

# ***Texas Department of Public Safety***



## **DRIVER TRAINING FACILITY**

## **FEASIBILITY STUDY**

**July 2006**

# MESSAGE FROM THE DIRECTOR



The Texas Department of Public Safety has long been considered as one of the top law enforcement agencies in the nation. The thousands of men and women who wear the badge of the Department and take their place in the fight against crime all work to protect the lives, rights, property, and privileges of the people of the state within the parameters of the agency's motto – "courtesy, service, protection."

Key to the ability of our officers to perform their duties is the training each receives from the Department; from the time they enter the Recruit School to specialized training within their assigned service. The agency's focus on training is one of our top priorities given the risks involved in law enforcement work.

Paramount to our ability to provide quality training is the setting within which the officer is trained. In the early 1960's, the current Training Academy was constructed on the outer edges of the city of Austin. Today, the Academy, as well as the entire Headquarters complex, is in the midst of a residential/commercial area that limits our ability to provide the quality training our officers must possess to perform their duties.

As our training programs continue to evolve to mirror the needs of the times, it is important that we continue to upgrade our training facilities. This proposal discusses the benefits of constructing a state of the art emergency vehicle operations course complex that includes the necessary infrastructure to develop the proper driving skills within our officers.

Sincerely,

A handwritten signature in black ink that reads "Thomas A. Davis, Jr." in a cursive script.

Thomas A. Davis, Jr.  
Director

## *Executive Summary*

*The purpose of this study is to determine the feasibility of constructing and operating an advanced Driver Training Facility on Department of Public Safety (DPS) property in Williamson County, Texas. This study addresses the following:*

- *Is there a need for a DPS Driver Training Facility?*
- *Is current DPS driver training adequate?*
- *Are there alternatives to building this facility?*
- *What benefits would this facility afford DPS and the citizens of Texas?*

*DPS crash statistics clearly indicate a need for increased driver training for DPS and other Texas law enforcement personnel. In the 5-year period from January 2001 to December 2005, DPS experienced a 30% increase in the number of fleet crashes involving our commissioned officers, which cost the State of Texas \$8,823,221 in vehicle repair and replacement and civil litigation. More significantly during this period, 2 commissioned officers and 6 citizens were killed, while 239 officers and 302 citizens were injured. As an adjunct to the significant cost in lives and dollars there was the loss of 40,824 patrol man-hours, which has a detrimental effect on overall traffic safety in Texas. Tragically, this trend continues as DPS has had 2 officers killed in on-duty crashes in the first 5 months of 2006.*

*Several factors have contributed to this marked increase in DPS officer crashes. 61% of the agency's fleet collisions involved our less tenured commissioned officers. Since DPS has trained 1,065 officers in the last 5 years, we expect that without better training, this trend will continue and is likely to increase. Additional contributing factors include the rapidly increasing number of vehicles on Texas highways and the advanced technological equipment used in today's patrol units. These two factors in conjunction mean officers on patrol are now working in an ever-changing, multi-tasked environment, requiring exceptional vehicle operation and judgment skills.*

*The alarming increase in DPS fleet collisions and the limitations of our Agency's current facilities indicates our training is inadequate to meet the demands of today's law enforcement environment. Because DPS has no adequate driving facility, troopers are trained on a small, leased area of pavement that confines training to low speed vehicle operation skills. Missing from our current driver training are exercises in emergency driving operations*

*in rural and urban environments, decision-making exercises in emergency and routine driving, and practical simulations of routine patrol operations.*

*DPS efforts through the years to locate a more suitable law enforcement driver training location or to utilize other agencies' facilities have been unsuccessful since most locations have the same size restrictions. The practice of training on public roads is dangerous to officers and the public. DPS survey results of police agencies across Texas show that Texas law enforcement agencies support the Department's efforts to build a comprehensive police Driver Training Facility, designed to address the needs of Texas peace officers. It is the Department's intent to make any Driver Training Facility available on a scheduled basis to all Texas law enforcement agencies.*

*The proposed DPS Driver Training Facility would consist of multiple driving areas that allow training on various driving techniques ranging from high speed maneuvers in changing environments to skid recovery training. Classrooms and driving simulators would enhance the hands-on training at this facility. The course design would allow multiple exercises to be conducted simultaneously. This facility would be built adjacent to the existing DPS firearms training facility near Florence, in Williamson County.*

*The Department has hired an architect to conduct the necessary site studies and preliminary architectural work to determine the cost of building this facility. When that information becomes available, it will be provided as an addendum to this study.*

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**TEXAS DEPARTMENT OF PUBLIC SAFETY  
DRIVER TRAINING FACILITY  
FEASIBILITY STUDY**

**PROBLEM STATEMENT**

Over the past five years, the number of collisions involving DPS officers has risen steadily, with a corresponding increase in injuries and deaths to both citizens and officers. The current DPS driver training program does not address all aspects of police driving because DPS has no suitable Driver Training Facility and DPS has been unable to find a viable alternative facility.

**SCOPE OF THE PROBLEM**

The operation of a police vehicle is a complicated task. In addition to patrolling the highways of the state looking for unsafe motorists, responding to traffic accidents, or requests for assistance, and assisting disabled motorists; officers also operate a police radio, radar, video camera, and mobile computer data terminal. DPS commissioned officers perform these duties while moving through traffic, making sudden U-turns, driving slower than normal traffic, and at times, driving much faster than traffic in an attempt to apprehend violators. DPS officers operate their vehicles every day in a rapidly changing multi-tasked environment that is much more demanding than that of the general motoring public. This operational environment has inherent risks that require specialized training and skills.

From January 2001 to December 2005, DPS officers were involved in a total of 2,691 collisions (an average of 538.2 per year), with a high of 613 collisions in Calendar Year (CY) 2005. The 613 collisions in CY 2005 represent a 30% increase over the 471 collisions in CY 2001. The Department's fleet crash increases during this time frame have significantly outpaced the enlargement of our fleet (6%), the addition of commissioned officers (8%), and the expansion of registered vehicles in Texas (8%). Of the 2,691 total collisions during the past five years, 1,125 (42%) were determined by the Department's Fleet Safety Board to be preventable. A preventable collision is an occurrence in which the Department driver failed to do everything he or she reasonably could have done to prevent the collision (see Appendix A, Table I).

Over this 5-year period, 8 individuals were fatally injured (2 DPS commissioned officers and 6 citizens). Also 239 DPS commissioned officers and 302 citizens were injured in these collisions. The 2,691 fleet collisions cost the Department and the state \$1,362,099 in workers compensation claims, while total property damage, and repair costs including the total loss of 178 vehicles was \$5,715,559 (see Appendix A, Tables I and V). In addition, from 2001 to 2005 the Agency paid \$1,147,191 in litigation costs arising from judgments and settlements in 45 lawsuits involving fleet collisions (see Appendix A, Table IV). Another \$598,372 was paid in 190 tort claim cases from 2001 through 2005. The total cost of fleet collisions to the Department and the state since January 1, 2001 was \$8,823,221 (see Appendix A, Table V).

This represents a significant loss of operating funds and a loss of resources needed for our officers to perform their patrol duties.

Of significant concern to the Department is the age and tenure of the officers involved in fleet collisions. Of the 2,691 fleet collisions reported during the last 5 calendar years involving commissioned officers, 1,270 (47%) involved fleet drivers between the ages of 21 and 35 (see Appendix A, Table II), while 1,640 (61%) of these collisions involved drivers with less than 10 years of service (see Appendix A, Table III). Because DPS has hired 1,065 new officers in the last 5 years we expect that this trend is likely to increase. If the Department is to reverse this upward trend in fleet collisions, we must improve the training provided to young officers in the operation of their patrol vehicles.



*“Serious fleet accidents have increased as our average officer age has decreased.”*

- Assistant Chief Ken Merchant, Abilene Police Department

While the previous statistics focus on DPS collision issues, law enforcement agencies throughout the state and the nation are facing the same challenge. A review of available data illustrates the depth of the problem.

In Texas, during the period from January 1, 2001 through December 31, 2005 (see Appendix A, Table VI):

- There were 8,917 crashes involving law enforcement vehicles, 2,560 occurring while the police vehicle was in pursuit and 6,357 in non-pursuit events.

- 3,218 crashes resulted in someone being injured or killed.
- 43 crashes resulted in someone being killed, 16 in pursuits and 27 in non-pursuit crashes. 2004 was the deadliest year with 15 fatalities.
- 245 crashes resulted in incapacitating injuries, 111 in pursuits and 134 in non-pursuit crashes.
- Non-incapacitating injuries were reported in 954 crashes, 353 in pursuits and 601 in non-pursuit events.
- The majority of all injuries and deaths occurred in non-pursuit crashes.

(Source: Department of Public Safety, Crash Records Bureau.)

Nationally, between 2000 and 2004 (see Appendix A, Table VII):

- 640 people were killed in crashes involving police vehicles.
- 149 were the drivers of the police vehicle, 19 were passengers.
- 350 were the passenger/occupant of the other vehicle.
- 113 were pedestrians
- 9 were pedal cyclists
- As with the State statistics, the majority of the deaths, 372, occurred in non-emergency crashes.

(Source: National Center for Statistics and Analysis, National Highway Safety Administration.)

Randomly selected Texas police agencies were surveyed to determine the adequacy of their driver training and to gauge interest in a DPS Driver Training Facility used to train their officers. DPS survey results show that Texas law enforcement agencies strongly support the Department's efforts in building a comprehensive police driver training facility, designed to address the training needs of today's officers. Of the surveyed agencies, 78.4% responded their current driver training was inadequate, while 94.3% indicated an interest in making use of a DPS facility to assist in their training efforts (see Appendix A, Table VIII).



## CURRENT TRAINING

The Department, like the majority of law enforcement agencies throughout Texas and the United States, fall short in providing the necessary practical driver training to their officers. DPS currently has 4,241 fleet drivers, of which, 3,552 are commissioned officers. The DPS recruit driver-training schedule consists of 22 hours of classroom training focusing on defensive driving concepts, 32 hours of driver skills training, and 17 hours of city and rural highway driving. Comparatively, DPS schedules approximately 112 hours of firearms training in the Academy. The driver skills training teaches the recruits about the dynamics of the patrol vehicles – steering, braking, acceleration, balance, and maneuvering. The city and rural driving segments teach the recruits the effect the patrol vehicle has on the other drivers on the roadway while giving the instructor time to correct poor driving technique.

While DPS officers receive the full 22 hours of defensive driving classroom training, the size of the recruit schools and the lack of an adequate Driver Training Facility reduce the actual hands-on training to less than 2 hours of driver skills training and approximately 18 hours city and rural driving per student.



*“Patrol cars are involved in more officer deaths  
and disable more officers than handguns.”*

- Chief Ike Hynes, Cleveland Police Department

The limited DPS driver-skills training is currently being conducted in the parking lot around the football field at the Tony Burger Center in Austin. Using this facility severely limits the type and duration of skills training for recruits. The small size requires running one exercise, then resetting the range for the next exercise, a time-intensive operation that limits the number

of recruits who can be trained each day. Missing from our current program is practical training in high-speed operation, pursuit transition from rural to urban environments, judgment skills in high-stress pursuits, transition from pursuit to felony stop procedure, and routine patrol operations in a multi-tasking environment. Moreover, DPS is unable to provide recurrent or remedial driver training when needed.



*“There is a pressing need for advanced driver training. Having a place large enough to train is the problem.”*

- Captain David Davis, Pecos Police Department

## **ALTERNATIVE TRAINING LOCATIONS**

Over the last decade, the Department has had to use a variety of driving areas to conduct driver training for our recruits. These driving areas consist of the following:

- Travis County Exposition Center Parking Lot
- Austin Police Department Driving Track
- San Marcos Police Department Driving Track
- Bergstrom Air Force Base Tarmac
- Robert Mueller Airport Tarmac

Inherent in each of the above sites are logistical problems that hamper our ability to adequately train our recruits:

- Training schedules must be coordinated with the facility owner.
- Setup of driving exercises reduces available training time.

