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**Situation:** Pawnee Hills Equestrian Community Riding Arena does not meet the GENERAL PURPOSE RECREATIONAL riding needs of the community.

**Background:** The riding arena footing consists of sand that has broken down over time & is inconsistent, deep and dusty. There is no base present & clay clumps & rocks have made their way to the surface. This has resulted in a difficult to unsafe riding situation for both horses & riders. Wooden arena fencing is dry rotted & in disrepair.

**Assessment:** The arena must be rebuilt from scratch. Wooden fencing removed. Sand removed, not reused. Sand breaks down over time, particles become smaller & contribute to a dusty environment. Reusing existing sand or attempting to amend the current footing with an additive will not result in a positive cost benefit outcome. The current native sand is small round particles that shift underfoot & do not offer an all-weather year round riding surface. The sand is contaminated with rocks & clay.

**Recommendation:** After extensive research, personal experience, and consultation with professional trainers, I recommend the following option, which does not include increasing the current dimensions of approximately 100 x 200 feet, more than adequate for recreational riding and approximately twice as long as wide, which suits most users performing performance patterns. In addition, increasing the size of the arena exceeds our budget.

Excavating down to SUB BASE of native clay; must be laser levelled at 1% north to provide drainage

BASE of granite crusher fines (1/4-inch minus) installed & compacted to 6 inches' depth. Using this type of material & not any other larger aggregate (gravel) will not be as problematic if the base gets punched or disked into the sand. IE, no large gravel will be present in sand footing. Granite is a more superior product than Rhyolite. Rhyolite is volcanic & breaks down sooner.

FOOTING of coarse angular sand installed to 3 inches' depth. Coarse angular sand does not roll under foot & provides both traction & cushion.

I obtained bids from three contractors to these specifications. In addition, a fourth bid calls for granite crusher fines mixed with rubber as a superior all weather arena. Bids range from approximately 30 – 40K.

**Please note:** Typical Western rodeo or fairground facilities are usually constructed by disking up existing native soil & amending with sand. Footing is deep, usually 4 plus inches. There is much routine

maintenance involved. Install cost is minimal. These types of facilities are not typically used during the winter months. Footing is affected by the elements & is inconsistent.

Typical English riding event facilities are usually constructed by removing topsoil to clay subsoil, then adding a base, compacting base, then adding 2 inches of footing, typically blended with a synthetic additive such as rubber. There is less routine maintenance, but higher install cost. Footing is typically good year round.

The outcome we are looking for here is not to cater to a particular style nor discipline of riding, but to offer a consistent footing that offers both cushion & traction and can be used year round, in both wet & dry conditions.

**Fencing:** Please note that the fencing bids are for different types of fencing, as the contractors do not deal with all types of fencing. All bids submitted are for steel fence. There will be no wood base board to hold in footing, as material will not be above grade. Bids range from approximately 5 – 18K.

**Option A:** Replacing wooden fencing with metal Priefert brand panels. Priefert MSRP for a 100 x 200 arena is \$4500 for Green Economy panels and \$5100 for Brown Utility panels. Metal panels are maintenance free & long lasting. Panels can be easily removed & replaced if damaged. No need for welding. There will need to be capped T posts or steel posts in concrete installed at intervals for support. These panels be viewed in person & purchased from the Big R in Elizabeth. A potential drawback is that the chain connectors can be undone by anyone to access the arena. Manufacturers website: <https://www.priefert.com/products/riding-arenas/riding-arenas>

**Option B:** 440 fence, 3 rail, professionally installed. Brown or green color available. Powder coated paint. Manufacturers website: <http://www.440fence.com/440pipefence3rail>

**Option C:** Professionally installed round metal pipe fencing. Any necessary repairs would need to be performed by a professional welder & can be costly. Pipe is raw. Will surface rust to dark brown color.

Please note that arena & fencing bids have itemized current fencing removal & disposal. Order of construction will be fencing removal, arena construction, fencing install. After consulting the arena contractors, it would be best to let them remove & dispose of the fence. There will not be any issues if their equipment contacts any of the missed concrete footers anchoring the posts.

**References:** Equine Arena Handbook by Robert Malgrem  
Roofs and Rails by Gavin Ehringer  
Horse keeping on Small Acreage by Cherry Hill