

# *Design Guide for Military Working Dog Facilities*

## Special points of interest:

- Larger kennel runs
- Indoor/Outdoor kennel combination standard
- Vet treatment room included
- More storage space added

## Introduction

Military Working Dog (MWD) facilities have long been under the misconception that they “just” board dogs like the stray animal facilities. In reality facilities not only house the MWDs, but include many other functions as well. For instance, all phases of MWD training for patrol and detection take place on the grounds and includes storage requirements for equipment connected to training, mobility, contingencies and VIP protection. Veterinary treatment areas are being collocated with MWD facilities. Documentation for handlers and dogs are staged there. Facilities are used as classrooms for teaching drug and explosive training aid safety, canine first aid and non-



handler agitator duties. In addition training areas with obstacle courses are used for MWD demonstrations during base tours. In short MWD facilities are more than “just” kennels.

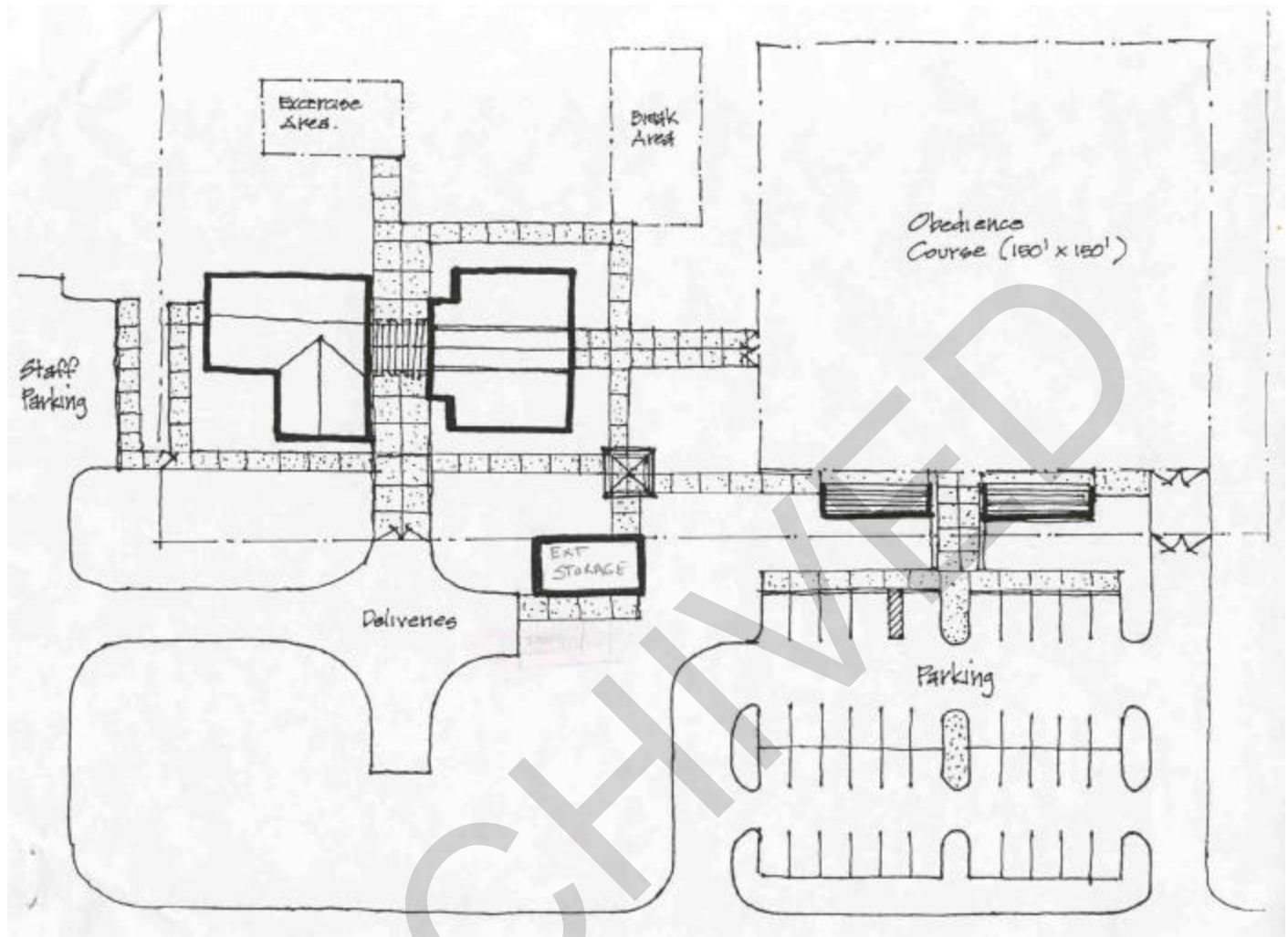
## Inside this guide:

Exterior Elements	2
Administration Areas	6
Special Use Areas	8
Support Areas	11
Kennel Area	13
Consideration for Renovations	19
Optional Spaces	19
Appendix 1 Obstacles	22
Appendix 2 Plans	29

## Purpose

This design guide is intended to provide the basic criteria to evaluate, plan, program and design quality MWD facilities. It endeavors to cover the ideal facility requirements and design considerations to provide a successful, quality, cost effective facility to the end user. This guide is intended for all personnel involved from the develop-

ment through the execution of the project. This guide provides the design basis for a 10 indoor/outdoor kennel run facility that includes a staff of one kennel master, two trainers and 10 handlers. Areas should be adjusted (larger/smaller) based on upon the number of MWDs.



## Site Planning

In general MWD facilities should not be located in urbanized, busy areas of the base. Noise from surrounding areas not only affect the MWD's rest, but the noise from MWD's create a distraction to people working in the area. If unavoidable, incorporate visual and noise barriers such as berms/screen walls to mitigate the distractions. Avoid sites near runways, taxiways, engine test cells, small arms ranges or other areas where the time weighted overall sound pressure level for any 24 hour period exceeds 75 adjusted decibels. Avoid low lying areas that could lead to infestations of mosquitoes, ticks, rodents and other external parasites. Do not collocate with or site near stray animal facilities.

Ideally all MWD facilities should be located on the same site to avoid excessive travel time and transportation requirements between areas. The site plan shown is an example of how a MWD facility site works, how areas relate to each other and what is required for each area. It is not intended to serve as a rigid model for duplication.

## Exterior Elements

A MWD complex consists of kennels, support building, obedience course, exercise area, MWD break area, exterior storage and parking/drives/walks.

Often as a result of location, utilities services are limited at the site. Provide as a minimum water (potable, backflow prevention), sanitary sewer, electrical, telephone, network and communication service to the site. Other systems, such as storm, natural gas and steam, should be incorporated in accordance with local procedures.

Fencing plays a major role at MWD sites for obvious reasons. The entire complex should be enclosed with a minimum heavy duty 8 ft high chain link fence with three strands of straight wire (no barbed) at the top to prevent a MWD from climbing or jumping out. A 10 ft (minimum) vehicle gate that can be locked (padlock or cypher lock) is to be installed to allow for food deliveries to the facility and other access requirements. An entry gate for personnel that is visible from the Kennel Master office is also required. Personnel gate should have a cypher lock and a notification buzzer that sounds in the Kennel Master office, obedience course and the kennel. The buzzer in the kennel should have the capability to be turned on when personnel are in the area and turned off to allow MWD rest when personnel are absent. All gates should be self closing/latching. Other perimeter fence types that meet the installation's policy may be used as long as it meets the requirements as a secondary measure to keep MWDs from leaving the compound.



Security lighting for the area should be in accordance with local policy. Warning signs should be posted on the perimeter fence per regulation.



### Obedience Course (150 ft x 150 ft)

The training/obedience course plays an important role in maintaining the MWD's agility and stamina, as well as, reinforcing obedience and confidence training.

The course should be grassed and free of objects (e.g. trees, large rocks, holes, burrs) that may be harmful to MWDs and handlers. The site should be graded for drainage, but minimally sloped to provide a level field for training.

The area should be enclosed with an 8 ft chain link fence. Gates should be self closing/latching and a minimum 5 ft wide to allow for lawn maintenance equipment.

The area should be well lighted with shadows eliminated. Poles should be located on the exterior of the fence. Switching should be manual. Weatherproof outlets should be provided at each light to provide power at the site. Speaker units connected to the chosen PA system should also be provided. Water should be provided to the site with a minimum number of hose bibbs installed to provide water for MWD's and lawn watering. An irrigation system for long term lawn maintenance is desirable.

Obstacles for the course include barrels, a tunnel, steps, jumps, a window, and a dog walk. Materials include concrete, wood and weather resistant polyvinylchloride. Dimensions can be found for each obstacle in DA Pamphlet 190-12.

## Exercise Area

**(20 ft x 40 ft)**

The exercise area is a space where the MWD can be released without the handler being present. The exercise area should not be a shared area with the obedience course, as it would conflict with training objectives. The exercise area should be visually separated from the obedience course to prevent MWD distraction during training.

The requirements (sitework, fencing, etc) for the area is the same as the obedience course with the exception of the obstacles.



## MWD Break Area

**(10 ft x 20 ft)**

A MWD break area should be located near the kennels. A break area allows the handler to release the MWD immediately after exiting the kennels or before entering the kennels.

The area should be enclosed with an 8 ft chain link fence. Gates should be self closing/latching and a minimum 5 ft wide to allow for lawn maintenance equipment.

Unlike other grassed areas, a sandy area for cleaning ease is encouraged to be included. A hose bibb is required for maintaining the area.

## Exterior Storage/Parking/Drives/Walks

An enclosed 400 sf exterior storage building is required to store, for example lawn maintenance equipment, portable kennels used for transportation, and obstacles. Interior/exterior lighting, power and a hose bibb should be included with the storage building.

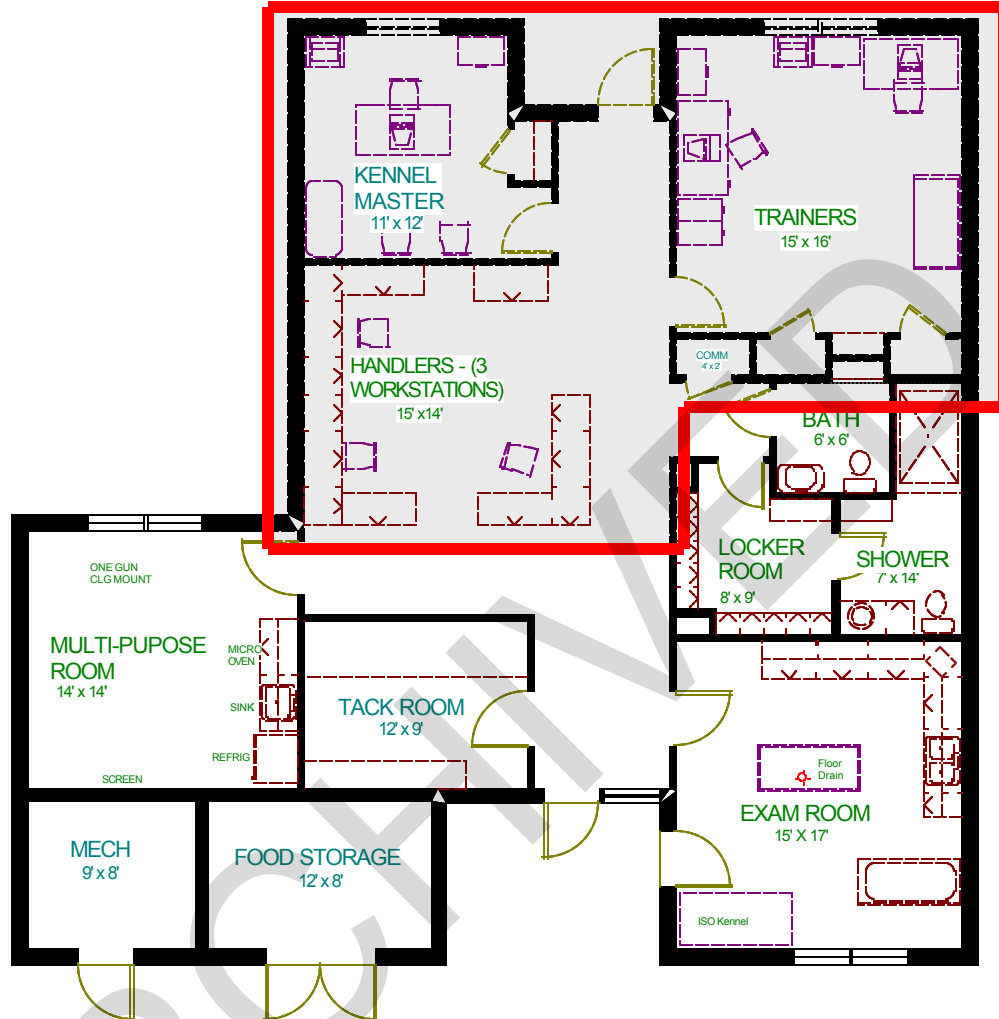
Staff parking should be a paved parking lot to include 8 POV, 3 GOV, 2 visitors, and 1 handicap parking space. Pave access drives to accommodate parking, exterior storage, food deliveries, and transportation of MWDs.