- No on-site storage of training aids (vehicles, traffic cones, barricades, etc.).
- No on-site facility for vehicle repairs and maintenance.

The specific advantages and disadvantages of each of the above facilities are as follows:

### **Travis County Exposition Center Parking Lot**

Driver training has been attempted using large parking lot areas such as the area surrounding the Travis County Exposition Center just east of Austin.

#### **Advantage:**

- The facility is within a 20-minute commute of the Academy and has some shelter and restrooms facilities.

#### **Disadvantages:**

- The parking lot has light poles at various intervals; tire stops; is littered with debris, such as broken glass, dirt and gravel; and is surrounded or divided by raised areas of permanent structures or vegetation.
- The parking lot limits exercise design. It was not designed for driver training and adapting it for driving exercises is very risky.
- High-speed pursuit training is not feasible.

### **Austin Police Department Driving Track**

The Austin Police Department (APD) Training Academy has a dedicated driver training area which includes a runway style paved area approximately 500 feet x 100 feet and a paved, single-lane, multiple-curved road course approximately  $\frac{3}{4}$  mile in length.

#### **Advantages:**

- The facility has some inside classroom capacity (not always available), restrooms, and traffic cone storage availability.
- It is a police agency controlled facility where the need for lights, sirens, and high-performance maneuvers are tolerated.
- It is within a 30-minute drive from our Academy.

Disadvantages:

- The track is designed for class sizes of 20 to 30 driving students which make it too small for our Academy classes of 120 to 150 students. While we generally split our Academy classes in two with half the class conducting driver training and the other half firearms training, our ability to train smaller groups is often restricted by the availability of the site.
- The track is only available subject to APD's approval. Their schedule takes priority even if we have prior approval.
- Only two vehicles can safely be on the course at a time. Entering and exiting this course requires the use of a portion of the runway area, so attempting to conduct training in both areas (runway and road course) is unsafe or very limited.
- The course is very tight and only allows for low-speed training (highway speeds are not possible). A maximum speed of only 40 to 45 miles per hour is possible on 1 section.
- Coned courses can be arranged on the runway area but only up to three exercises can be safely run simultaneously. When all students complete the current exercise, the course must be reset for the next exercise. Our basic driving program includes 16 different coned exercises.
- The track is designed for city-type emergency and non-emergency training and not the highway-type training course needed by the Department (i.e., divided highway, rural settings, unpaved roads, open intersections, etc.).

**San Marcos Police Department Driving Track**

The San Marcos Police Department has a paved area approximately 500 feet x 250 feet, located directly behind their headquarters near IH-35 in San Marcos.

Advantages:

- It is a police agency controlled facility where the need for lights, sirens, and high-performance maneuvers is tolerated.
- The track is a moderately sized paved area with no obstructions.
- The facility has some indoor classroom space, restrooms, and cone storage space.

Disadvantages:

- It is an area designed for 10 to 20 students.

- All exercises, including a road course; have to be designed using cones. As with the APD track runway area, only up to three exercises can be safely run simultaneously. There is no separate road course area so a “combined skills” course must be laid out using traffic cones within the same area where the other exercises are conducted. The student behind-the-wheel training time is less than afforded by the APD facility due to the extra time needed to arrange each course.
- The commute to this facility is 1½ to 2 hours each way.
- High-speed pursuit training is limited.
- The track is designed for city-type emergency and non-emergency training and not the highway-type training course needed by the Department (i.e., divided highway, rural settings, unpaved roads, etc.)
- Availability is subject to their agency use schedule.

### **Bergstrom Air Force Base and Austin Robert Mueller Airport**

The best facilities previously used by the Department were in Austin on the tarmacs at the Bergstrom Air Force Base and the city’s Robert Mueller Airport. Because of the size of the tarmacs, the Department was able to adequately meet the skills training needs for the recruit classes while giving each recruit sufficient behind-the-wheel training. While these facilities were available at different times both have been converted to other uses and are no longer available for our training.

## **THE PROPOSED DRIVER TRAINING FACILITY**

The Department began studying the shortcomings of our driver training program in the early 1990's. It focused on the various causes of fleet collisions, including age, experience, and other variables that contributed to the problem. While a significant number of fleet collisions were ruled as no fault of the driver, a higher than acceptable number of these collisions were determined to be preventable. There appeared to be a direct correlation between the level of practical, hands-on, pursuit-driving training of our officers and the number of fleet collisions – better-trained drivers were less likely to become involved in collisions.

The Department intends to request authorization and funding from the Texas Legislature to construct a Driver Training Facility on the DPS property near the City of Florence in Williamson County. The facility will consist of multiple driving areas that allow for training in various driving techniques ranging from high-speed maneuvers to off-road recovery. This will enable DPS to train its officers in the safe and proper use of the patrol vehicle in all situations. Additionally, it is the Department's intent that this facility also be used to train officers from other Texas police agencies.

A conceptual drawing of the proposed track is illustrated in Appendix B. This concept incorporates key aspects of the training needs but the final design is contingent upon recommendations of the architectural contractor. Ultimately, this facility should be of a size and design to provide adequate training in routine patrol, emergency, and pursuit driver training. Because DPS recruit schools normally have 120 or more students and at least 100 students per week attend in-service training biannually, it is critical that the facility be designed to allow for conducting multiple training exercises simultaneously to maximize the efficiency of the facility. The course would incorporate the following training exercises:

**Highway Response Course.** This driving course is a continuous long track that simulates rural driving conditions and allows for high-speed pursuit training. The course should consist of 2-lane, 4-lane, and divided highway sections with improved and unimproved shoulders. It should include a variety of straight-aways, curves, hills, rural-type intersections, and merge lanes commonly found on controlled access highways. Some of the training needs that could be addressed by this type of area include:

- Pursuit of a fleeing vehicle
- Roadblocks, rolling roadblocks, spike deployment, and training in other approved intercept tactics
- Violator and pursuit turning techniques
- Off-road recovery
- High-speed cornering and vehicle dynamus

**Precision Skills Pad.** The precision skills pad is a flat, paved surface. Two areas are needed to allow for simultaneous training by recruit and in-service schools, and training by other law enforcement agencies. These areas would be used for vehicle awareness and space management type training. The exercises, as illustrated in Appendix C, are laid out using

traffic cones to form tight, low-speed paths for the vehicle to negotiate. Some of the objectives are to teach driver awareness of the vehicle dimensions, turning radius limitations, proper seating position, foot position and braking, hand placement on the steering wheel, and use of mirrors. Some exercises may be timed but precision of movement is the primary emphasis. Although speeds are low, the large surface area is needed to be able to run several exercises simultaneously.

The precision skills pad is also used for emergency response driver training to teach the limits of traction, weight transfer, evasive maneuvers, and collision avoidance. These types of exercises require higher speed and/or acceleration. Each exercise needs a sufficient approach area to obtain the targeted speed prior to entering the exercise and a sufficient recovery area after exiting the exercise. These exercises often include extreme lateral movements which require sufficient side-recovery areas. The pad dimensions recommended in the conceptual drawing would allow for the necessary recovery areas and for simultaneous exercises.

**Skid Control Pad.** This is an area with a special surface for creating greatly reduced traction when wet. The size of this area should be approximately 200 feet x 300 feet, and should include entrance acceleration, recovery areas on all sides, and a separate exit avenue. Exercises are aimed at teaching skid prevention, low traction vehicle control, and recovery. The ability to wet down the area through a sprinkler system is necessary to keep tire damage and wear to a minimum.

**Off-Road Response Course.** This would be a non-paved course, similar to the highway response course, but not as long or complex. Non-emergency, emergency, and pursuit driving situations could be taught on various roadway surfaces such as dirt, sand, and gravel that produce sight restrictions and vehicle handling problems for the driver.

**Urban and Tactical Driving Area.** This would be a driving environment with urban type roads, intersections, and sight restrictions. Driver training would include various traffic situations commonly found in an urban area that would benefit routine patrol, emergency, and pursuit training. Additional specialized driver training could include approach to a crime in progress, covert following, dignitary protection, and pursuit transition from a vehicle pursuit to a felony arrest situation. SWAT and civil disturbance control type situations would also utilize this area.



*“This training would enhance officers’ ability to make good sound decisions in critical situations that would affect officer and public safety”*

- Chief Joel Ochoa, Port Isabel Police Department

### **SUPPORT BUILDINGS AND EQUIPMENT FOR DRIVER TRAINING FACILITY**

**Vehicle Maintenance/Emergency Vehicle Building.** A building with at least four repair stalls equipped with hydraulic rack lifts; dedicated tire mounting and balancing area; separate tire and parts storage area; brake rebuilding area; office, break room, toilets, and shower facilities; gasoline storage and dispensing. This building would also house an ambulance (a van), fire/crash truck, wrecker, and other emergency equipment. (See Appendix B.)

**Control/Viewing Tower(s).** A central control tower would be needed to provide a view of all driving areas. The tower should be heated and air conditioned, have radio, telephone, and traffic control device switching capability, and videotape recording capability. Smaller viewing towers would be needed at the Precision Skills Pads and the Urban/Tactical Driving Area.

**Dedicated Training Vehicles.** Vehicles are needed as dedicated training vehicles at the facility. These mechanically-sound vehicles, taken from the surplus patrol vehicles, should be representative of the type of patrol vehicles used by our officers.

**Traffic Control Devices.** Sufficient cones, barricades, signal lights, and other traffic control devices would be needed for setup and control of all exercises.



**Restrooms and Storage Buildings.** Restroom facilities and sufficient storage space to store traffic control devices, lawn equipment, and other auxiliary equipment is needed adjacent to the training areas.

Because this location is approximately 43 miles from the DPS Headquarters complex in Austin, it would be advantageous for the Agency to provide other auxiliary buildings and equipment to enhance the efficiency and effectiveness of the driver training program. The auxiliary buildings and equipment items are as follows:

**Administrative and Classroom Building.** In order to house the dedicated training staff that would be responsible for overseeing the training operations, an administrative office building is needed on the complex. Included in the building are 3 classrooms (30-, 60-, and 100-seat capacity) capable of handling the expected number of students, a classroom housing the Driving Simulators, a small cafeteria used only to serve meals prepared off-site, video training equipment, restroom facilities, storage, and other support rooms. The classrooms in this building could also help support the Firearms Training facility. (See Appendix B.)

**Driving Simulator Units.** While the driving track is designed to teach greater physical coordination skills and judgment skills, another critical part of driving is the complex decisions needed to timely utilize these skills. Truly complex decisions involving multiple moving vehicles, pedestrians, and other real-world elements cannot be safely trained even on a controlled track. Technology now exists in driving simulators to create a realistic yet safe driving environment for testing and training complex decision making. The Department would need eight driving simulator units at the Driver Training Facility to enhance the training program. Simulator training could assist in:

- Spotting aggression control, attention deficit, and distractibility issues.
- Legal and policy compliance adherence.
- Multiple pursuit vehicle coordination tactics (if multiple simulators are linked together).
- Allow coordinated training between drivers and communications operators.
- Developing the decision process for continuation or termination of a pursuit.
- Combination training going from a driving simulator scenario to firearms simulator scenario.

## **SUPPORT PERSONNEL**

**Training Staff:** A dedicated training staff is needed for the Driver Training Facility. The level of staffing will be contingent upon the size of the facility.

**Automotive Technicians:** In order to ensure that the training vehicles are maintained daily to conduct the exercises, a team of automotive technicians should be provided at the facility.

**Other Support Staff:** In addition to the above-designated staff, the Driver Training Facility will need custodians, groundskeepers, and maintenance technicians to maintain the buildings and grounds.

### **BENEFITS OF PROPOSED DRIVER TRAINING FACILITY**

In conducting this study DPS contacted the state police agencies considered to have the most advanced driver training programs and facilities. The purpose of the query was to identify positive and negative returns of their training programs and attempt to quantify the benefits. All agency responses listed the positive benefits of additional driver training as expected, but no agency has analyzed statistical data to determine if the use of a dedicated driver training facility had an impact on the number of officer-involved collisions.

