

1 Make the following section a part of the Standard Specifications:

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3 **“SECTION 671 – PROTECTION OF ENDANGERED SPECIES**

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5 **671.01 Description.** The Endangered Species Act (ESA) listed species  
6 Hawaiian Hoary Bat (*Lasiurus cinereus semotus*), Hawaiian goose (*Branta*  
7 *sandvicensis*), Hawaiian petrel (*Pterodroma sandwichensis*), band-rumped storm-  
8 petrel (*Oceanodroma castro*), the threatened Newell’s shearwater (*Puffinus newelli*),  
9 and the Hawaiian Stilt Bird (*Himantopus mexicanus knudseni*) are in the general  
10 vicinity of the proposed project that may transit or visit the proposed project. The  
11 State listed species, Hawaiian Hawk (*Buteo solitaires*), is also in the general vicinity  
12 of the proposed project that may transit or visit the proposed project. The  
13 Contractor shall protect these endangered species throughout the construction  
14 duration. The Contractor shall also minimize the spread of Rapid Ohia Death  
15 (ROD).

16  
17 **671.02 Materials.** None

18  
19 **671.03 Construction.**

20  
21 **(A) Pre-Construction and Construction Requirements.** Comply with  
22 the following conditions:

23  
24 **(1)** Hawaiian Hoary Bats nest in both exotic and native woody  
25 vegetation. To minimize impacts to the Hawaiian Hoary Bat,  
26 there will be no disturbance, removal, or trimming of woody  
27 plants greater than 15 feet (4.6 meters) tall during the birthing  
28 and pup rearing season (June 1 through September 14).

29  
30 Additionally, barbed wire will not be used for fencing and for  
31 any construction.

32  
33 **(2)** If any Hawaiian Goose are present during construction  
34 activities, then all activities within 100 feet (30 meters) should  
35 cease, and the bird should not be approached, fed or disturbed  
36 in any way. Work may continue after the bird leaves the area of  
37 its own accord.

38  
39 If Hawaiian Goose are observed loafing or foraging within the  
40 project area during the breeding season (September 1 through  
41 April 30), all work will cease, and a nest survey will be  
42 conducted in and around the project area by a Biologist familiar  
43 with the nesting behavior of Hawaiian Goose prior to the  
44 resumption of any work. Surveys will be repeated after any  
45 delay of work of three or more days. If a nest is identified

46 within 150 feet of the work area, all work will cease and the  
47 United States Department of Interior Fish and Wildlife Service  
48 (USFWS) and the State of Hawai'i Department of Land and  
49 Natural Resources, Division of Forestry and Wildlife will be  
50 contacted immediately for further guidance.  
51

52 In areas where Hawaiian Goose are known to be present,  
53 reduced speed limits will be posted and implemented and  
54 project personnel and Contractors will be informed of the  
55 presence of endangered species on-site.  
56

57 If during the biologist survey, the Hawaiian goose are loafing,  
58 foraging, or otherwise present within the project area, the  
59 USFWS will be contacted for further guidance. Inform project  
60 personnel and Contractors about the presence of this  
61 threatened species on-site.  
62

- 63 **(3)** Hawaiian seabirds, Newell's shearwater, and band-rumped  
64 storm-petrel may traverse the project area at night. If night  
65 time work will be required in conjunction with the development  
66 of the project, all lights will be fully shielded so the bulb can  
67 only be seen from below bulb height to reduce the potential for  
68 interactions of nocturnally flying seabirds with external lights  
69 and man-made structures. All outdoor lights will be equipped  
70 with automatic motion sensors switches and timers on all  
71 outdoor lights and will be turned off when activity is not  
72 occurring in the lighted area.  
73

74 No nighttime construction will occur during the peak seabird  
75 fledging period (September 15 through December 15).  
76

77 Any streetlights that are installed, as part of this action, will be  
78 shielded. This minimization measure would serve the dual  
79 purpose of minimizing the threat of disorientation or downing of  
80 seabirds, while at the same time complying with the Hawaii  
81 County Code Section 14-50 et seq. which requires the  
82 shielding of exterior lights so as to lower the ambient glare  
83 caused by unshielded lighting.  
84

- 85 **(4)** Hawaiian Stilt Birds – A biological monitor familiar with the  
86 species' biology and approved by the FHWA will conduct  
87 Hawaiian Stilt Bird nest surveys where appropriate habitat  
88 occurs within the proposed maintenance site prior to cleaning  
89 culverts and drainage structures. Survey will take place within  
90 three days of project initiation and after any subsequent delay

91 of work of three or more days (during which the birds may  
92 attempt to nest). If a nest or active brood is found, cease work  
93 and contact the USFWS.  
94