Provide paved walks to all areas. Careful consideration of creating one way MWD traffic system is required in the design process. Avoid situations which allow MWDs to meet and lead to confrontations.

Locate a trash dumpster outside of the perimeter fence for the complex. Screen dumpster and provide low maintenance landscaping for the complex in accordance with local policy.







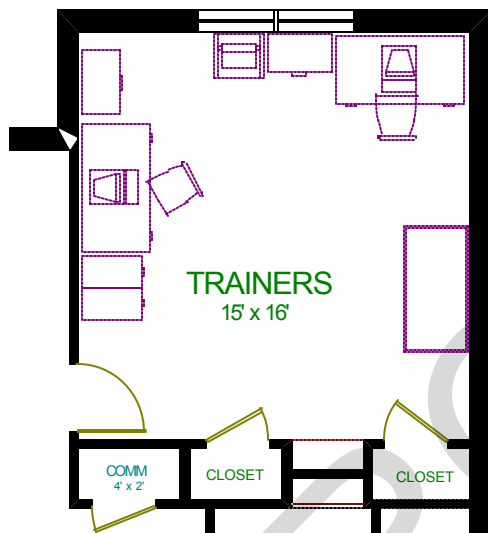
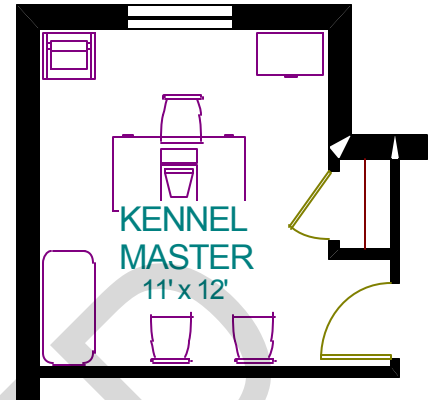
## Administration Areas

The administration area should provide work space for one kennel master, two trainers and 10 handlers. The ultimate goal of this area is to provide a professional, well organized space that create a sense of pride in the work place.

Since MWD's are likely to visit the area at some point, finishes should be of durable material, require minimal maintenance, and be easily repaired or replaced in case of damage. For example flooring should be hard surface such as VCT with a cove base.

## Kennel Master (132 sf)

The kennel master office serves as the nerve center for the complex. The kennel master maintains kennels, ensures MWDs are properly cared for, and handlers are knowledgeable of responsibilities. Ideally the office should be located at the front of the administrative area with exterior windows that view the entry gate to the complex. It should include a lockable closet for storage of supplies. Furnishings should include desk, chair, visitor seating (two), four drawer file cabinet, and bookcase. Equipment should include computer, printer, fax/copier and public address system or central intercom console.

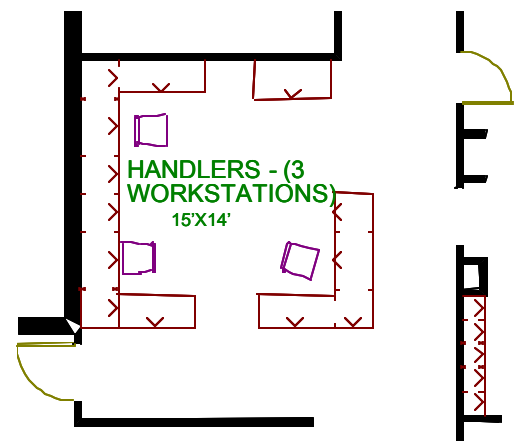


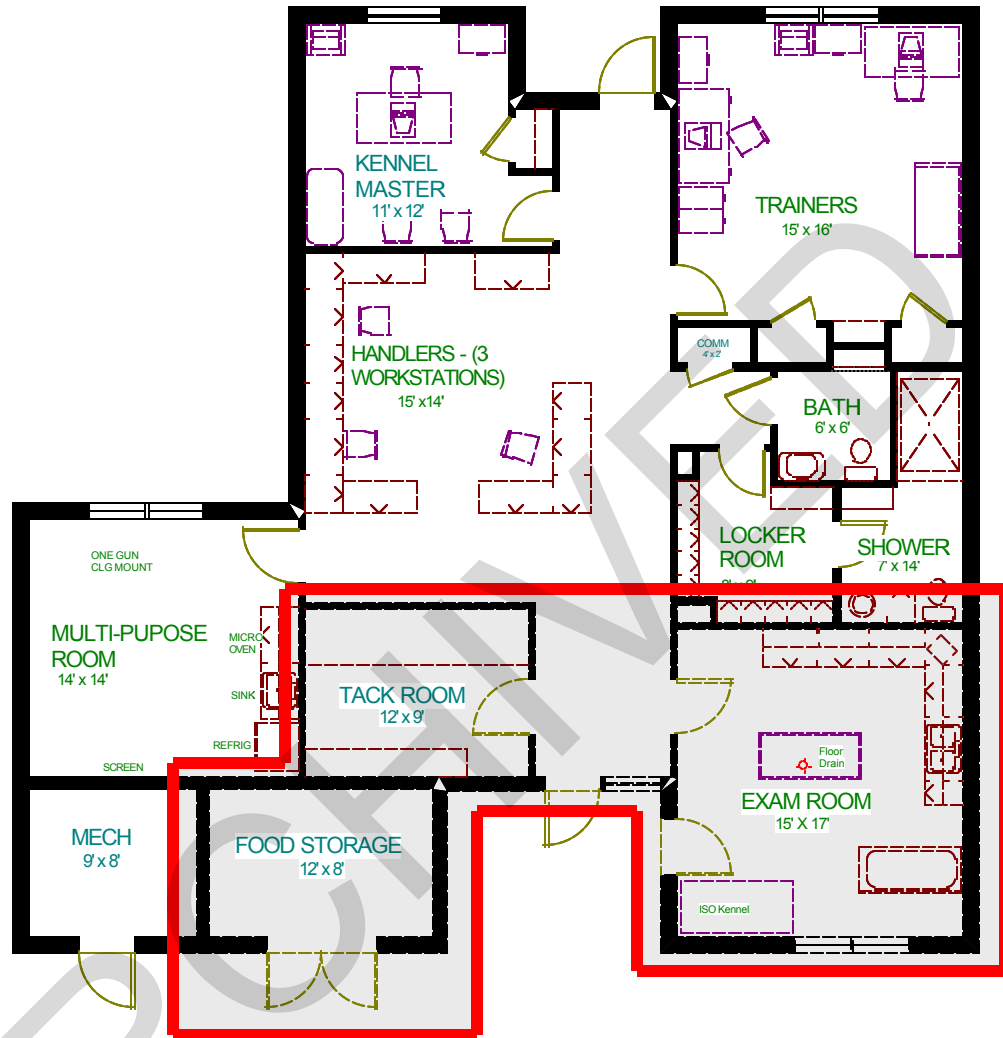
## Trainers (240 sf)

Trainers conduct patrol and explosive/narcotic detection training including training on the obstacle course. The trainer office will provide workspace for 2 people. Lockable closets are required to store training aides for each trainer. Furnishings should include desk, chair, four drawer file cabinet for each trainer, and a common bookcase. Equipment should include computer, printer, copier and one 4 x 8-foot dry erase board.

## Handlers (210 sf)

Handlers work daily with the MWDs. The area for the 10 handlers is an open area for general office functions. It includes 3 common workstations for handlers to update records, complete daily reports and space for documentation storage. Furnishings include three workstations, file cabinets (one four drawer vertical per workstation/systems equivalent) and distribution counter. Equipment should include computers and printer.





## Special Use Areas

The special use area should provide work space for the veterinarian and the unique storage requirements for the facility. The ultimate goal of this area is to provide a professional, well organized space that create a sense of pride in the work place.

Special use areas are the transition spaces between the administration area and the kennels. While their function is important in the day to day operations of the MWD facility, they are not normally occupied on a daily basis. As such, these areas provide a secondary function of serving as a noise buffer between the kennels and the administrative areas.



## Veterinary Treatment Room

A veterinary treatment room is used to perform routine physical examinations of MWDs every six months, provide an area for emergency first aid treatment as a result of sickness or accidents, quarantine sick MWDs and serve as a recovery area after dental care.

In order to maintain sanitary conditions, treatment rooms require a higher degree of cleanability/durability than the rest of the support area. Basic finish requirements are seamless floors with an integral base, washable walls, painted gypsum board ceilings, cabinets faced with plastic laminate and solid surface countertops. Interior partitions should provide a STC rating of 50—55. Floor drains should be centered in the room to aid in cleaning and located under the isolation kennel. Wall and base cabinets with drawers should be installed to include stainless steel dual wash basins with hot/cold water. One section of wall cabinets should be lockable, so that prescription medicines for MWDs may be stored in the room. In addition to the normal electrical outlets required by code, a 220 volt outlet is required to support other portable equipment that may be used.

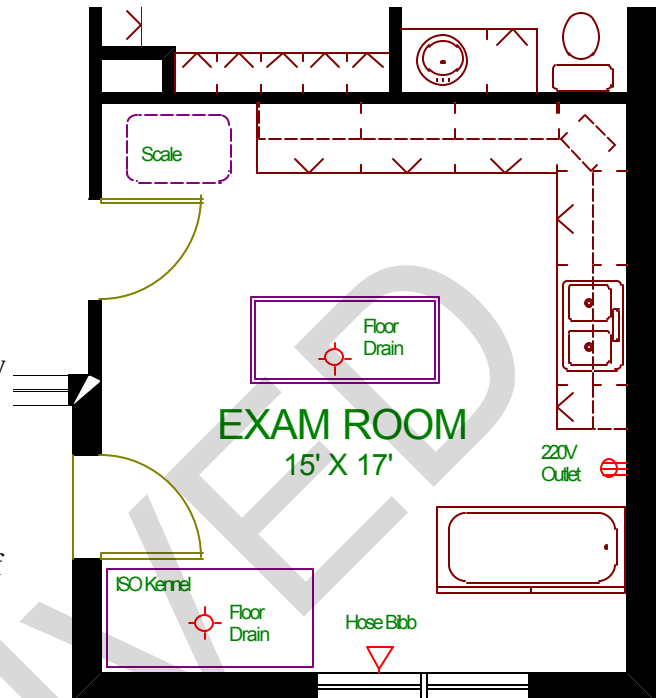
Equipment for the room would include the following:

### MWD Isolation Kennel:

Entire structure should be made of uniform, non-glare Type 304 stainless steel. The frame, cross members and vertical spokes should be welded together at every intersection. Latches and hinges should be made of 12-gauge stainless steel. The floor of the pen should be a raised, removable grate. The floor grate should be heavy gauge stainless steel, plastic-coated section installed 1 3/4" off the floor. Dedicated floor drain will be required for this kennel.

