

## List of Figures of Tables

Table 1. Previous Archaeological Studies in the Vicinity of the Project Area.....39

### Table 2. Previou

Figure 1. Portion of the 1996 Lihue USGS 7.5-minute topographic quadrangle showing the location of the project area.....2

Figure 2. Tax Map Key (TMK) [4] 3-4-07 showing the project area (Hawai‘i TMK Service 2015) .....3

Figure 3. Aerial photograph of the project area (Google Earth 2013).....4

Figure 4. KCC Long Range Development Plan (courtesy of client) .....5

Figure 5. Overlay of *Soil Survey of the State of Hawaii* (Foote et al. 1972), indicating soil types within and surrounding the project area (U.S. Department of Agriculture Soils Survey Geographic Database [SSURGO] 2001) .....7

Figure 6. Portion of 1878 Government Survey map by W.D. Alexander, showing location of project area.....18

Figure 7. Portion of the 1900 Monsarrat map of Lihue Plantation showing the location of the project area.....20

Figure 8. Portion of the 1901 map of Grove Farm showing the location of the project area .....21

Figure 9. Portion of the 1906 Donn Hawaii Territory Survey map of Kauai showing the location of the project area and historical land use.....22

Figure 10. Portion of 1910 Lihue USGS topographic quadrangle, showing the project area .....23

Figure 11. Plan map of Puhi Camp by W.M. Moragne, illustrated in September 1930, showing the general layout of Puhi Camp and the various ditches, reservoirs, and infrastructure in the area .....24

Figure 12. Puhi Camp in 1928 (courtesy of Grove Farm Company).....25

Figure 13. Puhi Camp in 1928 (courtesy of Grove Farm Company).....25

Figure 14. Puhi Camp houses in 1936 built using cane fiber (courtesy of Grove Farm) .....26

Figure 15. Puhi Camp houses in 1937-38 built using hollow tile (courtesy of Grove Farm).....26

Figure 16. Portion of the 1933 Land Court Application 1087 Map 1 showing the development of additional plantation infrastructure, including Puhi Camp illustrated in the south portion of the project area.....28

Figure 17. Portion of an undated field map of the Lihue Plantation Company showing the development of additional plantation infrastructure, including Puhi Camp illustrated in the south portion of the project area .....29

Figure 18. Portion of 1939 Lihue Plantation map showing plantation infrastructure, including Puhi Camp illustrated in the south portion of the project area; North Base is also observed in the north corner of the project area.....30

Figure 19. Portion of 1941 Lihue Plantation Company map showing the location of the project area adjacent to the plantation and within Grove Farm .....31

Figure 20. Grove Farm showing the location of the project area within the plantation (adapted from Krauss and Alexander 1984).....33

Figure 21. Portion of 1963 Lihue USGS 7.5-minute series topographic quadrangle, showing the project area.....34

Figure 22. 1950 USGS aerial photograph showing the extent of sugar cane cultivation within the project area and its vicinity.....35

Figure 23. 1959 USGS aerial photograph showing the extent of sugar cane cultivation within the project area and its vicinity.....36

Figure 24. 1965 USGS aerial photograph showing the extent of sugar cane cultivation within the project area and its vicinity.....37

Figure 25. 1978 USGS aerial photograph of Līhu‘e and vicinity showing the project area and its vicinity.....38

Figure 26. Portion of 1996 Lihue USGS 7.5-minute series topographic quadrangle, showing previous archaeological studies in vicinity of the project area.....42

Figure 27. Portion of 1996 Lihue USGS topographic quadrangle, showing locations of previously identified historic and archaeological sites near project area.....43

Figure 28. Locations of historic resources found within western portion of current project area during 1973 archaeological reconnaissance (adapted from Palama 1973:4).....46

Figure 29. Former agricultural fields showing vegetation in the north portion of the project area, view to east.....50

Figure 30. Puhi Camp Cemetery (SIHP # -B006) outside of, but in the center of and surrounded by the project area, view to southwest.....50

