

Wildlife Barrier for Special-Status Small Vertebrates

- Construction Site Special-Status Species Exclusion
- Directional Control
- Perimeter Control for Surveys

GUIDE SPECIFICATION

PRODUCT:

E-Fence™

MANUFACTURER:

ERTEC®
1150 Ballena Blvd. Suite 250
Alameda, CA 94501
Phone: 866-521-0724
Fax: 510-521-3972
email: sales@ertecsystems.com
Web: www.ertecsystems.com

1.0 Description:

Special-Status-Species Exclusion and Control System (SSSES) for special-status small vertebrates shall conform to the details shown on the plans and these special provisions and shall be installed around the perimeter of construction sites and/or survey areas, to control movement as a directional barrier or in designated areas. The primary function of the SSSES is to prevent special-status small vertebrates from entering construction sites where they can be killed, injured or isolated or provide directional control within fragmented habitat.

2.0 Material:

Provide SSSES as shown on the plans.

- A. **Barrier Configuration.** Furnish SSSES with a configuration based on the species to be controlled as per Table B. Furnish barrier in minimal 100 to 150 foot segments (10" width at 150 feet, 20" width at 150 feet, 30" width at 150 feet, 40" width at 100 or 150 feet, and 48" width at 100 feet to minimize segment overlaps.
- B. **Barrier Materials & Structure.** Furnish SSSES manufactured from non-biodegradable materials which are UV and dimensionally stable for at least 4 years (non-black), at least 15 years (black). The system shall:
- a. comprise a monolithic rigid polymer matrix
 - b. be thermally extruded into an apertured sheet with rigid and thermally bonded strands
 - c. be made from recycled base polymers such as high density polyethylene (HDPE #2)
 - d. be made from recycled polymer feedstock – content minimum shall be 95%
 - e. be durable, so that it can be reused on several projects
 - f. conform to the requirements in Table A below
- D. **Product Sheet.** A copy of the manufacturer's product data sheet together with instructions for installation shall be furnished to the Engineer 5 days before installation.
- E. **Posts.** Installations shall use reusable metal T-Posts (0.75 lbs/ft). Posts should be installed every 5 to 10 feet (see installation instructions for specific configuration and species) and at each

segment overlap. Install posts on 5 foot centers in areas of high wind or for permanent installations. Install posts on 10 foot centers when fence height is 30 inches or less.

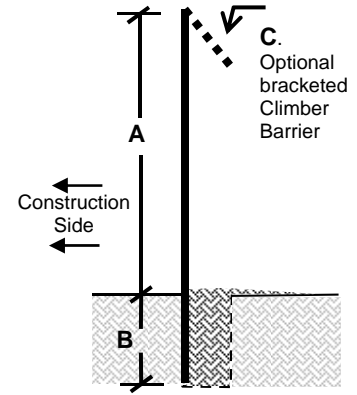
Table A: SSSES material property requirements

Specification	Design Characteristics	Material Requirements HDPE or Recycled HDPE
Barrier Height	Animal	See Configuration Table B column 2
Section Length (for widths 20", 30", 40", 48") (ft)	Minimize joints	150, 150, 100 or 150, 100
Strand Deformation – 0.375" sphere pull-through at 68°F (lbs) (minimum)	Intrusion resistance, entrapment resistance	38
Distance between strands (in) (maximum)	Intrusion resistance, entrapment resistance	0.185
Strand thickness (in) (maximum)	Intrusion resistance, entrapment resistance	0.10
Distance between strand centers (in) (maximum)	Intrusion resistance, entrapment resistance	0.25
Mass per Unit Weight range (lbs/ft ²)	Installation ease	0.16 to 0.19
Tensile Strength – machine direction ASTM D4595 (lbs) (minimum)	Dimensional Stability	400
Tensile Strength – transverse direction ASTM D4595 (lbs) (minimum)	Dimensional Stability	325
Aperture Size – Cylinder PASS (dimensional range within which a cylinder will pass thru) (in)	Allow wind & water passage	0.141 - 0.156
Aperture Size – Cylinder NO PASS (smallest dimension that will not pass) (in)	Confine juvenile vertebrates	0.212
Ultraviolet stability - percent tensile strength retained ASTM D 4355	Long term property retention	96%
Thickness ASTM 5199 minimum (in)	Dimensional consistency, Deformation and intrusion resistance	0.115
Life in application minimum (yrs) ORANGE/BLACK	Durability, Reusability	4+/15
Friction Coefficient (published base polymer data)	Climbing resistance, Resist accumulation of organic materials	<0.3
Shore Hardness (published base polymer data) at 68°F	Burrowing resistance	95
CBR Puncture strength ASTM D 6241 nominal (lbs)	Burrowing resistance, Intrusion resistance	237
Flow Rate ASTM D 4491 minimum gal/min/ft ²	Washout prevention	650
Low Temperature Brittleness (published base polymer data) ASTM D 746 (°F)	Extreme cold weather durability	-106
Operating Temperature (published base polymer data) range (°F)	All weather durability, Property retention	-30 to 160
Separation of stand planes (distance) (in - nominal)	Climbing resistance	0.02 - 0.04
Angle of strands (between stands and ground plane) (degrees)	Climbing resistance	70 to 80

