

BTW Techniques

“Language of  
TSE”

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Bellingham School District

**TRAFFIC  
SAFETY**



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Started TSE in 2018 trained through  
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Bellingham School District Fleet Manager

BTW Teacher at Squalicum High School

15,000+ miles of teaching in a year





# Derek Hahn

Started TSE in 2018 trained through CWU

Bellingham School District

Classroom & BTW Teacher at Sehome High  
School

10,000+ miles of teaching in a year

## “Language of TSE”

*WHAT* we say and *HOW* we say it impacts students driving

1. What is the goal of the BTW experience?
2. How do you know a drive is successful?
3. What are some things that create challenges with the BTW experience?

# “Language of TSE”

## Learning the skill of driving and development of the skill

- Before TSE
- Parent Night
- Classroom
- Pre-Drive
- BTW Experience
- Feedback
- At Home Practice
- Final/DOL Skills Test
- Habit for Lifetime



# “Language of TSE”

## Our Approach to Teaching

- Parent Night
- Classroom
- Pre-Drive
- BTW Experience
- Feedback
  
- Skills we will discuss
  - Lane Changes
  - General Driving
  - Front Referencing (Parallel Parking)



# “Language of TSE”

## *Student/Family Night*

1. How do you engage parents in the teaching and learning of TSE?
2. How will you work to add something to improve parent night?
3. What is the best compliment from a parent after a student has finished TSE?



# Teen, Parent & Teacher Partnership

Our Ultimate Collective Goal is to produce a **safe and responsible** driver who can *drive collision & citation-free* for a lifetime!

*Together*, We can accomplish more than we can individually



ONE OF THE MOST IMPORTANT SAFETY FEATURES  
**FOR YOUR TEEN DRIVER IS YOU.**





# Learning is a TEAM Effort

- Teacher: provide quality instruction & leadership
- Student: study, think & practice what we teach you
- Parent: provide safe, guided practice and positive example



ONE OF THE MOST IMPORTANT SAFETY FEATURES  
FOR YOUR TEEN DRIVER IS YOU.

# Seek to Teacher Best Practices



- **Hands at 9 & 3 or 8 & 4**
- Hand overhand or push-pull steering
- **Complete 2 second stops**
- Legal stop referencing (legal, safety, staggered)
- **Obeying the posted speeds**
- Using reference points
- **Establishing a 4-second following distance**
- Frequent mirror checks (5-7 seconds)
- **“Eye to Mirror – Foot to Brake”**
- Zone Awareness



ONE OF THE MOST IMPORTANT SAFETY FEATURES  
FOR YOUR TEEN DRIVER IS YOU.



# How many times must you repeat a behavior before it becomes a habit?

- **8 times** before it remains in your long-term memory
- **28 times** before it remains in your unconscious memory (habit)
- Skills are preformed typically **3-4 times on a particular BTW Drive**



ONE OF THE MOST IMPORTANT SAFETY FEATURES  
**FOR YOUR TEEN DRIVER IS YOU.**



# Importance of a *Parent Teen Agreement*



ONE OF THE MOST IMPORTANT SAFETY FEATURES  
**FOR YOUR TEEN DRIVER IS YOU.**



## Items to possibly discuss:

- A communicated understanding of the seriousness.
- **Risk / Responsibility**
- Parental Ownership, Rules, Expectations, Standards
- **Non-Negotiables**
- Honesty, Communication, Expected – Procedures
- **Clear consequences – when the contract is violated**
- Individual components – (grades, hours, behavior)
- **Any “Additional Items” – for your household**



ONE OF THE MOST IMPORTANT SAFETY FEATURES  
**FOR YOUR TEEN DRIVER IS YOU.**

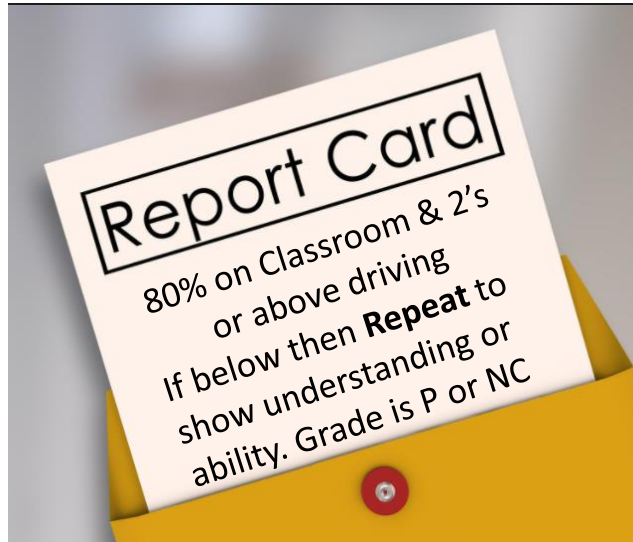


## Parent – Class Support

- Commit to regular driving practice
- Do not get angry – realize that they are learning
- Emphasize & Model “Best Practices”
- Review each Drive Card to track their progress



ONE OF THE MOST IMPORTANT SAFETY FEATURES  
**FOR YOUR TEEN DRIVER IS YOU.**



OneNote

## PRE-CAR CONTROL:

✓	-	X
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**Initial Vehicle Approach:** \_\_\_\_\_

Concepts: Vehicle Approach & Walk-around

- Key in hand
- Look under vehicle – leaks, objects
- Outer Car check
- Cell phone off; secure in trunk
- Entering – towards traffic flow
- Traffic-flow awareness