Figure 31. Modern wall in former Puhi Camp area, view to northwest.....51

Figure 32. Modern wall in former Puhi Camp area showing portion of school in background, view to west.....51

Figure 33. Modern pond in former Puhi Camp area, view to west.....52

Figure 34. Modern pond in former Puhi Camp area, view to north.....52

Figure 35. General view of Gulch on west side of project area, view to southwest.....53

Figure 36. Irrigation ditch, a portion of SIHP # -2179, shown meandering through gulch, view to northwest.....53

Figure 37. Aerial photograph of the project area (Google Earth 2013) showing location of backhoe trenches.....55

Figure 38. Overlay of Land Court Application 1087 map, showing trench locations in the old Puhi Camp area.....56

Figure 39. Photograph of T-1 north sidewall, view to north.....57

Figure 40. General location of T-1, view to west.....57

Figure 41. Profile of T-1 north sidewall.....58

Figure 42. Photograph of T-2 south sidewall, view to southeast.....59

Figure 43. General location of T-2, view to southwest.....60

Figure 44. Profile of T-2 southeast sidewall.....61

Figure 45. Photograph of T-3 east sidewall, view to east.....62

Figure 46. General location of T-3, view to southeast.....63

Figure 47. Profile of T-3 northeast sidewall.....64

Figure 48. Photograph of T-4 south sidewall, view to south.....66

Figure 49. General location of T-4, view to west.....67

Figure 50. Profile of T-4 southeast sidewall.....68

Figure 51. Photograph of T-5 northeast sidewall, view to south.....69

Figure 52. General location of T-5, view to east .....	70
Figure 53. Profile of T-5 northeast sidewall .....	71
Figure 54. Photograph of T-6 southeast sidewall, view to southeast.....	72
Figure 55. General location of T-6, view to southwest.....	73
Figure 56. Profile of T-6 southeast sidewall.....	74
Figure 57. Photograph of T-7 east sidewall, view to southwest.....	75
Figure 58. General location of T-7, view to south.....	76
Figure 59. Profile of T-7 east sidewall.....	77
Figure 60. Photograph of T-8 west sidewall, view to southwest.....	78
Figure 61. General location of T-8, view to northwest.....	78
Figure 62. Profile of T-8 west sidewall .....	79
Figure 63. Photograph of T-9 southeast sidewall, view to southeast.....	81
Figure 64. General location of T-9, view to south.....	81
Figure 65. Profile of T-9 southeast sidewall.....	82
Figure 66. Photograph of T-10 northeast sidewall, view to northwest.....	83
Figure 67. General location of T-10, view to northwest.....	84
Figure 68. Profile of T-10 northeast sidewall .....	85
Figure 69. Photograph of T-11 northwest sidewall, view to northwest.....	86
Figure 70. General location of T-11, view to southwest.....	87
Figure 71. Profile of T-11 northwest sidewall .....	88
Figure 72. Photograph of T-12 northeast sidewall, view to north .....	89
Figure 73. Profile of T-12 northeast sidewall .....	90
Figure 74. Photograph of T-13 northwest wall, view to northwest .....	92
Figure 75. Profile of T-13 northwest sidewall .....	92
Figure 76. Photograph of T-14 east wall, view to east .....	93
Figure 77. Profile of T-14 east sidewall.....	94
Figure 78. Photograph of T-15 south wall, view to south .....	95
Figure 79. Profile of T-15 south sidewall .....	95
Figure 80. Photograph of T-16 south wall, view to south .....	96
Figure 81. Profile of T-16 south sidewall .....	97
Figure 82. Photograph of T-17 south wall, view to southwest.....	98
Figure 83. Profile of T-17 south sidewall .....	99
Figure 84. Artifacts from T-11, trash pit feature (from left to right): soda bottles (Acc. #s 5, 6, 8, 9, and 11) .....	106
Figure 85. Artifacts from T-11, trash pit feature (from left to right): miscellaneous bottles (Acc. #s 12, 13, 14, and 15).....	106
Figure 86. Artifacts from T-11, trash pit feature (from left to right): miscellaneous bottles (Acc. #s 17, 20, 23, and 24).....	107
Figure 87. Artifacts from T-11, trash pit feature (from left to right): jars (Acc. #s 25, 26, 28, and 29).....	107
Figure 88. Artifacts from T-11, trash pit feature (from left to right): miscellaneous items, drinking glass (Acc. # 31); half a woman's compact (Acc. # 33); an electrical component (Acc. # 34); and a light bulb (Acc. # 36) .....	108
Figure 89. Artifacts from T-11, trash pit feature (from left to right): harmonica (Acc. # 42); half a plastic revolver (Acc. # 43); 'opihī ( <i>neritidae</i> spp.; Acc. # 44); and button (Acc. # 45)..	108

