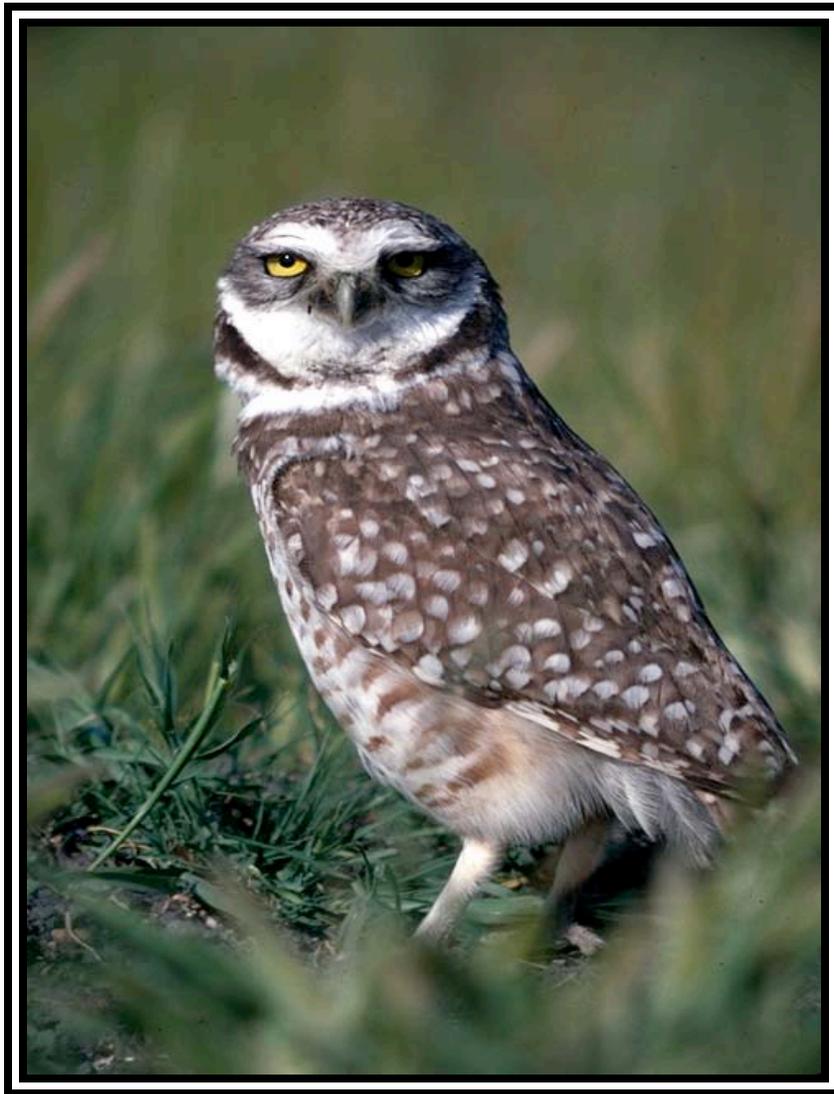


**Constructed nest sites for Burrowing Owls:
specifications and schematics.**

Avocet Research Associates

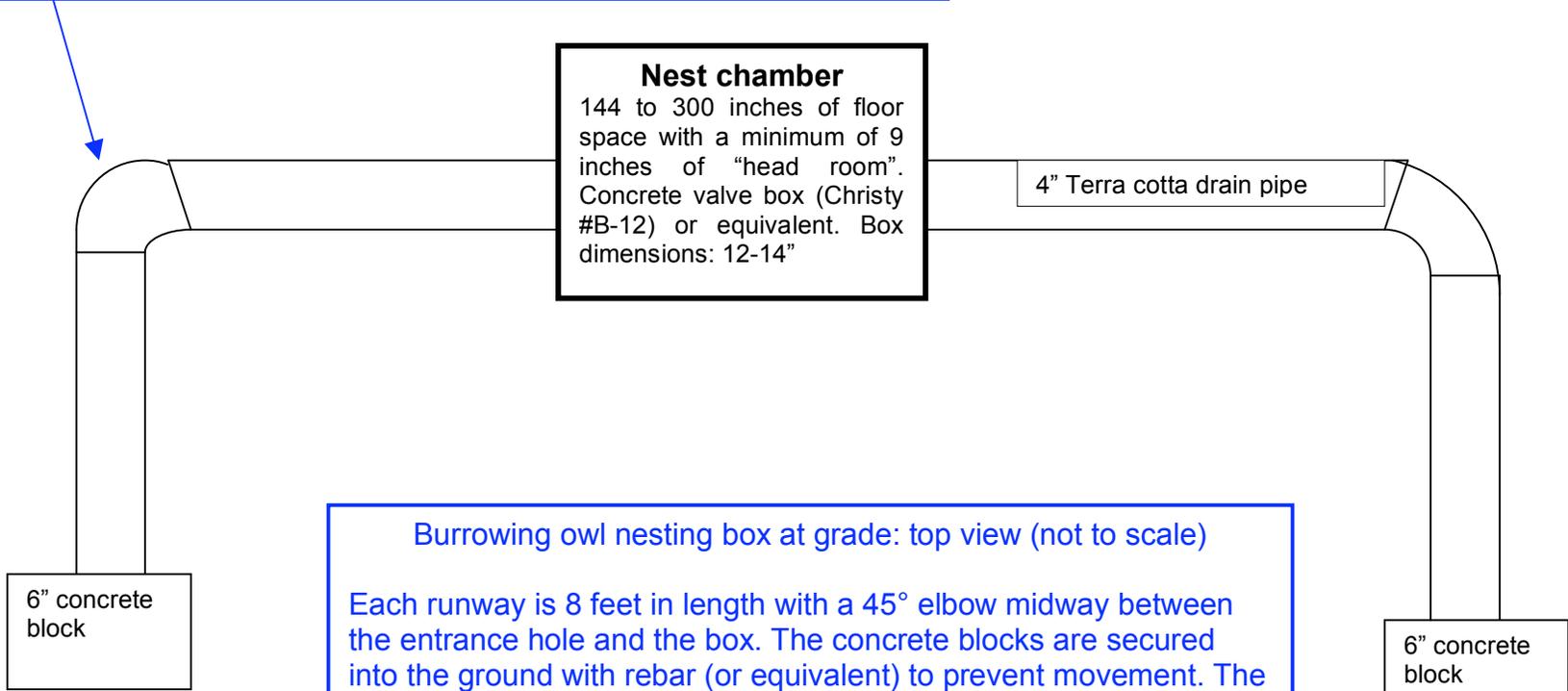
for the

