

Appendix C  
Park Lane Homes Burrowing Owl Avoidance Relocation Plan  
(Available on the city website)



**DRAFT WESTERN BURROWING OWL AVOIDANCE & RELOCATION PLAN**

**Park Lane Homes, L.P.**

**Assessor's Parcel Numbers: 656-040-061 (13 acres)**

Desert Hot Springs  
Riverside County  
California

Submitted to:

**Park Lane Homes, L.P.**

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## TABLE OF CONTENTS

	<b>PAGE</b>
<b>1.0 INTRODUCTION</b> .....	<b>1</b>
<b>2.0 PROJECT UNDERSTANDING AND PURPOSE</b> .....	<b>1</b>
<b>3.0 SPECIES BACKGROUND INFORMATION</b> .....	<b>4</b>
3.1 Western Burrowing Owl.....	4
<b>4.0 METHODS</b> .....	<b>5</b>
4.1 Submittal of List of Biologists Conducting Surveys.....	5
4.2 Construction Schedule.....	5
4.3 Take Avoidance (Pre-construction) Survey.....	6
4.4 Artificial Burrow Installation.....	6
4.5 No Disturbance Buffer Zones.....	7
4.6 Notification.....	7
4.7 Avoidance of Impacts to WBO.....	8
4.8 Passive Exclusion, Eviction and Relocation.....	8
4.8.1 Site, Burrow and WBO Monitoring.....	9
5.0 Conclusions.....	10
<b>6.0 LITERATURE CITED AND REFERENCES</b> .....	<b>11</b>

## TABLES

Table 1. Schedule of Activities.....	10
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## APPENDICES

Appendix A. Figures

## 1.0 INTRODUCTION

At the request of Park Lane Homes, L.P., this Western Burrowing Owl Avoidance and Relocation Plan (Plan) was prepared by WSP USA Environment & Infrastructure Inc. (WSP) for the proposed residential development of a portion of Assessor's Parcel Number (APN) 656-040-061 (project or project site) located in the city of Desert Hot Springs, Riverside County, California (WSP 2024). Information contained herein is intended to be used for compliance with the California Environmental Quality Act (CEQA), the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP), and in accordance with the California Department of Fish and Game (CDFG) Staff Report on Burrowing Owl Mitigation (CDFG 2012). The purpose of the Plan is to prescribe the proposed avoidance, impact minimization and relocation measures for the protection of the western burrowing owl (*Athene cunicularia hypugaea*; WBO) prior to and during project implementation at the site.

## 2.0 PROJECT UNDERSTANDING AND PURPOSE

The proposed project includes building 167 affordable dwelling units on an approximate 7-acre site located on a 13-acre parcel at the northeast junction of Palm Drive and Park Lane in Desert Hot Springs, Riverside County, California (Figure 1). The street address is: 14320 Palm Drive, Desert Hot Springs, CA 92240. The western 6± acres of the parcel are already developed, but the eastern portion is vacant. The lot is proposed to be split with entitlement. The project is within Section 6, Township 3 South, Range 5 East, United States Geological Survey (USGS) 7.5' Seven Palms Valley, Calif. Quadrangle. Elevation on the project ranges from 275-280 meters (m) (905-917 feet [ft]) above mean sea level (Figure 2).

For the purposes of the Plan, the project site includes the undeveloped, vacant open space portions of the parcel. The developed and paved portions of the parcel are not considered to be part of the Plan. Surrounding, adjacent land uses include developed civic/public space to the east and west, developed commercial space to the north, and a mix of developed commercial, civic/public, and industrial space to the south. Residential developments (single and multi-family homes) occur a few parcels away to the north, west, and south. Small vacant, undeveloped lots, similar to the project site, are scattered among the developed residential areas, with larger areas of undeveloped land occurring in proximity to the project site to the east and southwest (Figure 3).

A Biological Resources Assessment Report (BRAR) and CVMSHCP Consistency Analysis was prepared and submitted for the project by WSP in September 2024. Multiple WBOs were observed occupying multiple burrows on and immediately adjacent to the site by WSP on 6 August 2024 during fieldwork conducted for the BRAR and CVMSHCP Consistency Analysis (WSP 2024). For these reasons, the Plan has been prepared and hereby submitted.

