



Appendix B

Botanical Resources Study,
Kaipapa‘u Stream Bridge Replacement Project,
Ko‘olaupia District, O‘ahu

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SUBJECT KAIPAPA'U STREAM BRIDGE REPLACEMENT BOTANICAL RESOURCES ASSESSMENT STUDY

Dear Mr. Koga:

Field studies to assess the botanical resources on the Kaipapa'u Stream Bridge project site were made on 03 March 2004 by Char & Associates. The primary objectives of the survey were to:

- 1) provide a general description of the vegetation on the project site;
- 2) search for threatened and endangered species as well as species of concern; and
- 3) identify areas of potential environmental problems or concerns and propose appropriate mitigation measures.

The Kaipapa'u Stream Bridge is located along Kamehameha Highway in Hau'ula, O'ahu, near the Hau'ula Kai Shopping Center. Along this portion of the highway, it passes through a residential area; Pipilani Street is located on the north end of the study area. The existing bridge as well as the approach area, 200 feet on either side of the bridge, was surveyed. The bridge replacement work will be within the existing right-of-way.

Description of the Vegetation

The plant names used in this report follow Wagner et al. (1990) and Wagner and Herbst (1999). The few recent name changes are those reported in the Hawaii Biological Survey series (Evenhuis and Eldredge, eds., 1999-2002).

Within the approach area along the right-of-way, there are asphalt-covered walkways and grassy mowed lawns. The grassy strips along the highway are primarily Bermuda grass or manienie (Cynodon dactylon) with smaller mats of wiregrass (Eleusine indica) and Hilo grass (Paspalum conjugatum). Landscaping on the residential lots fronting the highway consists of an assortment of ornamental species which include spider lily (Pancratium maritimum), beach naupaka or naupaka kahakai (Scaevola sericea), false kamani (Terminalia catappa), croton (Codiaeum variegatum), Hibiscus cultivars, coconut trees

(Cocos nucifera), etc. A few weedy patches are found here and there. These support mostly annual, herbaceous species such as white-flowered beggar's tick (Bidens alba), sensitive plant or puahilahila (Mimosa pudica), nutgrass (Cyperus rotundus), field bindweed (Ipomoea alba), Chinese violet (Asystasia gangetica), Guinea grass (Panicum maximum), broad-leaved plantain (Plantago major), and false mallow (Malvastrum coromandelianum).

On the bridge itself, there are a few clumps of swollen fingergrass (Chloris barbata) and white-flowered beggar's tick. These plants occur in cracks with pockets of soil between the edge of the pavement and the concrete railings.

Upstream (mauka side) of the bridge, the stream banks are lined with dense elephant or Napier grass (Pennisetum purpureum), 7 to 8 feet tall. On the top banks, it is largely Guinea grass with a few scattered koa haole (Leucaena leucocephala) shrubs. On the downstream (makai) side of the bridge, the vegetation is open with patches of elephant grass and a few tall false kamani trees border the house lots. The stream bottom is rocky in this area.

Discussion and Recommendations

The Kaipapa'u Stream Bridge is located in a residential area along Kamehameha Highway in Hau'ula Town. Landscape plantings and mowed grassy lawns border either side of the bridge. A few weedy patches occur within the right-of-way.

Only two native plant species, beach naupaka and popolo (Solanum americanum), were observed within the project site. Both are indigenous species, that is, they are native to the Hawaiian Islands and elsewhere. Beach naupaka is a common coastal species and is also often used in landscaping, often for hedges. Popolo is often found in disturbed habitats; it prefers open, sunny areas. None of the plants found during the field studies is a threatened and endangered species or a species of concern (U.S. Fish and Wildlife Service 1999a, 1999b; Wagner et al. 1999). This is not surprising given the location of the project site.

The proposed replacement of the bridge at Kaipapa'u Stream in Hau'ula is not expected to have a significant negative impact on the botanical resources. However, areas cleared of vegetation should be grassed over as soon as possible to prevent excessive dust and runoff of sediment into the stream. Bermuda grass or Hilo grass, which are already used on nearby lawns and on the grassy strip along the highway, should be used.

Please do not hesitate to contact me should you have any questions regarding the report.

Sincerely,



Winona P. Char

References

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