City of Albany. California



5 November 2007

45° elbow connected with gaskets (90° shown here to fit on page!)



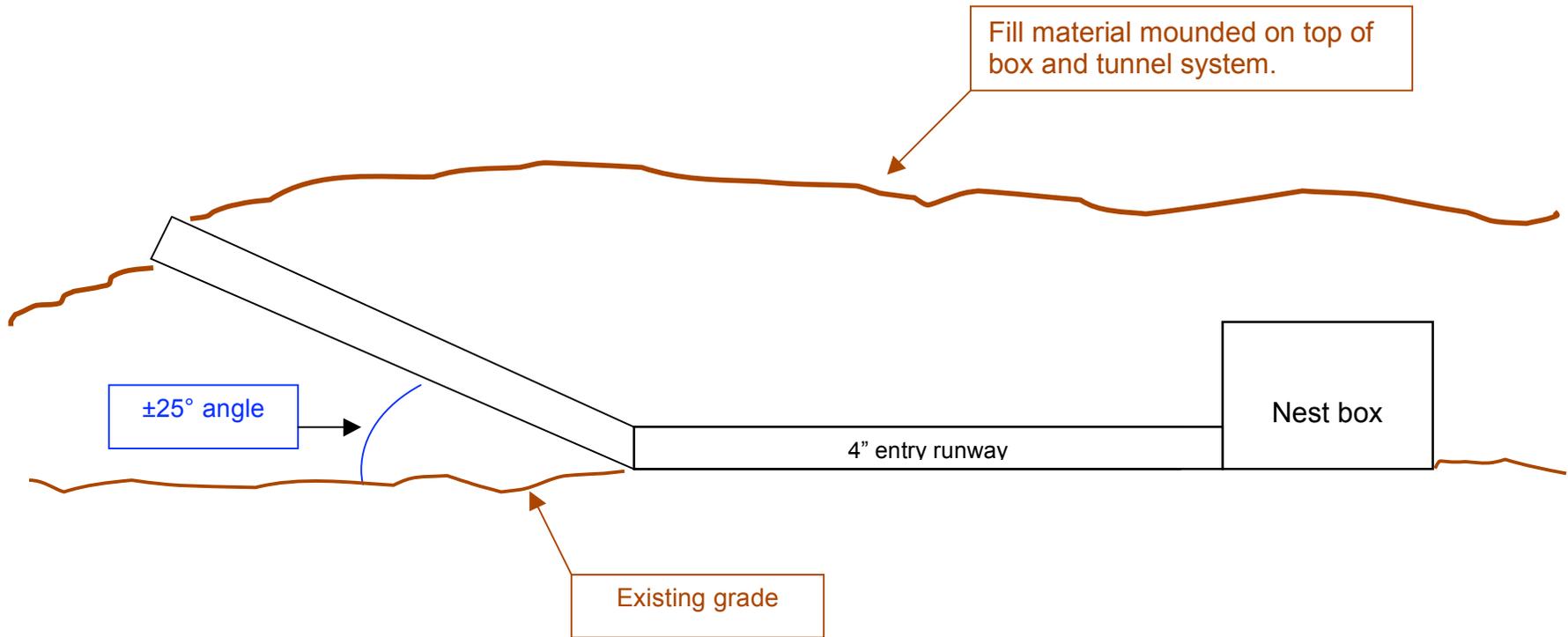
Burrowing owl nesting box at grade: top view (not to scale)