### 3.0 SPECIES BACKGROUND INFORMATION

#### 3.1 Western Burrowing Owl

The WBO is a small, tan, short-tailed, ground-dwelling owl with long legs that occupies underground burrows. Adult WBOs are approximately 7.5-9.5 inches tall, with a wingspan of approximately 22 inches and weigh between 5 to 6 ounces. A member of the Strigidae (typical owls family), this species is associated with grasslands and other arid open terrain, including Sonoran creosote bush scrub, throughout much of the western United States. WBOs are opportunistic in their selection of burrows, typically utilizing the burrows of small mammals (e.g., ground squirrels, kit fox), but also use desert tortoise (*Gopherus agassizii*) burrows, drainpipes, culverts, and other suitable natural or manmade cavities at or below ground level. In California, the species often occurs in association with colonies of the California ground squirrel (*Otospermophilus beecheyi*), where it makes use of the squirrel's burrows. The entrance of the burrow is often adorned with animal dung, feathers, debris, and other small objects. WBO is active both day and night and may be seen perching conspicuously on fence posts or standing at the entrance of their burrows. Due to the characteristic fossorial habits of WBOs, nest burrows are a critical component of their habitat. In California, WBOs typically begin breeding in March, although clutches have been initiated as early as February and the breeding season generally lasts until August (Rosenberg & Haley 2004). Females usually lay between two (2) and twelve (12) eggs. The eggs are incubated for about 30 days before hatching. The young fledge in about 50 days but may be dependent on the adults for food for an extended period following fledging.

In southern California, WBOs are not only found in undisturbed natural areas, but also fallow agricultural fields, margins of active agricultural areas, livestock farms, airports, and disturbed vacant lots. Despite their apparent tolerance to human activities, WBO populations in California are clearly declining and, if declines continue, the species may qualify for listing under the state and/or federal Endangered Species Acts (CDFG 1995). The declines in WBO populations are attributed to loss and degradation of habitat, to ongoing residential and commercial development, and as a result of rodent control programs.

In 1995 the CDFG issued the Staff Report on Burrowing Owl Mitigation to all its regional managers to ensure consistency in standards, policies, and regulatory mandates relating to the WBO (CDFG 1995). The California Burrowing Owl Consortium (CBOC) developed the Burrowing Owl Survey Protocol and Mitigation Guidelines to meet the need of uniform standards when surveying WBO populations and evaluating impacts from development projects (CBOC 1997). Due to the continued decline of WBO populations statewide and as an attempt to reverse this trend, the CDFG issued a more effective, viable, coordinated, and concerted approach to WBO conservation actions with the release of an updated Staff Report on Burrowing Owl Mitigation (CDFG 2012). Although WBO is a covered species under the CVMSHCP, the plan requires specific actions to avoid or minimize impacts to WBO, where they occur.

In March 2024, the California Department of Fish and Wildlife (CDFW) was petitioned by various groups to list the WBO under the California Endangered Species Act (CESA). On October 10, 2024, the California Fish and Game Commission unanimously approved designating the WBO as a candidate for listing under the CESA (CDFW 2024). Prior to the CDFW vote for candidate status,

WBO was managed as a Species of Special Concern (SSC) by the CDFW (CDFW 2024a), Bird of Conservation Concern by the United States Fish and Wildlife Service (USFWS), is considered "sensitive" by the U. S. Bureau of Land Management (BLM), protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGC) Sections 3503, 3503.5, 3513, and 3800 and managed as a covered species under the CVMSHCP. Because the WBO is a candidate species for listing, it is immediately afforded the same protections as CESA-listed species, until a final decision to list the species or not is made. The final decision to list the species or not is anticipated to be made within 12-18 months (spring 2026).

Because WBO appears to be resident at the site, project-related impacts to burrowing owl are possible. The project is required to adhere to the requirements of the CVMSHCP and CDFW requirements for candidate species.