Figure 90. Artifacts from T-11, trash pit feature (from left to right, top and bottom): a stack of thin plastic sheets (Acc. # 48); half a plastic flower ornament (Acc. # 37); and marbles (Acc. #s 38, 39, 40, and 41) .....	109
Figure 91. Artifact from T-11, trash pit feature: household item, enameled plate (Acc. # 51) ...	109
Figure 92. Artifact from T-11, trash pit feature: household item, enameled cup (Acc. # 53) .....	110
Figure 93. Artifact from T-11, trash pit feature: household item, water faucet (Acc. # 49).....	110
Figure 94. Artifact from T-11, trash pit feature: brake drum (Acc. # 55) .....	111
Figure 95. Artifacts from T-9, near the top of Stratum I (from left to right): blue marble (Acc. # 56) and half a ceramic doorknob (Acc. # 57) .....	111
Figure 96. Aerial photo (Google Earth 2013), showing historic properties found within or encompassed by the project area.....	116
Figure 97. Portion of 1996 Lihue USGS topographic quadrangle showing the locations of historic properties within the project area.....	117
Figure 98. General photograph of Puhi Camp Cemetery (SIHP # -B006) showing Buddhist grave markers on the right and Christian grave markers on the left, view to west.....	119
Figure 99. SIHP # -B006, Puhi Camp Cemetery, showing primarily Japanese headstones, view to southwest.....	120
Figure 100. SIHP # -B006, Puhi Camp Cemetery, showing various crosses, view to southeast	120
Figure 101. Puhi Camp Cemetery plan, SIHP # -B006 (Kikuchi and Remoaldo 1992:134) .....	121
Figure 102. Photo of SIHP # -2179 Feature A, reservoir adjacent to (but outside of) the project area, view to south (Hunkin et al. 2014).....	127
Figure 103. Photo of the overflow area of SIHP # -2179 Feature A, including the four sub-features (Features A1–A4) (Hunkin et al. 2014) .....	127
Figure 104. Plan view of SIHP # -2179 Feature A, including the four sub-features (Features A1–A4, labeled in this figure as Feat. 1–4) (Hunkin et al. 2014).....	128
Figure 105. Photo of SIHP # -2179 Feature A1, sluice gate at the northern end of the overflow area, view to northwest (Hunkin et al. 2014).....	129
Figure 106. Photo of SIHP # -2179 Feature A1, sluice gate at the northern end of the overflow area, view to north (Hunkin et al. 2014) .....	129
Figure 107. Photo of SIHP # -2179 Feature A2, sluice gate at the easternmost edge of the Feature A overflow area, view to south (Hunkin et al. 2014).....	131
Figure 108. Photo of SIHP # -2179 Feature A2, sluice gate at the easternmost edge of the Feature A overflow area, view to east (Hunkin et al. 2014).....	131
Figure 109. Photo of SIHP # -2179 Feature A3, sluice gate at the southwest side of the Feature A overflow area, water flows through the pipe in background, under the Island School road, into Feature F, irrigation ditch, view to southwest (Hunkin et al. 2014).....	132
Figure 110. Photo of SIHP # -2179 Feature A3, sluice gate at the southwest side of the Feature A overflow area, view to south (Hunkin et al. 2014) .....	132
Figure 111. Photo of SIHP # -2179 Feature A4, modern culvert at the south end of the Feature A overflow area, view to southwest (Hunkin et al. 2014) .....	133
Figure 112. Photo of SIHP # -2179 Feature A4, modern culvert, showing the inscription reading “10-29-69,” view down (Hunkin et al. 2014) .....	133
Figure 113. Photo of SIHP # -2179 Feature B, earthen irrigation ditch, view to east (Hunkin et al. 2014).....	134

