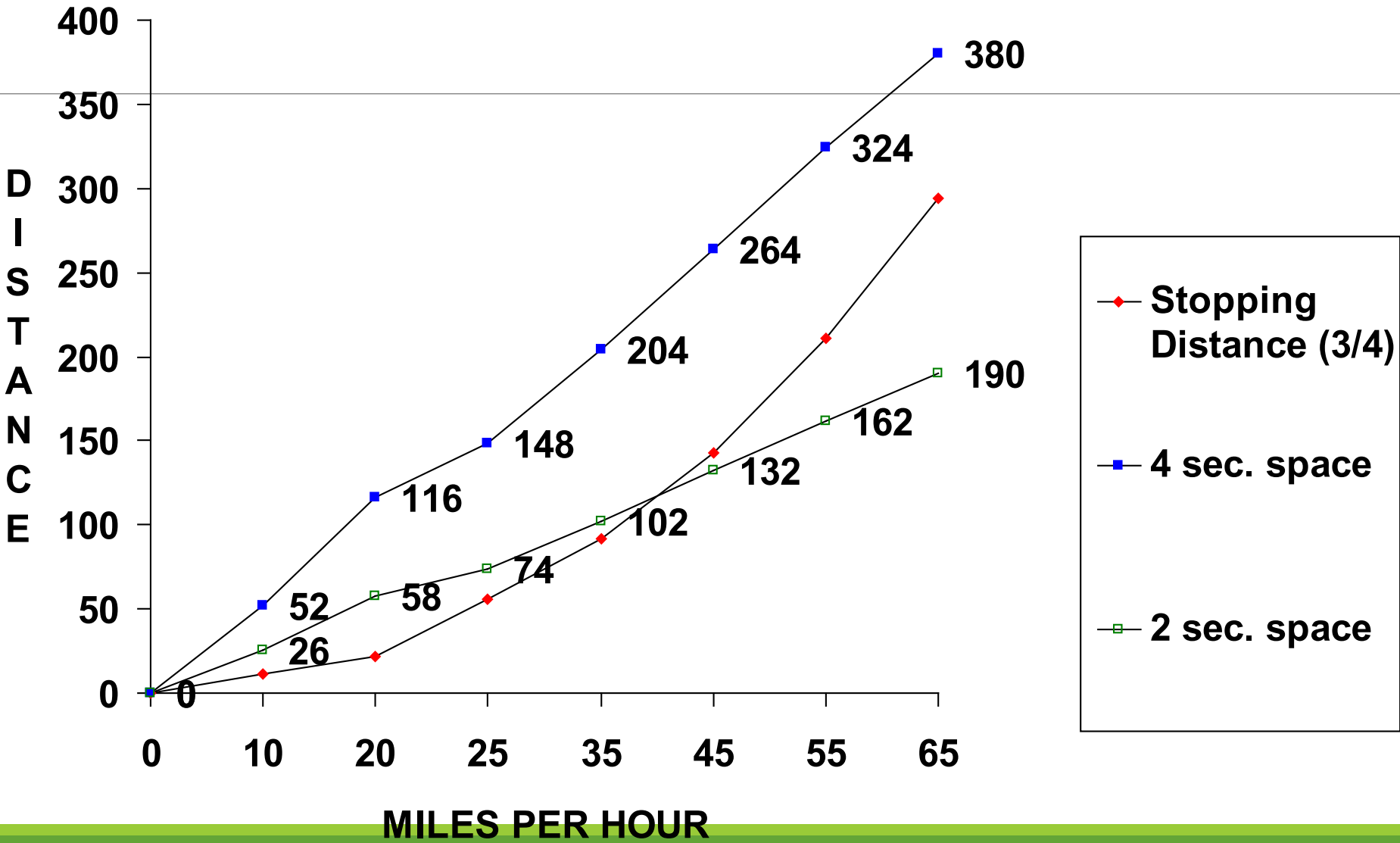


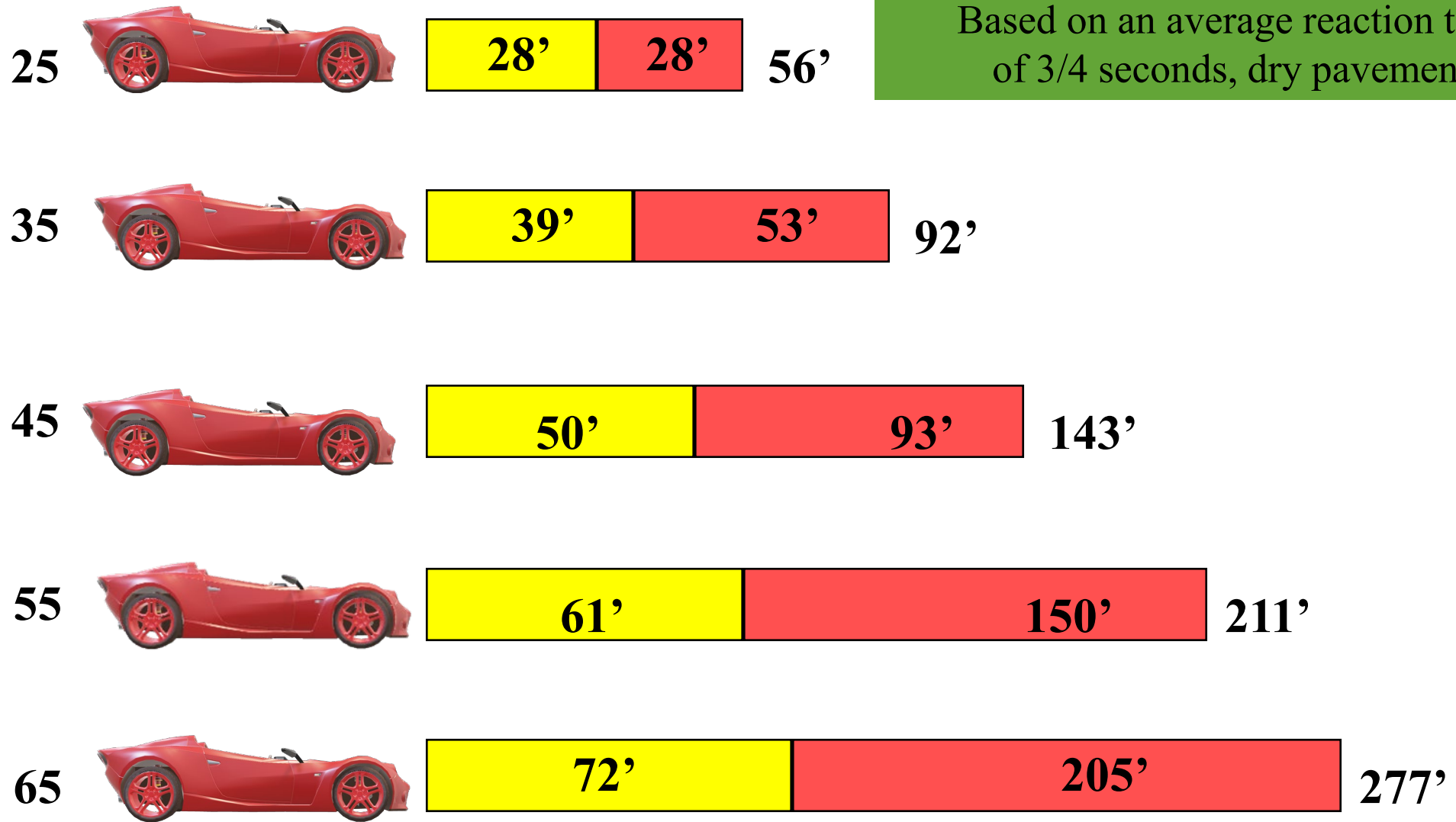
# NDSP & IRHS Driver Proficiency Workshop