A survey of Texas police agencies clearly indicates the need for this training facility. Over 78% of the agencies responding to the survey indicated their current driver training was inadequate. Many of the agencies have no realistic driver training program and focus their efforts on defensive driving or the occasional opportunity to utilize simulator training alone. It would be beneficial to police agencies in this State to have a facility available to train their officers in emergency operations.

Extensive and effective police driver training for DPS, Sheriff's offices, and local police departments would reduce officer-involved collisions across Texas. Monetarily, the average cost of 1 collision without tort claims or litigation is approximately \$2,630. With litigation the costs rise to an average of \$3,278 per collision. If advanced training significantly reduces the number of collisions, this might serve to offset some of the operational costs of a Driver Training Facility, although a greater benefit would be the reduction of fatalities and injuries related to officer-involved collisions.



*"A driving track would better prepare  
our troopers for real world pursuit driving."*

- Trooper Michael Windham, Highway Patrol-Sanger



Trooper Windham's Fleet

## SUMMARY

The statistical history and DPS survey results indicate the need for a state police driver training facility. DPS and Texas police agency collision statistics clearly indicate the costs of police officers involved collisions are staggering. DPS survey results show that most Texas police agencies believe their training programs are not adequate, and many would welcome the opportunity to utilize this facility if that option were available.

A DPS Driver Training Facility could feasibly be constructed to meet Texas peace officer driver training demands. This project, if properly funded, could be constructed on DPS property in Williamson County adjacent to the DPS firearms range near Florence. That property has sufficient space to accommodate the proposed Driver Training Facility. An in-depth analysis of this property is being conducted to assure its viability in respect to environmental issues, and the location is within the DPS long-range plan of eventually centralizing all training on this property.

**APPENDIX A**

**TEXAS DEPARTMENT OF PUBLIC SAFETY**

**FLEET COLLISION TABLES**

**TABLE I**

**DPS COMMISSIONED OFFICERS  
FLEET COLLISION ANALYSIS**

	<b>CY 2001</b>	<b>CY 2002</b>	<b>CY 2003</b>	<b>CY 2004</b>	<b>CY 2005</b>	<b>5-Year Total</b>	<b>5-Year Average</b>
Collisions	471	486	521	600	613	2,691	538.2
# Preventable	199	205	212	227	282	1,125	225.0
# Non-Preventable	272	281	309	373	331	1,566	313.2
Vehicles Lost	32	27	31	44	44	178	35.6
Injuries to DPS Personnel	40	47	62	47	43	239	47.8
Injuries to Non-DPS Personnel	49	68	72	61	52	302	60.4
<b>Total Injuries</b>	<b>89</b>	<b>115</b>	<b>134</b>	<b>108</b>	<b>95</b>	<b>541</b>	<b>108.2</b>
Fatalities – DPS Personnel	1	0	0	1	0	2	.4
Fatalities – Non-DPS Personnel	1	3	1	0	1	6	1.2
<b>Total Fatalities</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>8</b>	<b>1.6</b>
<b>Total Cost</b>	<b>\$947,857</b>	<b>\$928,959</b>	<b>\$1,082,772</b>	<b>\$1,416,181</b>	<b>\$1,339,790</b>	<b>\$5,715,559</b>	<b>\$1,143,112</b>

Source: Office of Audit and Inspection, Texas Department of Public Safety

**TABLE II**  
**DPS COMMISSIONED OFFICERS**  
**AGE OF DEPARTMENT DRIVER**  
**AT TIME OF FLEET**

<b>Age of Driver:</b>	<b>CY 2001</b>	<b>CY 2002</b>	<b>CY 2003</b>	<b>CY 2004</b>	<b>CY 2005</b>	<b>TOTAL</b>
21 – 25	14	9	29	38	40	<b>130</b>
26 – 30	80	77	89	108	106	<b>460</b>
31 – 35	108	134	131	147	160	<b>680</b>
36 – 40	82	87	96	104	107	<b>476</b>
41 – 45	61	78	84	83	78	<b>384</b>
46 – 50	76	60	59	73	70	<b>338</b>
51 – 55	45	33	22	34	36	<b>170</b>
56 – 60	5	7	9	13	12	<b>46</b>
Over 60	0	1	2	0	4	<b>7</b>
<b>TOTAL</b>	<b>471</b>	<b>486</b>	<b>521</b>	<b>600</b>	<b>613</b>	<b>2,691</b>

Source: Office of Audit and Inspection, Texas Department of Public Safety

**TABLE III**

**DPS COMMISSIONED OFFICERS  
LENGTH OF SERVICE WITH DPS  
AT TIME OF FLEET**

<b>Years of Service:</b>	<b>CY 2001</b>	<b>CY 2002</b>	<b>CY 2003</b>	<b>CY 2004</b>	<b>CY 2005</b>	<b>TOTAL</b>
Less Than 5	127	126	143	210	226	<b>832</b>
5 – 10	116	145	192	191	164	<b>808</b>
11 – 15	55	77	46	39	72	<b>289</b>
16 – 20	62	60	54	65	52	<b>293</b>
21 – 25	72	42	46	57	56	<b>273</b>
26 – 30	32	30	32	32	35	<b>161</b>
31 – 35	6	5	7	5	7	<b>30</b>
36 – 40	0	1	0	1	1	<b>3</b>
Over 40	1	0	1	0	0	<b>2</b>
<b>TOTAL</b>	<b>471</b>	<b>486</b>	<b>521</b>	<b>600</b>	<b>613</b>	<b>2,691</b>

Source: Office of Audit and Inspection, Texas Department of Public Safety

**TABLE IV**

**DPS COMMISSIONED OFFICERS' FLEETS**

**LITIGATION CLAIMS**

	<b>CY 2001</b>	<b>CY 2002</b>	<b>CY 2003</b>	<b>CY 2004</b>	<b>CY 2005</b>	<b>TOTAL</b>	<b>5/Year Average</b>
Number of Lawsuits Filed	9	11	8	17	19	64	12.8
Number of Lawsuits Settled	7	18	5	7	8	45	9
<b>Amount of Judgments/ Settlements</b>	<b>\$82,425</b>	<b>\$273,877</b>	<b>\$104,585</b>	<b>\$329,814</b>	<b>\$356,490</b>	<b>\$1,147,191</b>	<b>\$229,438</b>

**TORT CLAIMS**

	<b>CY 2001</b>	<b>CY 2002</b>	<b>CY 2003</b>	<b>CY 2004</b>	<b>CY 2005</b>	<b>TOTAL</b>	<b>5/Year Average</b>
Number of Claims Filed	53	59	80	71	71	334	66.8
Number of Claims Paid	14	29	57	44	46	190	38
<b>Total Tort Claim Payments</b>	<b>\$87,059</b>	<b>\$69,982</b>	<b>\$148,896</b>	<b>\$119,555</b>	<b>\$172,880</b>	<b>\$598,372</b>	<b>\$119,674</b>

Source: Office of General Counsel, Texas Department of Public Safety



**TABLE V**

**FLEET COLLISION ANALYSIS**

**DPS COMMISSIONED OFFICERS  
MEDICAL AND COMPENSATION PAYMENTS**

	<b>CY 2001</b>	<b>CY 2002</b>	<b>CY 2003</b>	<b>CY 2004</b>	<b>CY 2005</b>	<b>5-YEAR TOTAL</b>	<b>5-YEAR AVERAGE</b>
Medical Payments	\$221,722	\$230,086	\$396,742	\$118,746	\$83,355	<b>\$1,050,651</b>	<b>\$210,130</b>
Comp Payments	\$169,062	\$59,593	\$29,811	\$41,122	\$11,860	<b>\$311,448</b>	<b>\$62,290</b>
<b>TOTAL</b>	<b>\$390,784</b>	<b>\$289,679</b>	<b>\$426,553</b>	<b>\$159,868</b>	<b>\$95,215</b>	<b>\$1,362,099</b>	<b>\$272,420</b>

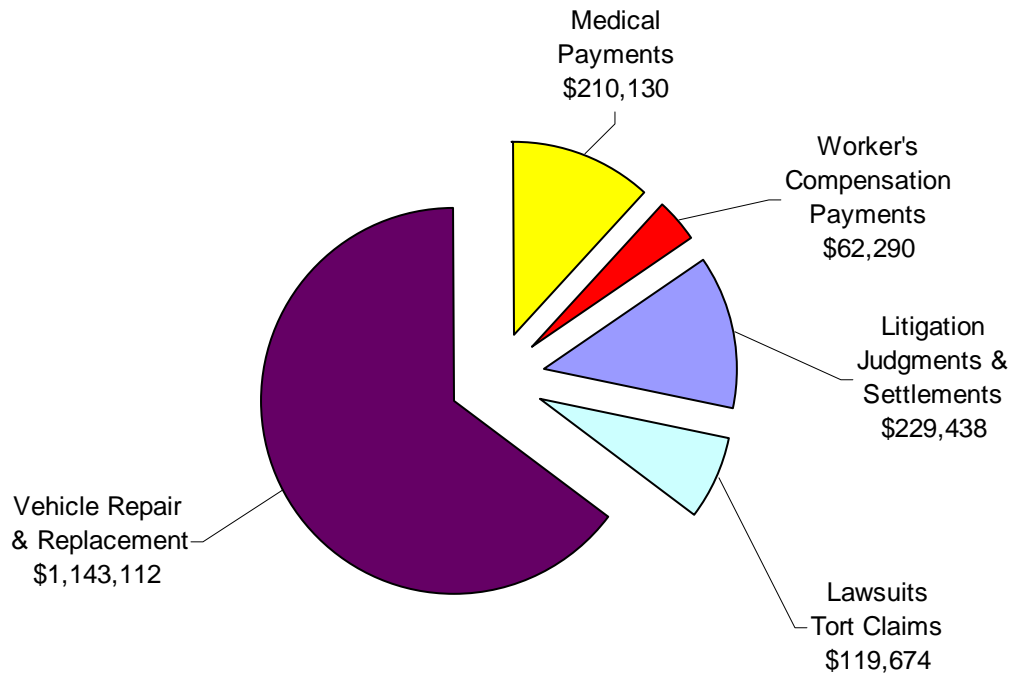
Source: Health & Safety Service, Texas Department of Public Safety

**DPS EMPLOYEE TIME LOST  
DPS COMMISSIONED OFFICERS  
DAYS LOST DUE TO INJURIES IN  
ON-DUTY FLEET CRASHES**

	<b>CY 2001</b>	<b>CY 2002</b>	<b>CY 2003</b>	<b>CY 2004</b>	<b>CY 2005</b>	<b>5-YEAR TOTAL</b>	<b>5-YEAR AVERAGE</b>
Days Lost	1,549	1,272	942	867	473	<b>5,103</b>	<b>1,020.6</b>
Number of Officers	33	19	28	34	30	<b>144</b>	<b>28.8</b>

Source: Health & Safety Service, Texas Department of Public Safety

# 5-YEAR AVERAGE 2001 - 2005



**TABLE VI**

**TEXAS STATISTICS**

**Police Involved in Motor Vehicle Traffic Accidents  
January 01, 2001 through December 31, 2005**

<b>2001 - 2005</b>	<b>In Pursuit</b>	<b>Non-Pursuit</b>	<b>Total</b>
Incapacitating	111	134	<b>245</b>
Non-Incapacitating	353	601	<b>954</b>
Possible Injury	591	1,385	<b>1,976</b>
Fatal	16	27	<b>43</b>
Non-Injury	1,489	4,210	<b>5,699</b>
<b>Total</b>	<b>2,560</b>	<b>6,357</b>	<b>8,917</b>

Source: Crash Records Bureau, Texas Department of Public Safety

**TABLE VII**

**NATIONAL STATISTICS**

**Persons Killed in Crashes Involving Emergency Vehicles  
by Person Type, Crash Type, and Vehicle Type**

Person Type	Crash Type				Total	
	Single Vehicle		Multiple Vehicle		Total	In Emergency Use*
	Total	In Emergency Use*	Total	In Emergency Use*		

