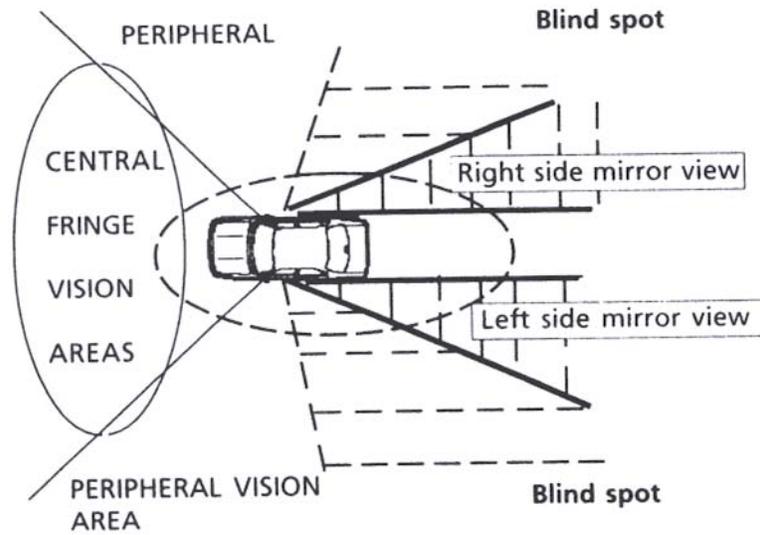


## SPACE AREAS



# Vision and Scanning

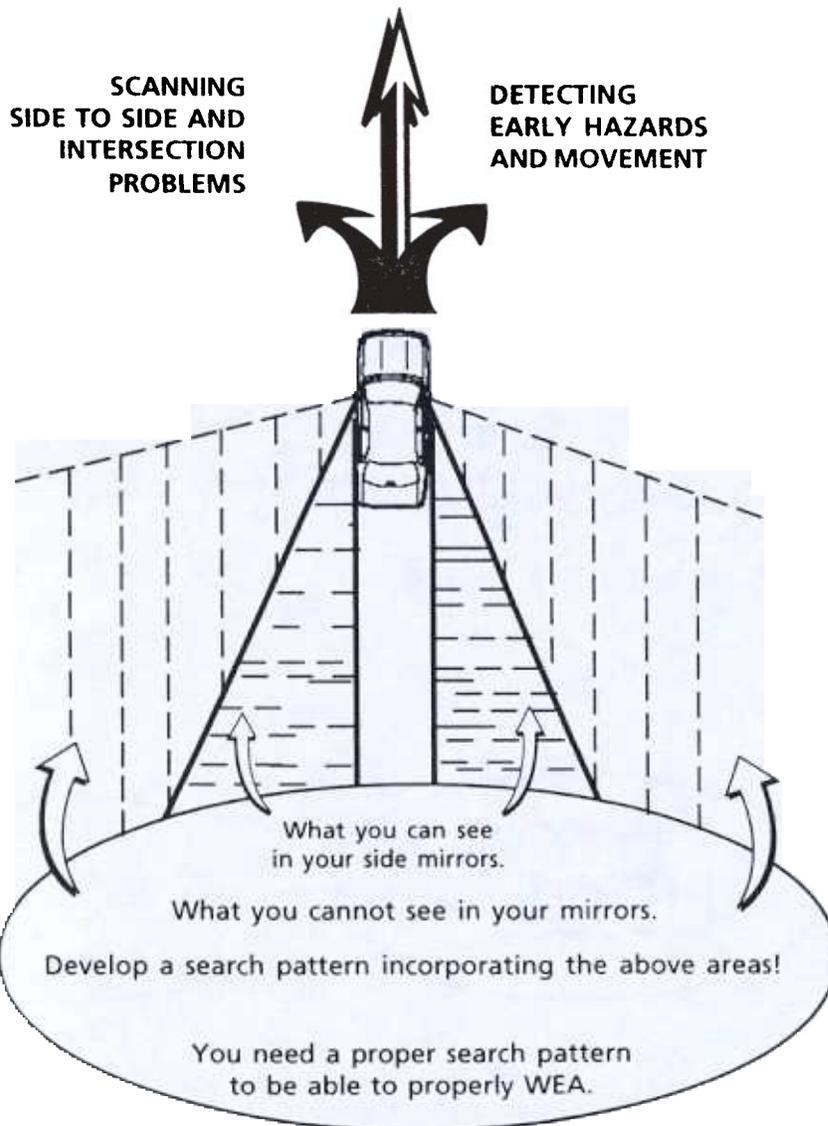
Mirror spaces and blind spots  
(traditional mirror setting)