## **Cockpit Drill:** \_\_\_\_\_

Concepts: Pre-Drive

- Lock Doors
- Key In-ignition
- Seat adjusted-Butt-in; "*Superman*"
- Head Restraint
- Mirror(s) adjusted
- Safety Belts on correctly; ✓ passengers

## **Pre-Car Motion:** \_\_\_\_\_

Concepts: Instruments & Gauges

- Review Dash Indicators
- Low/High Beam
- Wiper Control
- Night Mirror

## **Initial Car In-Motion:** \_\_\_\_\_

Concepts: Orientation to Controls

- Hands on Wheel – balanced 3 & 9
- Heel on floor – Pivot brake to gas
- Parking Brake off/on
- Safety Search Pattern

#'s 1-4 Scoring
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## **BASIC CAR CONTROL:**

### **Smooth Starts** \_\_\_\_\_

- Gentle motion/speed
- Pivot accelerator at the heel
- Overall Vehicle Balance

Instructor Signature: \_\_\_\_\_

Additional Notes & Comments \_\_\_\_\_

### **Smooth Stopping** \_\_\_\_\_

- Mirror Checks ("Eye to mirror / Foot to Brake")
- Smooth & Controlled / "trial braking"
- Overall Vehicle Balance

### **Initial Backing Maneuvers** \_\_\_\_\_

- Backing Straight
- Looking out the back window
- Around a Corner
- Correct use of references

### **Initial L/R Turn from a stop** \_\_\_\_\_

- Correct hand placement & wheel movement
- M-SMOG (mirror/sign/mirror/over-shoulder ck./GO)
- Legal Stop (x-walk/road edge/staggered)
- Scan Left-Front-Right – Clear
- Chin to Shoulder / (blind-spot) check
- Target Path – Go (Re-check)

### **Initial L/R Turn in motion** \_\_\_\_\_

- Correct Hand placement & wheel movement
- M-SMOG (mirror/sign/mirror/over-shoulder ck./GO)
- Speed Control – Brake + Trail
- Forward Position
- Left-Front-Right – Clear
- Chin to Shoulder / (blind-spot) check
- Last "re-check" of clear-traffic

### **Initial Parking Lane Maneuver** \_\_\_\_\_

- Accurate Use of Referencing
- M-SMOG (mirror/signal/mirror/over-shoulder/Go)
- Target & Steer gently to enter parking lane
- Aim High at target; steer to target
- Get parallel, straight & "tight"
- Secure vehicle – Wheel position
- Re-enter traffic (360°; M-SMOG)

### **Securing & Exiting the Vehicle** \_\_\_\_\_

- Foot on Brake / Set parking brake & Shift to Park
- Ck. before exiting / Walk towards traffic
- Remove Key & hand-off

#### BTW #1 Uniting Driver and Vehicle

- Repeat:** For abilities, experience & confidence
- Pass:** Continue to Next BTW #2
- Outside Practice:** Need to improve skills

# “Language of TSE”

## *Classroom*

1. How do you engage students to understand the concepts in the classroom
2. As a BTW instructor how do you ensure students are understanding the concepts

We are going to focus on lane changes, general driving and awareness and parallel parking



# Part I - Approach

- ID an Available Space
- Say “*Approach*”
- SMOG Right
- Move to Lane position #3
- Tap & Apply the Brake



# Approach



## Stop – “Bumper to Bumper”

next to the forward vehicle,  
2-3 feet (door width) away,  
with your rear bumpers  
even

### Reference Point:

When the rear bumper or  
the tail light of the vehicle  
is hidden behind your “C”  
pillar. (You can see it if  
you lean over)





- Stop next to the forward car
- LP # 3 – 2-3' away
- Shift to Reverse



Stop next to the forward car

- Check “C” Pillar
- The rear bumper of the adjacent car will hide behind it
- You can see the bumper/taillight if you lean over