2000						
Police Vehicle Driver	10	3	18	5	28	8
Police Vehicle Passenger	0	0	5	1	5	1
Occupant of Other Vehicle	0	0	81	39	81	39
Pedestrian	19	7	5	1	24	8
Pedal cyclist	4	0	0	0	4	0
<b>Total</b>	<b>33</b>	<b>10</b>	<b>109</b>	<b>46</b>	<b>142</b>	<b>56</b>

2001						
Police Vehicle Driver	13	4	15	3	28	7
Police Vehicle Passenger	3	1	4	3	7	4
Occupant of Other Vehicle	0	0	67	21	67	21
Pedestrian	21	5	2	1	23	6
Pedal cyclist	1	0	0	0	1	0
<b>Total</b>	<b>38</b>	<b>10</b>	<b>88</b>	<b>28</b>	<b>126</b>	<b>38</b>

2002						
Police Vehicle Driver	13	5	12	7	25	12
Police Vehicle Passenger	1	0	2	2	3	2
Occupant of Other Vehicle	0	0	69	35	69	35
Pedestrian	18	7	4	3	22	10
Pedal cyclist	0	0	0	0	0	0
<b>Total</b>	<b>32</b>	<b>12</b>	<b>87</b>	<b>47</b>	<b>119</b>	<b>59</b>

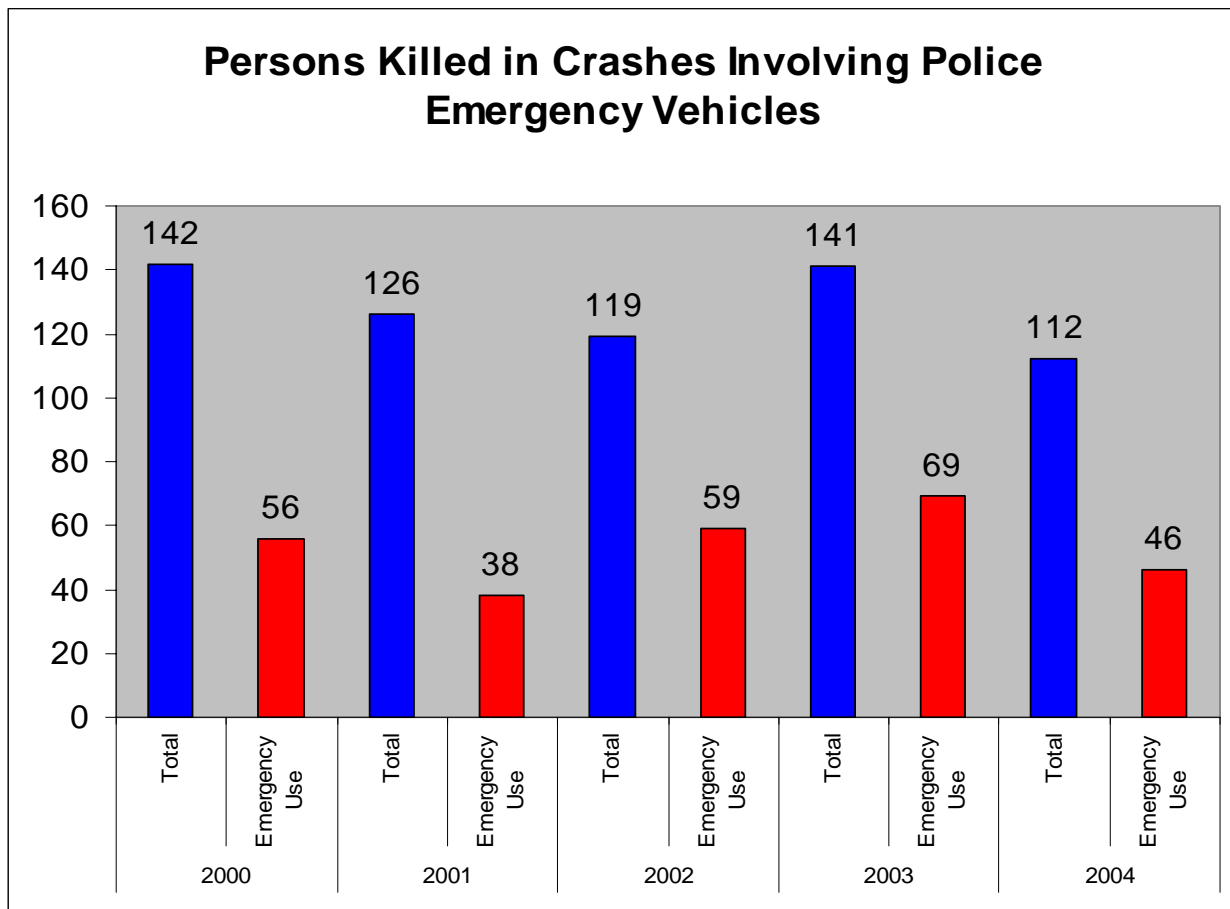
2003						
Police Vehicle Driver	16	9	16	7	32	16
Police Vehicle Passenger	0	0	2	2	2	2
Occupant of Other Vehicle	0	0	81	42	81	42
Pedestrian	23	7	2	2	25	9
Pedal cyclist	1	0	0	0	1	0
<b>Total</b>	<b>40</b>	<b>16</b>	<b>101</b>	<b>53</b>	<b>141</b>	<b>69</b>

Person Type	Crash Type				Total	
	Single Vehicle		Multiple Vehicle		Total	In Emergency Use*
	Total	In Emergency Use*	Total	In Emergency Use*		

2004						
Police Vehicle Driver	15	6	21	9	<b>36</b>	<b>15</b>
Police Vehicle Passenger	0	0	2	0	<b>2</b>	<b>0</b>
Occupant of Other Vehicle	0	0	52	24	<b>52</b>	<b>24</b>
Pedestrian	15	4	4	2	<b>19</b>	<b>6</b>
Pedal cyclist	3	1	0	0	<b>3</b>	<b>1</b>
<b>Total</b>	<b>33</b>	<b>11</b>	<b>79</b>	<b>35</b>	<b>112</b>	<b>46</b>

\*Refers to a vehicle traveling with physical emergency signals in use (red lights blinking, sirens sounding, etc.).

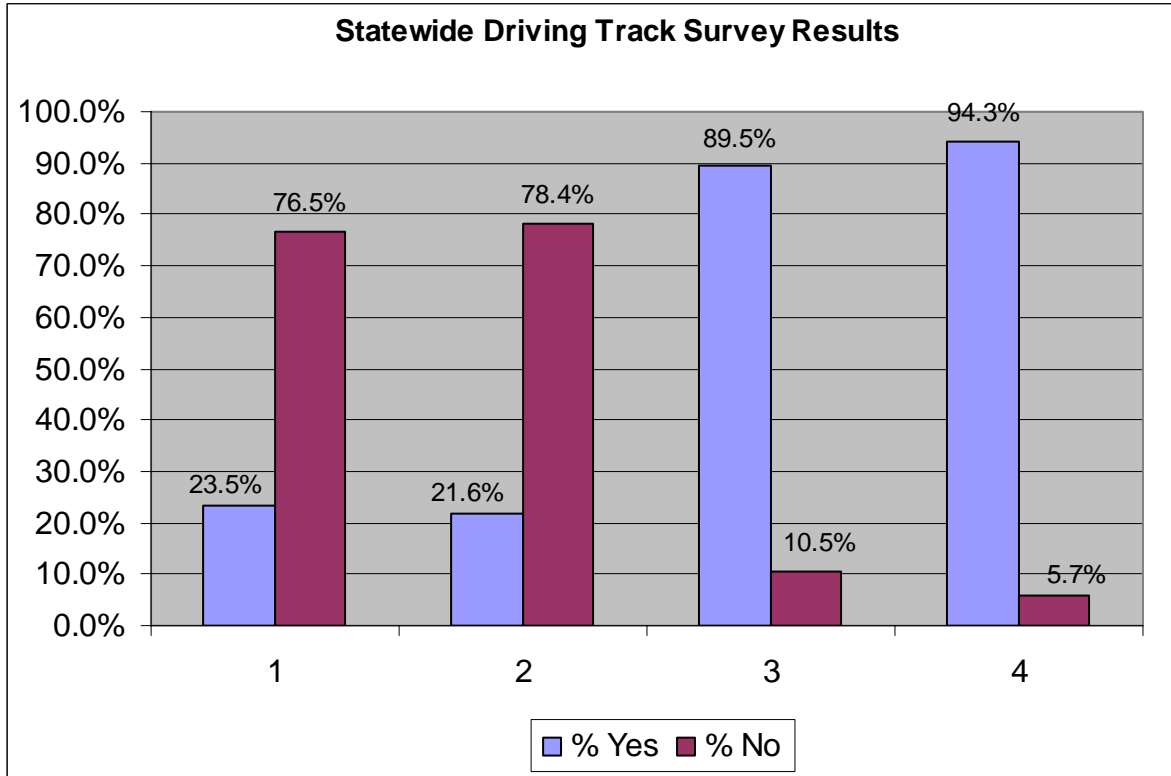
(Source: Traffic Safety Fact 2000, 2001, 2002, 2003, and 2004 National Center for Statistics and Analysis, National Highway Safety Administration)



**TABLE VIII**

**SURVEY RESULTS**

**TEXAS SHERIFFS AND POLICE CHIEFS**



1. Do you now provide advanced driver training to your law enforcement officers?
2. Do you feel your current police driver training program is adequate?
3. Would your agency benefit from advanced driver training courses designed for instructors from your agency? (train the trainer)
4. Would you support our efforts to develop an advanced driver facility at the Texas Department of Public Safety Training Complex in Florence, Texas?