Figure 114. Photo of SIHP # -2179 Feature B, earthen irrigation ditch, view to west (Hunkin et al. 2014) .....	134
Figure 115. SIHP # -2179 Feature B, Cross Section 7 (Hunkin et al. 2014) .....	136
Figure 116. Photo of SIHP # -2179 Feature B, Cross Section 7 (Hunkin et al. 2014) .....	136
Figure 117. SIHP # -2179 Feature B, Cross Section 8 (Hunkin et al. 2014) .....	137
Figure 118. Photo of SIHP # -2179 Feature B, Cross Section 8 (Hunkin et al. 2014) .....	137
Figure 119. SIHP # -2179 Feature B, Cross Section 9 (Hunkin et al. 2014) .....	138
Figure 120. Photo of SIHP # -2179 Feature B, Cross Section 9 (Hunkin et al. 2014) .....	138
Figure 121. Photo of SIHP # -2179 Feature B1, eastern culvert, view to west (Hunkin et al. 2014) .....	139
Figure 122. Photo of SIHP # -2179 Feature B1, western culvert, view to east (Hunkin et al. 2014) .....	139
Figure 123. Plan view of SIHP # -2179 Feature B1, including east and west culverts (Hunkin et al. 2014) .....	140
Figure 124. Elevation drawing of SIHP # 2179 Feature B1, eastern culvert (Hunkin et al. 2014) .....	141
Figure 125. SIHP # -2179 Feature C, Cross Section 4 (Hunkin et al. 2014) .....	142
Figure 126. Photo of SIHP # -2179 Feature C, Cross Section 4, view to southeast (Hunkin et al. 2014) .....	142
Figure 127. SIHP # -2179 Feature C, Cross Section 5 (Hunkin et al. 2014) .....	143
Figure 128. Photo of SIHP # -2179 Feature C, Cross Section 5, view to southeast (Hunkin et al. 2014) .....	143
Figure 129. SIHP # -2179 Feature C, Cross Section 6 (Hunkin et al. 2014) .....	144
Figure 130. Photo of SIHP # -2179 Feature C, Cross Section 6, view to south (Hunkin et al. 2014) .....	144
Figure 131. Photo of SIHP # -2179 Feature C1, culvert at northernmost section, view to north (Hunkin et al. 2014) .....	146
Figure 132. Elevation drawing of SIHP # -2179 Feature C1, culvert at northernmost section (Hunkin et al. 2014) .....	146
Figure 133. Plan view of SIHP # -2179 Feature C1, culvert at northernmost section (Hunkin et al. 2014) .....	147
Figure 134. Photo of SIHP # -2179 Feature C2, consisting of one active and one abandoned vertical rising sluice gate, somewhat perpendicular to each other, view to east (Hunkin et al. 2014) .....	148
Figure 135. Photo of SIHP # -2179 Feature C2, view to southeast (Hunkin et al. 2014).....	148
Figure 136. Plan view of SIHP # -2179 Feature C2 (two sluice gates) and Feature C3 (culvert) (Hunkin et al. 2014) .....	149
Figure 137. Photo of SIHP # -2179 Feature C3, an abandoned culvert located approximately 0.80 m north of Feature C2, view to southwest (Hunkin et al. 2014).....	150
Figure 138. Photo of SIHP # -2179 Feature C3, an abandoned culvert, view to northwest (Hunkin et al. 2014) .....	150
Figure 139. Elevation drawing of SIHP # -2179 Feature C3, an abandoned culvert (Hunkin et al. 2014) .....	151
Figure 140. Photo of SIHP # -2179 Feature C4, one active and one abandoned vertical rising sluice gate, view to northwest (Hunkin et al. 2014) .....	153