3.0 System Configuration.

Table B: System Configuration requirements

Common Name (Scientific Name)	Barrier Height (in) A	Trench Depth (min) (in) B	5" Bracketed Climber Barrier (Y/N) C	T-Post Depth (min) (in) D	One-Way Funnel with Mylar door (Y/N)	Barrier Designation EF = Exclusion Fencing Digits = Sheet width (in) Letters: L= Climber Barrier, F= Funnel
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Frogs

California red-legged frog (<i>Rana draytonii</i>)	38	5	Y	18	N	EF48L	Configuration previously accepted by USFWS Barrier type: 4 strands/in
Foothill yellow-legged frog (<i>Rana boylei</i>)	30	5	Y	18	N	EF40L	Configuration previously accepted by USFWS Barrier type: 4 strands/in
Sierra Nevada yellow-legged frog (<i>Rana sierrae</i>)	30	5	Y	18	N	EF40L	Barrier type: 4 strands/in
Sierra Madre yellow-legged frog (<i>Rana muscosa</i>)	30	5	Y	18	N	EF40L	Barrier type: 4 strands/in
Northern leopard frog (<i>Rana pipiens</i>)	30	5	Y	18	N	EF40L	Barrier type: 4 strands/in
Lowland leopard frog (<i>Rana yavapaiensis</i>)	30	5	Y	18	N	EF40L	Barrier type: 4 strands/in
Oregon spotted frog (<i>Rana pretiosa</i>)	30	5	Y	18	N	EF40L	Barrier type: 4 strands/in
Northern red-legged frog (<i>Rana aurora</i>)	30	5	Y	18	N	EF40L	Barrier type: 4 strands/in
Cascades frog (<i>Rana cascadae</i>)	30	5	Y	18	N	EF40L	Barrier type: 4 strands/in
Coastal tailed frog (<i>Ascaphus truei</i>)	30	5	Y	18	N	EF40L	Barrier type: 4 strands/in

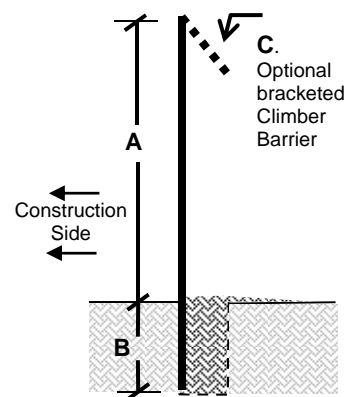
Toads

Colorado River toad (<i>Bufo alvarius</i>)	18	12	N	24	N	EF30	Barrier type: 4 strands/in
Arroyo toad (<i>Bufo microscaphus californicus</i>)	36	6	N	18	N	EF42	Configuration previously accepted by USFWS Barrier type: 4 strands/in
Boreal toad (<i>Bufo boreas boreas</i>)	18	12	N	24	N	EF30	Barrier type: 4 strand/in
Yosemite toad (<i>Bufo canorus</i>)	18	12	N	24	N	EF30	Barrier type: 4 strands/in
Coach's spadefoot toad (<i>Scaphiopus couchii</i>)	18	12	N	24	N	EF30	Barrier type: 4 strands/in
Western spadefoot toad (<i>Spea hammondi</i>)	18	12	N	24	N	EF30	Barrier type: 4 strands/in