95 (5) Hawaiian Waterbirds - All regular on-site construction staff  
96 shall be trained to identify waterbirds and take appropriate  
97 conservation measures when the waterbirds are present,  
98 including within equipment staging areas. When waterbird  
99 nests are found within the construction area, work within 100 ft  
100 of nests or active broods shall cease until the young have  
101 fledged and left the area. Waterbird nests, chicks, or broods  
102 found before or during construction shall be reported to the  
103 USFWS within 48 hours of discovery for further guidance.  
104

105  
106 (6) Hawksbill Sea Turtle and the Green Sea Turtle - Biological  
107 surveys of the work area will be conducted within three days  
108 prior to initiating any project activities occurring on land. These  
109 surveys will be conducted by a qualified biologist to determine  
110 whether there is visible evidence of sea turtle activity or  
111 presence in or around the terrestrial work area. During the  
112 project implementation phase, prior to the start of daily work,  
113 the designated competent observer will walk the beach looking  
114 for signs of any sea turtle activity including individual turtles or  
115 their tracks within the work area. The competent observer will  
116 also populate the daily monitoring log with relevant notes and  
117 details of any instances during a workday when turtles were  
118 observed, or work delays resulting from sea turtles being  
119 observed or reported in the vicinity of the project area. Project  
120 activities will commence only after the biologist finds no  
121 evidence that turtles are active or present in the terrestrial work  
122 area and following the competent observer training.  
123

124 (B) **Monitoring Requirement for Turtle Activity and Sand**  
125 **Accumulation.**  
126

127 Criterion A: >75 Percent Vertical and > 25 Percent Curvilinear  
128 Accumulation of Sand on Arch  
129

130 One scenario where criterion A would apply is when the  
131 Sandsaver blocks are wherein most of the blocks in the arc are  
132 buried (>75 percent vertical and >25 percent curvilinear).  
133 Criterion A will exist whenever the arc is mostly or completely  
134 buried in sand. This set of conditions allows unrestricted  
135 movement for sea turtles into or out of the arc configuration.

Once criterion A is validated by the biologist or trained or competent observer and concurred with HDOT, the monitoring will entail regular remote surveillance using the installed mobile camera system.

Cameras will be purchased and leased by HDOT; however, the Contractor will install the camera on the camera concrete pad. The camera will be used specifically for the purpose of monitoring for turtle activity and sand accumulation around the arch. The camera specifications should allow for clear remote observations and shall be able to move and zoom in as needed. The real-time footage can be virtually monitored from any computer connected to the internet. The operator of the camera will be able to move the camera and zoom in to identify small objects on the beach. The Contractor will be responsible for monitoring the sand levels and for turtle activity for a duration of 12 months following the completion of the Sandsaver installation. The stainless-steel bandit straps will provide a visual determination for the vertical sand accumulation level. Two stainless-steel bandit straps will be used to secure the Sandsavers together, one placed in the top hole and a second one placed in the second hole down. The second bandit strap will be used as the 75 percent threshold height. Therefore, if the second bandit strap is covered by sand, this results in 75 percent of the vertical face of the Sandsavers are buried. The cameras will enable early detection of beach effects following high surf events that could temporarily remove some sand or cause a short-term entrapment or displacement risk. The loss of enough sand that falls below the second bandit strap (75 percent vertical) and 25 percent of the curvilinear length criteria, will trigger monitoring under criterion B (see below).

If a sea turtle is observed in the vicinity of the Sandsavers arch then the in-person monitoring described under criterion B (described below).

Criterion B:<75 Percent Vertical and <25 Percent Curvilinear Accumulation of Sand on Arc

There could be several scenarios such as high surf events or storms that might cause sand to be removed or redistributed around the Sandsaver blocks that drops the level of sand below the second bandit strap (<75 percent vertical) and <25 percent curvilinear, an entrapment hazard for sea turtles would

181 exist. In this situation a trained and competent observer will  
182 commence Sandsaver beach checks three days a week. One  
183 inspection is required per day on Mondays, Wednesdays, and  
184 Fridays (excluding holidays). The inspections will entail  
185 conducting a visual inspection of the entire length of the  
186 Sandsaver and adjacent beach, on foot, searching for evidence  
187 of activity or presence of sea turtles (individual or tracks).  
188 These inspections shall be performed at sunrise when turtle  
189 tracks are likely to remain visible to the observer.

191 If sea turtle tracks are found, monitoring will be increased to  
192 daily rather than three days a week. The camera system will  
193 also be used at this time to evaluate efficacy as a monitoring  
194 component and to augment the competent observer's  
195 inspections. Checks every two days will continue until the  
196 potential hazard of entrapment is low because the 75 percent  
197 or greater level of sand accumulation criterion has been  
198 reached along a cumulative 25 percent or greater curvilinear  
199 length of the Sandsaver arc (criterion A). For example, after a  
200 storm event, the Sandsaver blocks are expected to facilitate  
201 the process of restoring sand to the beach, and over time, the  
202 amount of exposed surface area presented by the Sandsaver  
203 blocks in the lower section of the arch should decrease,  
204 thereby lowering the overall hazard of entrapment or  
205 displacement for sea turtles.