**APPENDIX B**

**TEXAS DEPARTMENT OF PUBLIC SAFETY**

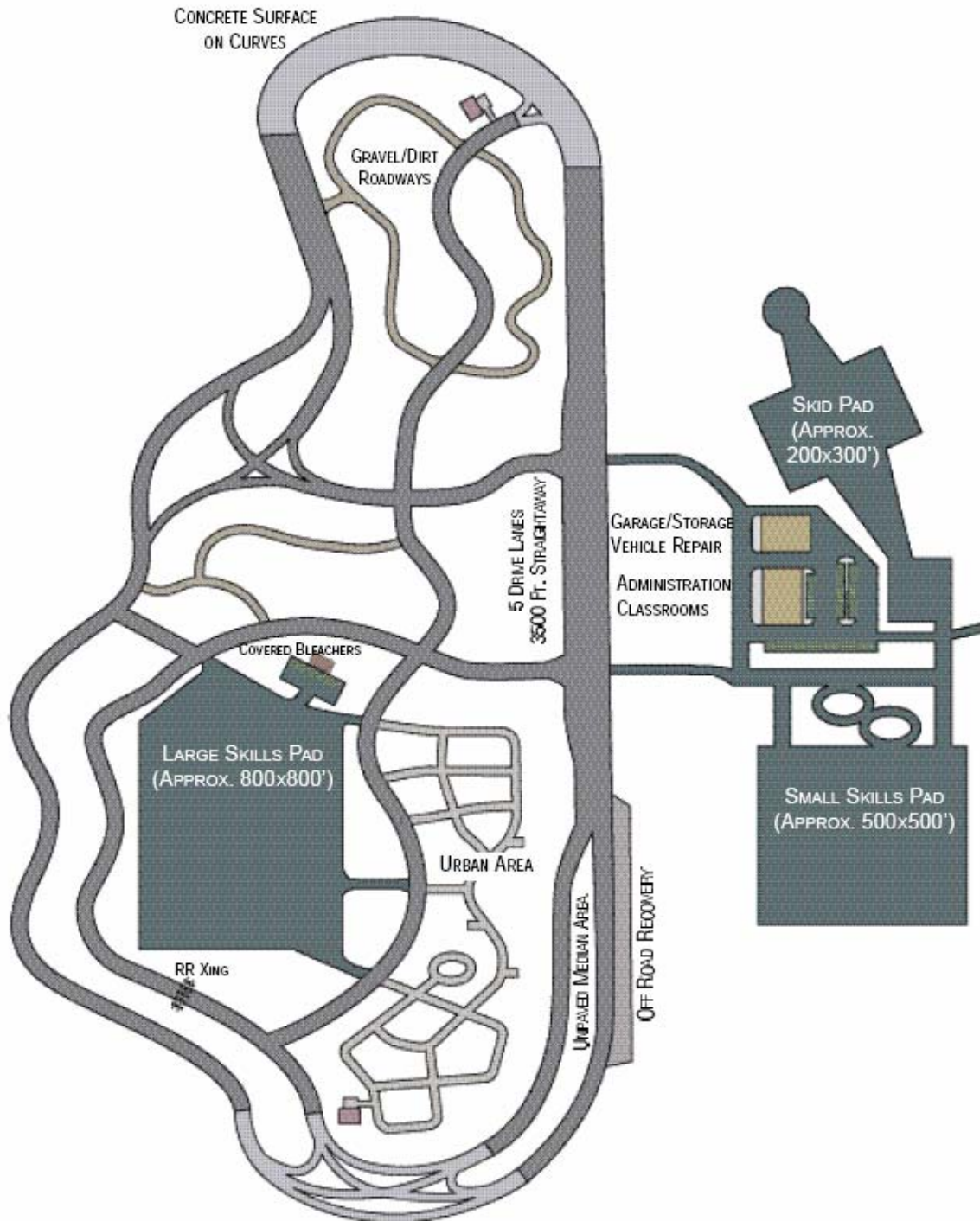
**DRIVER TRAINING FACILITY**

**CONCEPTUAL DRAWING**

**FOR**

**DRIVING TRACK**

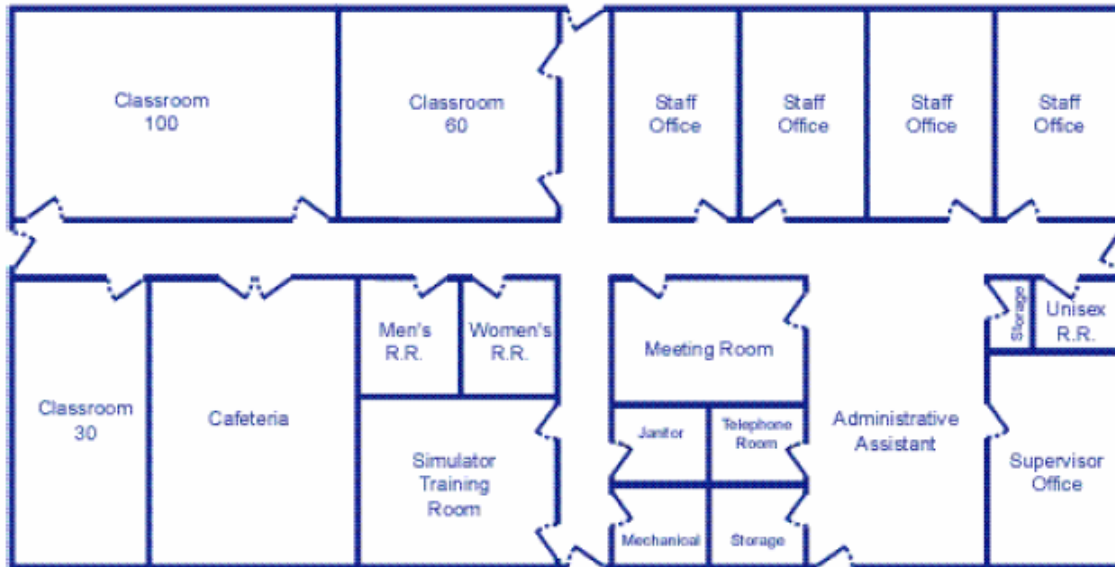
**CONCEPTUAL DRAWING  
PROPOSED EMERGENCY VEHICLE OPERATIONS COURSE  
(Final design to be determined by architectural study)**



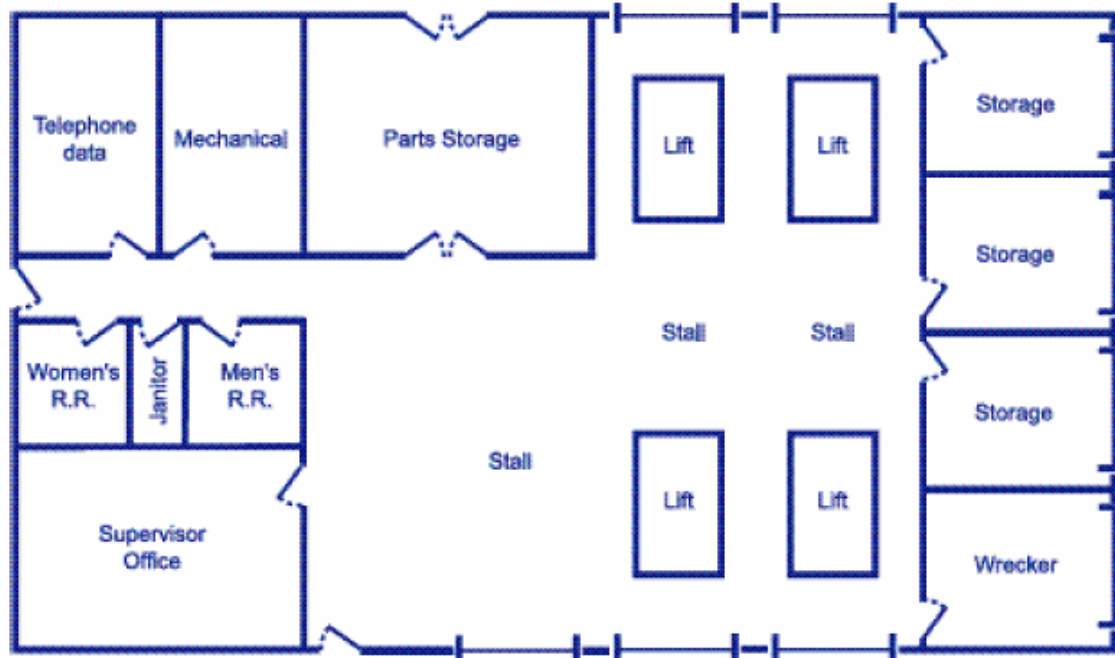


# CONCEPTUAL DRAWING DRIVER TRAINING FACILITY

## ADMINISTRATION BUILDING



## MAINTENANCE BUILDING



## **APPENDIX C**

### **PRECISION & PERFORMANCE**

#### **SKILLS PAD EXERCISES**

# Exercise Selection Matrix

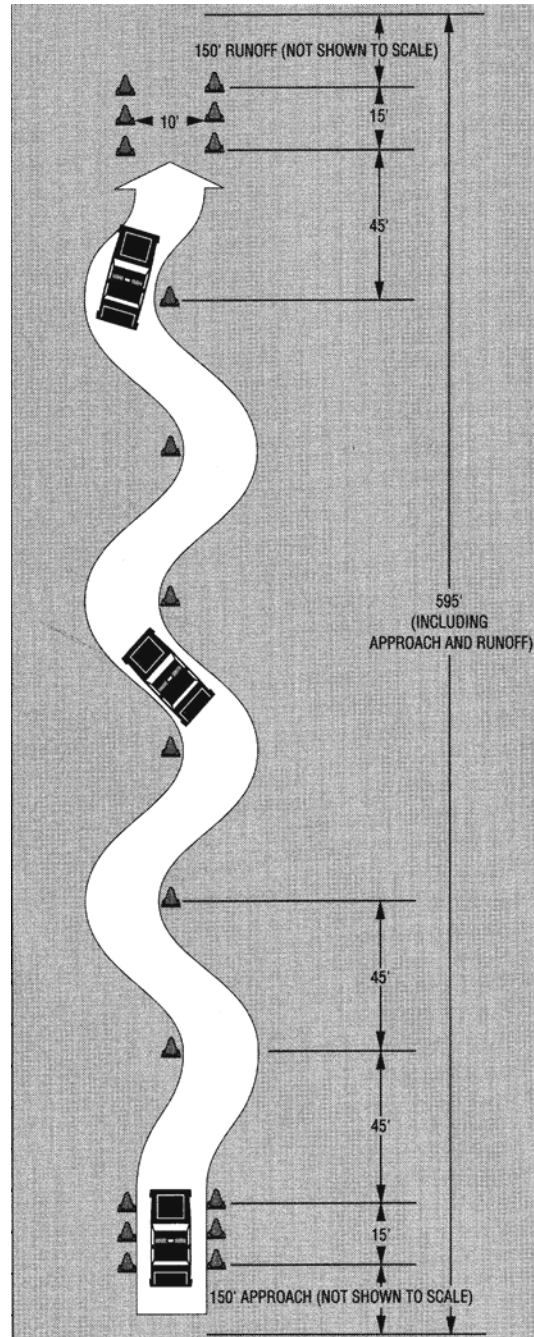
		Steering	Braking	Throttle Control	Cornering	Lane Change	Skid Control	Skid Avoidance	Backing	Parking	Vehicle Positioning	Turning	Off-Road Recovery
Performance	Serpentine or Slalom	☞		☞		☞			☞		☞		
	Shuffle Steering	☞		☞		☞					☞	☞	
	Lane Changing	☞		☞									
	Baird's Judgment	☞		☞		☞		☞			☞		
	Controlled Braking	☞	☞	☞			☞				☞		
	In-Line Max Braking	☞	☞	☞				☞			☞		
	Straight Braking - 90°	☞	☞		☞			☞			☞	☞	
	Skid Control	☞					☞	☞					
Precision	T - Driveway	☞		☞					☞		☞	☞	
	Dutton's Weave	☞		☞					☞		☞		
	Parallel Parking	☞		☞					☞	☞	☞		
	Perpendicular Parking	☞		☞					☞	☞	☞		
	Angle Parking	☞		☞						☞	☞		
	Throttle Steering Circle	☞		☞	☞			☞			☞		
	Off-Road Recovery	☞		☞				☞					☞
	Combined Skills Course	☞	☞	☞	☞	☞		☞	☞		☞	☞	

# Serpentine or Slalom

**Purpose.** To develop the basic skills of coordinating acceleration, timing of steering movements, weight transfer and the use of the 9 – 3 hand position. Also, demonstrates how throttle control and timing affect the ability to steer. If driven in reverse, trains in use of center palm hand positioning. It also develops the ability to judge the relationship of fixed objects to the vehicle.

**Adjustability.** Speed and difficulty is adjustable by longer distance spacing between cones. Vehicle driven in reverse and backed through the entire course.

**Design Requirements.** Approximately 600 feet x 70 feet, including approach, runoff and side recovery areas. Approximately 50 traffic cones, per exercise.