Turtles/Tortoises

Western pond turtle (<i>Actinemys marmorata</i>)	14	6	N	18	N	EF20	Configuration previously accepted by USFWS Barrier type: 4 strands/in
Northwestern pond turtle (<i>Clemmys marmorata marmorata</i>)	14	6	N	18	N	EF20	Barrier type: 4 strands/in
Southwestern pond turtle (<i>Clemmys marmorata pallida</i>)	14	6	N	18	N	EF20	Barrier type: 4 strands/in
Desert tortoise (<i>Gopherus agassizii</i>)	18	12	N	30	N	EF30	Configuration previously accepted by USFWS Barrier type: 4 strands/in

Common Name (Scientific Name)	Barrier Height (in) A	Trench Depth (in) B	5" Bracketed Climber Barrier (Y/N) C	T-Post Depth (min) (in) D	One-Way Funnel with Mylar door (Y/N)	Barrier Designation EF = Exclusion Fencing Digits = Sheet width (in) Letters: L= Climber Barrier, F= Funnel
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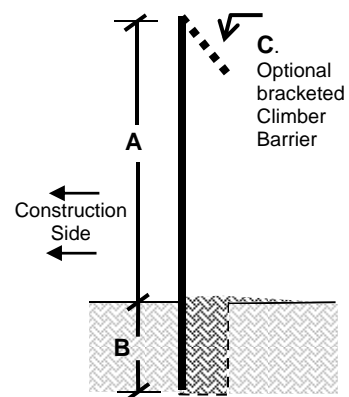
Salamanders

Common Name (Scientific Name)	Barrier Height (in) A	Trench Depth (in) B	5" Bracketed Climber Barrier (Y/N) C	T-Post Depth (min) (in) D	One-Way Funnel with Mylar door (Y/N)	Barrier Designation	Configuration previously accepted by USFWS* Barrier type: 4 strands/in
California tiger salamander (<i>Ambystoma californiense</i>)	14	6	N	18	N	EF20	Configuration previously accepted by USFWS* Barrier type: 4 strands/in
Southern torrent salamander (<i>Rhyacotriton variegates</i>)	14	6	N	18	N	EF20	Barrier type: 4 strands/in
California Coast range newt (<i>Taricha torosa</i>)	14	6	N	18	N	EF20	Barrier type: 4 strands/in
Inyo Mountain slender salamander (<i>Batrachoseps campi</i>)	14	6	N	18	N	EF20	Barrier type: 4 strands/in
Yellow-blotched salamander (<i>Ensatina eschscholtzii croceater</i>)	14	6	N	18	N	EF20	Barrier type: 4 strands/in
Large-blotched salamander (<i>Ensatina eschscholtzii klauberi</i>)	14	6	N	18	N	EF20	Barrier type: 4 strands/in
Limestone salamander (<i>Hydromantes brunus</i>)	14	6	N	18	N	EF20	Barrier type: 4 strands/in
Mt. Lydell salamander (<i>Hydromantes platycephalus</i>)	14	6	N	18	N	EF20	Barrier type: 4 strands/in
Shasta salamander (<i>Hydromantes shastae</i>)	14	6	N	18	N	EF20	Barrier type: 4 strands/in
Owens Valley web-toed salamander (<i>Hydromantes platycephalus</i>)	14	6	N	18	N	EF20	Barrier type: 4 strands/in
Scott Bar salamander (<i>Plethodon asupak</i>)	14	6	N	18	N	EF20	Barrier type: 4 strands/in
Del Norte salamander (<i>Plethodon elognatus elongatus</i>)	14	6	N	18	N	EF20	Barrier type: 4 strands/in