Figure 141. Photo of SIHP # -2179 Feature C4, showing the 4-inch by 12-inch board of treated wood just southwest of (nearly atop) the active gate, view to west (Hunkin et al. 2014) ..... 153

Figure 142. Plan view of SIHP # -2179 Feature C4, two vertical rising sluice gates (Hunkin et al. 2014) ..... 154

Figure 143. SIHP # -2179 Feature D, Cross Section 1 (Hunkin et al. 2014)..... 155

Figure 144. Photo of SIHP # -2179 Feature D, Cross Section 1, view to east (Hunkin et al. 2014) ..... 155

Figure 145. SIHP # -2179 Feature D, Cross Section 2 (Hunkin et al. 2014)..... 156

Figure 146. Photo of SIHP # -2179 Feature D, Cross Section 2, view to northeast (Hunkin et al. 2014) ..... 156

Figure 147. SIHP # -2179 Feature D, Cross Section 3 (Hunkin et al. 2014)..... 157

Figure 148. Photo of SIHP # -2179 Feature D, view to north (Hunkin et al. 2014)..... 157

Figure 149. Photo of SIHP # -2179 Feature D1, outlet at the westernmost end of Feature D, which indicates water from Feature A was diverted and fed into Feature D to be transported to feed cane fields to the east (slightly down slope from Features C and A), the original Lihue Plantation Company's cane field 39A, view to west (Hunkin et al. 2014) ..... 159

Figure 150. Plan view of SIHP # -2179 Feature D1, portion of an irrigation ditch SIHP # -2179 Feature D (Hunkin et al. 2014) ..... 159

Figure 151. Elevation drawing of SIHP # -2179 Feature D1 at culvert opening in the northwest corner (Hunkin et al. 2014)..... 160

Figure 152. SIHP # -2179 Feature E, abandoned irrigation ditch, view to north ..... 161

Figure 153. SIHP # -2179 Feature E, abandoned irrigation ditch, view to east ..... 161

Figure 154. Small berm separating SIHP # 2179, Feature A (foreground) from SIHP # -2179 Feature E (background), view to southwest..... 162

Figure 155. Plan map of a portion of SIHP # -2179 Feature E, abandoned irrigation ditch ..... 162

Figure 156. CS-10, cross-section of Feature E, abandoned irrigation ditch ..... 163

Figure 157. SIHP # -2179 Feature E1, flume, showing concrete footings, view to northwest ... 163

Figure 158. Portion of flume, SIHP # -2179 Feature E1, view to northwest..... 164

Figure 159. Portion of SIHP # -2179 Feature E1, view to east ..... 164

Figure 160. Plan map of a portion of the concrete flume SIHP # -2179 Feature E1 ..... 165

Figure 161. Cross-section of concrete flume (Feature E1), showing the elevation of area ..... 165

Figure 162. SIHP # -2179 Feature F former reservoir, view to northeast ..... 167

Figure 163. Sluice gate (Sub-feature F1) associated with Feature F, view to north..... 167

Figure 164. SIHP # -2179 Sub-feature F1 showing mortared basalt retaining wall and wooden beam structure holding sluice gate, view to southeast..... 168

Figure 165. Plan map of SIHP # -2179 Sub-feature F1 ..... 169

Figure 166. Profile map of SIHP # -2179 Sub-feature F1 ..... 170

Figure 167. SIHP # -2179 Sub-feature F2, view to northwest..... 171

Figure 168. SIHP # -2179 Sub-feature F2, showing channel for floodwaters, view to southeast..... 171