# Vision and Scanning

TARGET  
20-30 SECONDS  
AHEAD

VISUAL LEAD TIME/DISTANCE  
12-15 SECONDS AHEAD



# The WEA Way!

## WEA

Space management system which includes the process steps of watch, evaluate, act (WEA).

## Watch

### **Look for High-Risk Situations**

- Search and scan
- Time to perceive hazards
- Keep stable eye movement
- Sight line and travel path (LOS/POT)
- Get larger view of roadway

### **Gain Information**

- Space management
- Look for changing areas
- Look for open areas
- Look for closed areas

# Evaluate

## Recognize High-Risk Situations

- Potential and critical hazards
- Collision potential
- Intersections
- Curvatures
- Speed

## Decision Making

- Prevent high-risk situations
  - Sight line and travel path (LOS/POT)
  - Lane position
  - Time space
  - Space control
- Control high-risk situations
  - Open sight line and travel path
  - Motion control (controlled-threshold braking, progressive acceleration)
- Steering control
  - Hand over hand
  - Evasive action
  - Shuffle/slide hand

# Act

## **Speed Changes in Response**

- To danger
- To traffic conditions
- To roadway conditions
- To vehicle balance

## **Lane Position Changes in Response**

- To danger
- To traffic conditions
- To roadway conditions
- To vehicle balance

## **Space Control in Response**

- To danger
- To traffic conditions
- To roadway conditions
- To vehicle balance



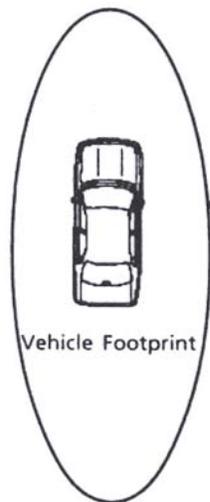


## Reference Points

The “footprint” below shows us that we cannot see every spot around the vehicle. We need help to maneuver the vehicle within this “blind” area.

Maneuvers such as parking, stopping, backing, and lane position can be done more accurately and safely when using reference points. In the next few pages, diagrams and short descriptions will help you to identify these points of reference and provide rationale on where to use them.

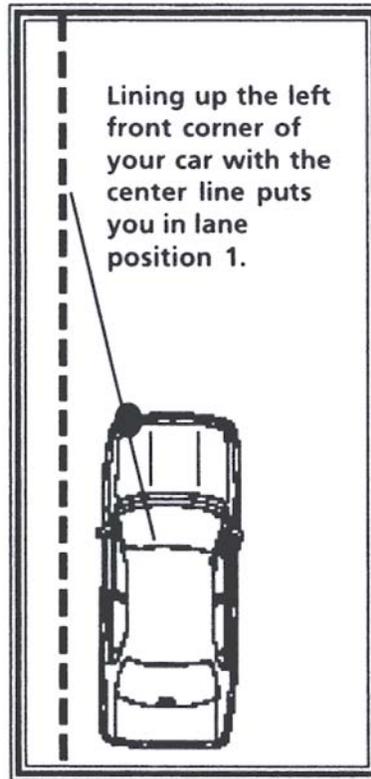
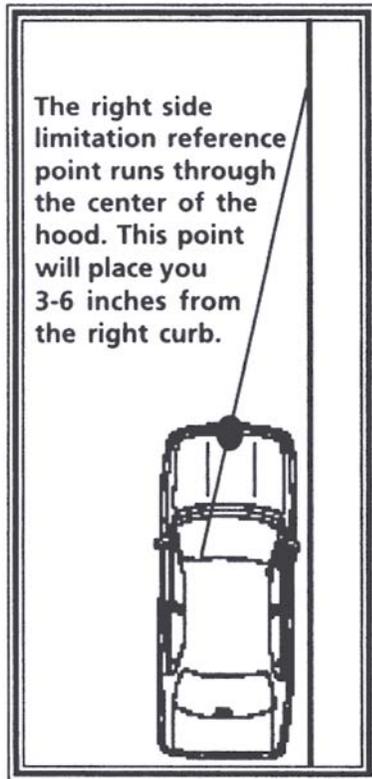
Reference points are points on the vehicle that assist the driver in determining when to start turning, vehicle limitations, or where the vehicle is actually located.