Snakes

Common Name (Scientific Name)	Barrier Height (in) A	Trench Depth (in) B	5" Bracketed Climber Barrier (Y/N) C	T-Post Depth (min) (in) D	One-Way Funnel with Mylar door (Y/N)	Barrier Designation	Configuration previously accepted by USFWS* Barrier type: 4 strands/in
Alameda Whip Snake (<i>Masticophis lateralis euryxanthus</i>)	30	5	N	18	Y	EF40	Configuration previously accepted by USFWS* Barrier type: 4 strands/in
San Joaquin Whip Snake (<i>Masticophis flagellum ruddocki</i>)	30	5	N	18	Y	EF40	Configuration previously accepted by USFWS* Barrier type: 4 strands/in
Giant Garter Snake (<i>Thamnophis gigas</i>)	35	5	N	18	N	EF40	Configuration previously accepted by USFWS* Barrier type: 4 strands/in
Rosy boa (<i>Lichanura trivirgata</i>)	30	5	N	18	Y	EF40F	Barrier type: 4 strands/in
Southern boa (<i>Charina umbratica</i>)	30	5	N	18	Y	EF40F	Barrier type: 4 strands/in
California Rat Snake (<i>Elephe rosaliae</i>)	30	5	N	18	Y	EF40F	Barrier type: 4 strands/in
San Diego ringneck snake (<i>Diadophis punctatus similis</i>)	30	5	N	18	Y	EF40F	Barrier type: 4 strands/in
California mountain kingsnake (<i>Lampropeltis zonata</i>)	30	5	N	18	Y	EF40F	Barrier type: 4 strands/in
Santa Cruz Island gopher snake (<i>Pituophis catenifer pumilis</i>)	30	5	N	18	Y	EF40F	Barrier type: 4 strands/in
Coast patch-nosed snake (<i>Salvadora hexalepis virgulata</i>)	30	5	N	18	Y	EF40F	Barrier type: 4 strands/in

Common Name (Scientific Name)	Barrier Height (in) A	Trench Depth (in) B	5" Bracketed Climber Barrier (Y/N) C	T-Post Depth (min) (in) D	One-Way Funnel with Mylar door (Y/N)	Barrier Designation EF = Exclusion Fencing Digits = Sheet width (in) Letters: L= Climber Barrier, F= Funnel	
Two-striped garter snake (<i>Thamnophis hammondi</i>)	30	5	N		Y	EF40F	Barrier type: 4 strands/in
Santa Catalina garter snake (<i>Thamnophis hammondi</i> ssp.)	30	5	N		Y	EF40F	Barrier type: 4 strands/in
South Coast garter snake (<i>Thamnophis sirtalis infernalis</i>)	30	5	N		Y	EF40F	Barrier type: 4 strands/in
San Francisco Garter Snake (<i>Thamnophis sirtalis tetrataenia</i>)	38	5	Y	18	N	EF48LF	Configuration previously accepted by USFWS* Barrier type: 4 strands/in
Northern red-diamond rattle snake (<i>Crotalus ruber</i>)	30	5	N		Y	EF40F	Barrier type: 4 strands/in



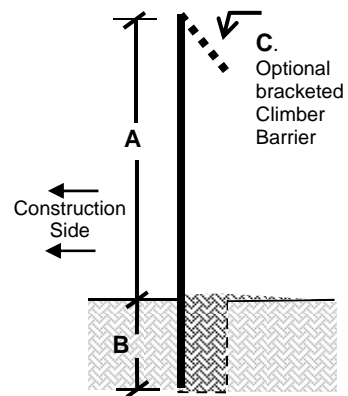
Lizards, Skinks

Blunt-nosed leopard lizard (<i>Gambelia sila</i>)	30	5	Y	18	N	EF40L	Configuration previously accepted by USFWS* Barrier type: 4 strands/in
Coachella Valley fringe-toed lizard (<i>Uma inornata</i>)	24	24	Y	36	N	EF53L	Configuration previously accepted by USFWS* Barrier type: 4 strands/in
Coast (San Diego) horned lizard (<i>Phrynosoma coronatum blainvillii</i>);	30	5	Y	18	N	EF40L	Barrier type: 4 strands/in
Coast horned lizard (<i>Phrynosoma coronatum</i>)	30	5	Y	18	N	EF40L	Barrier type: 4 strands/in
Flat-tailed horned lizard (<i>Phrynosoma mcallii</i>)	30	5	Y	18	N	EF40L	Barrier type: 4 strands/in
Panamint alligator lizard (<i>Elgaria panamintina</i>)	30	5	Y	18	N	EF40L	Barrier type: 4 strands/in
Black legless lizard (<i>Anniella pulchra nigra</i>)	30	5	Y	18	N	EF40L	Barrier type: 4 strands/in
Silvery legless lizard (<i>Anniella pulchra pulchra</i>)	30	5	Y	18	N	EF40L	Barrier type: 4 strands/in
Coronado skink (<i>Plestiodon skiltonianus interparietalis</i>)	30	5	Y	18	N	EF40L	Barrier type: 4 strands/in