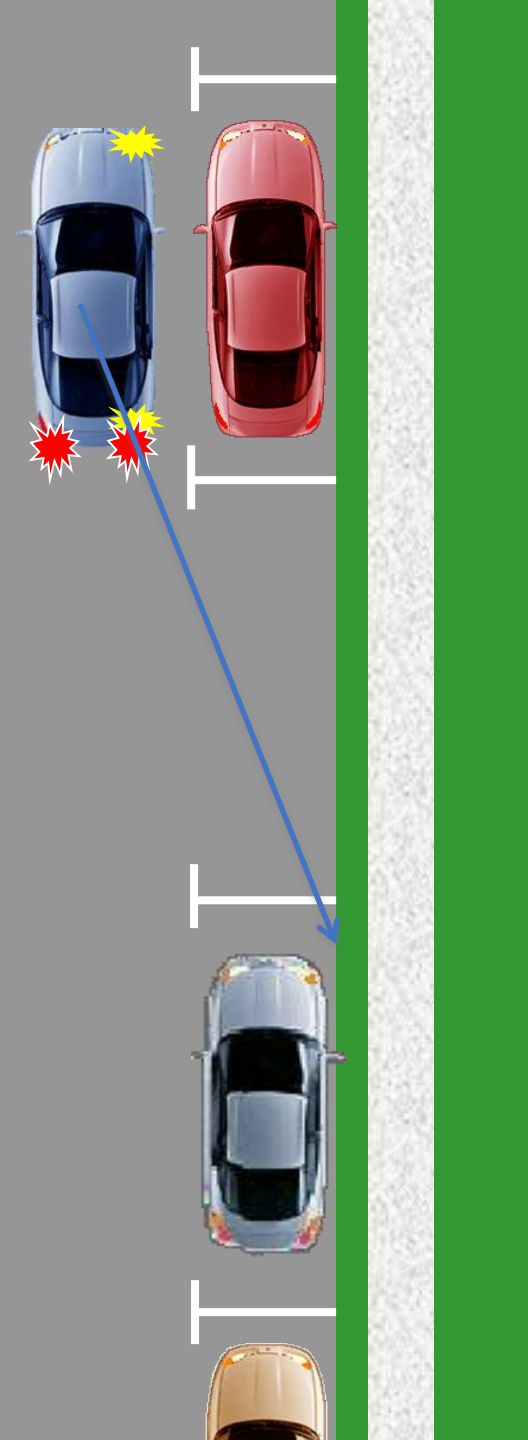




Bumper to Bumper!

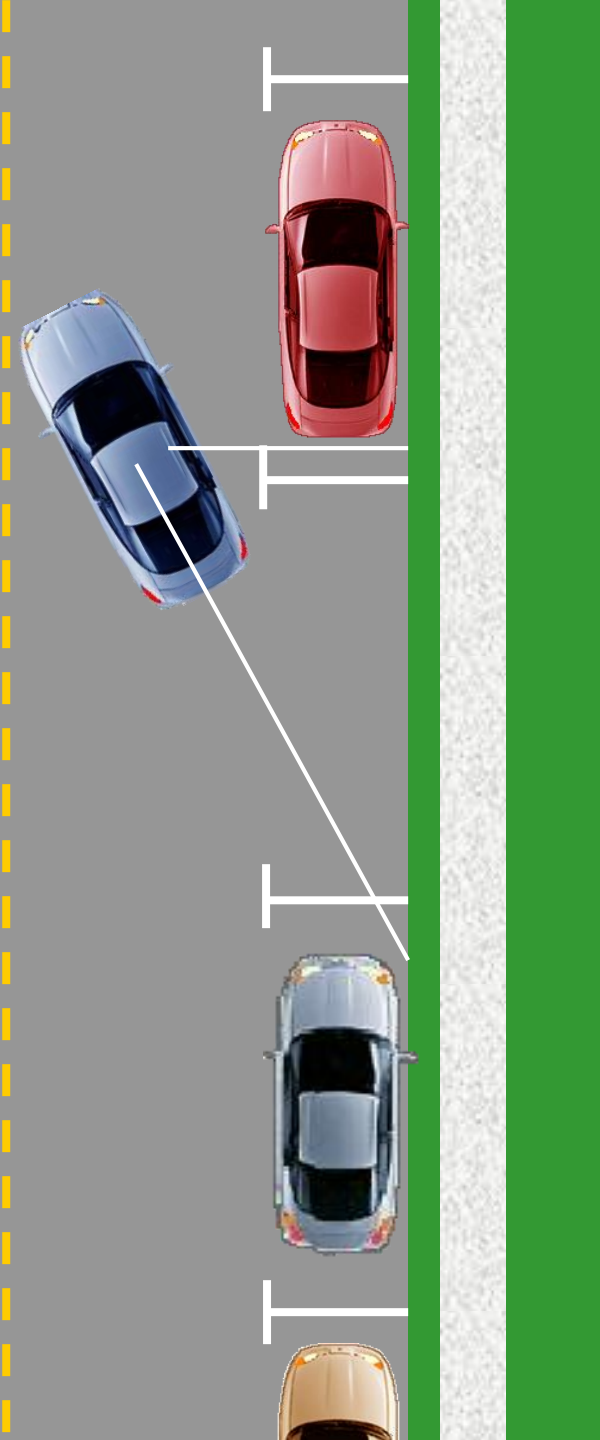
# Part II - Entry

- Shift to reverse
- Do a 360° check
- Look back; if not clear, wait until clear of approaching vehicles
- Target the right rear corner of the space
- Release slight pressure off the brake and turn the wheel sharp, all the way to the right (1 ½ turns)





- Target the corner of the space out the rear window
- Release the brake (trail brake) and turn all the way to the right (1 ½ turns)
- **STOP** when the car is aligned straight on a 45° angle to the corner of the space. (Lean over to the middle of the car and check the alignment)
- Another reference is the seatback (“B” pillar) will be aligned with the rear bumper of the adjacent car. (*“Seatback to Bumper”*)
- **Straighten Wheels** – while rolling slowly; (1 ½ turns to the left)