### Standard Table Tub:

Tub should be designed of Type 304 stainless steel with a minimum depth of 15". The tub should slope to the drain end. The design should include a removable, bathing rack made of plastic coated-stainless steel that fits into the bottom of tub to give the MWD better footing during treatments. Faucets should include a flexible, stainless steel hose that will extend the length of the tub and spray hard to reach areas.





#### Exam Room Light:

Recommend ceiling mounted with arm extension and swivel capacity of 360°.

#### Walk On Platform Scale:

Type 304 stainless steel platform with wall or post-mounted LED display. The scale should be able to perform calibration and weigh MWDs to the nearest 0.1 of a pound or kilogram.

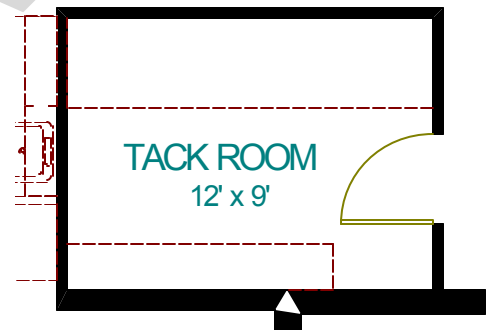
#### Stationary Exam Table:

Type 304 stainless steel die-formed from one piece of 20 gauge steel. The top should have raised edges to prevent fluid runoff and permanently attached to a heavy base. There should be a minimum of 35" work height from floor to top of table. Heavy base should have adjustable leveling-screws.

## Tack Room

(108 sf)

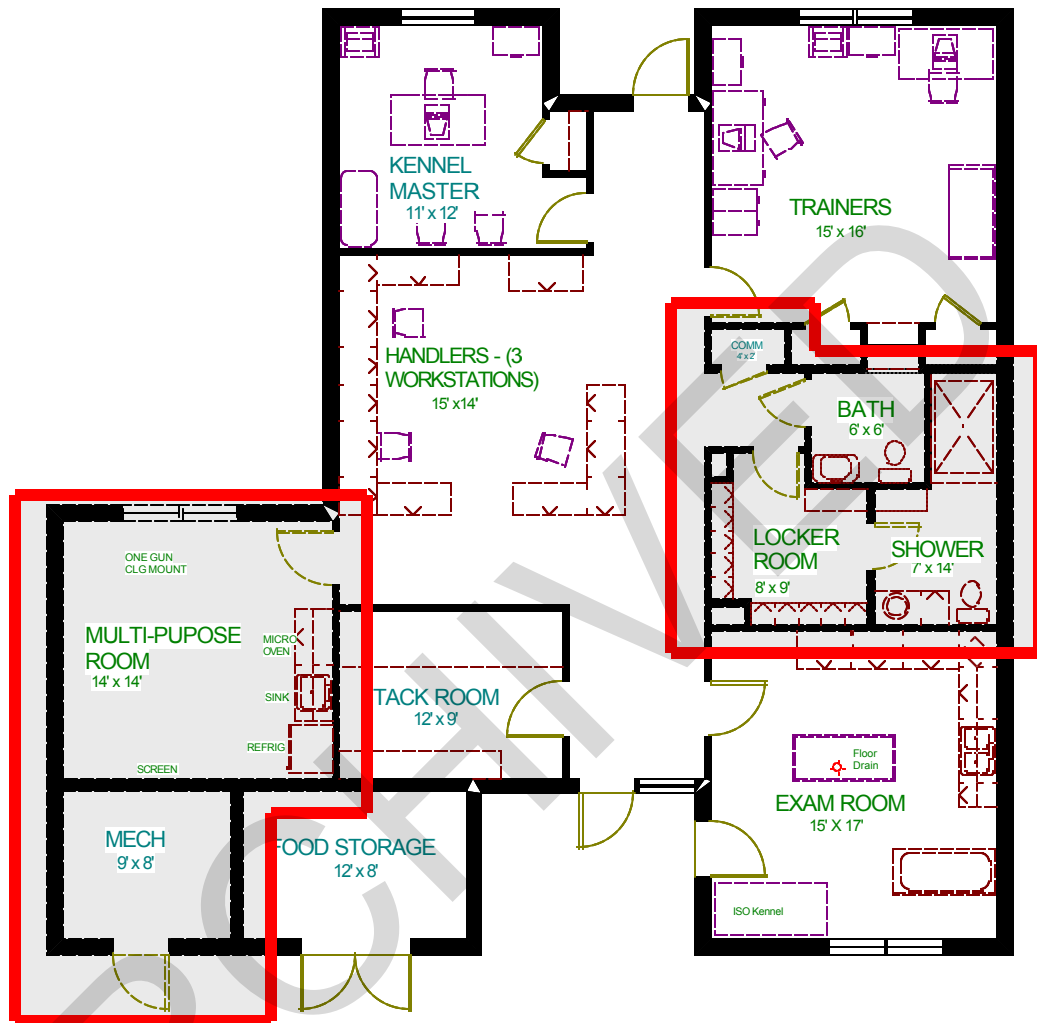
The tack room is for storage of MWD equipment, such as body suits and portable kennels for transportation. The tack room should be located near the entrance to the kennel area and not the main building entrance. Requirements include 12 linear feet of 36 in by 18 in by 36 in deep shelves, a 24 in hanging space with hooks and 6 linear feet of 18 in by 18 in by 12 in shelves.



## Food Storage

(96 sf)

The food storage room is for bulk storage of normally a 30 day supply of food for the dogs. Room should be adjacent to the kennel area with an exterior entry. Entry should be a pair of 36 inch doors to allow for palletized food delivery and storage. Doors require weatherstripping and thresholds to aid in insect and rodent control. Temperature and humidity control equivalent to the office area are required in this room to control food spoilage. A minimum separation of 2 in from the walls to the stored food is required to allow for air circulation. Shelving should be installed to meet local delivery operations.



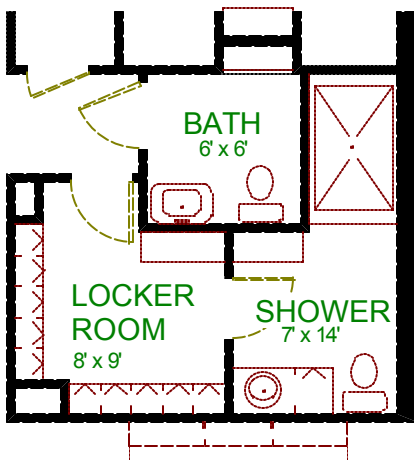
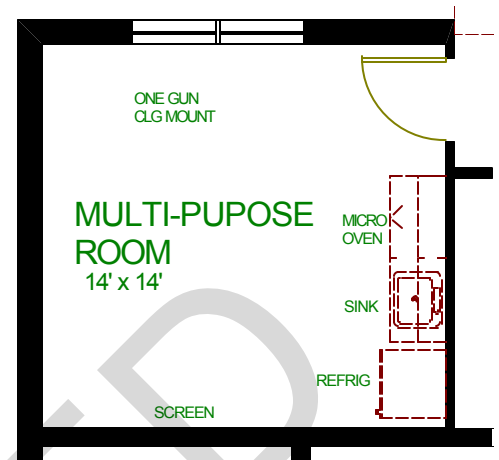
## Support Areas

The support area provides space for the common use areas of the building. Areas such as, the multipurpose room, latrines, communication and mechanical rooms, form the core of the support areas. The ultimate goal of this area is to provide a professional, well organized space that create a sense of pride in the work place.

Support areas should be centrally located and easily accessible for building occupants or maintenance personnel in the case of the mechanical room.

## Multi-Purpose Room (196 sf)

The multi-purpose room serves as a combination conference room, classroom and break room. While food preparation requirements are light, a countertop, base and wall cabinets for storage are required. Lighting should have a variable-level control for use as a conference room/classroom. Furnishings include either a conference table for 15 or three five-person tables, chairs, bulletin board, and one 4 x 8-foot dry erase board. Equipment includes video projection system (ceiling mounted, one gun unit), projector screen, sink, microwave oven, and refrigerator.



## Latrine/Shower/Lockers (206 sf)

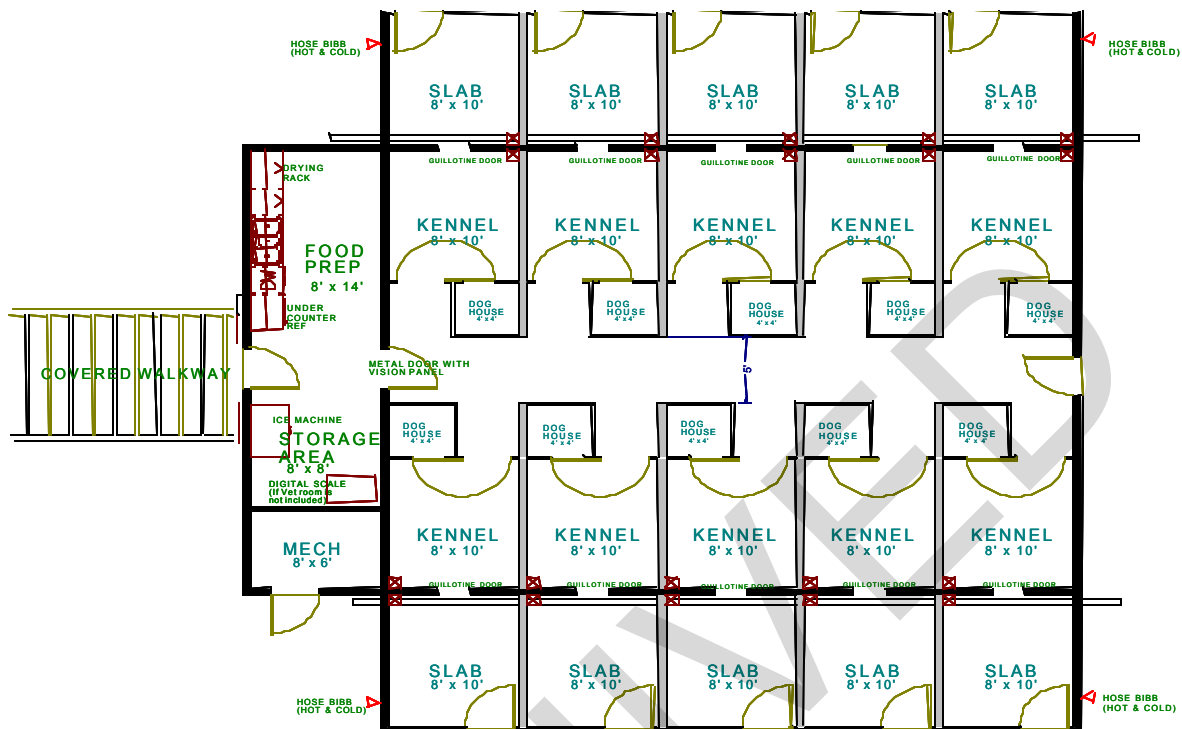
The latrine/shower/locker is a unisex area subdivided into three rooms. One room is a handicapped accessible latrine with a water closet and lavatory for general use. The locker room includes 10 full height metal lockers and bench for MWD handlers use. The shower room includes a shower, bench, water closet, and lavatory. Don't neglect to include other accessories, such as, mirrors, soap dispensers, paper towel dispensers, disposal units, grab bars, and hooks.

## Mechanical/Electrical/Communication

In the simplest of terms HVAC is a process to add or remove heat in a facility. It also introduces fresh air to maintain indoor air quality to eliminate the "sick building syndrome". Design HVAC systems to optimize energy use and meet the design criteria for the area you are located. Include the hot water heater in the mechanical room and size to meet the demands of the latrine/lockers/shower, multipurpose room and veterinary treatment room. Allow for location of electrical panels in this area as well. Although a recommended size is shown on the plans, the room should be sized to support the equipment required for the location.