## **4.0 METHODS**

### **4.1 Submittal of List of Biologists Conducting Surveys**

The Coachella Valley Conservation Commission (CVCC) maintains a list of acceptable biologists that are approved to conduct surveys for specified CVMSHCP-covered species. The permittee must submit the names of biologists considered to conduct proposed activities to confirm that they are included on the list of acceptable biologists. Biologists conducting survey activities must have the appropriate permits (i.e., in accordance with the federal Endangered Species Act, Section 10[a][1][A], or state Endangered Species Act, CFGC Section 2081[a]) to conduct such surveys. Annually, or whenever the list is revised, CVCC shall submit the list to the appropriate wildlife regulatory agencies for review. The agencies are provided thirty (30) days to provide input on the qualifications of any biologists on the list. If the regulatory agencies have not responded within thirty days (30) of receipt of the list from CVCC, the biologists on the list shall be deemed acceptable.

### **4.2 Construction Schedule**

Impacts to WBO, while nesting, are not permitted or allowed under the CVMSHCP, CFGC and the MBTA. WBOs, especially resident colonies, are particularly vulnerable to disturbance during the breeding/nesting season. For these reasons, and to minimize anticipated and unavoidable impacts, commencement of project activities (i.e., initial vegetation clearance and grading) ahead of construction should be planned to avoid the burrowing owl breeding/nesting season, which is generally from 1 February to 31 August, or until it is determined that the young are no longer dependent on their burrows. Initial vegetation removal and grading should be planned to occur between 1 September and January 31. The anticipated commencement of project activities will need to be provided to the biologists implementing the WBO Avoidance and Relocation Plan, in advance, to facilitate implementation of this plan and conduct the take avoidance (pre-construction) surveys and monitoring within the appropriate timeframe. The biologist(s) should be provided the anticipated schedule at least 60 days in advance of the initial project activities (i.e., vegetation clearance and/or grading) to allow time to obtain and prepare materials (i.e., one-way doors and artificial burrow components), conduct necessary fieldwork in the appropriate timeframe and to enhance existing offsite burrows and/or install artificial burrows (if necessary)

prior to implementing the passive eviction and relocation methods.

### **4.3 Take Avoidance (Pre-construction) Surveys**

Because the site is not located within a CVMSHCP conservation area, take avoidance (pre-construction) surveys are required and will be conducted prior to commencement of site disturbance. The take avoidance (pre-construction) surveys are intended to detect the presence of WBOs on the site to determine the appropriate and necessary take avoidance actions. The survey may detect changes in WBO presence such as recent colonization of WBOs on the site, migrating WBOs, resident WBOs changing burrow use and/or young that may be present and have not yet dispersed.

No less than fourteen (14) days prior to the anticipated commencement of initial vegetation clearance and/or grading, a take avoidance (pre-construction) survey will be conducted to avoid direct take of WBO. Time lapses between project activities trigger subsequent take avoidance (pre-construction) surveys including, but not limited to, a final clearance survey conducted within twenty-four (24) hours prior to the anticipated ground disturbance. All burrows exhibiting WBO sign (i.e., whitewash, pellets, feathers, tracks/prints and/or burrow adornments) and other burrows suitable for burrowing owl but lacking sign onsite and offsite within a 152 m (500 ft) radius, where accessible, will be recorded using a handheld Global Positioning System (GPS) and mapped utilizing ArcGIS Collector/Field Maps applications (ESRI). Digital photographs will also be taken to document the current status of WBO and burrows on- and adjacent to the site. Burrows will be considered to be occupied if records indicate that at least one WBO has been observed occupying a burrow on site during the past three (3) years. Current weather conditions (i.e., ambient temperatures, cloud cover and wind speeds) will be recorded at the start and end of each survey.