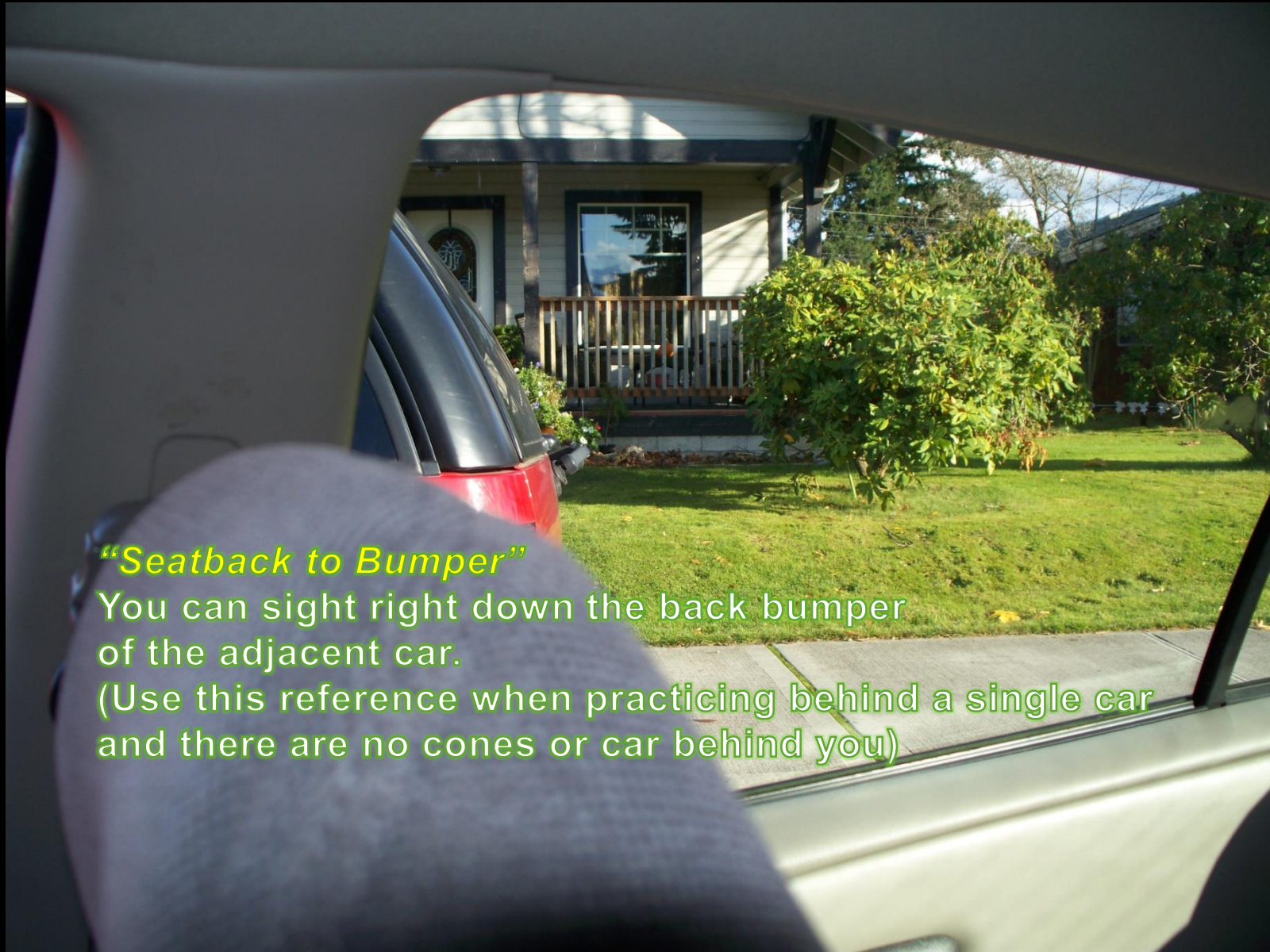
Getting this angle (45°, heading to the corner) is critical to  
The success of the maneuver.



- Looking back, the car should be on a 45° angle, aligned with the corner of the space.
- If you lean over, then the pivot point (mid-point over the rear axle) Should be in alignment with the rear corner of the space.  
This car has a few more more inches to go ...
- Straighten the wheels, 1 ½ turn to the left.
- Turn the wheel sharp/fast while rolling very slowly (no dry steering)



Notice how the “B” pillar is aligned with the rear bumper; and  
The back end of the car is not in the space yet.



*“Seatback to Bumper”*

You can sight right down the back bumper of the adjacent car.

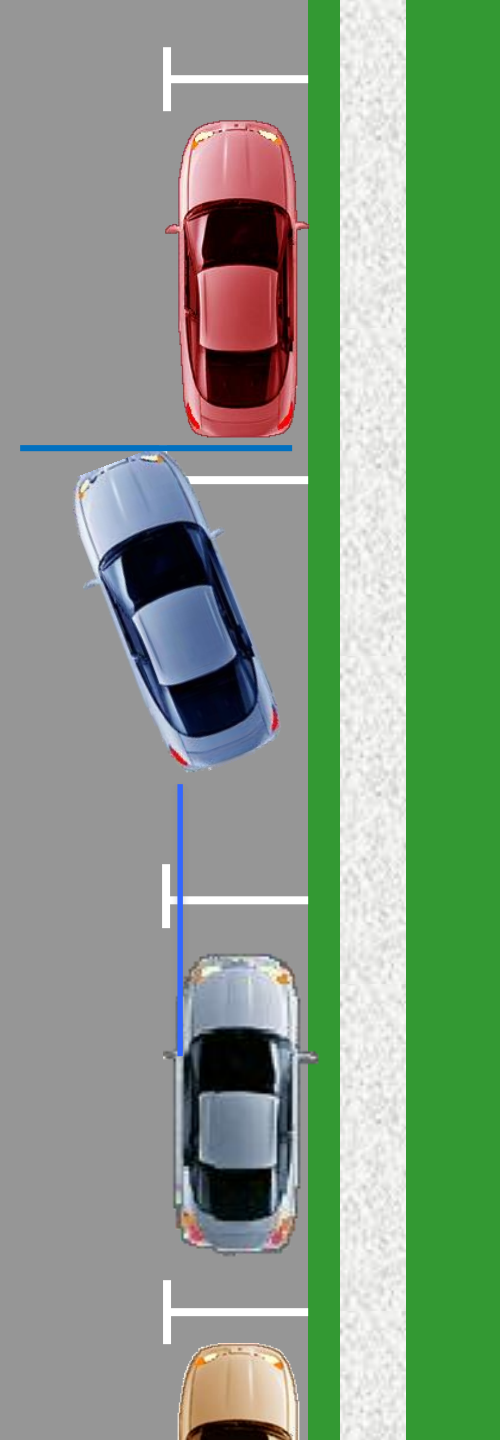
(Use this reference when practicing behind a single car and there are no cones or car behind you)