While the number of instruments/computers is not large, the communications closet is vital to the success of the organization. Provide a minimum of one prewired telephone/LAN outlet per desk/workstation, plus one in each common area and in the kennel food preparation area. Include telephone/LAN outlets for fax machines and printers. Conceal conduit in walls.





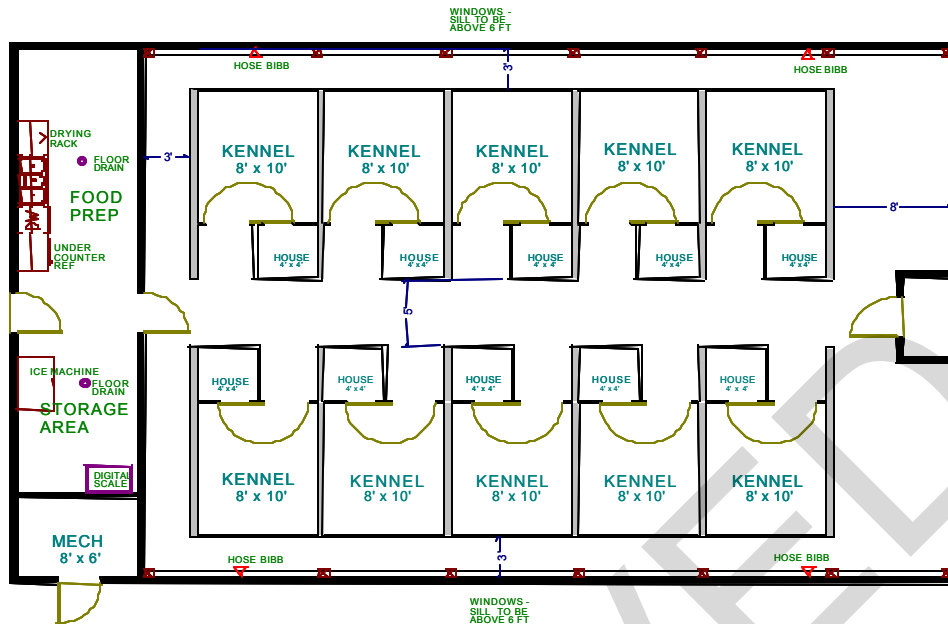
Combination Indoor/Outdoor Kennel

## Kennel Area

The kennel area provides the day to day living environment for the MWDs by giving each one a place for eating, resting and privacy. Kennel areas should be built to accommodate large breed dogs and should be designed as a modular structure to allow for future expansion of runs. There are three types of kennel areas—indoor kennels, outdoor kennels and a combination indoor/outdoor kennels, with the combination indoor/outdoor kennel the preferred standard. While the preferred standard is the indoor/outdoor kennel, there are other factors that must be taken into consideration when selecting the kennel type. Clearly cost is always a consideration in selecting a kennel type, but climate also plays a big role in the selection. In cold weather climates the benefit to cost ratio will drive the selection to an indoor kennel while the opposite is true for hot weather climates. The more temperate the climate the more suited the indoor/outdoor kennel is for use.

Each type of kennel includes the same space requirements. Areas within the kennel include kennel runs with dog houses, food preparation, storage and a mechanical rooms. It should also be noted, for example, that what applies to the indoor portion of a combination indoor/outdoor kennel also applies to an indoor kennel and vice versa.

The kennel area should be separated from the administrative building a minimum of 20 ft. This not only provides separation between different functions, it aids in the control of noise from one facility to another. As a result of the constant interaction between the administrative and kennel area, a covered walkway is required to connect the two areas and provide protection from the elements. Care should be taken in the layout of the kennel area in relationship to the administrative building in order to maintain a one way system in the movement of



Indoor or Outdoor Kennel

## Kennel Area (cont)

situations where MWDs will meet face to face and prevent confrontations. Consider the installation of mirrors at corners, intersections and blind spots to alert handlers of potential wrong way traffic. All entries/exits from the kennel area are required to be self closing and self latching. Doors exiting the kennel runs should open inward to aid in preventing MWD escape.

Proper ventilation is important in the kennel area to prevent the spread of diseases and control odors. It is recommended that the ventilation standard should be 10 to 15 room air changes per hour. In no instance should it be less than 8 room air changes per hour.

Kennel temperature should range from 45 degrees Fahrenheit to 85 degrees Fahrenheit with humidity in the range of 40% to 70%. Note that MWDs work more effectively and are more alert when the kennel temperature is close to the temperature of their working environment. Strive to maintain a kennel temperature that is within 10 degrees of the exterior temperature.

Potable water is required in the kennel area. Hot and cold water lines will be installed at ceiling level down the length of the 5 ft wide center corridor connecting to hose reels at each end of the corridor. A high pressure washer is required to assist in sanitizing and cleaning kennel runs.

Since the kennel is basically a wet environment, all receptacles should be provided with ground fault circuit interrupters and all-weather covers. Receptacles mounted at 48 inches above the finish floor are required at each end of the central corridor. Each kennel run should have a waterproof light fixture that is individually switched at the corridor entrances. Other areas require general purpose lighting in accordance with industry standards.

All drain lines in the kennel should be a minimum of 6 inches in diameter and should be designed to sustain flow velocities that will maintain self-cleansing action. Due to the nature of the waste, cleanouts should be numerous and easily accessible. Floor drains should be included in the central corridor to aid cleaning of kennels.



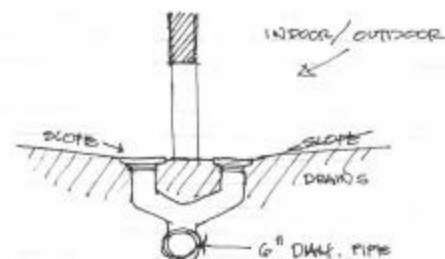
## Indoor/Outdoor Kennel

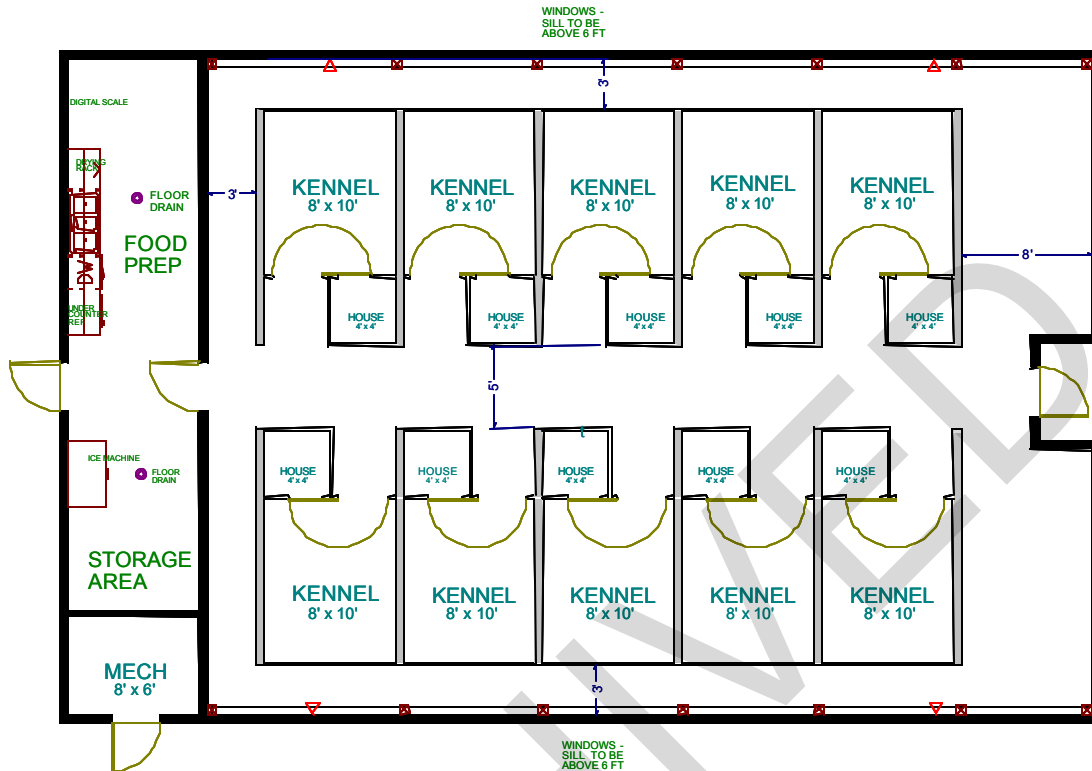
A combination indoor/outdoor kennel simply implies that there is an interior run and an exterior run linked with each MWD living area. The interior run and the exterior run will be connected by a guillotine-type door. Other door types may be used, but the idea is to permit isolation of the MWD during cleaning operations. Ideally, operation of the door would be from the central corridor and from the outside of the exterior run. At 6 ft above the finish floor provide translucent wall panels in the wall separating the runs to provide natural light inside the kennel.

The roof should extend entirely over the exterior runs and include gutters/downspouts to prevent excessive water in the runs. Exterior framing should be enclosed with a soffit to prevent birds from roosting.

Exterior hose bibbs (freeze protection where required) with both hot and cold water are required at each corner of the building. These are necessary for cleaning of exterior runs.

Floor drains should be located in the corner of each run adjacent to the common wall separating exterior and interior runs. Drains should tie to a common waste line. Drain covers should be flush with the floor. Kennel floors should slope (at least 1/4-inch per foot) toward the drains to allow for quick water drainage and drying.





## Indoor or Outdoor Kennel

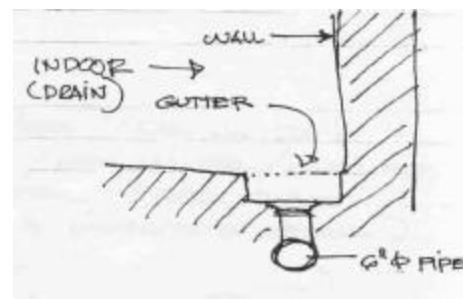
The plan for the indoor and the outdoor kennel area is the same for either style. The obvious difference is the wall that encloses the kennel area. For an indoor kennel the exterior walls along the runs should have windows beginning at 6 ft above the finish floor to allow for natural light. Windows should be operable and hinged at the sill to tilt inward to prevent escape of MWDs. For outdoor kennels the exterior wall is simply an 8 ft chain link fence.

The plan shown allows for additional storage by including 8 ft of covered space at the end of the kennel runs. This unfinished space can also be converted to kennel runs in the future for a low initial cost. First cost can be reduced by revising plan to include only the 3 ft walkway all around the kennel runs.

Hose bibbs with hot and cold water are required at

each corner of the building. These are required to clean the gutter and drain system for the kennel.

A gutter and drainage system will be provided at the back of the kennel run for either type of kennel for sluicing waste waters from cleaning operations. Kennel run floors should slope to the gutter and the gutter should slope to the drain. Gutters should be of sufficient to allow for easy cleaning. A minimum of 3 ft should be allowed between the end of the kennel and the wall or fence.





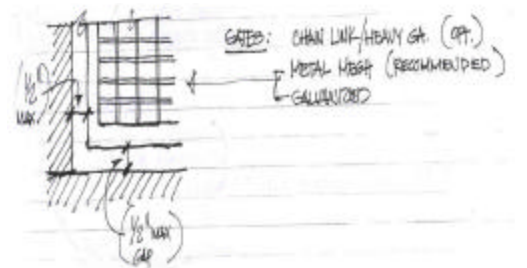
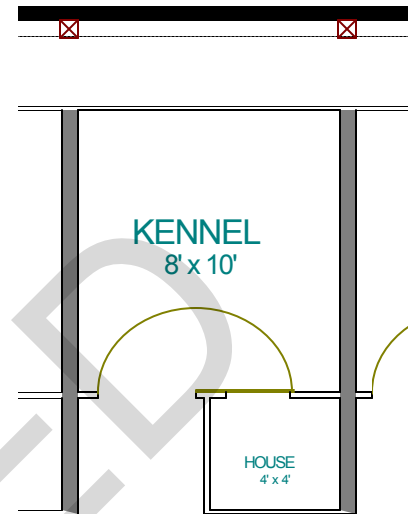
## Kennel Run

The size of the kennel run for each dog has been increased to 8 ft by 10 ft. This increase from past guidance resulted from the numerous documented injuries to MWDs particularly in the tail area. Runs should be arranged such that openings are staggered in order to avoid MWDs facing each other across the corridor.