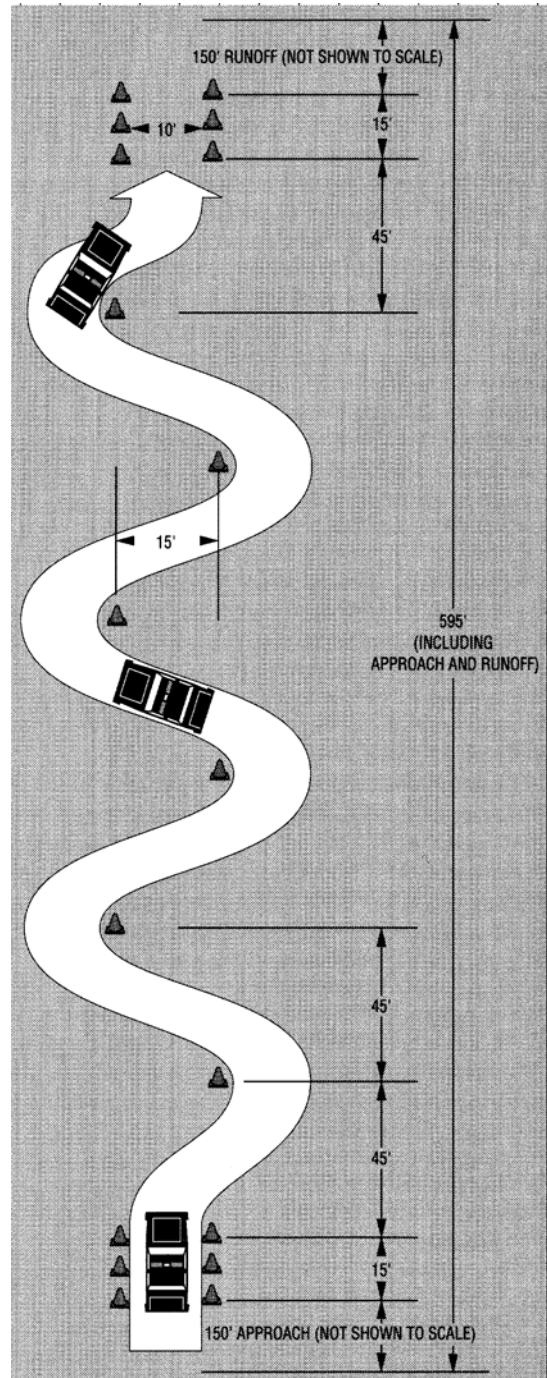


# Shuffle Steering

**Purpose.** To develop the basic skills of coordinating acceleration, timing of steering movements, and the use of the shuffle hand positioning steering technique. It also develops the ability to judge the relationship of fixed objects to the vehicle.

**Adjustability.** Speed and difficulty is adjustable by longer distance spacing between cones.

**Design Requirements.** Approximately 600 feet x 70 feet, including approach, runoff and side recovery areas. Approximately 50 traffic cones, per exercise.

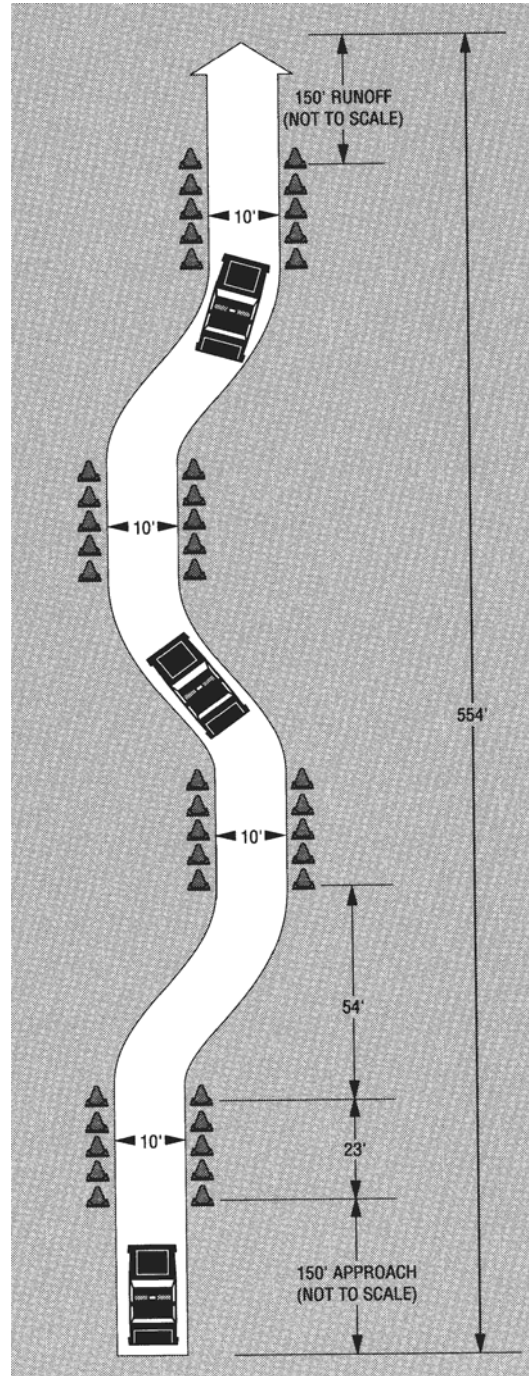


# Lane Change

**Purpose.** To develop confidence in controlling the vehicle and experience the effects of weight shift and stability. Assists in developing coordination of steering, acceleration, and fixed object relationships.

**Adjustability.** Speed and difficulty is adjustable by changing the distances between alleys and/or changing the alley widths.

**Design Requirements.**  
Approximately 600 feet x 80 feet, including approach, runoff and side recovery areas.  
Approximately 100 traffic cones, per exercise.

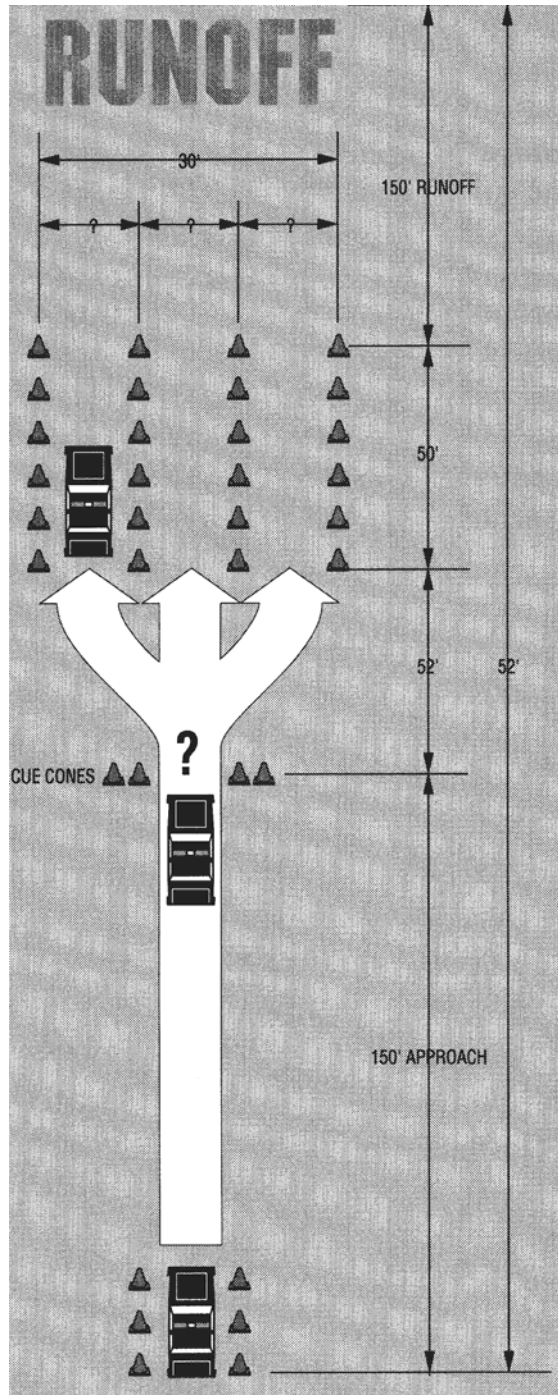


# Baird's Judgment

**Purpose.** To develop confidence in controlling the vehicle in an emergency evasive maneuver and judging clearances. Assists in developing limited decision making ability by creating simulated indicators of closed versus open lanes.

**Adjustability.** Placing remotely controlled traffic signals over or near the lanes to indicate which lane to take. Varying when lane indication is given to evaluate decision to performance time. Varying lane widths make proper positioning more or less difficult.

**Design Requirements.** Approximately 500 feet x 70 feet, including approach, runoff and side recovery areas. Approximately 80 traffic cones, per exercise.

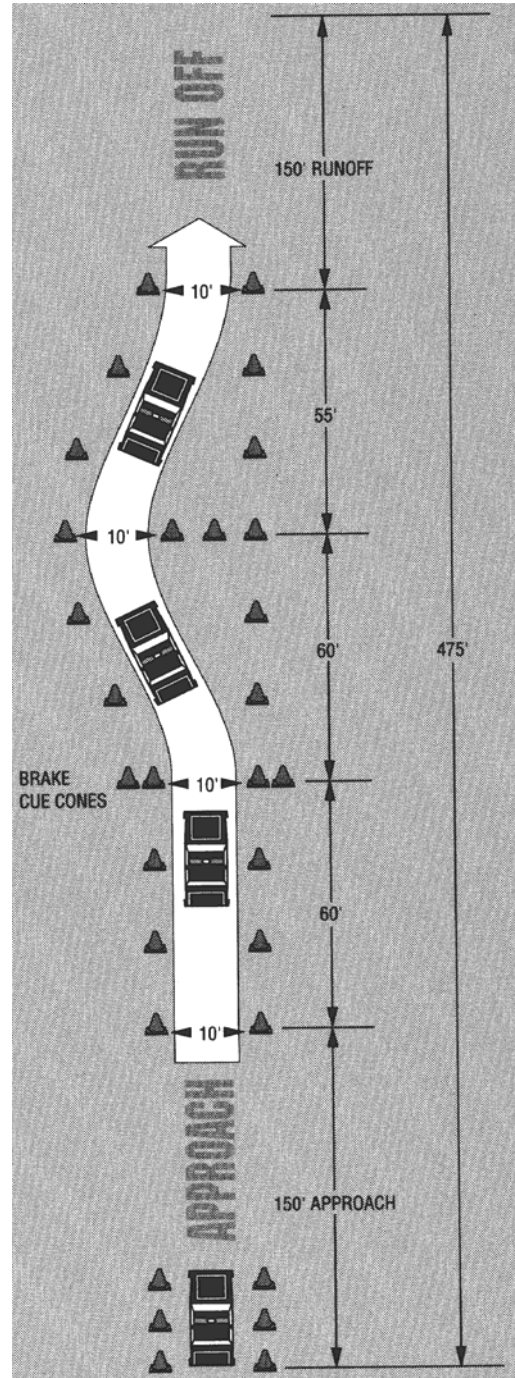


# Controlled Braking

**Purpose.** To develop the skill of achieving maximum braking pressure while maintaining vehicle maneuvering control.

**Adjustability.** Difficulty may be increased or decrease through lane width adjustments and/or changes in the cue cone initiation distance.

**Design Requirements.**  
Approximately 475 feet x 60 feet including approach, runoff and side recovery areas.  
Approximately 80 traffic cones, per exercise.