Undeveloped open space areas adjacent to and within 152 m (500 ft) of the site will be surveyed, where accessible, for the presence of WBO and offsite burrows suitable for WBO use. The locations of WBO and/or burrows suitable for WBO will be recorded using handheld GPS and mapped utilizing ESRI applications and software. Digital photographs will also be taken to document the condition of the adjacent undeveloped open space and burrows present adjacent to the site. If existing burrows are present within the adjacent undeveloped open space but require slight modification to make the burrows more accessible and/or more visible to WBOs, slight modifications may be made (i.e., widening the entrance using hand tools, clearing vegetation away from the opening, moving debris away from entrance, installation of natural or artificial perches near the burrows, etc.) by the approved biologist. Installation of natural or artificial perches can increase the attractiveness of a burrow location to burrowing owls, when natural perches are not present or available. Natural or artificial perches, if determined to be necessary, will be installed within approximately 8 m (25 ft) of the burrow, and may include placement of rocks, rock piles, sturdy branches, wooden stakes (with the top 61 cm [2 ft] of the stake exposed) and/or other natural materials. Perches taller than 61 cm (2 ft) should not be used to avoid attracting to common ravens (*Corvus corax*) and other potential predators. Care should also be taken to avoid installation of perches that could pose a visual obstruction to the entrance of the burrow.

### **4.4 Offsite Artificial Burrow Installation**

If suitable natural, surrogate burrows are not available (minimum of two burrows for each WBO

onsite) in the undeveloped open space areas adjacent to the site (within 152 m [500 ft]), the location will be assessed, based on land ownership, proximity to the site, vegetation, risk of human disturbance and suitable soils for the potential installation of artificial burrows. If authorized, and if soil, environmental and accessibility issues are conducive for WBOs, a minimum of one (1) artificial burrow for every affected occupied burrow will be installed in the adjacent offsite open space areas. Artificial burrow design and construction will be consistent with Barclay (2008) or other similar methods (i.e., Johnson et al. [2010], San Diego Zoo Institute for Conservation Research [2019]). Barclay's design incorporates a central chamber consisting of a plastic irrigation valve box, bucket, drum or similar interior structure (with inside dimensions of approximately 43-centimeter [cm] {17 in} long x 35 cm {14 in} wide x 27 cm {11 in} high) and at least two (2) sections of flexible plastic, corrugated and perforated tubing or pipe (2.5 m [8 ft] long and 10 cm [4 in] diameter) to provide multiple entrances and exits. The slope of the entrance should be less than 27 degrees. The entrance to each burrow should be protected with a hollow concrete (20 cm [8 in] x 20 cm [8 in] x 15 cm [6 in]) brick or supported by rocks to discourage burrowing predators. The initial excavation of the central chamber and sloping trenches often requires use of a backhoe and refining with hand tools. The bottom of the inside chambered should be 76 cm (30 in) deep. The burrow structure is usually assembled in place then buried with hand tools. The offsite artificial burrows should be installed a minimum of one (1) week prior to the implementation of the passive exclusion/eviction to allow the WBOs enough time to find and investigate the newly installed artificial burrows.

Materials required for each artificial burrow installed include: 1) one plastic irrigation valve box, bucket, drum or hollow sturdy object with the minimum interior dimensions, 2) two sections of flexible plastic, corrugated and perforated tubing or pipe, 3) one hollow concrete brick, 4) one chain or plastic rope marking location of the underground nest chamber, and 4) one 5-6 ft perch post (if necessary).

Equipment required for artificial burrow installation includes: 1) backhoe (if necessary, based on soil conditions), 2) shovels of various sizes, 3) sledgehammer and 4) work gloves.

#### **4.5 No Disturbance Buffer Zones**

WBO burrows, or burrows with sign, will be flagged and a 49 m (160 ft) no disturbance buffer zone around the occupied, or suspected to be occupied, burrows will be established and staked/flagged during the non-breeding season. A 76 m (250 ft) no disturbance buffer zone will be established and staked/flagged during the breeding season. The no disturbance buffer zones will be to the edge of the property boundary if less than 152 m (500 feet) and will be established around the burrows. No site disturbance activities will be permitted within the established no disturbance buffer zones until it is determined by the project biologist that young are no longer dependent on the burrows. If no occupied burrows, or burrows with sign, are observed onsite or within a 152 m (500 ft) buffer zone, unoccupied burrows suitable for WBO but lacking sign will be made inaccessible to WBO by the project biologist, and vegetation clearance, site grading and/or project construction activities may proceed.