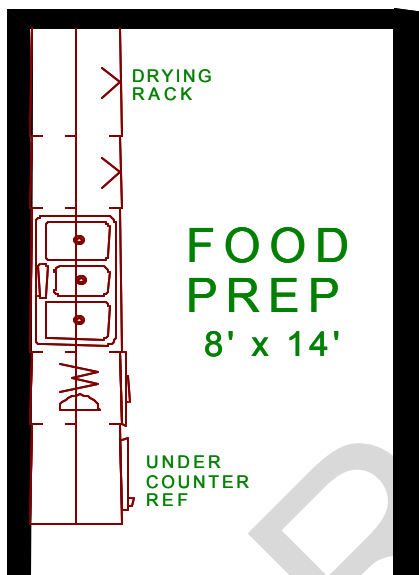
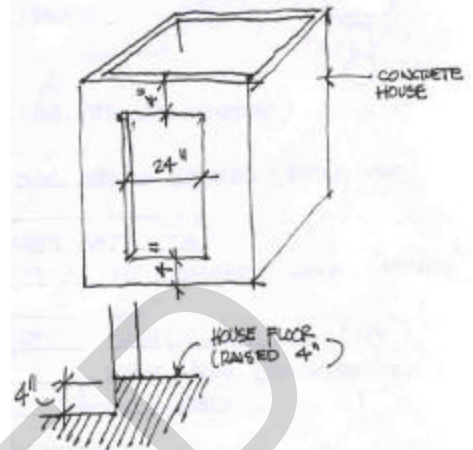
Full height partitions are required between runs for all kennel types. The first 6 ft above the floor should be sealed concrete. For interior runs steel clad acoustical panels should be considered from the top of the concrete partition to the ceiling. Steel clad acoustical ceiling panels should also be considered above the kennels. Heavy gage chain link fence is used for exterior runs, but is also an option for interior runs. However, because of the noise generated in the enclosed area of an interior run, it is important that noise reducing materials be introduced to prevent stress to the MWD and hearing loss to personnel. As a minimum, end walls should be full height galvanized chain link fencing. Care should be taken to prevent sharp edges from bolts, hinges, tie wires etc to not be on the interior of the runs where MWDs may be cut or harmed. A better alternative is to use galvanized metal mesh with galvanized square tubing. Self latching entry gates should swing 180 degrees and be able to cover the opening of the MWD house. This allows the MWD to be penned in the house during cleaning operations of the run. A stainless steel water bucket is required for each run including a holder that will prevent the MWD from overturning the bucket. A better alternative is to provide a “lick” watering system.

Flooring should be concrete and slope toward floor drains and/or gutters to provide rapid run-off of water and drying. Since runs are subject to frequent wash downs to clean and prevent disease, a 3/16-inch epoxy terrazzo finish will provide a long term finish for the flooring. Other alternatives include an epoxy (100% solids) coating to sealing concrete at the low price end.

In general all materials in areas accessible by MWDs should be resistant to damage by scratching, biting and chewing. Materials should be durable and easy to sanitize. Avoid using material such as angle iron that will rust over a period of time and generate sharp edges that will pose a danger to MWDs.



MWD houses are 4 ft by 4 ft by 4 ft sealed concrete boxes with a metal top. Fiberglass tops do not hold up over time. Tops should hinge toward the end wall in order to be raised to clean the house or treat a MWD. Once lifted, a holding device should be available to keep the top open. Wall opening dimensions are shown. Slots are required along the sides of the opening to allow a plate (metal, plexiglass, etc) to close the opening and prevent MWD entry while the house is being cleaned. The house should be a minimum of 8 inches and a maximum of 12 inches above the run floor. The house floor should have positive drainage toward the wall opening.



## Food Preparation

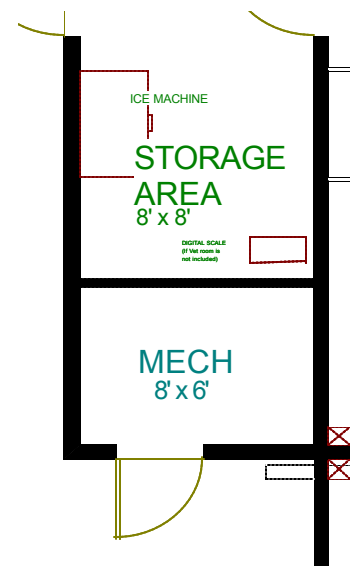
(112 sf)

The food preparation area is where feedings are prepared and feeding pans/bowls are stored/cleaned. Food preparation for MWDs dictates a large countertop with a three compartment, deep, stainless steel sink. Upper wall cabinets are required for general storage. Under counter refrigerator, dishwasher and space to store food for daily usage are necessary for operation. A 2 ft space at the end of the counter should accommodate storage/drying rack for pans/bowls. Lighting and receptacles should be installed per code and a floor drain installed. A telephone, bulletin board, feeding chart, and large garbage can should also be provided. Optional equipment would include a garbage disposal unit and a stackable washer/dryer.

## Storage/Mechanical

Additional storage for the kennel area is provided. A commercial quality ice machine is required to aid in cooling down MWDs. Include a floor drain for the area. If a veterinary treatment room is not included, the digital scale should be located in this area.

Design mechanical systems to optimize energy use and meet the design criteria for the area you are located. Include the hot water heater in the mechanical room and size to mean the demands of the kennel. Allow for location of electrical panels in this area as well. Although a recommended size is shown on the plans, the room should be sized to support the equipment required for the location.



## Considerations for Renovations

Design renovation projects to incorporate as many of these guidelines as logical and practical into the MWD facility. In most cases the cost of the renovation should not exceed 70% of the cost for a new MWD facility. Serious consideration for new facilities or a reduction in the scope of the renovation should be given when renovation costs near the 70% mark. Don't neglect the impact to cost that environmental hazards (e.g. asbestos and lead based paint) will have on the project as well.



## Optional Areas

Often the obedience course is used to showcase the MWD program during base tours. An optional area to the site would be to add a covered viewing area for these events. Ideally aluminum bleachers on a concrete pad that sits 60 people would cover the requirement. Amenities would include drinking fountains, public address system, walks and bus parking.

In remote locations it may be advantageous to include in the veterinary treatment area an operating room and a x-ray room. The operating room would be 144 sf and include wall and base cabinets (lockable), sinks and counters. Close coordination with the veterinarian office on all requirements including equipment would be a mandatory action at the beginning of the project.

If space allows, additional training structures can be added to the project. Examples would include out of commission vehicles for searches and simple building structures with rooms simulating different facilities that would be expected to be searched in the area.

In the kennel area, particularly if the veterinary treatment room is not included in the design, a dip tank or tub area for MWD bathing and cooling can be included in the project.

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## Optional Areas (cont)

In many cases it is more advantageous to store drugs (narcotics) used as training aids at the MWD facility. The drug training aids should be stored in a GSA approved safe/container. Ideally the safe/container should be located in a storage room dedicated for this purpose, but the closet in the kennel master office, the trainers office or space within the tack room could also serve as a storage area. Access to the storage room should be limited to as few people as possible. The room used to store drug training aids must be protected with Intrusion Detection Equipment (IDE) and , if possible, staffed by an armed guard 24 hours a day. Where 24 hours a day staffing is not possible, the following additional measures are required:

Limit the number of entry points providing access to the storage room to the minimum possible.

Entry doors should be solid metal or wood doors or covered with 9 to 12 gauge security screening or 16 gauge sheet metal, fastened with smooth head bolts and nuts, pinned in place.

Hinges should be mounted to the inside of the door with nonremovable pins. Doors must be secured with a high security lock when not in use.

All window providing access to the storage room must be protected by 9 to 12 gauge security screening or 3/8 inch or larger diameter steel bars spaced no more than 6 inches apart. The frames holding the screen or bars must be fastened to the window frame with smooth head bolts.

Vents, crawl spaces and ceilings surrounding the storage room must not allow access to the storage room. Any opening larger than 96 square inches must be covered with 9 to 12 gauge security screen or steel mesh. The screens or mesh must either be welded to the frame of the opening or secured with smooth head bolts pinned in place.

Walls, floors and ceilings of the storage room must provide a degree of protection equivalent or better than the reinforced doors and protected window.

Coordinate additional requirements with local Security Forces.





## Abbreviations

ADAL	Addition/Alteration
A-E	Architectural/Engineering Firm
AF	Air Force
AFI	Air Force Instruction
CFR	Code of Federal Regulations
BCE	Base Civil Engineer
DA	Department of Army
DoD	Department of Defense
FT	Foot
FY	Fiscal Year
GOV	Government Owned Vehicle
GSA	General Services Administration
HVAC	Heating, Ventilation, Air Conditioning
IAW	In Accordance With
IDE	Intrusion Detection Equipment
LAN	Local Area Network
LED	Light Emitting Diode
MAJCOM	Major Command
MWD	Military Working Dog
POV	Private Owned Vehicle
SF	Square Foot or Security Forces
STC	Sound Transmission Class
VCT	Vinyl Composition Tile

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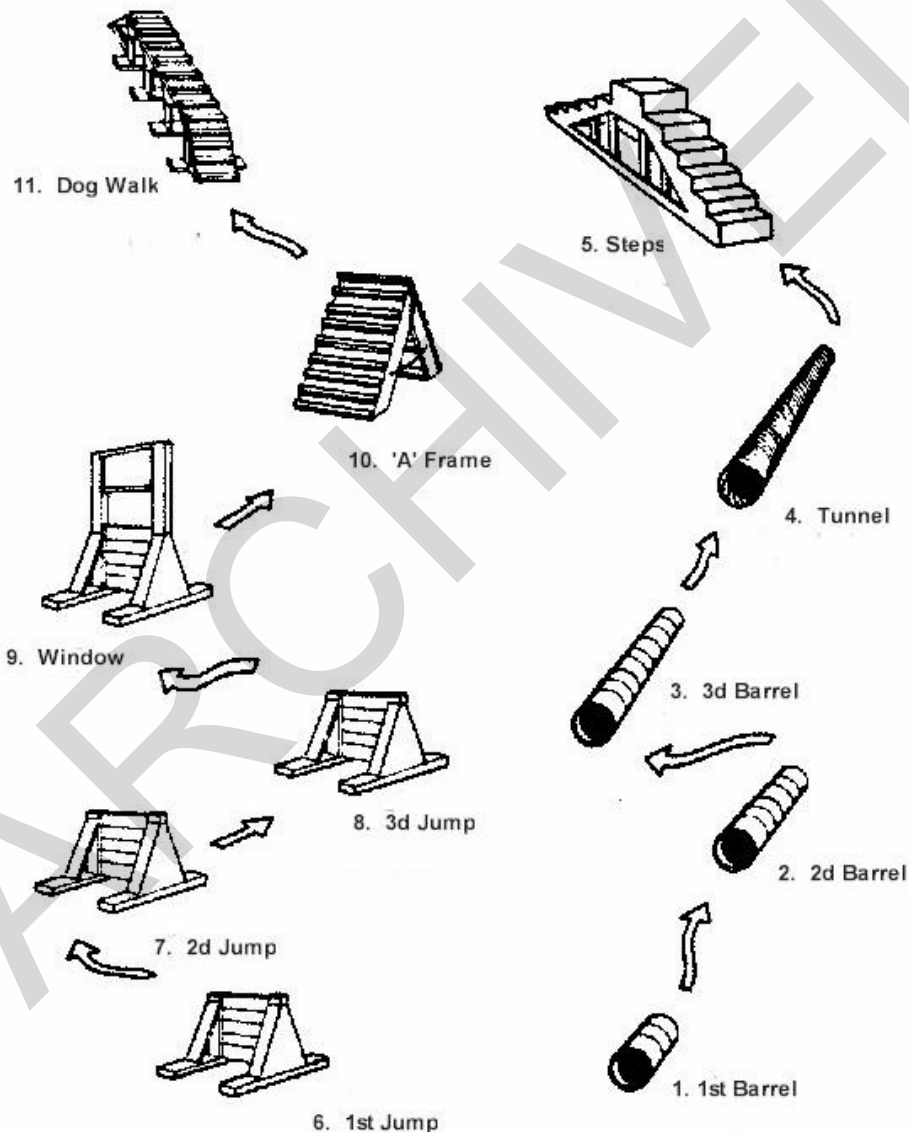
## References