## Evasive Maneuver Exercises

# Stopping/Following Distances



# STOPPING DISTANCES



Reaction Distance



Braking Distance

# Habits to Improve Perception

- Use a **SYSTEMATIC SEARCH PATTERN.**

- Search in meaningful groups

1. Traffic Controls



2. Highway Conditions



3. Other Users



Be Ready, Be Safe, Be Responsible

# Search Systems & Processes

## SIPDE

S I

**Search:**

20-30 sec.  
ahead

**Identify:**

Conditions and  
hazards 10-15  
sec. ahead

P D

**Predict:**

The level of  
risks

**Decide:**

Actions that need  
to be taken in 4-5  
sec.

E


**Execute**

**your  
decision**



# Search


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- **Use visual search pattern and selective seeing**
  - **Keep your eyes moving**
  - **Leave yourself an “out”**
  - **Look far ahead (at least 12 seconds)**
  - **Look through curves**
- 



# Identify

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- **Specific clues**
  - **Other roadway users**
  - **Roadway features and conditions**
  - **Traffic controls**
  - **Condition of your vehicle**
- 



# Predict

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- **Actions of other roadway users**
- **Control of your vehicle**
- **Consequences of your actions**
- **Use judgement, knowledge, and experience**





# Decide


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- **Change speed**
  - **Change direction**
  - **Communicate**
- 

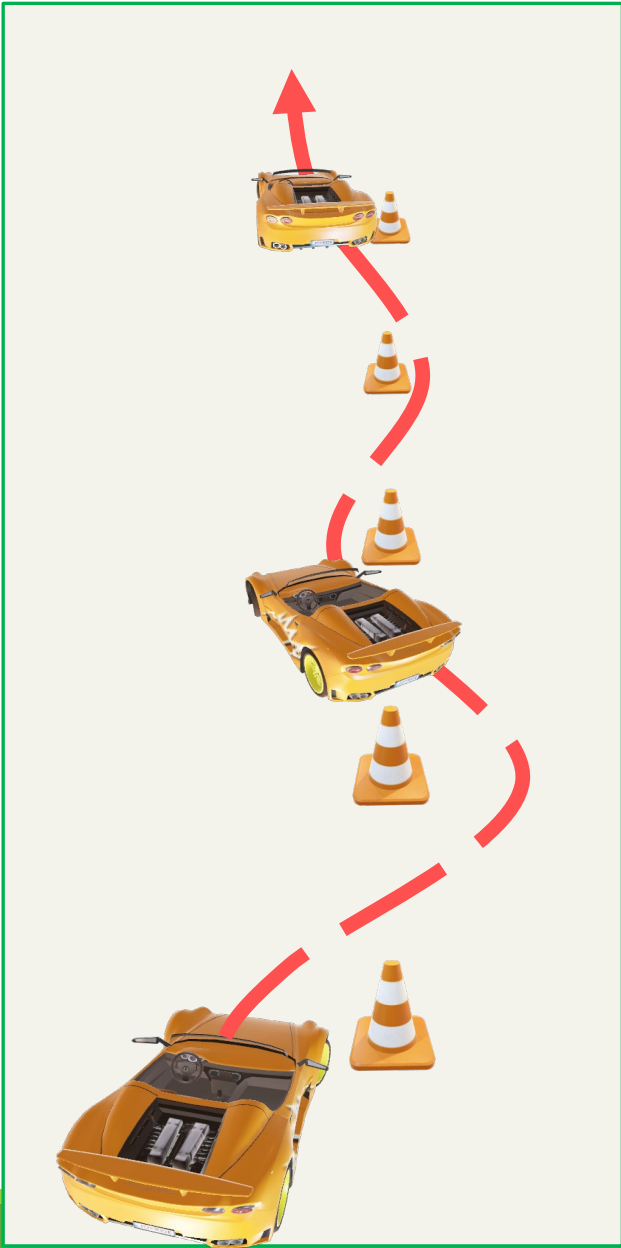


# Execute

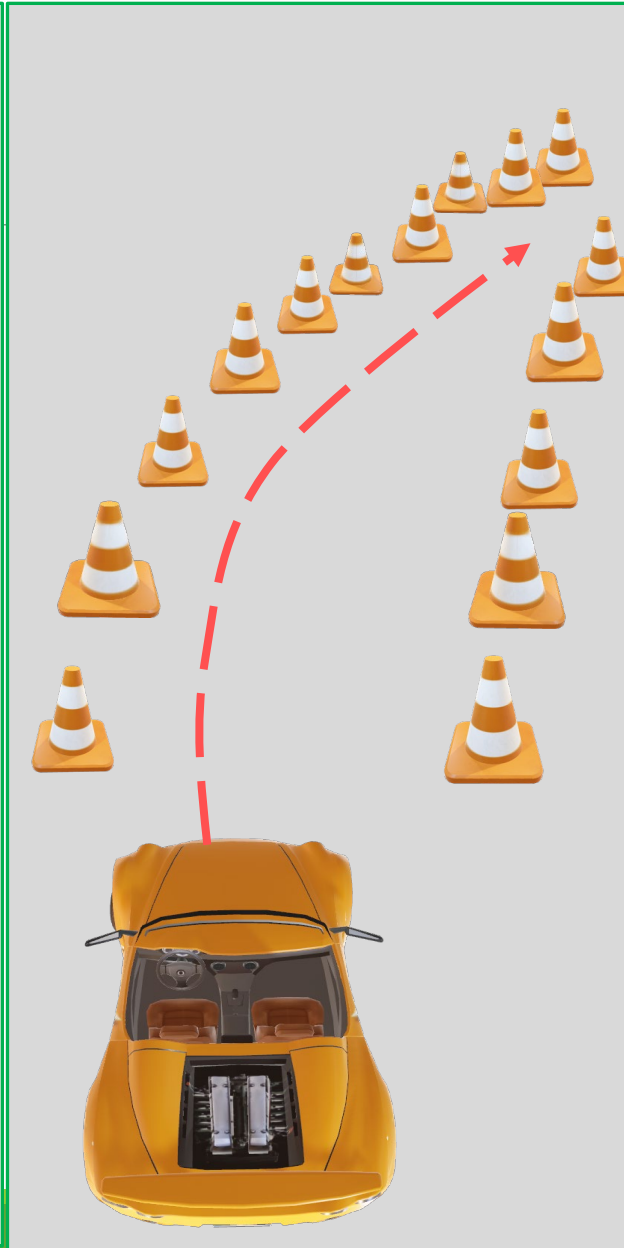
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- **Accelerate**
  - **Brake**
  - **Steer**
  - **Communicate**
  - **Combined actions**
- 