- Back slowly until the back end of the car has fully entered the space. (Just as the left rear corner of your car enters the parking space, stop and check forward)

- Check the front bumper – it should line up with the front vehicle's rear bumper

*“Front Bumper to Rear Bumper”*

- Continue backing slowly, while turning the wheel all the way to the left ( 1 ½ turns) — looking out the rear window





- Back straight until the back end of your car Fully enters the space
- Make sure you lean over and monitor the left rear corner (yellow line); most people only focus on the right rear.



- Continue to back straight to the corner;
- The left rear corner of your car is just about to enter the parking space
- Now, it's time to check your front bumper.....



But first, here is a view from the outside of the rear of your car just entering the space





*“Front Bumper to Rear Bumper”*

- ***“Front Bumper to Rear Bumper”***

- Should feel like your front bumper will just “kiss” the rear bumper of the forward car

- Time to turn the wheel all the way to the left to tuck in the front



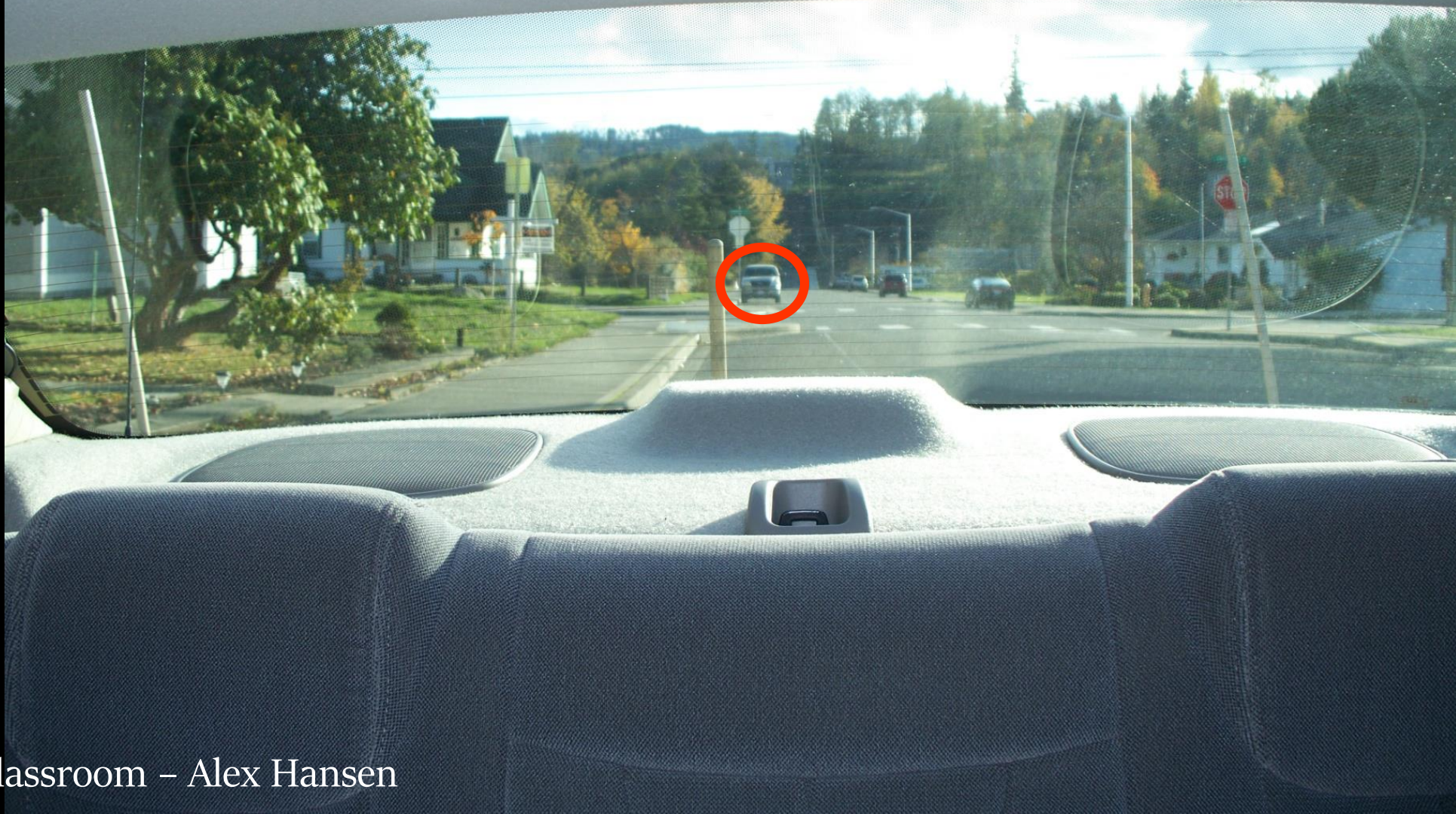


Another view ....