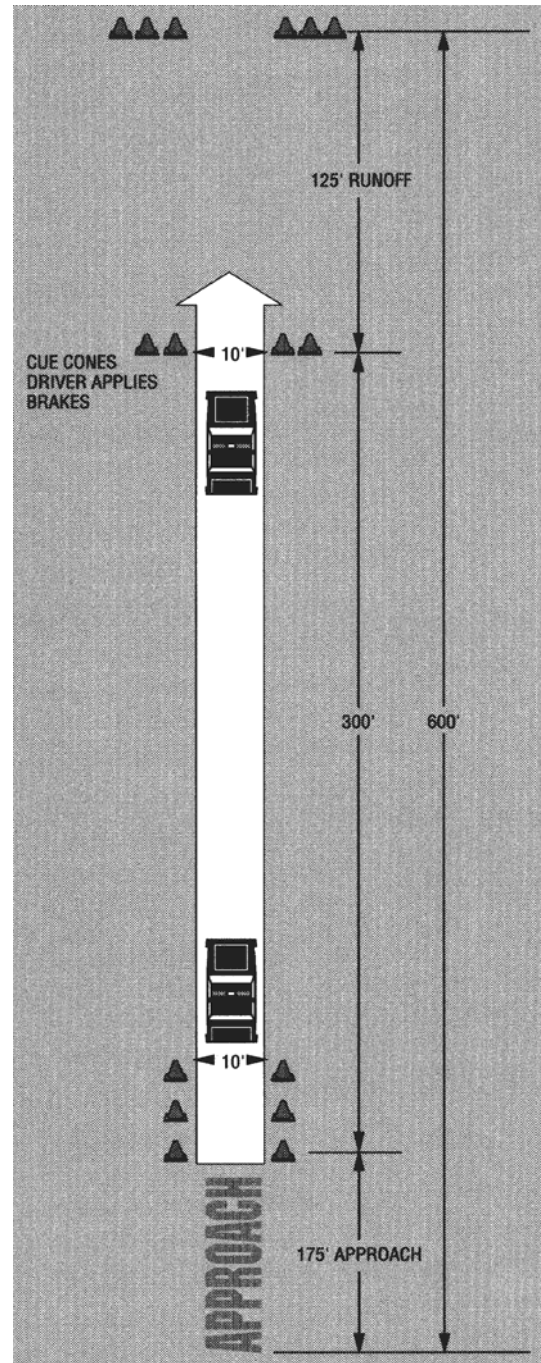


# In-line Maximum Braking

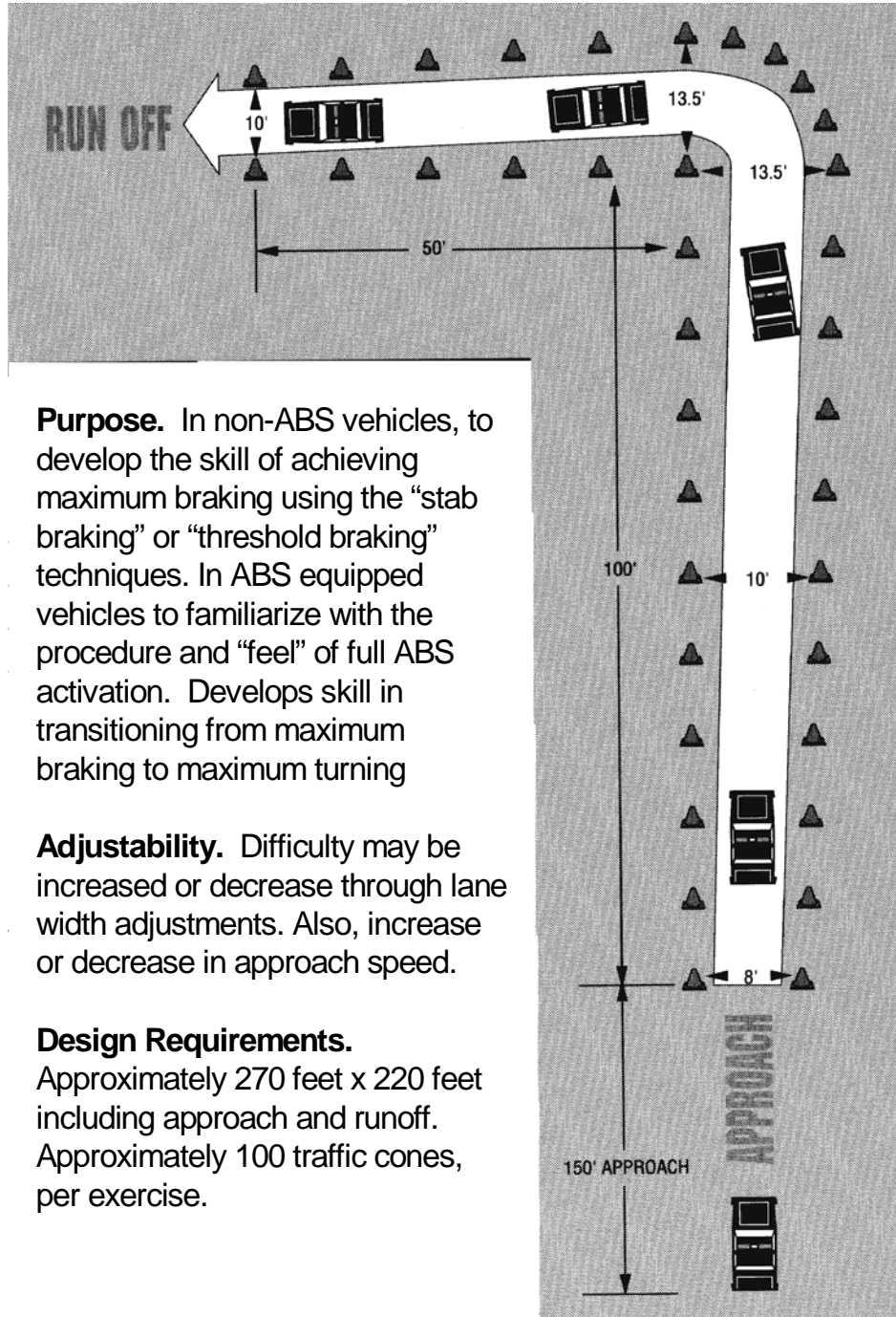
**Purpose.** In non-ABS vehicles, to develop the skill of achieving maximum braking using the “stab braking” or “threshold braking” techniques. In ABS equipped vehicles to familiarize with the procedure and “feel” of full ABS activation.

**Adjustability.** Difficulty may be increased or decrease through lane width adjustments. May be combined with a hard (90 degree) turning movement.

**Design Requirements.** Approximately 600 feet x 40 feet including approach and runoff. Approximately 30 traffic cones, per exercise.



# Straight Line Braking - 90° Turn

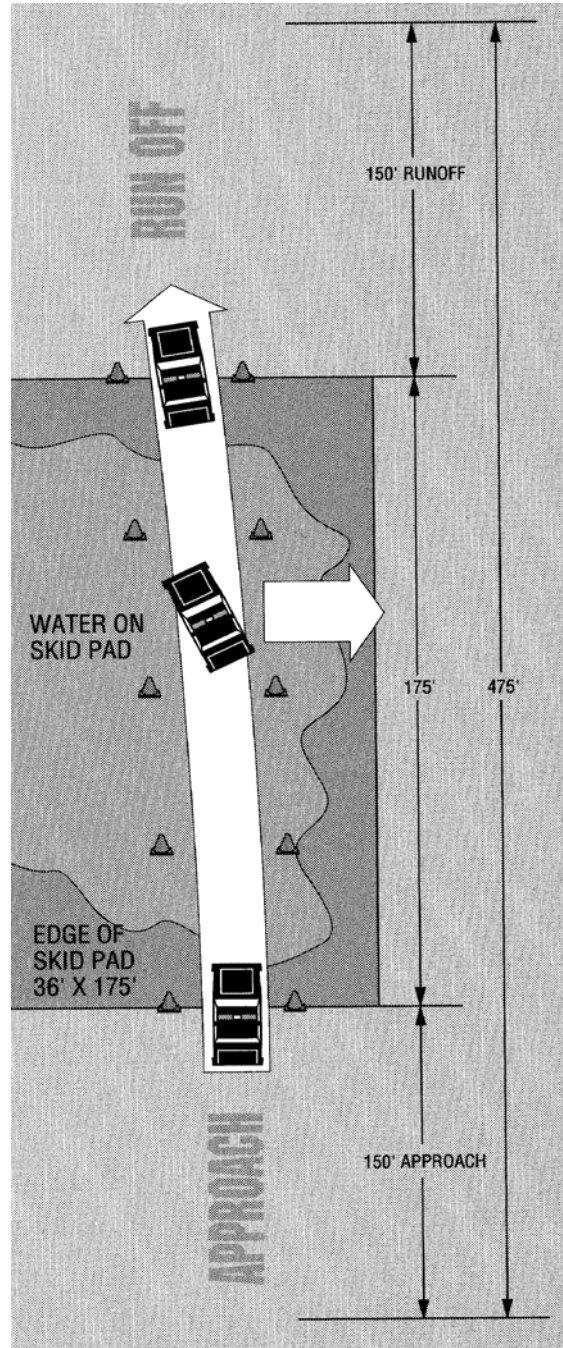


# Skid Control

**Purpose.** To develop skill in steering and acceleration / deceleration as a means of controlling a skid.

**Adjustability.** Difficulty may be increased through entry speed changes; instructor held remote controlled wheel lock out devices and adding soap or other, safe, "slickening" agents to the water.

**Design Requirements.** Approximately 475 feet x 100 feet including approach and runoff. Approximately 25 traffic cones, per exercise. Pavement sealer and wetting capability.



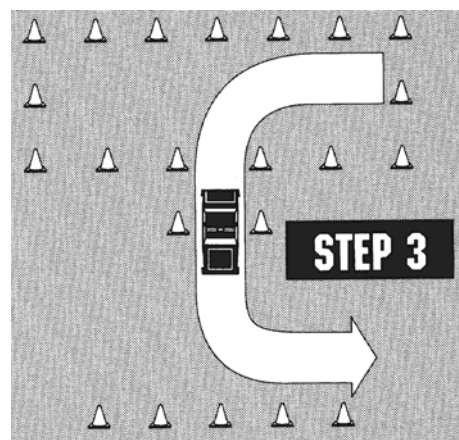
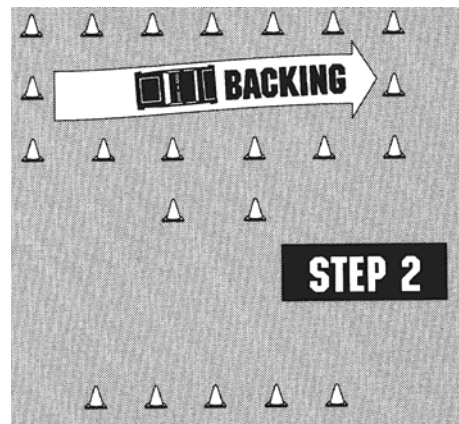
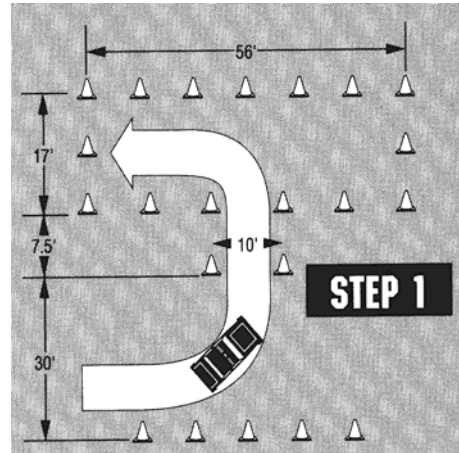
# T-Driveway

**Purpose.** To develop backing and roadway positioning skills. Assists in developing perceptual and judgment skills while maneuvering in a limited space.

**Adjustability.** Maneuvering area dimensions may be adjusted to accommodate different size vehicles. Time requirement may be added.

**Design Requirements.**

Approximately 56 feet x 55 feet.  
Approximately 100 traffic cones, per exercise.

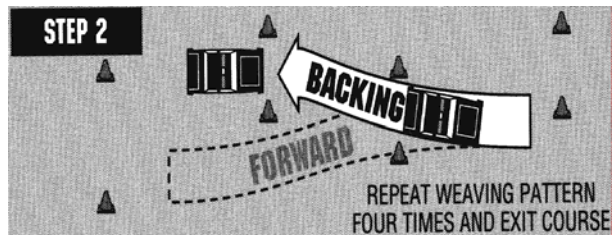
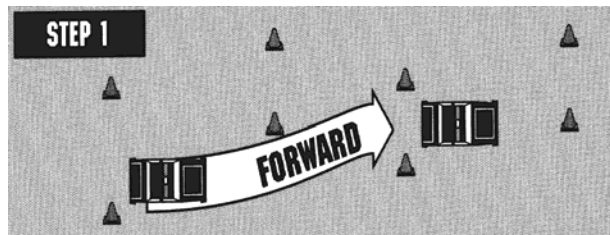
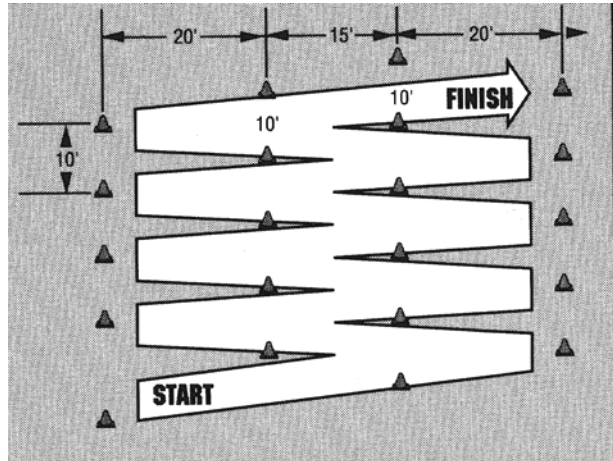


# Dutton's Weave

**Purpose.** To develop forward and reverse control of vehicle in confined spaces, at low speeds. Assists in developing perceptual and judgment skills while maneuvering in a limited space. Develops skill in backing using mirrors to judge rear and side clearance.