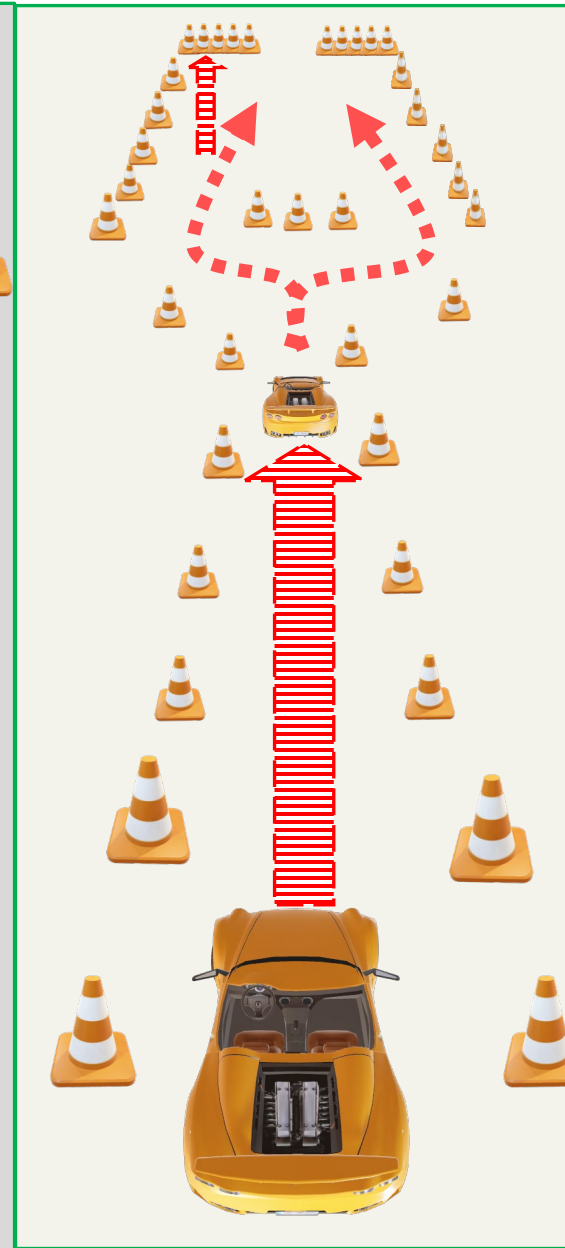
1. Serpentine Course Layout



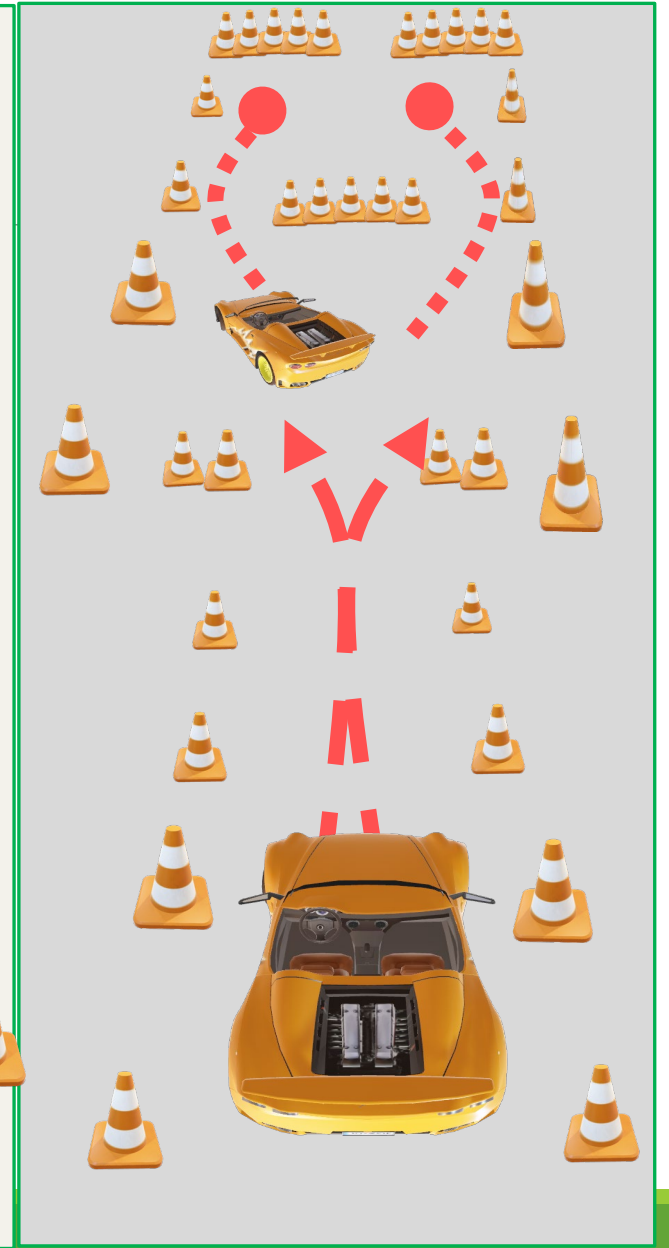
2. Constant Cornering



3. Evasive Maneuver Layout



4. Controlled Braking Layout

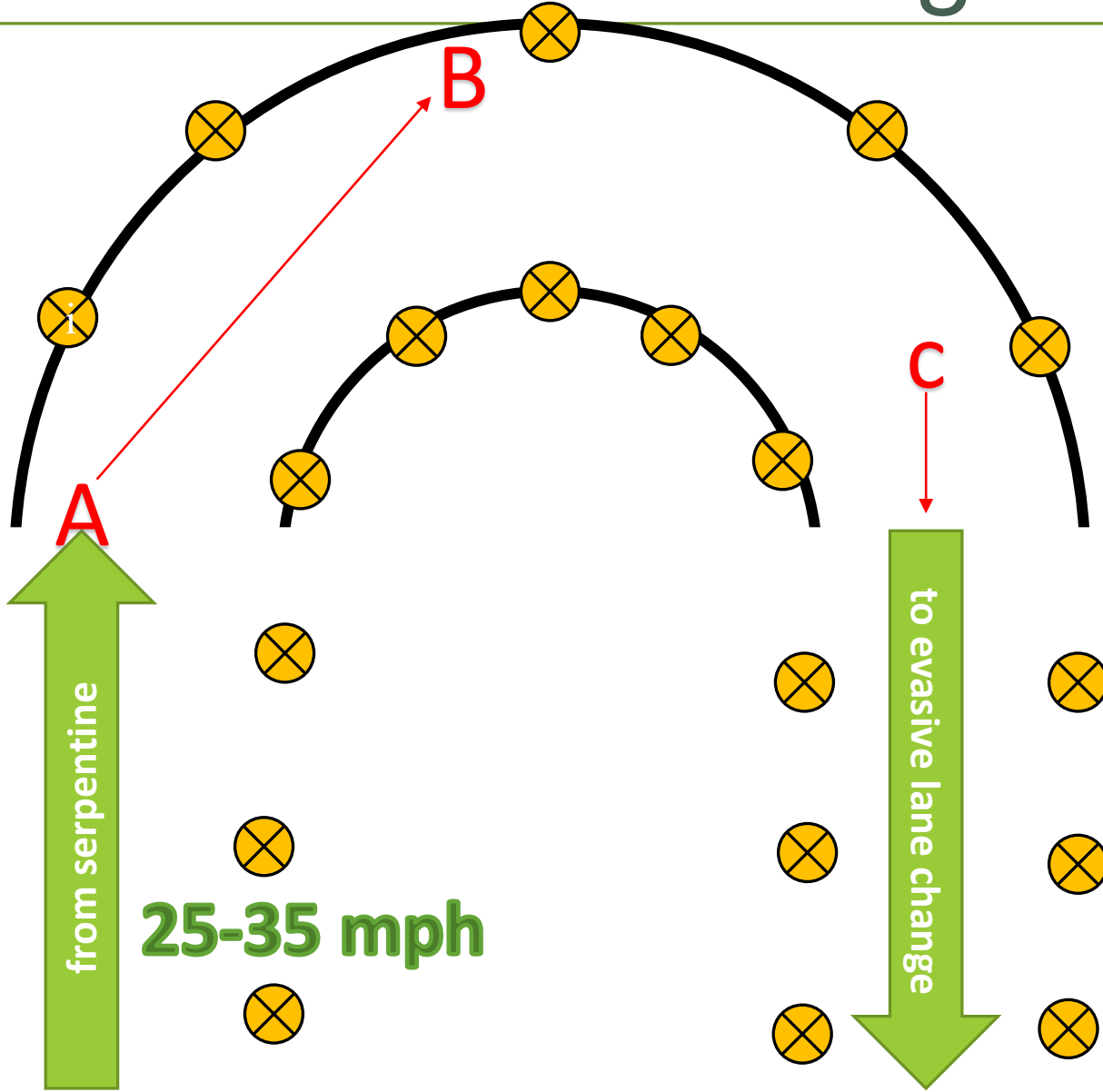




# Serpentine



# Constant Cornering



## Procedures

- A. Speed is set before entering curve...20-35mph
- B. Look through the curve to the apex point
- C. Accelerate to speed as you are able to see your way out of the curve

## Skill Techniques

### Visual

- A. Use OUTSIDE of lane as guide in entering curve