- **Straighten the wheels when you get parallel;** if you went slow enough and turned sharply, there should be enough room behind to straighten the wheels before you run out of room
- **Pull forward slightly to center your vehicle in the space;** notice that this car isn't centered yet. While pulling forward, straighten the wheels and car if unable to finish in reverse
- **Secure the Vehicle**



- Target the space directly behind you
- When parallel, straighten your wheels (1 ½ turns right)
- Stop short of hitting the car behind, and shift to “Drive”





From: SHS Classroom – Alex Hansen



Almost parallel, but not centered;  
pull forward and finish up....

From: SHS Classroom – Alex Hansen

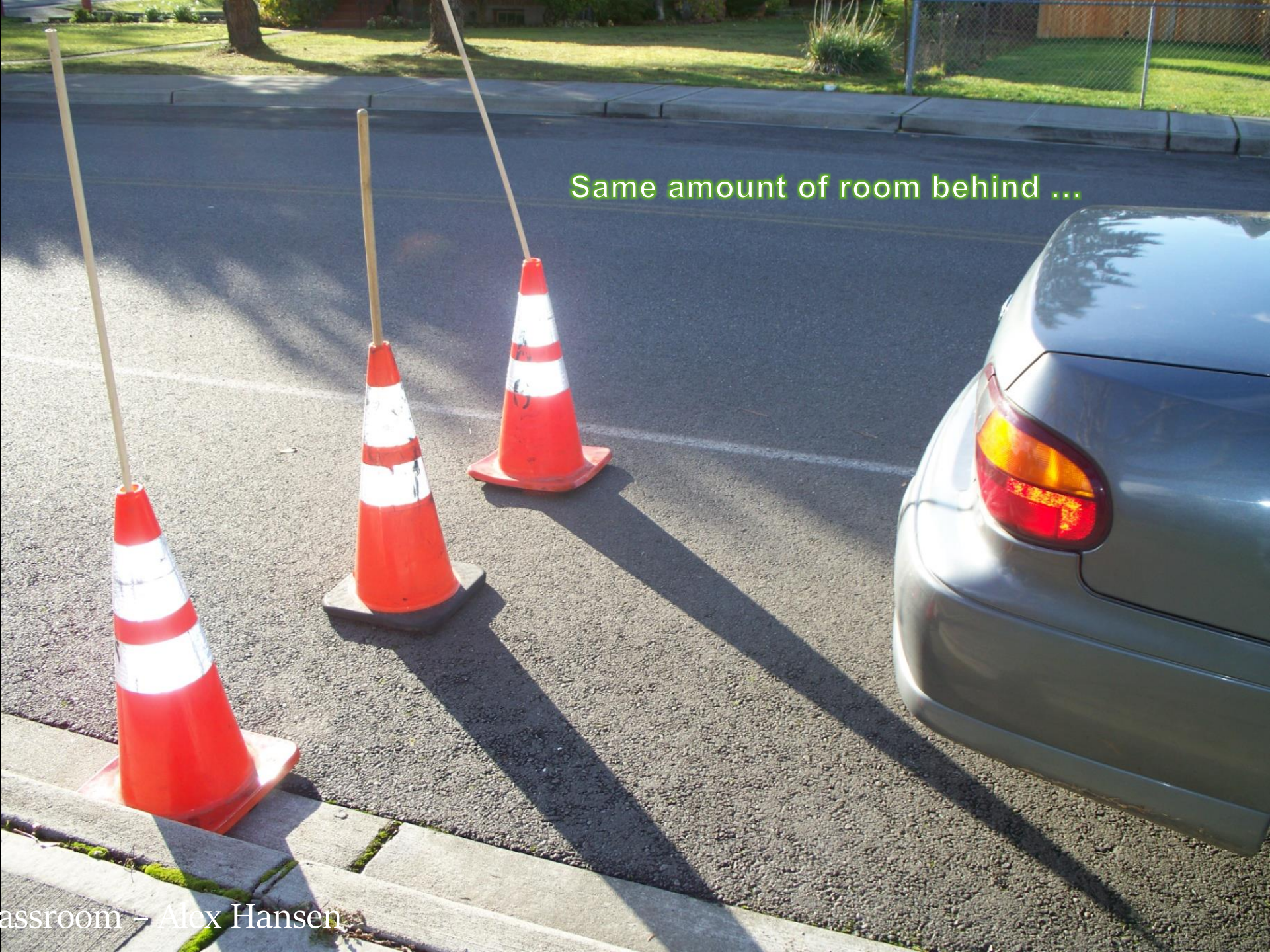


If you can see the tires like this, you aren't centered; pull forward until you can't see the tires ....



A photograph taken from the driver's perspective looking out the rear window at a red Chevrolet Blazer. The car is centered in the frame. The license plate is white with black text and a green '31' sticker, reading '603-SEI'. The text 'BLAZER' and 'CHEVROLET' are visible on the rear panel. The background shows a residential street with trees and a house.