Small Mammals

San Joaquin kit fox (<i>Vulpes mutica mutica</i>)	35"	5	N	18	N	EF40	Configuration previously accepted by USFWS* Barrier type: 4 strands/in
Tipton kangaroo rat (<i>Dipodomys nitratoides nitratoides</i>)	35"	5"	N	18	N	EF40	Configuration previously accepted by USFWS* Barrier type: 4 strands/in
Stephens' kangaroo rat (<i>Dipodomys stephensi</i>)	35"	5"	N	18	N	EF40	Configuration previously accepted by USFWS* Barrier type: 4 strands/in
San Bernardino kangaroo rat (<i>Dipodomys merriami parvus</i>)	35"	5"	N	18	N	EF40	Barrier type: 4 strands/in
Preble's meadow jumping mouse (<i>Zapus hudsonius preblei</i>)	35"	5	N	18	N	EF40L	Barrier type: 4 strands/in
Salt Marsh Harvest Mouse (<i>Reithrodontomys raviventris</i>)	30"	5"	Y	18	N	EF40	Barrier type: 4 strands/in
Mount Lyell shrew (<i>Sorex lyelli</i>)	35"	5	N	18	N	EF40	Barrier type: 4 strands/in
Buena Vista Lake shrew (<i>Sorex ornatus relictus</i>)	35"	5	N	18	N	EF40	Barrier type: 4 strands/in
Monterey shrew (<i>Sorex ornatus salarius</i>)	35"	5	N	18	N	EF40	Barrier type: 4 strands/in
Southern California salt marsh shrew (<i>Sorex ornatus salicornicus</i>)	35"	5	N	18	N	EF40	Barrier type: 4 strands/in

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Suisun shrew (<i>Sorex ornatus sinuosus</i>)	35"	5	N	18	N	EF40	Barrier type: 4 strands/in
Santa Catalina shrew (<i>Sorex ornatus willetti</i>)	35"	5	N	18	N	EF40	Barrier type: 4 strands/in
Salt-marsh wandering shrew (<i>Sorex vagrans halicoetes</i>)	35"	5	N	18	N	EF40	Barrier type: 4 strands/in
Monterey vagrant shrew (<i>Sorex vagrans paludivagus</i>)	35"	5	N	18	N	EF40	Barrier type: 4 strands/in
Pygmy rabbit (<i>Brachylagus idahoensis</i>)	35"	5	N	18	N	EF40	Barrier type: 4 strands/in
Riparian brush rabbit (<i>Sylvilagus bachmani riparius</i>)	35"	5	N	18	N	EF40	Configuration previously accepted by USFWS* Barrier type: 4 strands/in
Sierra Nevada mountain beaver (<i>Aplodontia rufa californica</i>)	35"	5	N	18	N	EF40	Barrier type: 4 strands/in
Point Arena mountain beaver (<i>Aplodontidae rufa nigra</i>)	35"	5	N	18	N	EF40	Barrier type: 4 strands/in
Point Reyes mountain beaver (<i>Aplodontidae rufa phaea</i>)	35"	5	N	18	N	EF40	Barrier type: 4 strands/in
Island fox (<i>Urocyon littoralis</i>)	35"	5	N	18	N	EF40	Barrier type: 4 strands/in
Santa Catalina fox (<i>Urocyon littoralis catalinae</i>)	35"	5	N	18	N	EF40	Barrier type: 4 strands/in
San Miguel fox (<i>Urocyon littoralis littoralis</i>)	35"	5	N	18	N	EF40	Barrier type: 4 strands/in
Santa Cruz fox (<i>Urocyon littoralis santacruzae</i>)	35"	5	N	18	N	EF40	Barrier type: 4 strands/in
Santa Rosa fox (<i>Urocyon littoralis santarosae</i>)	35"	5	N	18	N	EF40	Barrier type: 4 strands/in