- B. Move eyes quickly through the curve to the apex
- C. Visually track your path of travel out of the curve
  - 1. this gives an indication of when to use accelerator
  - 2. important to keep a good visual track as it will keep you in your lane position

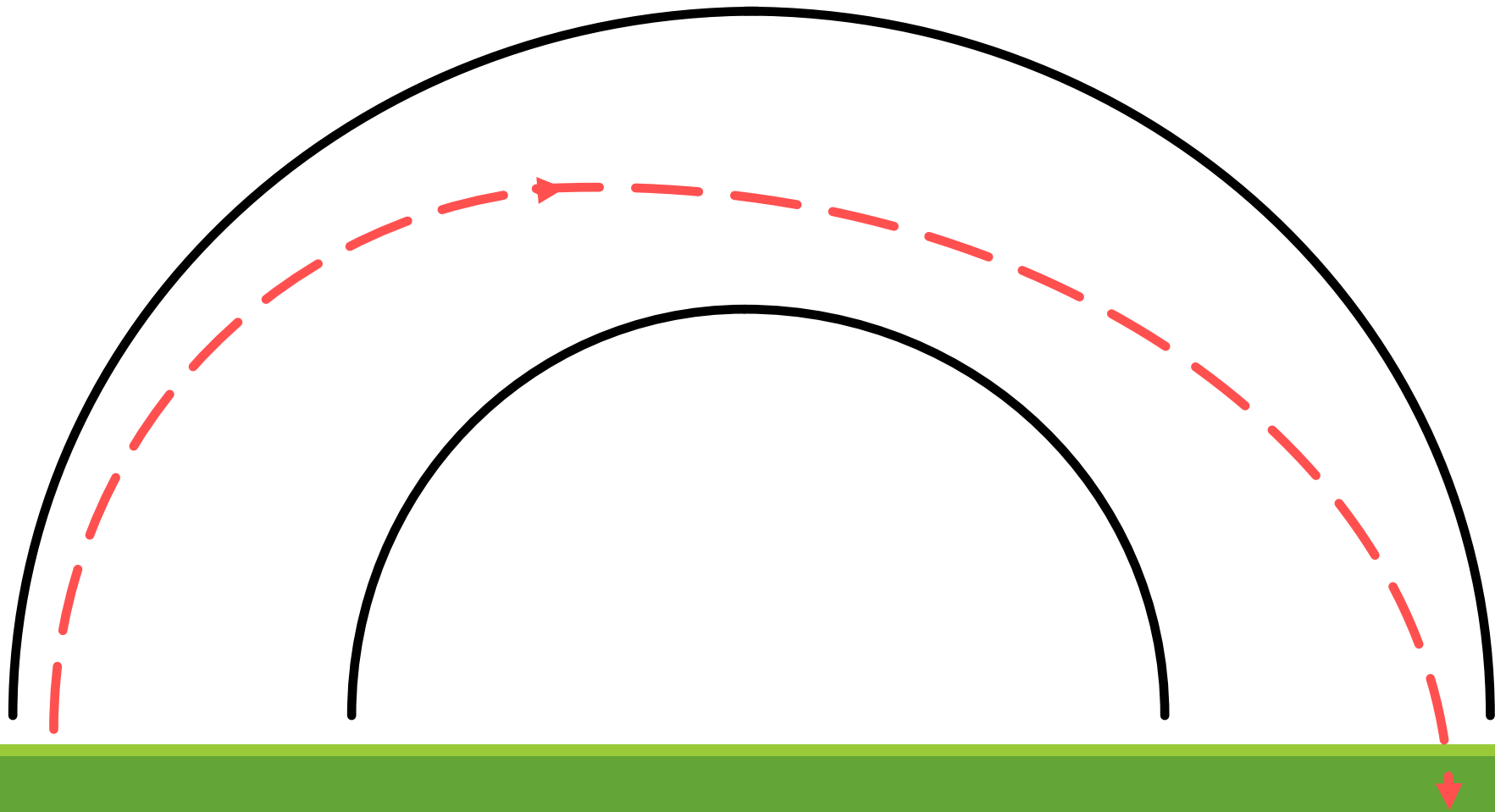
### Motion

- A. Speed set before entering curve
- B. Try not touch brake in curve
- C. Use accelerator to monitor speed through curve
- D. Accelerate as you exit the curve