207 Note that in the table below, the ADCP Deployment,  
208 Operational, and Removal phases will be conducted by others  
209 and not part of the construction project.

Table 1. Summary of effects determination for the affected species.

Project Phase	Type of Monitoring	Estimated Duration
ADCP Deployment	Visual, exercise avoidance	2 days
ADCP Operational	Visual, exercise avoidance	60-90 day intervals
ADCP Removal	Visual, exercise avoidance	2 days
Debris Removal and Revetment Installation	<b>Preconstruction survey followed by daily inspection</b> of the beach and work area prior to construction activity; spot checks; trained competent observer on site	9 months
Sandsaver Installation	<b>Preconstruction survey followed by daily inspection</b> <b>of the beach and work area</b> prior to construction activity and spot checks by, trained competent observer on site	6-10 days
Sandsaver Operations ≥ 75% vertical and ≥ 25% curvilinear accumulation of sand on arc ≤ 75% vertical and ≤ 25% curvilinear accumulation of sand on arc	<b>Virtual monitoring using surveillance cameras</b> and as needed visual inspection on site by trained competent observer	as long as this criterion or entrapment risk remains low or no longer exists
	<b>Beach and Sandsaver arc inspections Monday, Wednesday, and Friday</b> (excluding holidays) combined with camera surveillance <b>until 75% vertical and 25% curvilinear sand accumulation threshold is achieved</b>	As long as this criterion or entrapment hazard is high

Note: ADCP = Acoustic Doppler Current Profilers.

(7) Hawaiian Hawks nest in both exotic and native woody vegetation. To minimize potential impact to Hawaiian Hawks during the breeding season (March 1 through September 30), a nest search will be conducted of the project footprint and surrounding areas immediately prior to the start of construction activities by a biologist familiar with the species. No trees containing a nest will be trimmed or cut regardless of the time of year as nests may be reused during consecutive breeding seasons.

(8) For ROD, ensure that all work will be completed within the existing, pre-disturbed right of way and implement the following minimization measures should tree clearing occur to minimize the potential spread of ROD:

(a) A survey of any locations where tree cutting may occur will be conducted within two weeks prior to tree cutting to determine if there are infected ohia trees.

(b) If infected trees are identified, the following measures will be implemented:

i. The USFWS, the University of Hawaii

Cooperative Extension Service, the U.S. Department of Agriculture (USDA) Forest Service, and the USDA Agricultural Research Service will be contacted for further guidance.

(c) Prior to cutting and after the project is complete, the following measures will be implemented:

- i. Tools used for cutting infected ohia trees will be cleaned with a 70% rubbing alcohol solution or a freshly-prepared 10% solution of chlorine bleach and water as long as the tools are oiled afterwards. Chainsaw blades will be brushed clean.
- ii. Vehicles used off-road in infected areas will be thoroughly cleaned and tires and the undercarriage will be pressure washed with detergent.
- iii. Shoes and clothing worn in infected area will be cleaned by dipping shoe soles in 70% alcohol and washing clothing in hot water with detergent.
- iv. All cut wood will be left on-site to avoid spreading ROD.

(C) **Compliance Requirements.** The Contractor shall protect, Hawaiian Hoary Bats, Hawaii Goose and Hawaiian seabirds, Newell's shearwater, band-rumped storm-petrel, Hawaiian Stilt Bird, Hawaiian Hawks for the duration of construction. Failure to comply with the construction requirements, harm or a taking of an individual during the construction duration shall be enforceable by the USFWS as set forth by the ESA and DOFAW. Resultant penalties and/or fines shall be at the Contractors expense without cost or liability to the State.

The approved Biological Opinion and Informal Consultation for the Proposed Kuhio Highway Emergency Shoreline Mitigation Project, Wailua Beach, Kauai, Federal-aid Project No. ER-24(004) is attached with these contract documents.

**671.04 Measurement.** The Engineer will measure the work required for the protection of endangered species on a force account basis in accordance with Subsection 109.06 – Force Account Provisions and Compensation and as ordered by the Engineer.

The Engineer will not measure the work required for minimizing spread of Rapid Ohia Death for payment.

**671.05 Payment.** The Engineer will pay for the accepted protection of endangered species on a force account basis in accordance with Subsection 109.06 – Force Account Provisions and Compensation. Payment will be full compensation for the work prescribed in this section, by the Engineer, and in the contract documents.

The Engineer shall consider the cost for minimizing the spread of ROD as included in the contract price of the various contract items.

The Engineer will pay for the following pay item when included in the proposal schedule:

Pay Item	Pay Unit
Protection of Endangered Species	Force Account

An estimated amount may be allocated in the proposal schedule under “Protection of Endangered Species”, but the actual amount to be paid will be the sum shown on the accepted force account records, whether this sum be more or less than the estimated amount allocated in the proposal schedule.”

**END OF SECTION 671**