AFI 31-202	Military Working Dog Program
AFI 32-1021	Planning and Programming of Facility Construction Projects
AFI 32-1023	Design, Construction Standards and Execution of Facility Construction Projects
AFI 32-1024	Standard Facility Requirements
Military Handbook 1008C	Fire Protection for Facilities Engineering, Design, and Construction
DA Pamphlet 190-12	Military Working Dog Program
9 CFR Chapter I Part 3	Animals and Animal Products Standards

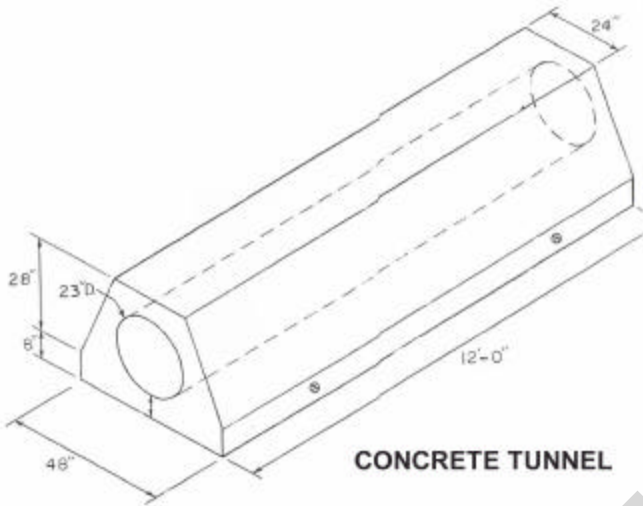
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## Appendix 1—Obedience Course Obstacles

Obedience course obstacles consist of barrels, tunnels, stairs/steps, jumps, hurdles, windows, “A” frames and dog walks. Obstacles should not have sharp edges or other features that could cause injury to MWDs. Keep obstacles in good repair and select material based on life cycle cost. Wood obstacles require either two coats of resin or 2 coats enamel paint or 1 coat of marine varnish. Refer to DA Pamphlet 190-12 for more information on dimensions and size. If space permits, advanced obstacles such as a teeter-totter, tunnel on chains, rope bridges, for example, can be included to enhance training.



Each obstacle is 15 to 20 feet from previous obstacle and course runs in sequence.



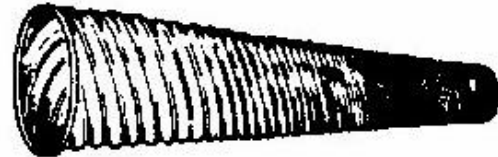
**Barrel No. 1**      Length = 35 inches  
Opening = 23 inches



**Barrel No. 2**      Length = 70 inches  
Opening = 23 inches



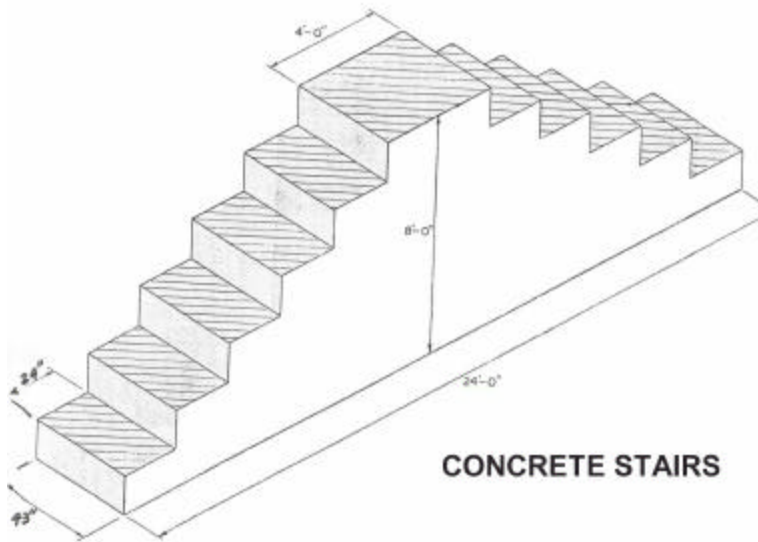
**Barrel No. 3**      Length = 105 inches  
Opening = 23 inches



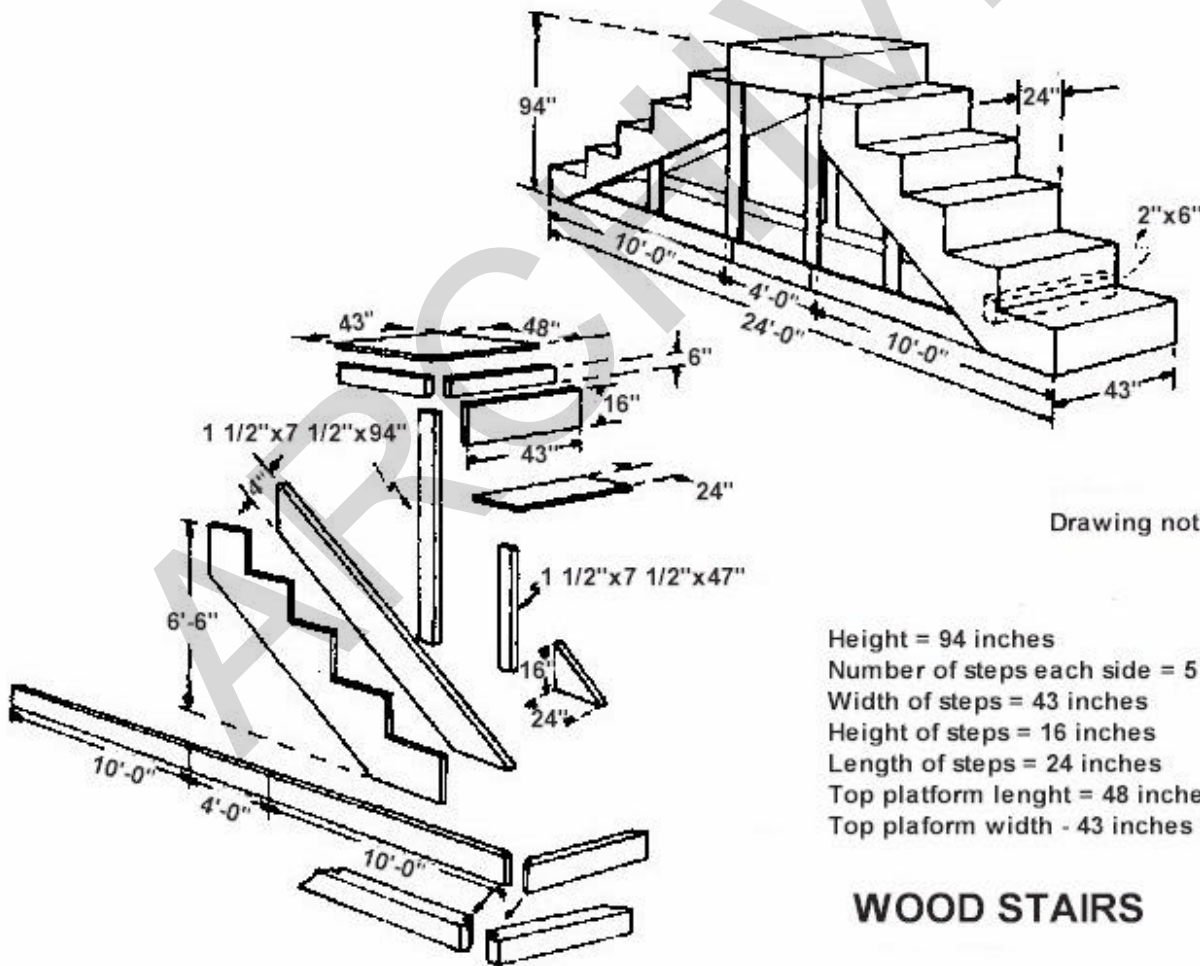
**Tunnel**      Length = 146 inches  
Opening = 19 inches



## Tunnels



**CONCRETE STAIRS**



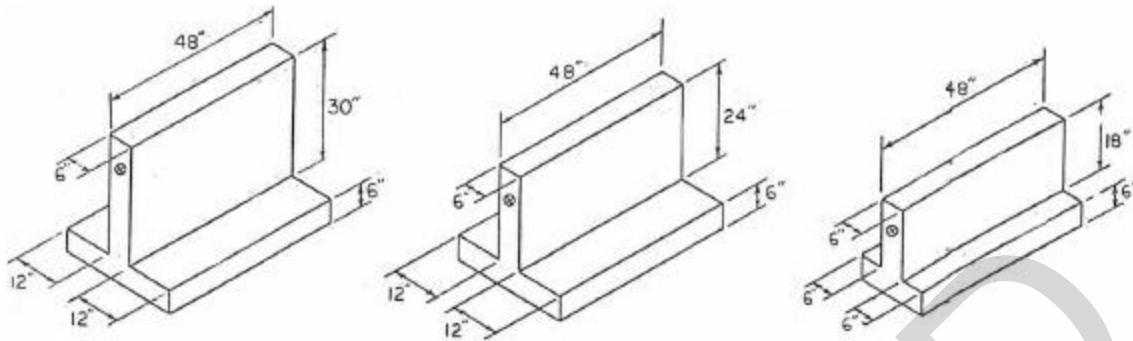
Drawing not scaled

- Height = 94 inches
- Number of steps each side = 5
- Width of steps = 43 inches
- Height of steps = 16 inches
- Length of steps = 24 inches
- Top platform length = 48 inches
- Top platform width = 43 inches