#### **4.6 Notification**

Positive results (i.e., WBO and/or sign present) of the pre-construction clearance surveys will be



submitted to the Coachella Valley Association of Governments (CVAG) and the CDFW for review prior to implementing WBO exclusion and/or relocation. The results of the positive pre-construction surveys should be submitted to the CVAG and CDFW immediately (within 24 hours) upon completion of each of the two pre-construction surveys.

#### **4.7 Avoidance of Impacts to WBO**

To avoid unnecessary impacts to nesting WBO, project-related vegetation clearance, site grading and/or construction activities will not be conducted within 75 m (250 ft) of occupied WBO burrows during the breeding/nesting season (1 February-31 August) or until after the relocation efforts have been completed and all onsite burrows collapsed and cleared. Outside of the breeding/nesting season (i.e., 1 September-31 January) project-related activities will not be conducted within 50 m (164 ft) of occupied WBO burrows onsite and in the immediate vicinity or until all WBO onsite and adjacent burrows have been collapsed and cleared.

#### **4.8 Passive Exclusion, Eviction and Relocation**

Passive exclusion, eviction and relocation of the affected WBOs will be implemented immediately following the initial (within 14-days) pre-construction take avoidance survey, mapping of the existing onsite and offsite burrows and installation of artificial burrows (if necessary) by qualified biologists outside of the nesting/breeding season (1 September–31 January) and after approval from CVAG and/or CDFW. Passive exclusion, eviction and relocation of WBOs is not permitted during the nesting/breeding season (1 February–31 August) unless all onsite and immediately adjacent WBOs were cleared and collapsed outside of the nesting/breeding season.

WBOs will be excluded from occupied burrows through the installation of one-way doors (e.g., 10 cm [4 in] diameter corrugated plastic drainpipe with gravity-closing transparent door) at the entrance of each occupied burrow and suitable burrows onsite and in the immediate vicinity (within a 50 m [160 ft] buffer zone). Slightly modified standard dryer vents can be used as one-way doors for burrowing owl exclusion (Clark & Plumpton 2005). One-way doors will be installed in the afternoon with care taken not to flush any WBO during installation. If WBO are detected leaving in response to one-way door installation, the installation activity will cease until the activity no longer poses a potential harassment threat (all detected WBO have voluntarily left the vicinity). Burrows larger than the diameter of the one-way door will be remotely investigated using a fiber-optic scope camera to ensure an animal larger than the one-way door is not occupying the burrow. For known occupied burrows, the site, occupied burrows and WBOs will be monitored at dusk (i.e., beginning 1 hour before evening civil twilight and ending at twilight) and dawn (i.e., beginning at first light until 2 hours after dawn) to document their departure and status of the burrows and WBO onsite. One-way doors will be installed following WBO departure at dusk. Surveyors will remain at least 152 m (500 ft) from the burrows under surveillance, so their presence does not impact WBO behavior. One-way doors will be installed at not greater than a 45-degree angle from the ground to ensure if a WBO were still present they are able to depart and exit the burrow(s).

The area and number of burrows in the immediate vicinity to be included will be based upon focused observations and a conservative approach will be taken. Biologists will err on the side of being over inclusive versus under inclusive in case burrows are being utilized that do not exhibit sign. Planning and coordination with the Project team will need to occur to avoid multiple

evictions. This Plan focuses on ground squirrel burrows which provide the most suitable potential nest habitat for WBO.

Materials required for passive relocation and burrow excavation include: 1) an appropriate number of one-way doors and corrugated plastic drainpipe and/or modified standard dryer vents, 2) flexible plastic piping or tubing, and 3) packed cardboard or paper.

Equipment required for artificial burrow installation include: 1) fiber-optic scope camera, 2) shovels of various sizes, 3) work gloves and 4) digital camera.