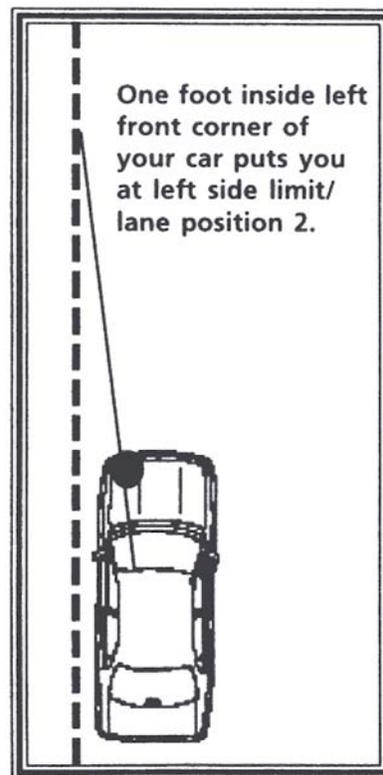
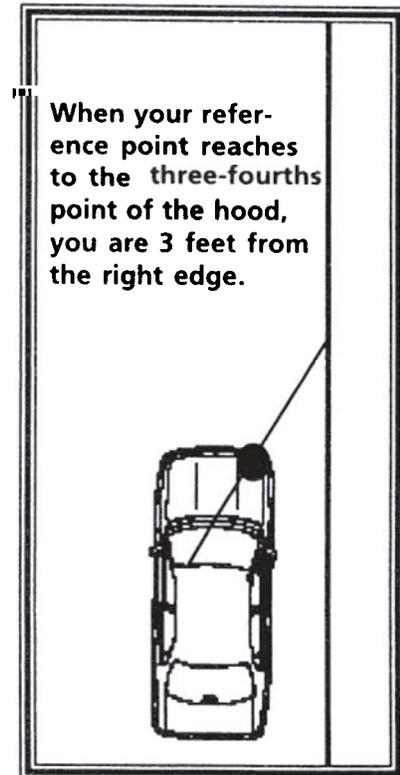
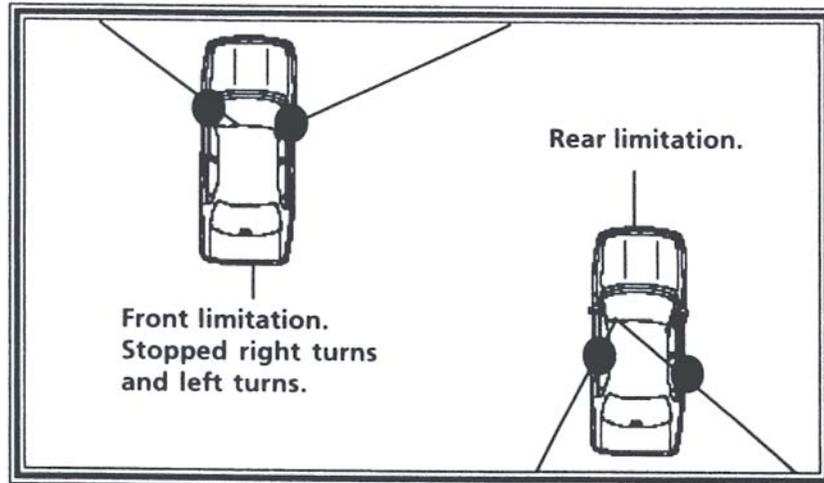
It is essential that the new driver recognize that there is a “footprint” space around the vehicle that one cannot see from behind the steering wheel. This “footprint” makes it almost impossible to maneuver the vehicle within this blind space with any assurance of accuracy. Unless one uses some sort of reference guide, the only option is trial and error. We propose using reference points when maneuvering within this area.