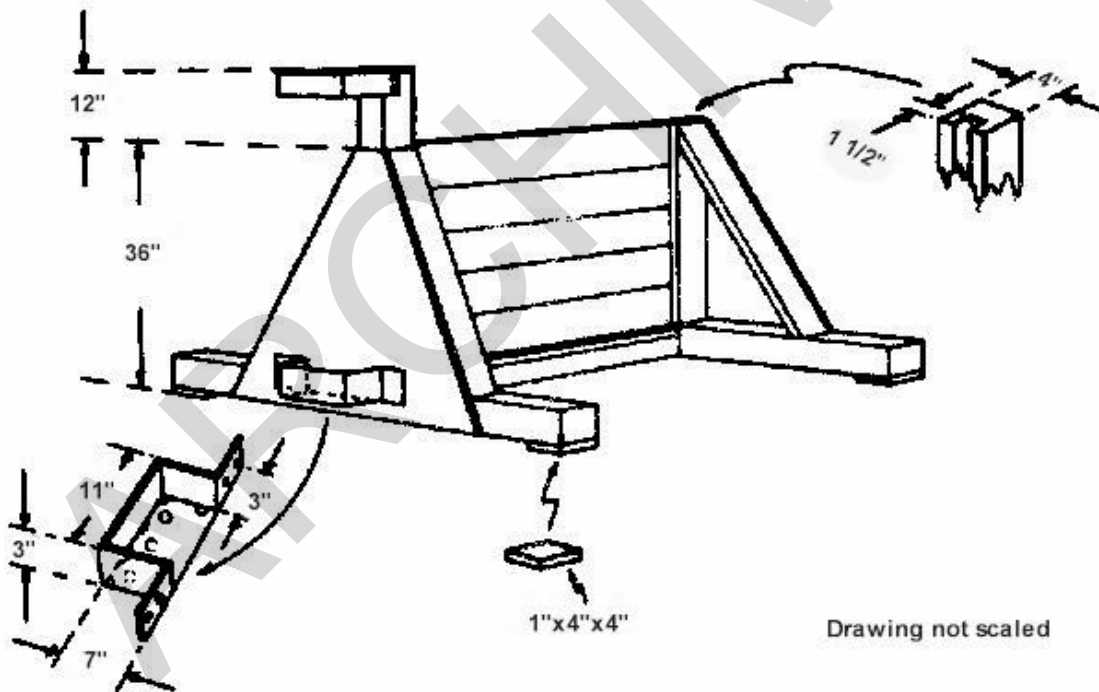
**WOOD STAIRS**

# Stairs





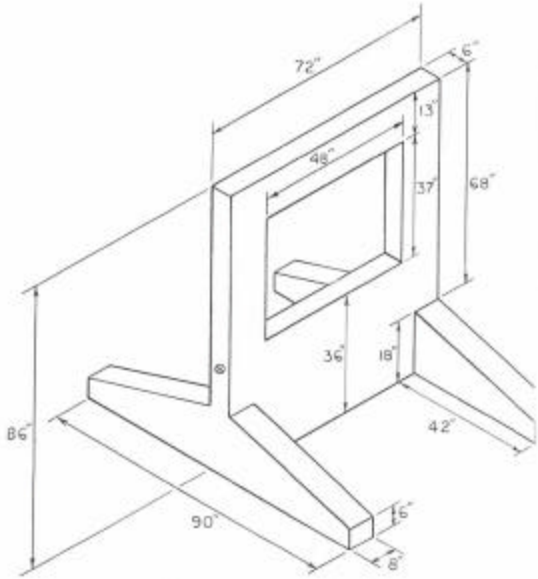
**CONCRETE HURDLES**



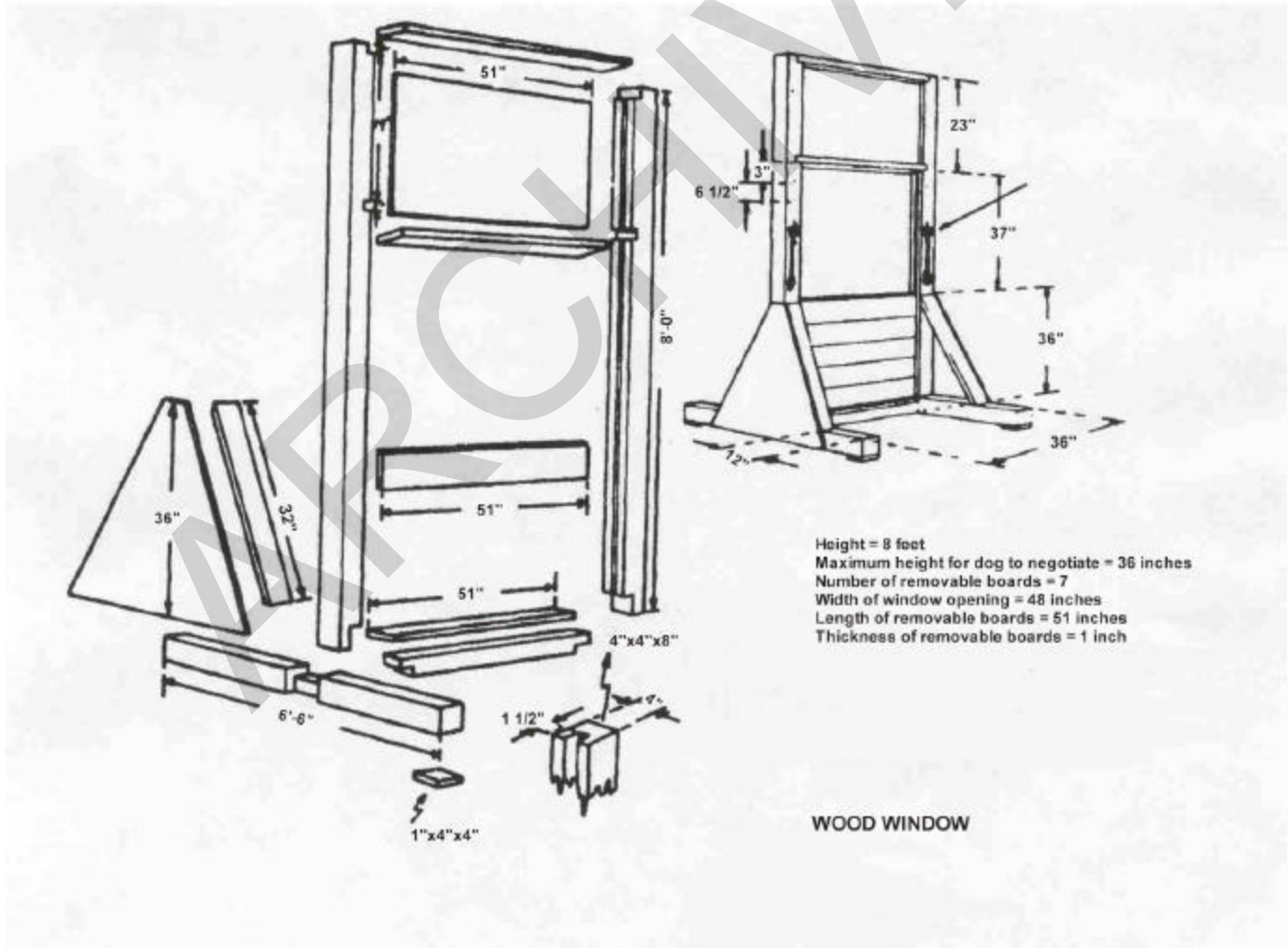
Height of maximum raised level for dog to negotiate = 36 inches  
 Number of removable boards = 6  
 Length of 6 boards, each = 51 inches  
 Height of 6 boards each = 6 inches  
 Thickness of each board = 1 inch

**WOOD JUMPS 1, 2, and 3**

**Hurdles**



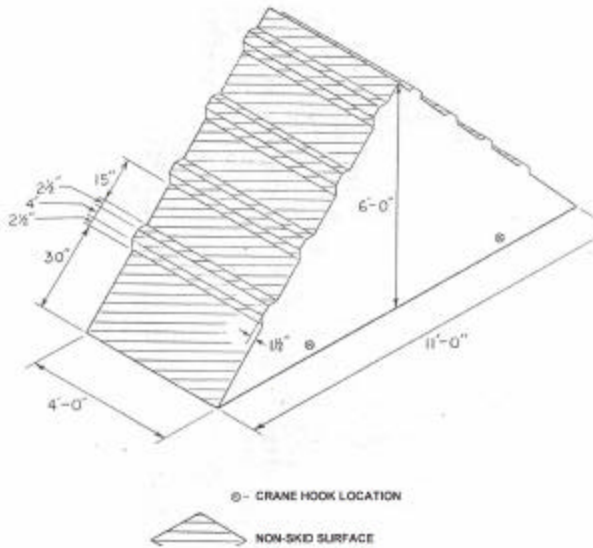
**CONCRETE WINDOW**



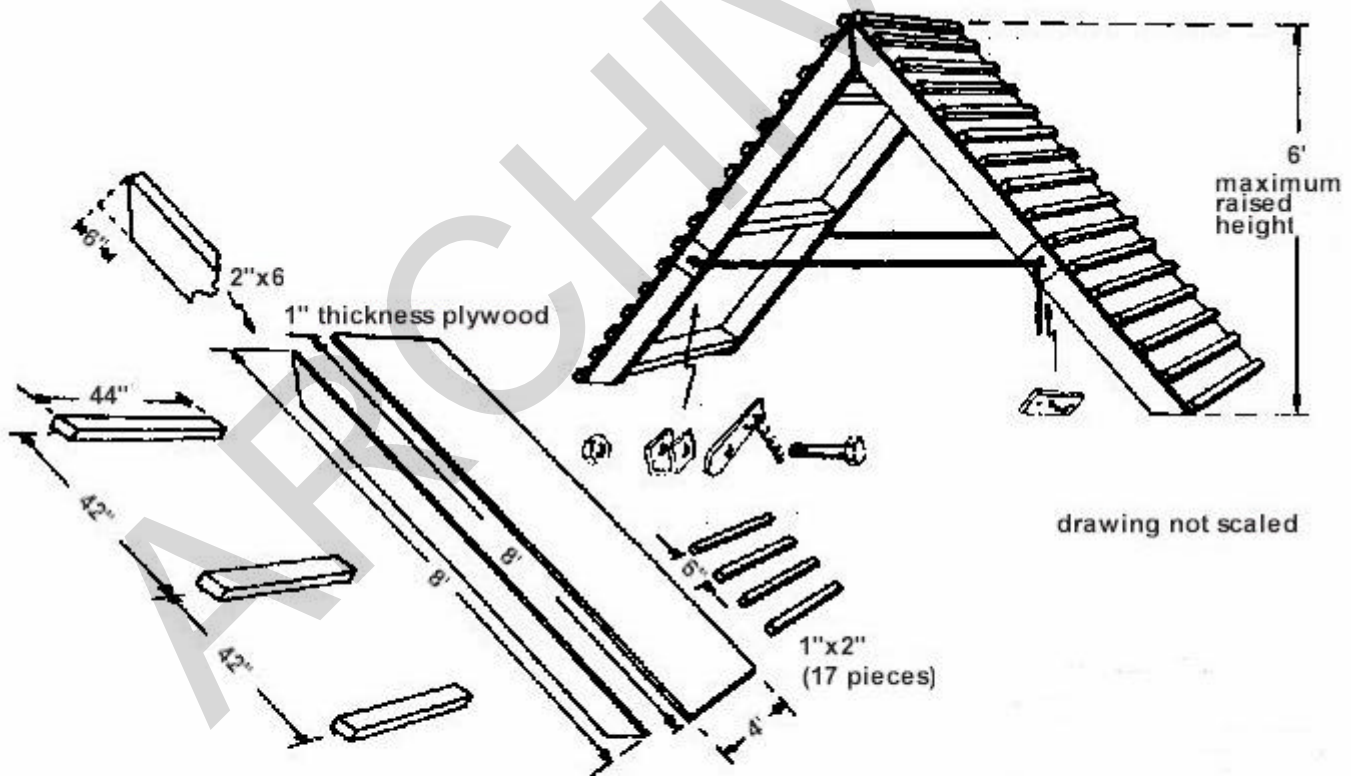
Height = 8 feet  
 Maximum height for dog to negotiate = 36 inches  
 Number of removable boards = 7  
 Width of window opening = 48 inches  
 Length of removable boards = 51 inches  
 Thickness of removable boards = 1 inch