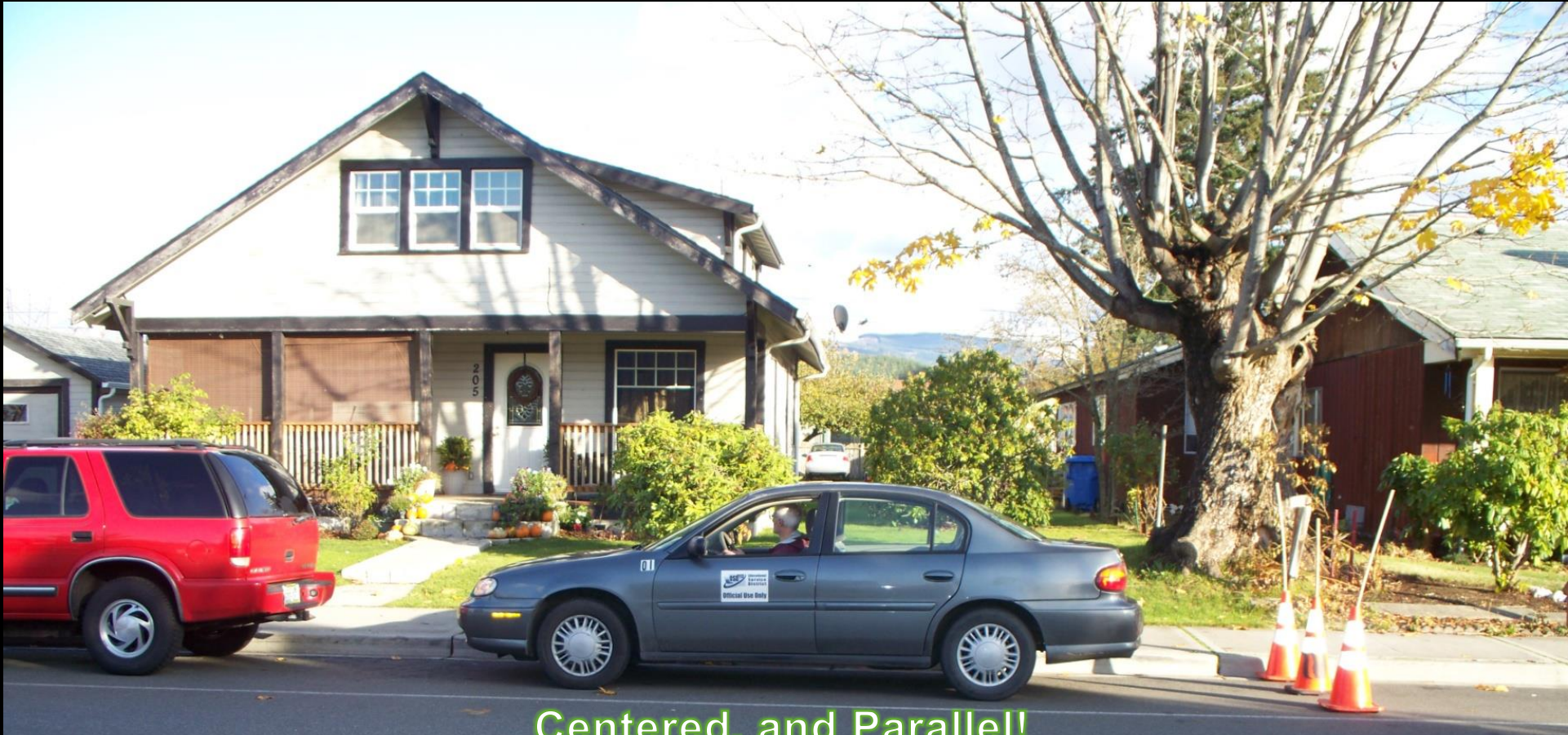
... Like this.  
Now you are centered.  
Secure the car.  
(Don't forget to use neutral first to check for a hill)



Same amount of room behind ...



... as in the front.



Centered, and Parallel!

# “Language of TSE”

## *Pre-Drive*

1. How do students know what to expect, how many students is it their first time BTW or doing a skill?


# Pre-Drive Videos

## Post Assessment



### Details

#### BTW #1: Uniting Driver and Vehicle

Published on 1/29/2021 by [Hahn, Derek](#)  Company 73  0 

Smooth Starts & Stops

Left & Right Turns



### Details

#### BTW #3: Arterial Roadways. Speed & Space Management

Published on 1/31/2021 by [Hahn, Derek](#)  Company 29  0 

Continuing Skills from BTW #1 & #2 w/  
Lane Changes

[See more](#)

# “Language of TSE” *BTW Experience*

1. What makes the experience successful?
2. How do you set up the drive, for student driving and observer?
3. How is your BTW’s structured to help students gain confidence in abilities?



# “Language of TSE” Lane Changes

- Pre-Drive
- BTW Experience
- Feedback

## Initial Parking Lane Maneuver \_\_\_\_\_

- Accurate Use of Referencing
  - M-SMOG (mirror/signal/mirror/over-shoulder/Go)
  - Target & Steer gently to enter parking lane
  - Aim High at target; steer to target
  - Get parallel, straight & “tight”
  - Secure vehicle – Wheel position
  - Re-enter traffic (360°; M-SMOG)
- BTW #1

## Parking Maneuvers \_\_\_\_\_

### Concepts: Curb-Lane Parking

- Identification & Application of Car Reference Pts.
  - Demonstration of Car Handling
  - Neutral Gear-Check (uphill / downhill)
  - Goal – 6” distance
- BTW #2

## LANE Change & Passing \_\_\_\_\_

- **Safe & Legal**
    - M-SMOG
    - 2 Headlight in rearview mirror
    - Semi-truck full grill in center rearview mirror
    - Safe Lane Return
    - Not Slowing – when returning to lane
  - **Speed Maintenance**
- BTW #3

## Physical Car Control \_\_\_\_\_

- Speed Control & Maintenance
- Safe Passing Options
- 4 Second Following Distance
- Changing Traffic Environment
- Re-establishing a Safety Gap
- Clearly followed Target (Central Vision)
- Appropriate Lane Position (not on the lines)