## Reference Points

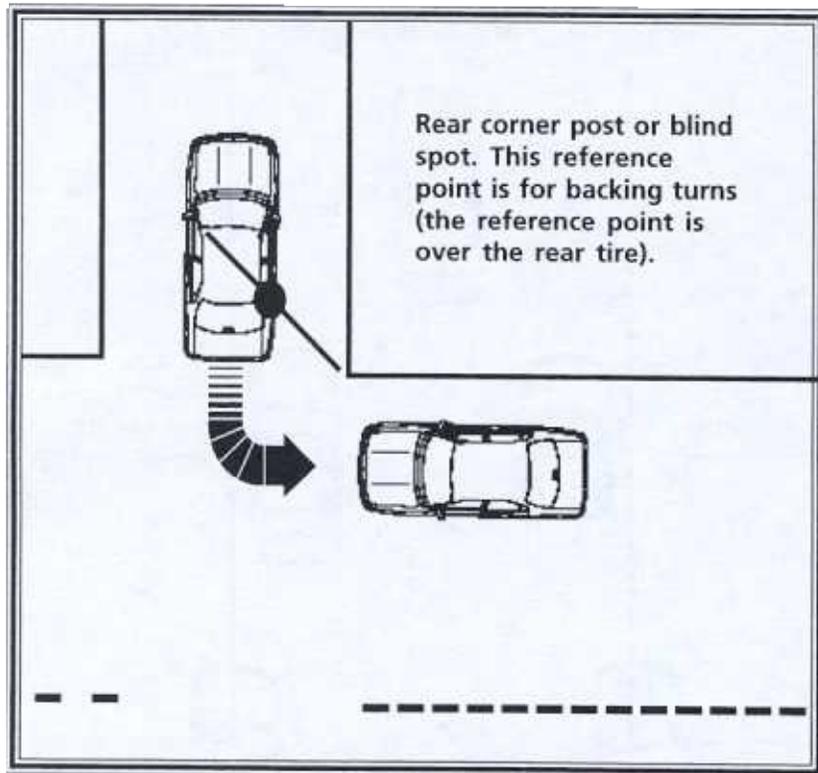
A guide to finding reference points on your vehicle.