**WOOD WINDOW**

# Window



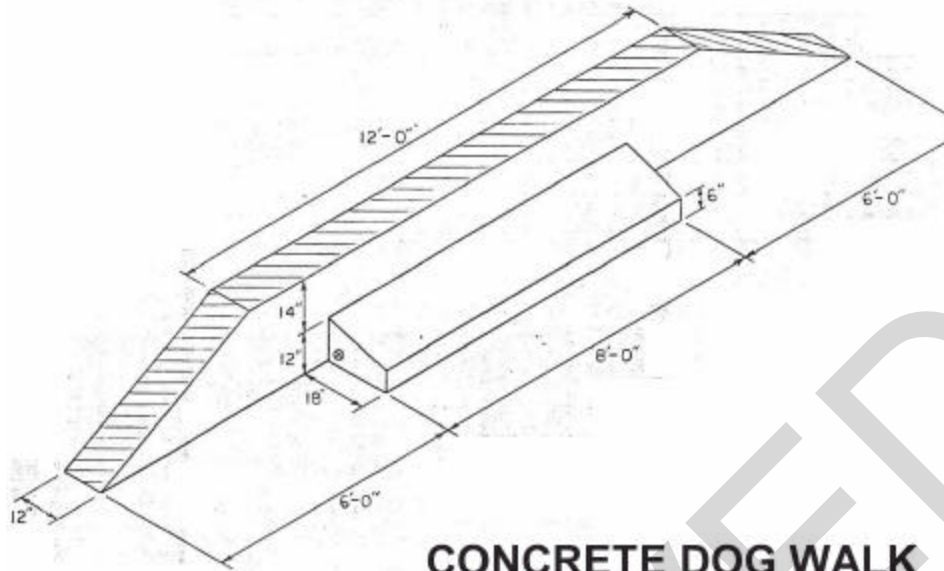
CONCRETE "A" FRAME



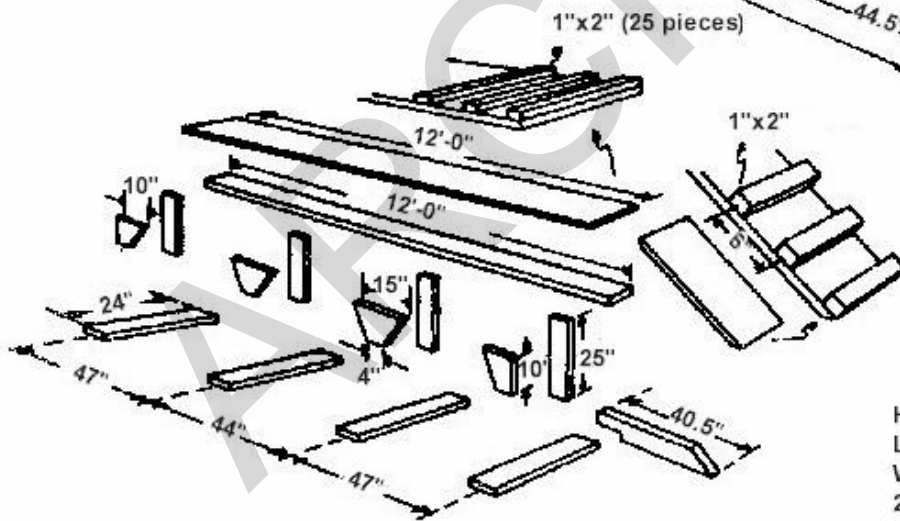
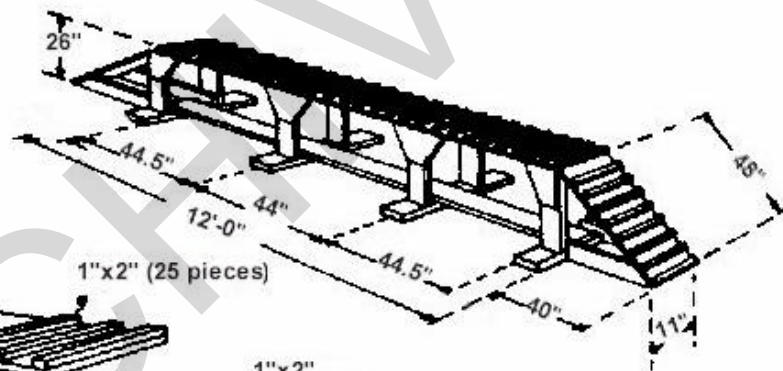
WOOD "A" FRAME

Length - 10 feet (8 feet on each side)  
 Width - 4 feet  
 Maximum raised height - 8 feet  
 Adjustable from horizontal position to the maximum allowable of 6 feet

## A Frame



**CONCRETE DOG WALK**



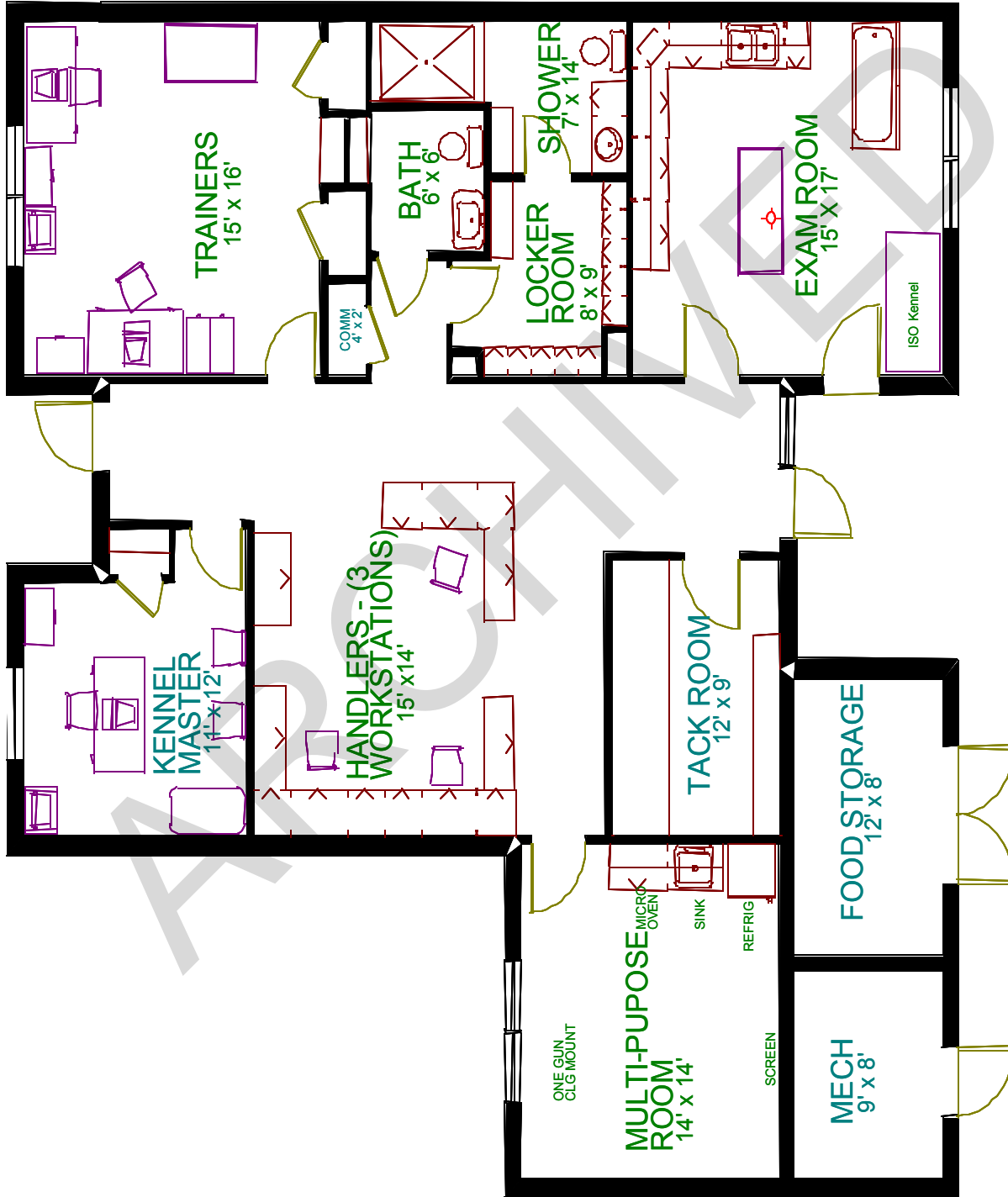
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Height = 26 inches  
 Length = 224 inches  
 Width = 11 inches  
 2-inch boards every 4 inches to insure safe footing  
 Ramp on each end of walk, 11 inches wide, 40 inches long (To be included in total 224-inch overall measurement)

**WOOD DOGWALK**

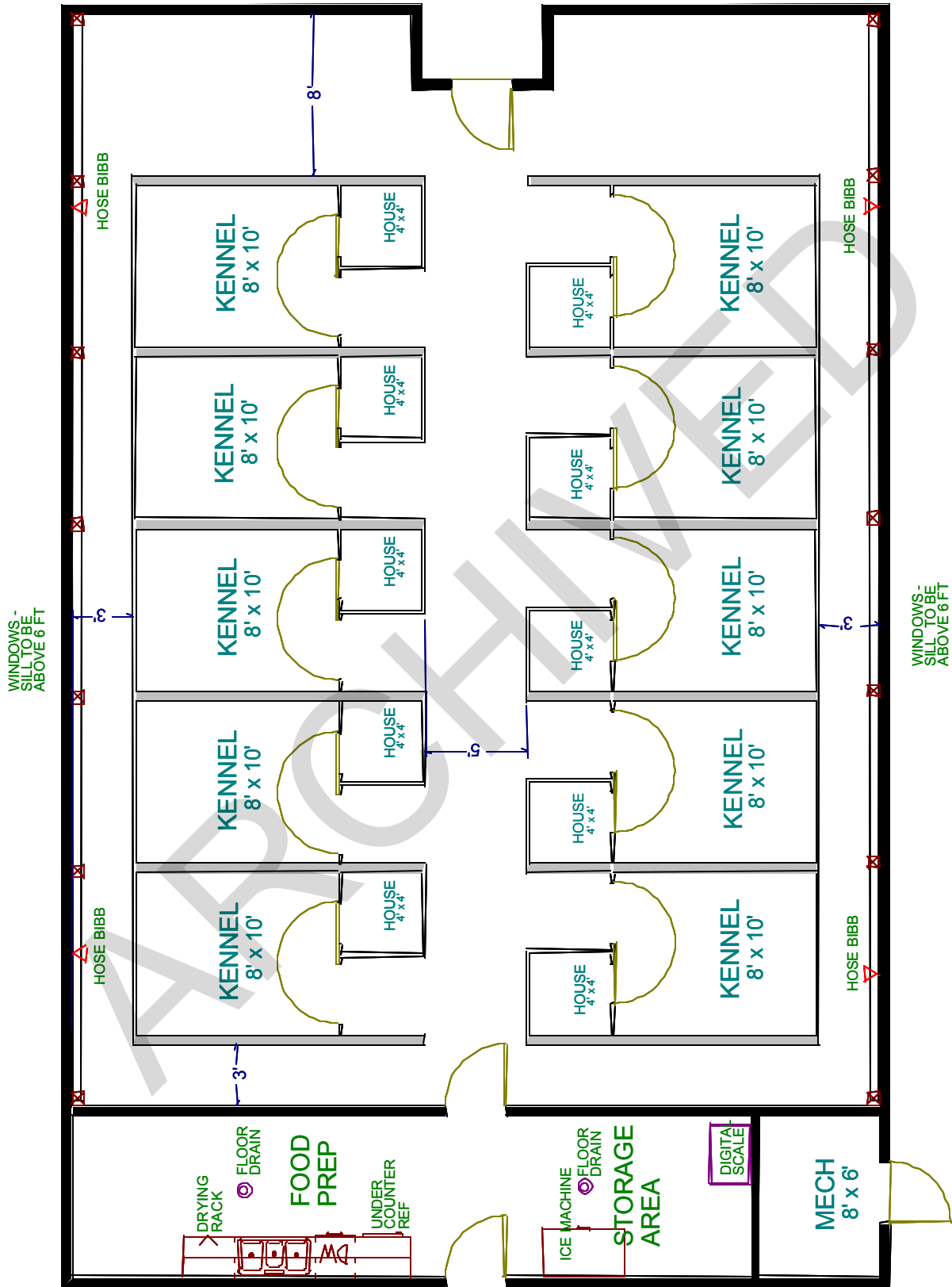
## Dog Walks

# Appendix 2—Plans



Administration Area





Indoor or Outdoor Kennel