Figure 169. Plan map of SIHP # -2179 Sub-feature F2 ..... 172

Figure 170. SIHP # 2179 Feature G, irrigation ditch, view to northwest..... 172

Figure 171. CS-11, cross-section of SIHP # -2179 Feature G ..... 173

Figure 172. View of the confluence of SIHP # -2179 Features G and M, view to southwest.....	173
Figure 173. SIHP # -2179 Sub-feature G1, sluice gate remnant, view to west .....	175
Figure 174. SIHP # -2179 Sub-feature G1, sluice gate remnants, view to east.....	175
Figure 175. Plan map of SIHP # -2179 Feature G1 .....	176
Figure 176. SIHP # -2179 Feature G2, west end of culvert showing modern pipe for diverting and transporting water, view to northwest.....	176
Figure 177. SIHP # -2179 Feature G2, east end of culvert, view to west.....	177
Figure 178. Plan map of SIHP # -2179 Feature G2 .....	177
Figure 179. SIHP # -2179 Feature H, reservoir in center of project area at fullest extent, view to north .....	178
Figure 180. SIHP # -2179 Feature H, reservoir in center of project area, showing Sub-feature H1 in background, view to southeast.....	178
Figure 181. SIHP # -2179 Sub-feature H1, retaining wall, view to south .....	179
Figure 182. SIHP # -2179 Sub-feature H1, showing retaining wall, sluice gate (right), and flume (left) with lower water level in Feature H, view to northeast .....	180
Figure 183. SIHP # -2179 Sub-feature H1, showing retaining wall, sluice gate (right), and flume (left) with lower water level in Feature H, view to southeast.....	180
Figure 184. Date engraved in flume associated with SIHP # -2179 Sub-feature H1 .....	181
Figure 185. SIHP # -2179 Sub-feature H1, flume on west end of road, view to southeast.....	181
Figure 186. Profile view of sluice gate outtake and flume at the origin of Feature I, irrigation ditch, view to west .....	182
Figure 187. Plan map of SIHP # -2179 Sub-feature H1, water control infrastructure, depicting Feature H (right) and Feature I (left) .....	183
Figure 188. SIHP # -2179 Feature I, showing bend in ditch southwest of Sub-feature H1 and northeast of Sub-feature I1, view to west .....	185
Figure 189. CS-12, cross-section of SIHP # -2179.....	185
Figure 190. SIHP # -2179 Sub-feature I1, north sluice gate, diverting water to pipe that flows under grass road to Feature J, view to east, photo adapted from Groza and Hammatt 2010 (note wooden bridge over the south sluice gate had not yet been constructed).....	186
Figure 191. SIHP # -2179 Sub-feature I1, south sluice gate and modern wooden bridge, maintaining water flow to Feature I, view to northeast .....	186
Figure 192. SIHP # -2179 Sub-feature I1, south sluice gate, maintaining water flow through Feature I, view to north.....	187
Figure 193. Plan map of Sub-feature I1, showing a portion of Features I and J .....	187
Figure 194. SIHP # -2179 Sub-feature I2, stream ford, view to northwest .....	189
Figure 195. SIHP # -2179 Sub-feature I2, stream ford, view to southeast.....	189
Figure 196. Sub-feature I2, showing water flowing from Sub-feature I2 to Feature I, view to south.....	190
Figure 197. Plan map of Sub-feature I2, showing Feature I and Feature J.....	190
Figure 198. SIHP # -2179 Sub-feature I3, showing modern pond in background, view to west	192
Figure 199. Sub-feature I3, retaining wall of culvert on south end, view to south.....	192
Figure 200. Sub-feature I3, view of concrete-lined culvert for Feature I, view to north.....	193
Figure 201. Plan map of Sub-feature I3, showing modern pond on right and Feature I flowing through culvert.....	193