#### **4.8.1 Site, Burrow and WBO Monitoring**

The exclusionary one-way doors will be left in place for 48 continuous hours to ensure WBOs have departed prior to excavation and collapsing. During the 48-hour exclusionary period, the site, onsite burrows and offsite recipient burrows (natural or artificial) will be monitored twice daily (once at dawn and once at dusk) to determine the status of WBO at the site and at the offsite recipient burrows. The entrance and interior (inside the one-way doors) of the burrows will be inspected for recent WBO sign. Monitoring will be conducted at dawn (i.e., no later than morning civil twilight) until at least 1 hour after sunrise for two (2) days during exclusion activities, and WBO presence or absence in the exclusion area as well as WBO behavior will be documented.

On the third (3<sup>rd</sup>) morning following one-way door installation all burrows with one-way doors will be scoped using a fiber-optic scope camera to ensure that no WBO or other species are currently occupying burrows. Upon confirmation that the burrows are unoccupied, the one-way doors will be removed, and the burrows carefully excavated and collapsed. The site should be monitored daily for one (1) week to confirm WBO use of alternate or artificial burrows prior to excavating the affected burrows on- and adjacent to the site.

Excavation and collapse of the burrows will be accomplished in stages using hand tools with the use of flexible plastic piping or tubing to stabilize the burrow to prevent collapse until the entire burrow has been excavated and it can be determined that no WBOs, or other species, remain inside the burrows. The piping/tubing will be inserted, if possible, into the burrow to allow an escape route and prevent burrow collapse while soil over the burrow is excavated. The piping/tubing will be adjusted, as needed, during the excavation process. If piping/tubing cannot be inserted, other materials such as packed cardboard or paper can be used to prevent premature burrow collapse. Following completion of burrow excavation, the burrow will be collapsed and filled with native soils from the site. Other potential surrogate burrows (i.e., other burrows of suitable size for WBO but lacking sign onsite and in the immediate vicinity) will also be investigated, carefully excavated and collapsed using the same methodology. One-way door installation, burrow excavation and collapse will be photographed to document status and success. Unless necessary to prevent injury or mortality, burrowing owls will not be handled by the biologists conducting burrow excavation.

**Table 1. Schedule of Activities**

Date	Task
60 days prior	Proponent notifies biologists of site clearance schedule
30 days prior	Proponent submits names of biologists to CVCC for approval
14 days prior	Biologists conduct initial take avoidance survey, photograph and map WBO burrows, flag no disturbance buffer zone, scope and collapse unoccupied but suitable burrows onsite
13 days prior	Biologists submit positive results of take avoidance survey to CVAG and CDFW
12 days prior	Biologists install artificial WBO burrows offsite (if required)
10 days prior	Biologists install one-way doors on WBO burrows onsite and monitor WBOs for 48 hours
7 days prior	Biologists scope burrows, remove one-way doors and collapse burrows if confirmed unoccupied and excavate and collapse WBO burrows
6 days prior	Biologists monitor site and offsite artificial and surrogate burrows
5 days prior	Biologists monitor site and offsite artificial and surrogate burrows
4 days prior	Biologists monitor site and offsite artificial and surrogate burrows
3 days prior	Biologists monitor site and offsite artificial and surrogate burrows
2 days prior	Biologists monitor site and offsite artificial and surrogate burrows
1 day prior	Biologists conduct final take avoidance survey
Day of	Commencement of site clearance/grading
2 weeks after	Biologists submits draft report to client
3 weeks after	Client submits comments and revisions to report to biologist
4 weeks after	Biologist submits final report to client, CVCC and CDFW

## 5.0 CONCLUSIONS

Implementation of the proposed WBO avoidance and passive exclusion, eviction and relocation measures are intended to meet the requirements for non-conservation lands within the planning area of the CVMSHCP.