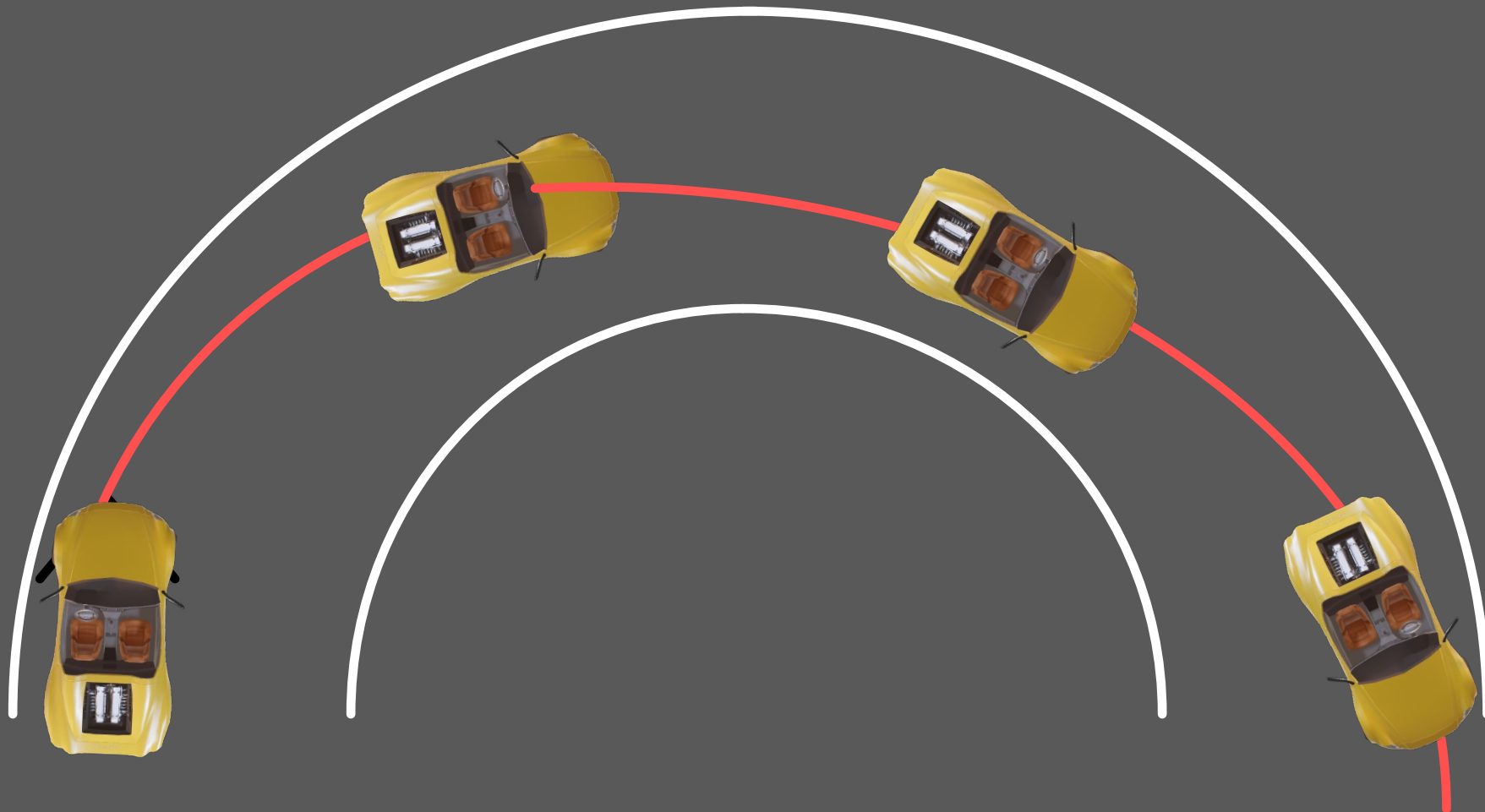
### Steering

- A. You will need hand over hand steering
- B. Steering may remain at 9 and 3 depending on speeds