(Revision Date: February 16, 2012* (check www.ertecsystems.com for most current version))

4.0 Installation:

General E-Fence trenched installation (no Climber Barrier)

1. Excavate a trench a minimum of 4" wide and a minimum of 5" to 24" deep depending on species. See Table B in E-Fence specifications (www.ertecsystems.com). The trench shall be cleared of obstructions.
2. T-posts shall be a minimum of 0.75 lbs/ft. T-posts shall be driven a minimum 12" deep into the ground beyond the bottom of the trench. Installed T-Posts must be a few inches higher than fence. For configuration without climber barrier, T-posts shall be on the same side as construction activities. Install T-Posts at maximum 8' centers. For very high wind or permanent installations install posts on 5' centers.
3. Wrap 14 gauge galvanized wire 2 times around the top of each T-post, so that the guide wire is 3 to 4 inches down from where the top of the fence will reach. Pull the guide wire from post to post, wrap, secure and pull wire tight between each post.
4. Insert E-Fence into trench against the posts
5. At segment overlaps – overlap segments a minimum of 8". Install T-posts on one side of the section overlap. At 10" increments up and down the post, utilizing 14 gage galvanized wire (8" cut wire segments), tie the fence to the post. Close gaps at the other end of the overlap threading 22 gauge galvanized wire, closing the segments together.

6. Near the top of the fence, using E-Fence wire ties, connect the guide wire to the fence at 3' intervals, as illustrated in Detail A of the installation guidelines. Crimp E-Fence wire-tie loops around the guide wire tightly.
7. E-Fence must be installed in continuous lengths (100 or 150 foot rolls). Do not cut segments into shorter lengths unless necessary due to sudden change in elevation.
8. Backfill trench with native soil. Backfill from E-Fence side of posts first so that E-Fence is pushed up against T-posts. Back fill other side to complete backfill.

General E-Fence trenched installation (with Climber Barrier)

1. Excavate a trench a minimum of 4" wide and a minimum of 5" to 24" deep depending on species. See Table B in E-Fence specifications (www.ertecsystems.com). The trench shall be cleared of obstructions.
2. T-posts shall be a minimum of 0.75 lbs/ft. T-posts shall be driven a minimum 12" deep into the ground beyond the bottom of the trench. Top of post must be below climber barrier. For configuration with climber barrier, T-posts shall be on the side of the fence away from construction activities (on the same side of the fence as the climber barrier). Install T-Posts at maximum 8' centers. For very high wind or permanent installations install posts on 5' centers.
3. Wrap 14 gauge galvanized wire 2 times around the top of each T-post, so that the guide wire is 1 to 2 inches down from the top of the T-post. Pull the guide wire from post to post, wrap, secure and pull wire tight between each post.
4. Create climber barrier by bending top of E-Fence at the thermal crease (5" from one edge) downward 120 degrees. Top of fence should point down towards the ground. See Detail B in the E-Fence installation guidelines.
5. Insert E-Fence into trench against the posts and hang climber barrier over 14 gauge wire and T-posts.
6. At segment overlaps – overlap segments a minimum of 8". Install T-posts on one side of the section overlap. At 10" increments up and down the post, utilizing 14 gage galvanized wire (8" cut wire segments), tie the fence to the post. Close gaps at the other end of the overlap threading 22 gauge galvanized wire, closing the segments together.
7. At the top of the fence, using E-Fence wire ties, connect the guide wire to the fence at 3' intervals, as illustrated in Detail A of the installation guidelines. Crimp E-Fence wire-tie loops around the guide wire tightly.
8. Install E-Fence climber barrier brackets every 3 feet.
9. E-Fence must be installed in continuous lengths (100 or 150 foot rolls). Do not cut segments into shorter lengths unless necessary due to sudden change in elevation.
10. Backfill trench with native soil. Backfill from E-Fence side of posts first so that E-Fence is pushed up against T-posts. Back fill other side to complete backfill.