Figure 202. SIHP # -2719 Feature I4, showing concrete culvert and mortared basalt retaining wall, photograph adapted from Groza and Hammatt 2010, view to south .....	194
Figure 203. Sub-feature I4, showing current condition of culvert, view to southeast .....	194
Figure 204. View of roadway above Sub-feature I4, showing patches of asphalt, view to east .....	195
Figure 205. Date “1938” located on Sub-feature I4, view to south .....	195
Figure 206. Plan map of Sub-feature I4, showing Feature I flowing through culvert .....	196
Figure 207. SIHP # -2179 Feature J, north section, view to south .....	197
Figure 208. Feature J, south section at Sub-feature I2, view to west .....	197
Figure 209. Plan map showing Feature J in relation to Feature I and Sub-features I1 and I2 .....	198
Figure 210. Sub-feature K1, north end of culvert, view to southeast .....	200
Figure 211. Plan view of Sub-feature K1, north end, view to west .....	200
Figure 212. Sub-feature K1, south end, view to northeast .....	201
Figure 213. Plan view of Sub-feature K1, south end, view to east .....	201
Figure 214. Plan map of Sub-feature K1 .....	202
Figure 215. Plan view of Sub-feature K2, north end, view to west .....	204
Figure 216. Sub-feature K2, north end, soil accumulation obscuring riprap, view to southeast .....	205
Figure 217. Sub-feature K2, north end, view to south .....	205
Figure 218. SIHP # -2179 Sub-feature K2, south end, view to east .....	206
Figure 219. Sub-feature K2, south end showing riprap on west end, view to northwest .....	207
Figure 220. Sub-feature K2, south end showing riprap at east end and metal pipe, view to east .....	207
Figure 221. Plan map of SIHP # -2179 Sub-feature K2 .....	208
Figure 222. SIHP # -2179 Feature L, flume, showing west portion mostly intact, view to east .....	209
Figure 223. Sluice gate foundation with date “1960,” view to west .....	209
Figure 224. West portion of Feature L, showing general construction design, view to northeast .....	210
Figure 225. West portion of Feature L, showing support structure including wooden beams, concrete foundations, and mortared basalt retaining walls, view to west .....	211
Figure 226. Debris from collapse of center portion of Feature L, view to northeast .....	212
Figure 227. Feature M crossing path of Feature L, note concrete foundations on left and right, view to east .....	212
Figure 228. Feature M crossing over central portion of Feature L, collapsed section of east portion in foreground, view to southwest .....	213
Figure 229. Intact section of east portion, showing general construction, view to west .....	213
Figure 230. Remnants of support structure of east portion of Feature L including wooden beams, concrete foundations, and mortared basalt retaining walls, view to southeast .....	214
Figure 231. Plan map of Feature L, flume, showing Feature M crossing feature .....	215
Figure 232. Sub-feature L1, showing dirt accumulation at tunnel opening, view to southwest .....	216
Figure 233. View of Feature L and ditch from Sub-feature L1, view to northeast .....	216
Figure 234. Sub-feature L2, showing heavy dirt accumulation at entrance, view to east .....	217
Figure 235. SIHP # -2179 Feature M, southwest of Feature K2, view to east .....	219
Figure 236. Feature M near cemetery (SIHP # -B006), view to west .....	219
Figure 237. Plan map of SIHP # -2179 Feature M .....	220
Figure 238. CS-13, cross-section of Feature M .....	220
Figure 239. Sub-feature M1, showing Feature M flowing into tunnel, view to southeast .....	221