# Constant Corners - Proper Vehicle Set-Up

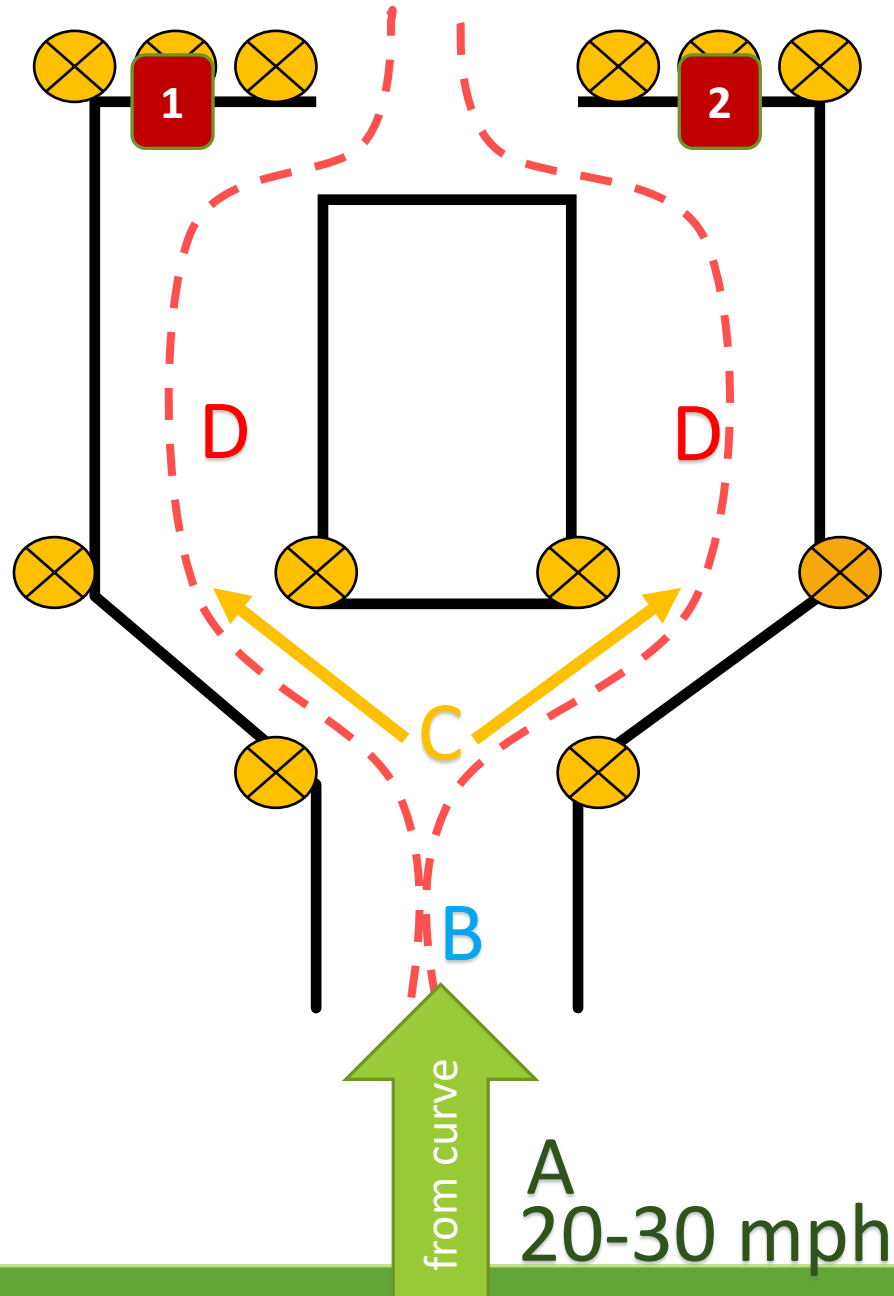


# Constant Corners - Proper Vehicle Set-Up





## Evasive Lane Change-Left, Right, Stop



### *Controlled Braking with Lane Change*

#### Procedures

- Approach exercise between 20-30mph
- Use 9 and 3 steering technique
- Decide which direction to move at instructor's command
- Use control braking to slow vehicle down

#### Skill Techniques

##### Visual

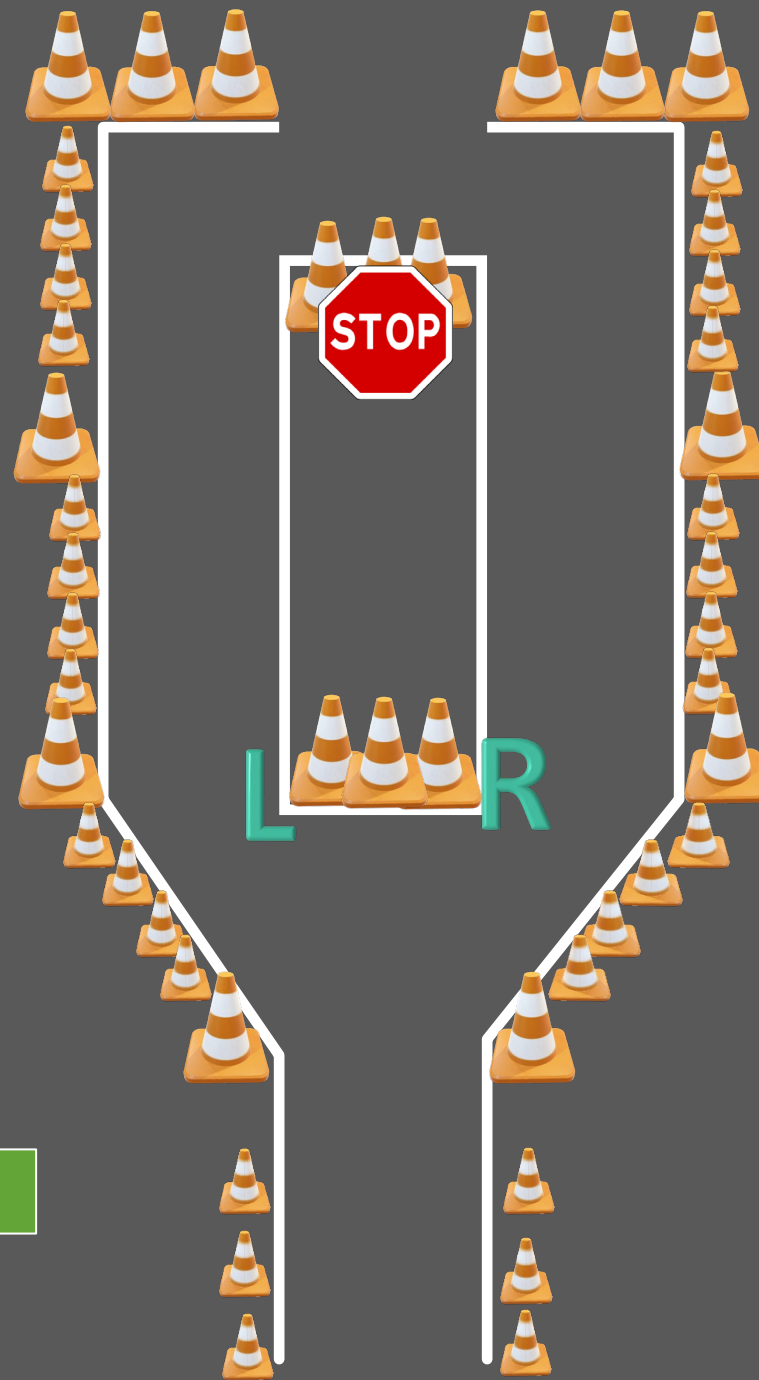
- Move eyes to follow lane position...lane 1 or 2
- Look in the lane position rather than at cones

##### Motion

- Keep foot on accelerator until instructor gives direction...lane 1 or 2
- Use a controlled hard brake w/o skid; braking occurs with steering movements
- Stay on brake until vehicle comes to a complete stop between lanes 1 and 2

##### Steering

- Use 9 and 3 steering technique to enter the lane change
- Technique should be bump (touch arms)...bump (touch arms)..straighten (center steer)