## Lane Control & Passing \_\_\_\_\_

- Safe & Legal / Speed Maintenance
  - LOS / POT / Zone Control / 4 Second Following
  - Lane Position (no sway)
  - Freeway - Signs, Signals & Markings
  - M-SMOG
  - Speed Maintenance. No reduction when passing
  - Return to Lane (2 Headlight in rearview mirror OR Centered Grill in rearview mirror)
- BTW #4

## Changing Traffic Flow \_\_\_\_\_

- **Traffic Awareness** \_\_\_\_\_
    - Early Mirror checks for options
    - M-SMOG
    - Targeting & Picking an opening
    - Safe Car / Traffic Flow - interactions
  - **Front Zone Safety** \_\_\_\_\_
  - **Legal Stops** \_\_\_\_\_
  - **Legal Stop Reference** \_\_\_\_\_
  - **Rear Zone Control** \_\_\_\_\_
  - **Establishing Safety Gap** \_\_\_\_\_
  - **Lane Selection & Planning** \_\_\_\_\_
  - **Controlled Intersections** \_\_\_\_\_  
Search Pattern & Traffic Flow
  - **Uncontrolled Intersections** \_\_\_\_\_  
Search Pattern & Traffic Flow
  - **Traffic Signal Obedience** \_\_\_\_\_  
Point of No Return -
  - **Legal Stop References** \_\_\_\_\_
  - **One Way to Two Way** \_\_\_\_\_
  - **Two Way to One Way** \_\_\_\_\_
- BTW #5

# “Language of TSE”

## Parallel Parking

- Pre-Drive
- BTW Experience
- Feedback

### Initial Backing Maneuvers \_\_\_\_\_

- Backing Straight
- Looking out the back window
- Around a Corner
- Correct use of references

BTW #1

### Backing Around a Corner \_\_\_\_\_

Concepts: L & R Car Referencing

- Appropriate Wheel Turning
- Identification & Application of Car Reference Pts.
- Demonstration of Car Handling
- Demonstration of Safe Traffic Awareness
- Looking out the back-window w/ mirror cks
- 18" or less from the curb

BTW #2

### Parallel Parking Maneuver \_\_\_\_\_

- Signal on Approach / Ck Rear Zone
- Safe / Referenced Side Position
- **3-Step Progression**
  - Back Bumper to Back Bumper
  - Seat Back to Back Bumper
  - Front Bumper to Back Bumper
- Three Movements
- Centered in Space & Within 12" to Curb

BTW #3

# “Language of TSE”

## Basics (Left and Right Turns)

- Pre-Drive
- BTW Experience
- Feedback

### Initial L/R Turn from a stop \_\_\_\_\_

- Correct hand placement & wheel movement
- M-SMOG (mirror/sign/mirror/over-shoulder ck./GO)
- Legal Stop (x-walk/road edge/staggered)
- Scan Left-Front-Right – Clear
- Chin to Shoulder / (blind-spot) check
- Target Path – Go (Re-check)

### Initial L/R Turn in motion \_\_\_\_\_

- Correct Hand placement & wheel movement
- M-SMOG (mirror/sign/mirror/over-shoulder ck./GO)
- Speed Control – Brake + Trail
- Forward Position
- Left-Front-Right – Clear
- Chin to Shoulder / (blind-spot) check
- Last “re-check” of clear-traffic

BTW #1

### Overall Residential/Neighborhood: \_\_\_\_\_

✓	-	X
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- Enter/Leave Parking Lane \_\_\_\_\_
- Appropriate Traffic Gaps \_\_\_\_\_
- Stop Reference (legal, safety) \_\_\_\_\_
- R-Turn Referencing (target/position) \_\_\_\_\_
- L-Turn Referencing (target/position) \_\_\_\_\_
- Intersections (controlled & uncontrolled) \_\_\_\_\_
- Vehicle Tracking (LOS & POT) \_\_\_\_\_
- “Emerging”-Confidence Speed (Safe & Legal) \_\_\_\_\_
- LOS & POT – Application \_\_\_\_\_
- Signs / Signals / Markings \_\_\_\_\_
- Car Signaling \_\_\_\_\_

Concepts: Identify & Respond

Concepts: Communication 100'

BTW #2

### Basic Car Control: \_\_\_\_\_

- Speed Control & Maintenance \_\_\_\_\_  
Proper Speed for Conditions
- Stopping \_\_\_\_\_  
(Smooth & Controlled)
- Stop Referencing \_\_\_\_\_  
(Legal, Safety)
- R-Turn Tracking \_\_\_\_\_  
(Safe, Target, Position)
- L-Turn Tracking \_\_\_\_\_  
(Safe, Target, Position)
- Vehicle Tracking \_\_\_\_\_  
(LOS & POT)
- Directions \_\_\_\_\_  
Signs, Signals, Markings
- Signaling \_\_\_\_\_  
Timely, Legal Distance
- Rear Zone \_\_\_\_\_  
Consistent Eye to Mirror / Foot to Brake
- Entering Traffic \_\_\_\_\_  
M-SMOG / Chin-to-Shoulder
- Mirrors \_\_\_\_\_  
Consistent Mirror Checking

BTW #3-5

# “Language of TSE”

## *Feedback*

1. How does the student work to improve?
2. How does the parents help support improvement?

BTW Techniques

**TRAFFIC  
SAFETY**

Questions &  
Answers

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