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Burrowing Owl Avoidance & Relocation Plan  
Park Lanes Homes, L.P.  
January 2025

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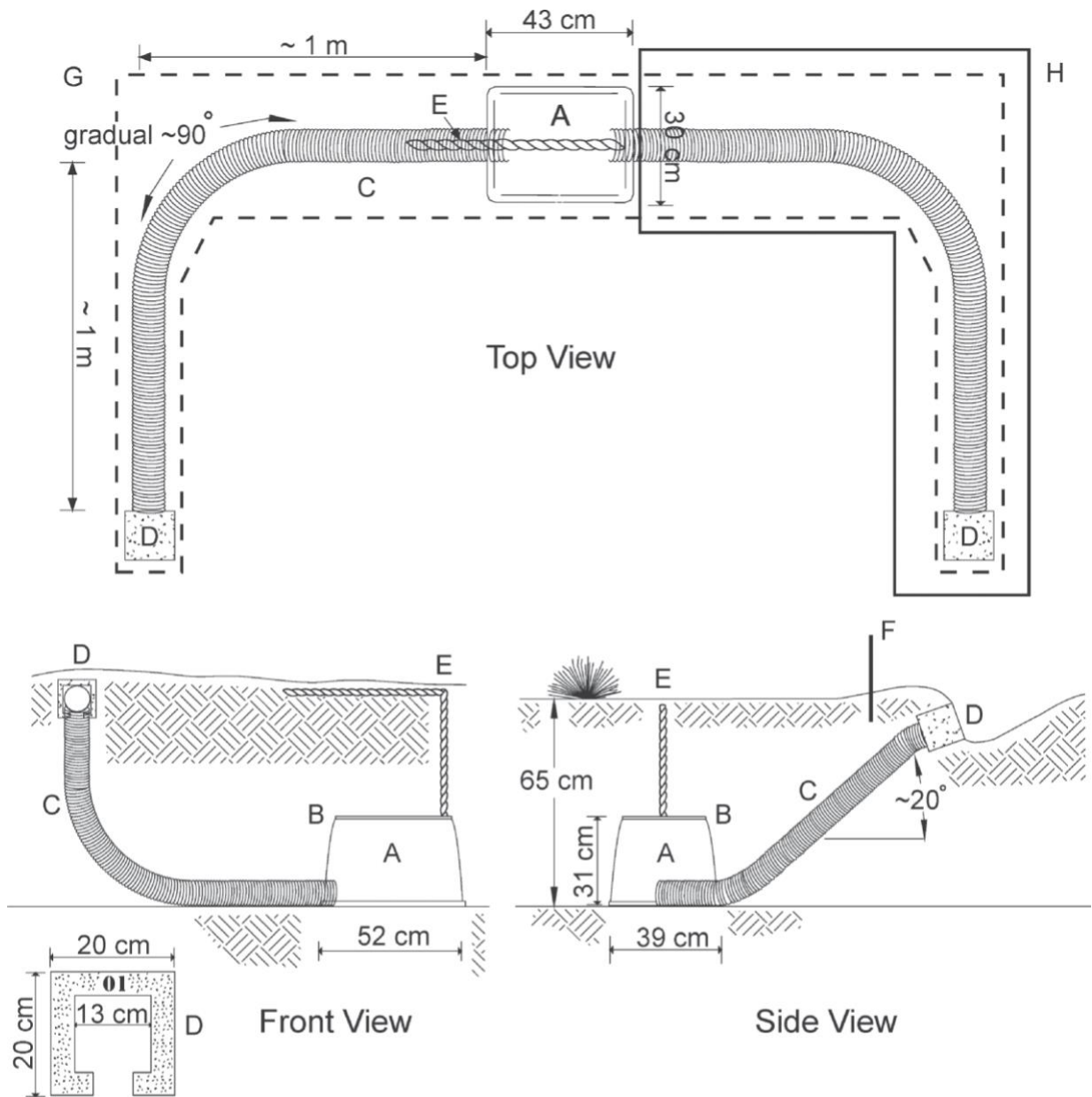
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## **APPENDIX A**

### **FIGURES**

**Figure 1**



- A - Plastic irrigation valve box, 48 cm long x 35 cm wide x 27 cm high (inside dimensions)
- B - Removable lid
- C - Ca. 2 m of 10-cm diameter perforated flexible plastic pipe
- D - 20 x 20 x 15 cm hollow concrete block
- E - Plastic rope or chain marking location of nest chamber on ground surface
- F - 0.5 m perch post (optional)
- G - Excavation footprint for installation - - -
- H - Optional second entrance

**Figure 1. Materials and installation of an artificial burrow for WBO (Barclay 2008).**

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