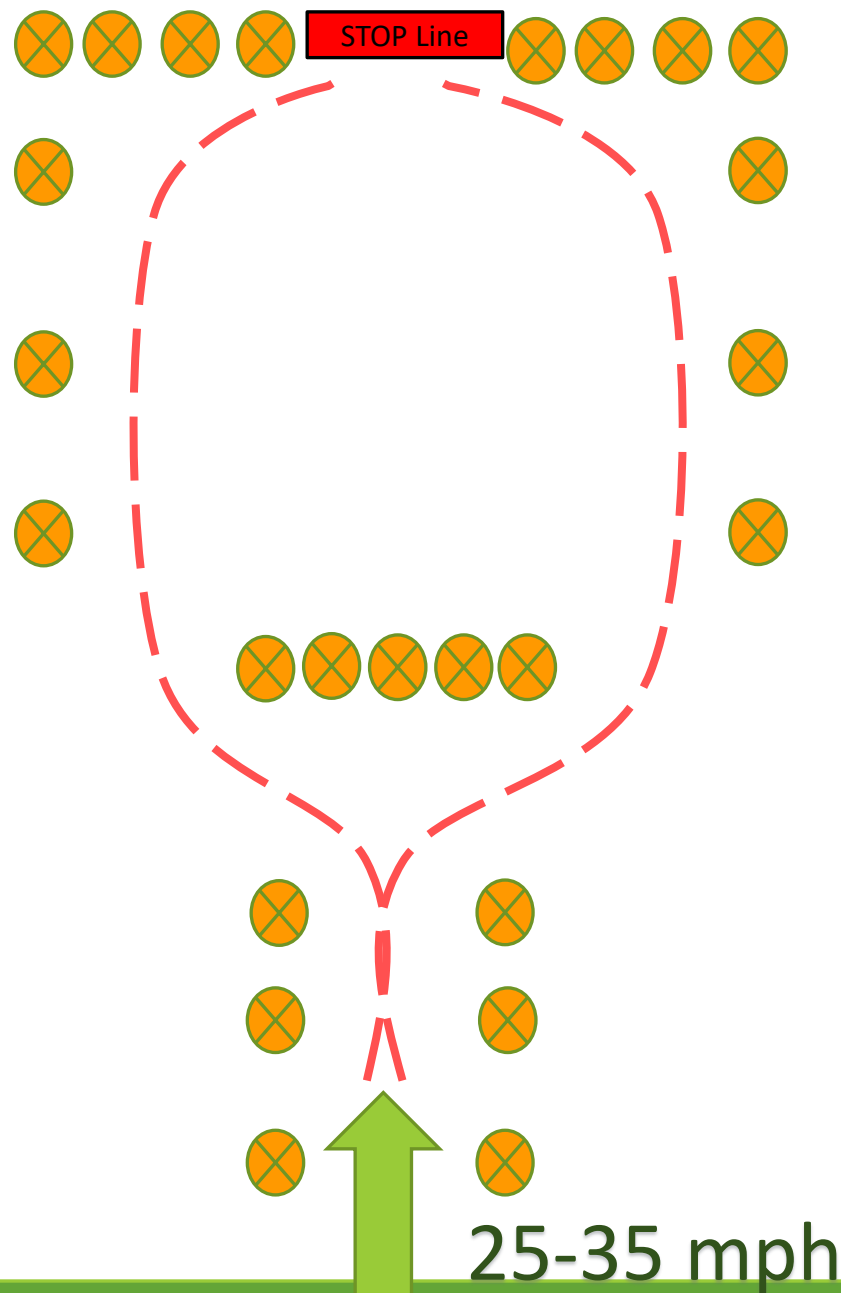


100'

20'

**Evasive Lane Change Left, Right, Stop**

# Controlled Braking



## Procedures

- A. Approach exercise between 25-35mph
- B. Use 9 and 3 steering technique to execute lane change when indicated by instructor a...LEFT, RIGHT, or STOP
- C. Use controlled braking technique while steering into lane
- D. Bring vehicle to a stop before cues

## Skill Techniques

### Visual

- A. Move eyes to sight on instructor at end of exercise
- B. Look to lane position rather than cones

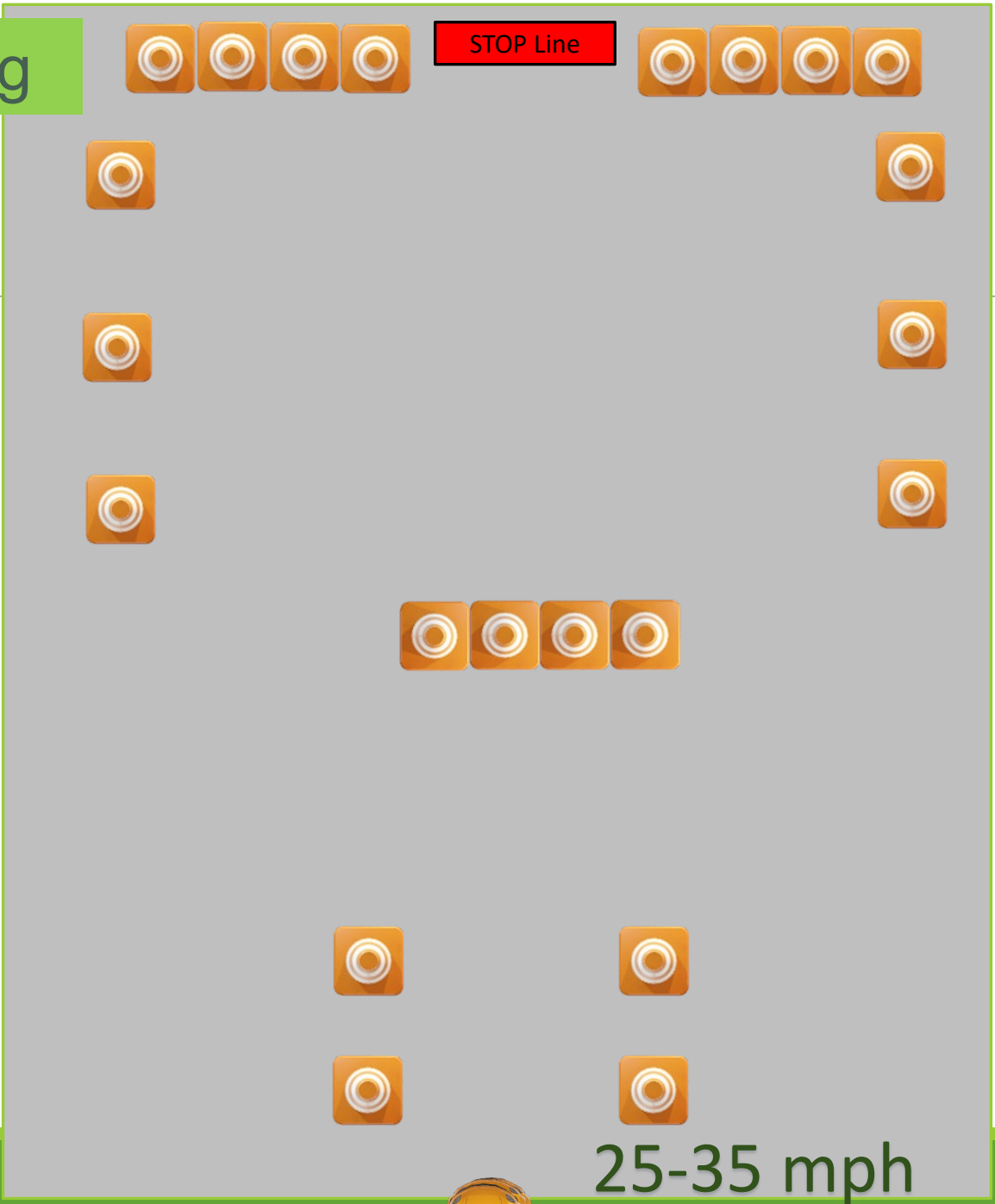
### Motion

- A. Speed is set at entrance to exercise
- B. Braking occurs with steering movements
- C. Brake hard initially w/o skid, then ease up to stop

### Steering

- A. Use 9 and 3 technique to enter the lane change
    1. 1<sup>st</sup> bump (touch of arms) moves wheel to area...180 degrees
    2. 2<sup>nd</sup> bump (touch of arms) opposite way brings vehicle back to control...
  - B. Straighten wheel back to center steer
  - C. Keep hands at 9 and 3 for stop command, bring vehicle to a complete stop using controlled braking in lane - no lane change needed for this command
- \*\*If stopping distance is too short, steer between end lane cones using 9 and 3 steering technique (BRING VEHICLE TO A COMPLETE STOP!)