**Adjustability.** Maneuvering area dimensions may be adjusted to accommodate different size vehicles. Time requirement may be added.

**Design Requirements.** Approximately 55 feet x 55 feet. Approximately 21 traffic cones, per exercise.

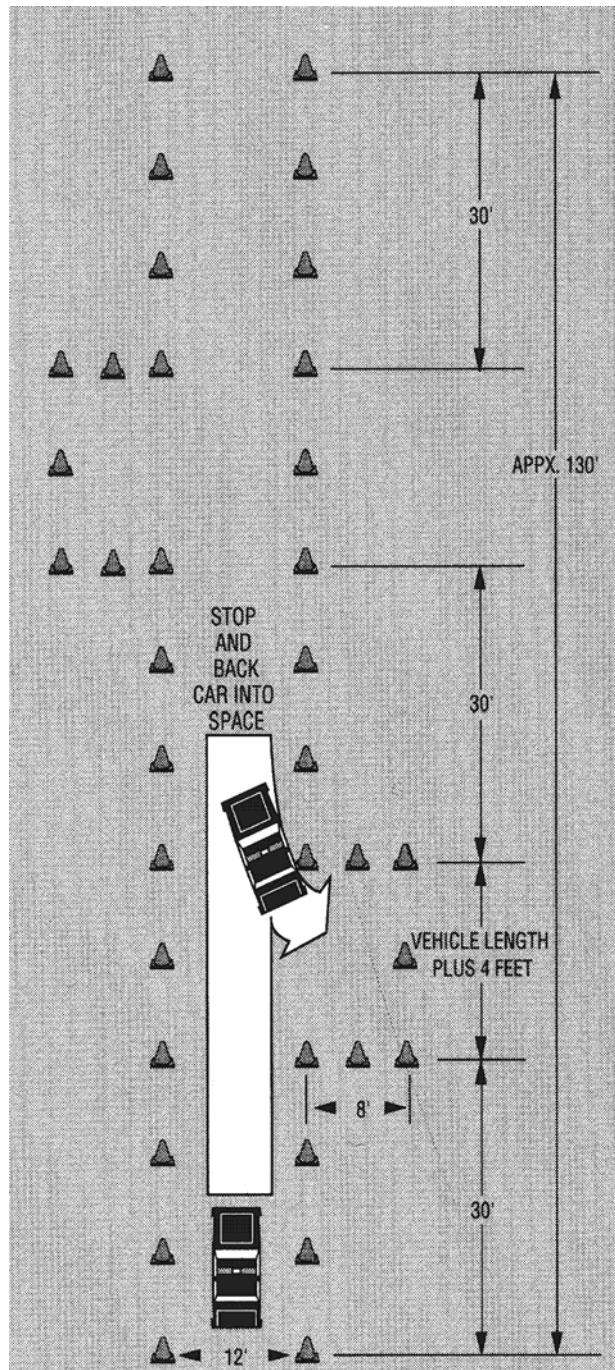


# Parallel Parking

**Purpose.** To develop a recognition of front end swing of a vehicle, turning radius, palm steering (when backing) and the relationship of the vehicle to fixed objects.

**Adjustability.** Difficulty may be increased by changing cone height, shorter cones (below sight line when seated in vehicle) requires more mirror use and head turning. Use of other vehicles to create parking spaces. Move cones to accommodate different vehicle styles and sizes.

**Design Requirements.** Approximately 130 feet x 35 feet. Approximately 50 traffic cones, per exercise.

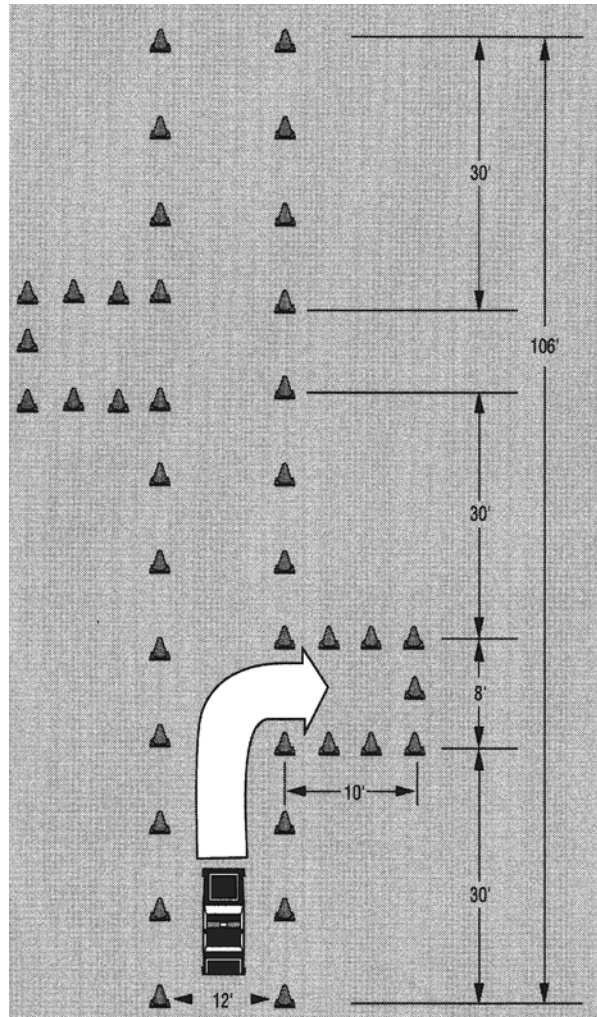


# Perpendicular Parking

**Purpose.** To develop a recognition of turning radius, accelerator control, steering control, shuffle steering (moving forward), center palm (backing) and the relationship of the vehicle to fixed objects.

**Adjustability.** Difficulty may be increased by changing cone height, shorter cones (below sight line when seated in vehicle) require planning vehicle positioning well in advance of the actual turning point. Use of other vehicles to create parking spaces. Move cones to accommodate different vehicle styles and sizes. May be used as backing exercise, also.

**Design Requirements.** Approximately 110 feet x 40 feet. Approximately 50 traffic cones, per exercise.





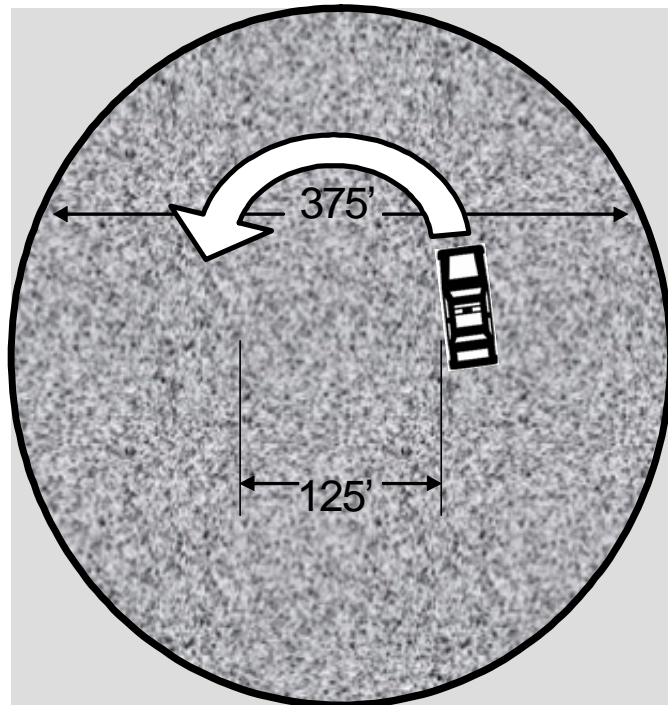


# Throttle Steering Circle

**Purpose.** To develop a recognition of using throttle control (acceleration / deceleration) as an effective means of steering the vehicle.

**Adjustability.** Any type, non-articulated, vehicle may be used. Initially, the steering wheel is turned and held at whatever angle is needed to hold the vehicle on the inner circle at 15 mph. Steering angle is held constant but as speed is increased, vehicle moves toward outside circle. Decreasing throttle causes vehicle to move toward the inner circle.

**Design Requirements.** Approximately 375 feet x 375 feet, small circle diameter is 125 feet, large circle diameter is 375 feet. Sufficient traffic cones to outline the circles or permanent paint markings, per exercise.

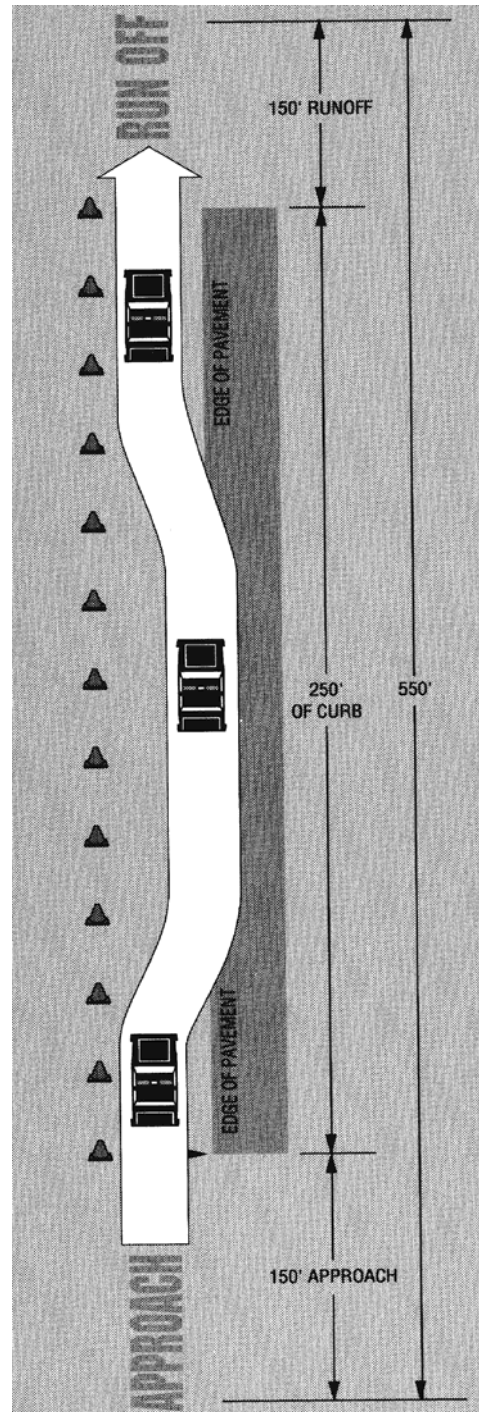


# Off-Road Recovery

**Purpose.** To develop skill in making an off-road recovery at operating speed over a raised roadbed.

**Adjustability.** Vary speed, use both sides of the vehicle. Create improved, soft shoulder and/or no shoulder conditions.

**Design Requirements.** Approximately 540 feet x 50 feet, including approach, runoff and side recovery areas. Approximately 50 traffic cones, per exercise.



# Combined Skills Course

**Purpose.**

A pre-training and post-training evaluation tool inclusive of most of the individual exercises.

**Adjustability.**

Difficulty may be increased by changing cone heights; increasing or decreasing lane widths; setting a time requirement; and/or adding a "rabbit" vehicle which must be chased by the student.

**Design**

**Requirements.**

Approximately 300 feet x 200 feet. Approximately 250 traffic cones, per exercise.