## Reference Points

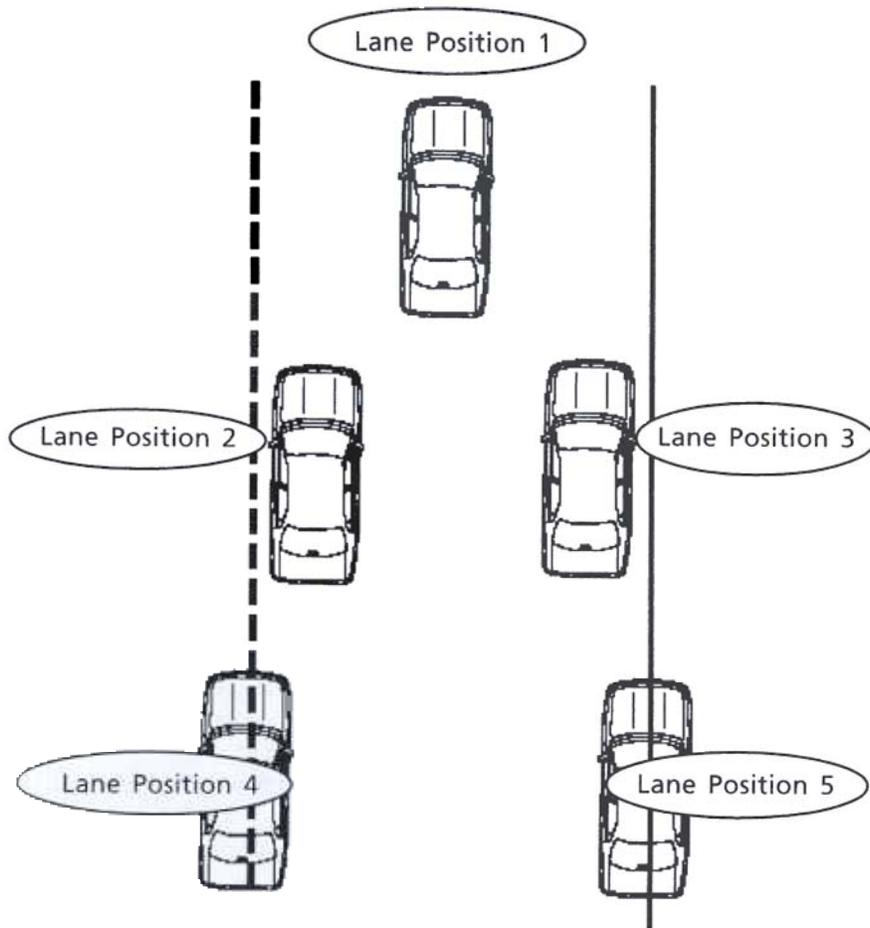


## Reference Points



Reference points can help to determine when it is time to turn in a backing maneuver. Once turned, reference points can also help the driver determine vehicle position on the side street.

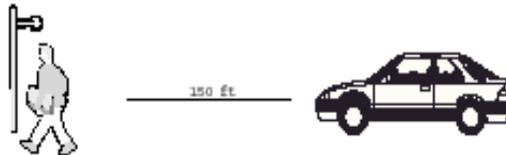
# Lane Positions



# Night Driving

By law, you must use your lights one-half hour after sunset until one-half hour before sunrise and at any other time you cannot see clearly without them. When you are driving at night your vision is reduced and driving conditions and behavior must change to allow for the differences in the environment.

Dawn and dusk are two high-risk times to drive a vehicle. The problems of seeing contrasting colors and images is due to reduced visibility. Use your headlights on low beam and make sure others see you.



Since average low beam headlights provide safe vision for only 150 feet, you are overdriving your headlights if you are going at a speed that does not let you stop within the distance your headlights illuminate.



When approaching another vehicle you must dim your bright lights when you are within 500 feet.

# Night Driving

The teen driver encounters many-high risk factors when driving at night. In *Teen's Nighttime Risk Factors* by Frederik Mottola, seven factors are identified and should be discussed between parent and young driver. The seven factors and salient points are:

1. Less visibility—roadway lighting or lack of lighting, full moon or new moon, depth perception alteration, physiological changes.
2. Social setting—alcohol and other drugs, frolics, joy riding.
3. Driver distractions—passengers, games, peer pressure.
4. Change in temperature—colder air, surface freezes, moisture on surface.
5. Driver fatigue—biological clock, not alert, and slow reactions.
6. Driver's emotional balloon—day's activities, risk acceptance higher.
7. Vehicle dynamics—low tire pressure can effect response, number of occupants changes axis balance.

## Nighttime driving tips

- Plan your trip before you leave.
- Keep your attention on your driving.
- Keep your eyes moving.
- Use the night setting for your inside rearview mirror when lights blind you from behind.
- Increase your following time to at least 4 seconds of space.
- Never wear sunglasses at night.
- Keep instrument panel dim and dome light off.
- Keep the windshield and headlights clean.
- Use headlights at night (not parking lights).
- Your eyes need more time to respond to images along your path of travel. Decrease your speed and always have an escape path available.