# Controlled Braking

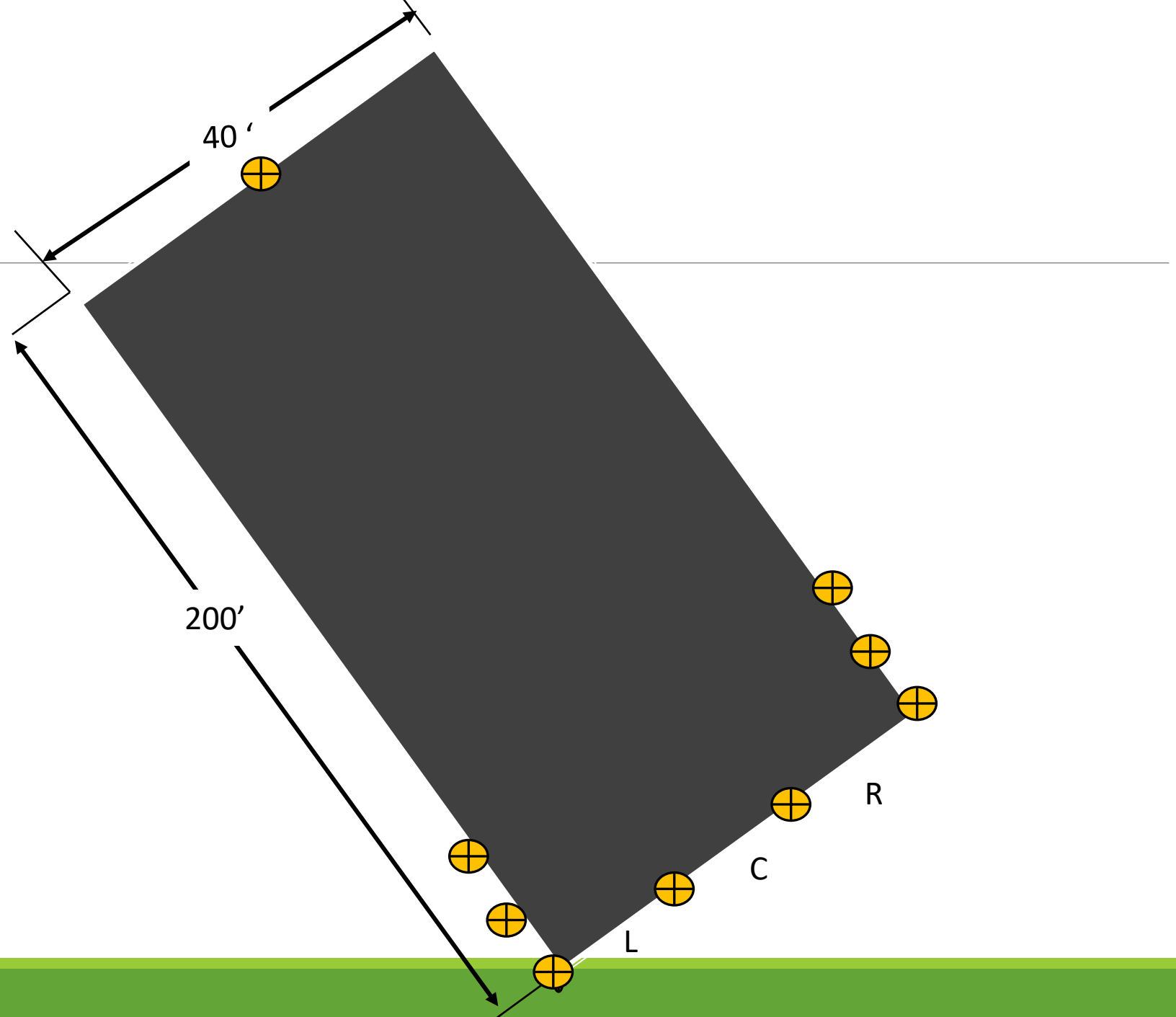






# Perceptual Driving

# Skid Pad





# Skid Control

- One out of every four accidents involve skidding.
- Skidding results from changes in speed or direction that are too abrupt for road surface conditions
- Your ability to control skidding is critical in reducing the likelihood and severity of a collision.
- The most critical elements in skid control is to manipulate the brake to avoid locking the wheels and to maintain steering control.





# Skid Exercises

## Four Wheel Lock-up

- Demonstrate that locked-sliding wheels can't be steered.
- Demonstrate that locked-sliding wheels go further than controlled braking.

## Controlled Braking-Straight Line

- Maximum braking without locking wheels
- Demonstrate stopping distance is shorter than when wheels were locked and sliding.
- If lock-up occurs, release pressure slightly on brake and squeeze again (DO NOT pump the brakes).

## Uncontrolled Skid

- Demonstrate an uncontrolled skid.
- Demonstrate that locked-sliding wheels will always want to lead.



# Skid Exercises Cont...

## Skid Control

Rear Wheels will begin to skid and want to lead.

1. Steer in a direction you want to go,
2. Remove foot from gas.
3. (DO NOT brake)
4. As vehicle begins to respond to your steering, stop and begin steering in the other direction.
5. As the vehicle is stabilized, use the controlled braking and stop.

## Controlled Braking With Evasive Lane Change

1. Initiate controlled braking.
2. Steer into the center lane and stop vehicle.







# What is ABS?

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- Each wheel is individually monitored by computer,
- does not allow the wheels to lock-up and slide when the brakes are applied.



# What ABS Doesn't Do

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- It DOESN'T shorten reaction distance or braking distance.
- It DOESN'T defy the laws of physics.
- It DOESN'T improve action time.
- It DOESN'T change the driver's response to recover from a skid.



# ABS Malfunction

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- ABS Symbol on Dash Panel
- Conventional Brakes take over



# ABS Exercises

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Straight-line Braking

Braking and Evasive Steering



# New Maneuver - STOP COMMAND on Skid Pad

