CHAPTER 5

CRASH AVOIDANCE

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TABLE OF CONTENTS

DEFENSIVE DRIVER 5-3
SPACE CUSHION 5-3
VISION 5-3
PERCEPTION/REACTION TIME 5-4
FOLLOWING DISTANCE 5-4
DRIVER DISTRACTION 5-5
INTERSECTIONS 5-5
- Clearing Intersections 5-5
- Fresh Green Light 5-6
- Stale Green Light 5-6
- Right Turns 5-6
- Left Turns 5-6

FREEWAY DRIVING 5-6
- Merging 5-6
- Reentering a Freeway After a Traffic Stop 5-7
- Driving at High Speed for Long Periods (Loss of Speed Reference) 5-7
- Wrong-Way Driver 5-7

OPERATING A VEHICLE IN REVERSE 5-7
BACKING HAZARDS 5-8
- Backing at Speeds Greater Than 10 Miles Per Hour 5-8
- Backing While in the Roadway 5-8
- Backing Onto the Roadway 5-8
- Parking 5-8

OCCUPANT RESTRAINT SYSTEMS 5-9
- Seat Belts 5-9
- Tactical Seat Belt Removal 5-9
- Airbags 5-9

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CHAPTER 5

CRASH AVOIDANCE

1. DEFENSIVE DRIVING. Safe driving habits can reduce the risk of crash and injury. Peace officers have a duty to drive in an exemplary manner, as this can affect the driving habits of other drivers and their attitude toward law enforcement. Defensive driving is driving in a manner that avoids crashes at all times regardless of who has the right-of-way, whether in normal conditions, during Code 3 response, or while engaged in pursuit operations.

a. Defensive drivers possess the following characteristics:

(1) View safe driving as a personal responsibility.

(2) Recognize the dangers involved in driving a law enforcement vehicle.

(3) Drive at a speed that is safe for existing conditions.

(4) Yield the right-of-way when necessary.

(5) Make exemplary and safe decisions while driving.

b. It is the obligation of all officers to respond to emergency calls in a responsible manner, balancing the risk of their driving behaviors with the risk to the public posed by the call. Peace officers operating emergency vehicles are accountable under federal and state laws as well as agency policies. Failure to operate within the law and policy can result in criminal prosecution, civil liability, and agency discipline.

2. SPACE CUSHION. The term “space cushion” refers to the clear area surrounding a vehicle. It includes the front, rear, and sides of the vehicle. Enforcement driving requires constant vigilance, and officers should always be aware of the area surrounding their vehicles.

3. VISION. The greatest asset to a law enforcement driver is vision. An increase in speed or driver stress can significantly reduce an officer’s visual acuity.

a. The following are critical components of vision:

(1) Focal Point. The specific point at which a driver is looking at any given moment.

(2) Central Vision. That part of a driver's field of view that measures about 15 degrees around the focal point. Vision is sharpest within this area.

(3) Peripheral Vision. The part of the driver's field of view that lies outside central vision and extends approximately 160 to 180 degrees horizontally, and 100 degrees vertically. Peripheral vision is especially useful for detecting moving hazards outside central vision.

(4) Tunnel Vision. With an increase in speed or stress, peripheral vision can significantly decrease, making it more difficult to detect objects outside central vision.

(5) High Visual Horizon. The distance a driver looks ahead of the vehicle. A fluid concept that fluctuates with speed and available roadway. High visual horizon encompasses using the full spectrum of vision including looking at a distance, laterally scanning, and identifying and linking components of a turn (high entry/apex/exit) in a smooth, arching manner.

4. PERCEPTION/REACTION TIME. The average driver's perception time is 0.75 seconds, and their reaction time (which includes the decision-making process) is 0.75 seconds. It takes a total of 1.5 seconds to perceive and react to a problem on the road. Depending on the speed of the vehicle, a significant distance can be covered during the 1.5-second perception/reaction period.

a. For example, a vehicle traveling 60 miles per hour (mph) will cover 132 feet in 1.5 seconds during the average driver's perception/reaction time. The calculation for the distance covered during 1.5 seconds is as follows:

(1) Speed multiplied by 1.1 equals distance traveled in 0.75 seconds (perception time); speed multiplied by 1.1 equals distance traveled in 0.75 seconds (reaction time).

(a) (60 x 1.1 = 66) + (60 x 1.1 = 66) = 132 feet.

5. FOLLOWING DISTANCE. A safe minimum following distance is at least three seconds of time between vehicles. This allows sufficient time for a driver to react to sudden hazards.

a. For example, a vehicle traveling at 60 mph should be approximately 270 feet from the vehicle in front.

(1) Speed multiplied by 1.5 equals feet per second (approximately).

(a) (60 x 1.5 = 90) x 3 seconds = 270 feet.

6. DRIVER DISTRACTION.

a. Peace officers may be distracted by multiple factors while driving a law enforcement vehicle. These distractions include, but are not limited to, the following:

(1) Cellular telephone use.

(2) Mobile Digital Computer.

(3) Radio/Consolidated Patrol Vehicle Environment.

(4) In-custody arrestee.

(5) Partner officer.

(6) Map/navigation.

(7) Operation of Code 3 equipment.

(8) Patrol activities/observations.

(9) Unsecured objects within the vehicle.

(10) Food/drink.

7. INTERSECTIONS. Intersections pose one of the greatest risks for crashes faced by the law enforcement driver. Defensive drivers, even if they have the right-of-way, visually clear intersections by looking for cross traffic and pedestrians. A defensive driver should always assume every lane is occupied until they can see otherwise. The following identify intersection hazards and the appropriate response(s):

a. Clearing Intersections.