E-Fence no-trench installation – (Desert Tortoise only)

1. Use this configuration with Desert tortoise only for the portion of the fence where fence material cannot be trenched more 6" below existing ground level due to hard substrate.
2. Vertical height shall be 18 inches. Horizontal leg shall be 12 inches. Roll length shall be 150 feet. Unwind 30 inch wide roll to 150 feet. Bend fence material at preformed crease, 12 inches from one side. Form a 90 degree bend along entire 150 foot length of barrier panel.
3. Unless otherwise specified, T-posts shall be equipped with a spade and a minimum of 0.75 lbs/ft. Length of T-posts may be a minimum length of 5 feet. T-posts shall be driven a minimum of 30" into the ground. T-posts shall be installed on the side of the barrier with construction activities. T-posts shall be installed a maximum of 10 feet apart for fences 30" or less.
4. Tie 14 AWG galvanized guide wire between T-posts, so the guide wire is 3 to 4 inches from the top of the fence. Extend the guide wire from post to post, secure and pull wire tight at each post.
5. Locate 18 inch vertical portion of barrier (fence material) against posts so that the horizontal segment points towards animal habitat. Ensure that there is a zero to 2 inch ground clearance at the bend. Ensure that the bent horizontal portion of the fence is lying on the ground.

6. Install 6 AWG galvanized U shaped hold-down-pins (12 inches in length) 2 inches from leading edge of horizontal flap as shown on plans. Install pins on 3 foot centers.
7. At barrier segment overlaps, overlap segments a minimum of 6". Install a T-post at the section overlap. At 6" increments along the post, utilizing 16 AWG galvanized wire ties (8" cut wire segments), tie the fence to the post. Close gaps at the ends of the fence segment by threading 16 AWG galvanized wire, closing the segments together.
8. Install E-Fence ties every 3.3 feet. Tie E-Fence to Guide wire and crimp securely. (see E-Fence installation guidelines for E-Fence ties)
9. E-Fence must be installed in continuous lengths (150 feet). Do not cut segments into shorter panels.

E-Fence trenched installation (Desert tortoise only)

1. Excavate a trench a minimum 12" deep. The trench shall be cleared of obstructions.
2. Vertical height shall be a minimum of 18 inches. Depth of fence should be maximum 12 inches, minimum 6 inches. Roll length is 150 feet.
3. Unless otherwise specified, T-posts shall be equipped with a spade and a minimum of 0.75 lbs/ft. T-posts shall be driven a minimum of 30" into the ground. T-posts shall be installed a maximum of 10' apart for fences 30" or less.
4. Tie 14 AWG galvanized guide wire from T-Post to T-Post, so that the guide wire is 3" to 4" from the top of the fence. Extend the guide wire from post to post, secure and pull wire tight between posts.
5. Insert ERTEC E-Fence into trench and against the posts.
6. At segment overlaps, overlap segments a minimum of 6". Install a T-post at the section overlap. At 10" increments up and down the post, utilizing 16 AWG galvanized wire ties (8" cut wire segments), tie the fence to the post. Close gaps at the overlaps of the fence segments by threading 16 AWG galvanized wire, closing the segments together.
7. Install E-Fence ties every 3.3 feet. Tie E-Fence to Guide wire and crimp securely. (see E-Fence installation guidelines for E-Fence ties)
8. E-Fence must be installed in continuous lengths (150 feet). Do not cut segments into shorter panels.
9. Backfill trench with native soil. Backfill on the fence side of the posts first to push the fence up against the posts.

5.0 Maintenance:

Perform maintenance as required. Inspect areas of concentrated rainwater run-off following rainfall events and after high-wind events. Damage to the special-status-species exclusion barrier resulting from weather or the construction site vehicles, equipment, or operations shall be repaired immediately.

Split or torn segments shall be repaired with zip-ties or 16 gauge galvanized wire ties or replaced. Rills, gullies and other evidence of concentrated runoff which has undercut the SSSEB shall be corrected. Locations needing repair shall be repaired or replaced immediately after identifying the deficiency.

6.0 Method of Measurement:

Quantities of SSSSES to be paid for will be determined by the linear foot measured along the centerline of the installed barrier. Where SSSSES segments are joined and overlapped, the overlap will be measured as a single installed strip.

7.0 Basis of payment:

The contract price paid per linear foot for SSSSES shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in installing the SSSSES, complete in place, including trench excavation and backfill, and maintenance, as shown on the plans, and in these special provisions, and as directed by the Project Manager.