Each runway is 8 feet in length with a 45° elbow midway between the entrance hole and the box. The concrete blocks are secured into the ground with rebar (or equivalent) to prevent movement. The drainage pipe is attached securely to the nest box where a hole has been cut to accept the pipe using couplings, epoxy, or some other secure method. The top of the nest box should have a lid that can be accessed should the nest become occupied.

Materials:

- (1) concrete valve box
- (2) terra cotta drainage pipe elbows (45°)
- (2) 6" concrete blocks
- 16 ' of terra cotta drainage pipe
- four lengths of 1/2" rebar to secure entrance blocks

Side view of nest box: first 4 feet of entry tunnel should be slanted downward at ~15 to 25° angle





Burrowing owl nest box built on grade, prior to burial.
In this example 4" perforated plastic drain pipe was used rather than terra cotta
and 90° rather than 45° elbows



Burrowing owl nest site reinforced with concrete blocks prior to backfilling with native soils. The reinforcement was used to protect the system from trampling by the curious cattle that were present on the site.

Key guidelines:

- √ Good drainage is a critical factor. If the native soil does not drain well, or if the site is being built on fill (as at Albany), nest boxes should be placed at or slightly above grade and covered with a large mound of sandy soil. Water must not be allowed to drain toward the nest structure.
- √ The nests should be placed on a slightly elevated portion of the site.
- √ Ample nearby foraging opportunities, ideally 10-20 acres of short grass habitat for each nesting pair of owls. Grazed cattle pastures, roadsides, annual grasslands and any other short vegetation habitat that contains a supply of insects and small vertebrates can be used.
- √ Away from disruptive human activities such as construction, uncontrolled public access, fast moving vehicles and other activities that might disrupt the owls daytime and nocturnal behavior.
- √ Dogs should be kept away from burrows as they can dig and destroy the entrances. If dogs are a possibility, entry pipe should be doubly reinforced.
- √ Burrowing owls move around in search of best opportunities; they “prospect.” Chances of occupancy will increase by locating nests as near as possible to an existing owl population. If that is not possible (as at Albany) two, or several mounds in different locations will allow owls to choose the one that best meets their needs.
- √ After selecting the site, soil to construct the mound may be either imported into the area or scraped from the surrounding area. If you scrape the soil into a pile, take care not to negate the natural drainage. Approximately five to ten cubic yards of soil are required to construct a single chamber mound, ten to fifteen yards for a double chamber mound.
- √ Concrete nest boxes are best, however, nest chambers can be constructed of concrete or plastic irrigation valve boxes. These are usually obtainable at landscape supply, home supply, and general hardware stores (e.g. Orchard Supply). Concrete material is preferable as it provides the greatest thermal protection. Ideally, the inside dimensions of the chamber should be between 144 and 300 square inches of floor space. Mark or sketch the chamber location so that you can locate the buried lid in the future, if the need should arise. Place some form of perch (snag or wood post)

near the mound.

√ The four-inch corrugated pipe must be at least eight feet long and set to make a 90-degree bend. This is important, as this configuration will minimize light inside the nesting chamber. Two pipes are necessary to allow proper ventilation and escape routes should a predator enter the chamber. Pipes greater than four inches allow easy entry for potential nest predators and should not be used. Once the pipe is in place, the ends should be inserted into concrete cinder blocks to anchor them and discourage digging attempts by coyotes and feral dogs.