(1) Look left, front, right, then left again before proceeding.

(2) Make eye contact with other drivers or pedestrians at the intersection who appear to be yielding the right-of-way.

(3) Be prepared to stop if necessary.

b. Fresh Green Light.

(1) Pause and look left, front, right, and left again before proceeding into the intersection to allow for cross traffic which has failed to stop for the red light.

(2) Make eye contact with other drivers or pedestrians at the intersection who appear to be yielding the right-of-way.

c. Stale Green Light.

(1) Anticipate the light cycling to yellow and be prepared to slow to a stop at the intersection if necessary.

(2) Make eye contact with other drivers or pedestrians at the intersection who appear to be yielding the right-of-way.

(3) Look both ways before proceeding into the intersection to allow for unanticipated cross traffic.

d. Right Turns.

(1) When waiting for another vehicle directly ahead of you to make a right turn, do not assume the other driver will proceed when it is clear. This assumption may lead to a crash.

(2) Make eye contact with other drivers or pedestrians at the intersection who appear to be yielding the right-of-way.

e. Left Turns.

(1) When waiting to make a left turn, keep the front wheels straight to avoid being pushed into oncoming traffic if hit from the rear.

(2) Make eye contact with other drivers or pedestrians at the intersection who appear to be yielding the right-of-way.

(3) Clear the oncoming traffic lane by lane before proceeding.

8. FREEWAY DRIVING. Freeway driving poses different hazards than driving on city streets. The following are potential hazards and appropriate responses while driving on a freeway:

a. Merging.

(1) Accelerate to match the speed of the flow of traffic.

(2) Signal your intention to merge with the turn signal, check the traffic-side mirror, and check the blind spot by looking over your left or right shoulder as appropriate.

b. Reentering a Freeway After a Traffic Stop.

(1) Use the shoulder, if available, as an acceleration lane to match the speed of traffic before merging.

(2) Signal your intention to merge with the turn signal, check the traffic-side mirror, and check the blind spot by looking over your left or right shoulder as appropriate.

c. Driving at High Speed for Long Periods (Loss of Speed Reference).

(1) Checking your speedometer frequently will assist in maintaining appropriate speed awareness.

d. Wrong-Way Driver.

(1) Encountering a wrong-way driver should always be a consideration when driving on the freeway. Use of the leftmost lane should be avoided as wrong-way drivers are often impaired or disoriented and operate in the leftmost lane.

(2) Maintaining a high visual horizon is the best defense from being involved in a crash due to a wrong-way driver.

9. OPERATING A VEHICLE IN REVERSE. Peace officers should be aware that a large percentage of crashes occur while operating a vehicle in reverse. When operating a vehicle in reverse, peace officers should:

a. Exit the vehicle and visually check behind the vehicle if you are not certain the area is clear.

b. Look over your right shoulder to look through the rear window for maximum visibility. Confirm the blind spot directly behind the vehicle is clear prior to beginning any backing maneuvers.

c. Continue to look back until the vehicle stops.

d. Use someone to assist while backing if necessary.

e. Use all available equipment (mirrors/camera) if the view out of the back window is obstructed.

10. BACKING HAZARDS. The following represent specific backing situations peace officers may encounter:

a. Backing at Speeds Greater Than 10 Miles Per Hour.

(1) Avoid unless necessary.

(2) Back in a straight line when possible.

(3) Use minimum and smooth steering input if necessary.

(4) Be aware of obstacles and blind spots.

b. Backing While in the Roadway.

(1) Use the shoulder of the road.

(2) Avoid erratic movements that could confuse other drivers.

(3) Back slowly and smoothly.

(4) Be aware of obstacles and blind spots.

c. Backing Onto the Roadway.

(1) Be aware of cross traffic on sidewalk, shoulder, and roadway.

(2) Back slowly and smoothly.

(3) Be aware of obstacles and blind spots.

d. Parking.

(1) When possible, back into a parking space when arriving rather than backing out when leaving.

(2) Consider a front-end swing and crowding the side of the stall you are backing towards when leaving.

11. OCCUPANT RESTRAINT SYSTEMS.

a. Seat Belts.

(1) The number of peace officers injured or killed in traffic crashes due to the lack of seat belt usage continues to be significant. When worn properly, seat belts are the single most effective way of protecting vehicle occupants from serious injury or death in a crash.

(2) Departmental policy requires seat belt use when driving. Strict adherence to policy should be followed.

b. Tactical Seat Belt Removal.

(1) This is a quick and effective way of disengaging and retracting a seat belt to ensure it does not become entangled on items in the vehicle's interior or on an officer's equipment. It can be accomplished through training and preplanning. This technique should be performed every time the vehicle is coming to a stop and prior to exiting the vehicle. The link to a tactical seat belt removal instructional video can be found on the California Highway Patrol Intranet website.

c. Airbags.

(1) Airbags are supplemental restraint systems and do not replace seat belts.

(2) Airbags cushion occupants in crashes.

(3) Airbags inflate with explosive force, then immediately deflate. If the driver's hands or arms are in front of the steering wheel when this happens, serious injury could result. It is suggested officers keep their hands on the steering wheel at the 8 o'clock and 4 o'clock positions when possible.

(4) Airbag deployment is dependent upon speed, the angle at which the vehicle strikes an object, and the rigidity of the object hit.

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