Figure 240. Plan map showing Sub-feature M1 .....	222
Figure 241. Sub-feature M2, irrigation ditch tunnel outflow, view to southwest.....	222
Figure 242. Plan map of Sub-feature M2, irrigation ditch tunnel outflow .....	223
Figure 243. Feature M3, sluice gate, showing close proximity to SIHP # -B006, view to northeast.....	223
Figure 244. Sub-feature M3 showing north gate (left) and east gate (right), view to northeast..	224
Figure 245. Sub-feature M3, east gate, view to west.....	224
Figure 246. “J.Andres 4/14/67 FEB 14” inscribed on wing wall .....	225
Figure 247. “4/14/67 FEB 14” inscribed on wing wall .....	225
Figure 248. Plan map of SIHP # -2179 Sub-feature M3.....	226
Figure 249. Sub-feature M4, from cemetery road, view to south towards Sub-feature M3 .....	228
Figure 250. View of tunnel and roadway associated with Sub-feature M4, view to north .....	228
Figure 251. North end of Sub-feature M4, view to southwest.....	229
Figure 252. Sub-feature M4, showing collapse on in interior, view to south.....	230
Figure 253. Plan map of Sub-feature M4.....	230
Figure 254. Feature N, showing berm of right side of photo, view to northwest.....	232
Figure 255. Plan map of a portion of Feature N .....	232
Figure 256. CS-14, cross-section of Feature N.....	233
Figure 257. Sub-feature N1, abandoned earthen tunnel, view to southwest.....	233
Figure 258. Plan map of Sub-feature N1 .....	234
Figure 259. Sub-feature N2, abandoned sluice gate, view to northwest.....	234
Figure 260. Date “DEC. 13 <sup>th</sup> 1905” inscribed on east concrete foundation of Sub-feature N2 ..	235
Figure 261. Plan map of Sub-feature N2 .....	235
Figure 262. Sub-feature N3, showing two sluice gates, view to northwest.....	236
Figure 263. East portion of Sub-feature N3, view to southeast.....	236
Figure 264. Close-up of east portion of Sub-feature N3, view to northeast.....	237
Figure 265. Plan map of Sub-feature N3 .....	237
Figure 266. Feature O, abandoned remnant of an irrigation ditch connecting Features M and N, view to south.....	240
Figure 267. Plan map of Feature O.....	240
Figure 268. CS-15, cross section of Feature O .....	241
Figure 269. Feature P, view to northwest .....	241
Figure 270. Plan map of Feature P.....	242
Figure 271. CS-16, cross-section of Feature P .....	242
Figure 272. Photo of southeast tunnel opening (Sub-feature P1), view to southwest .....	243
Figure 273. Photo of northwest tunnel opening (Sub-feature P1), southeast opening in the background, view to southeast.....	244
Figure 274. Inside of ditch tunnel (Sub-feature P1) showing hearth feature, view to southeast..	245
Figure 275. Hearth and bottle observed in ditch tunnel (Sub-feature P1), showing past use of abandoned tunnel, view to east.....	245
Figure 276. Plan map of Sub-feature P1, showing modern access road.....	246
Figure 277. South end of Sub-feature P2, showing the top portion of the ditch tunnel, and dirt accumulation from the collapse, view to south.....	247
Figure 278. North end of Sub-feature P2, ditch tunnel not visible, view to north.....	247
Figure 279. View of Sub-feature P2 from modern access road, view to northwest .....	248

Figure 280. Sub-feature P2 showing collapse and eroded drainage channel in upper left corner, view to east .....248

Figure 281. Plan view of Sub-feature P2 .....249

Figure 282. Photo of 105 mm cloverleaf end cap, downward view .....249

Figure 283. Sub-feature P3, abandoned ditch tunnel, view mostly obscured by tree and roots, view to northeast .....251

Figure 284. Close-up of tunnel opening, view to northeast .....251

Figure 285. Plan map of Sub-feature P3, showing Feature P .....252

Figure 286. Photo of SIHP # -2220, showing the short protruding inner walls supporting the metal structure with a base and pipe that runs all the way to and through the concrete slab at the top .....254

Figure 287. Photo of SIHP # -2220, showing the overall structure, including the trapezoid-shaped walls, the steps on the east wall, the square concrete slab topping the structure, and the metal pipe protruding outward from the top .....255

Figure 288. Photo of SIHP # -2220, showing the top of the cement slab with the words “KAUAI NORTH BASE” and many divots, downward view to north .....255

Figure 289. Hawaii Territory Survey marker shown underlying metal pipe, view to east .....256

Figure 290. Photo of SIHP # -2220, showing the Hawaii Territory Survey marker that the structure covers, downward view .....256

Figure 291. Elevation drawing of SIHP # -2220 .....257

Figure 292. Plan map of SIHP # -2220 showing SIHP # -2719: Feature B in relation to survey station (SIHP # -2220) .....258

List sly Identified Archaeological Sites in and near the Project Area .....44

Table 3. T-1 Stratigraphic Description .....58

Table 4. T-2 Stratigraphic Description .....61

Table 5. T-3 Stratigraphic Description .....64

Table 6. T-4 Stratigraphic Description .....68

Table 7. T-5 Stratigraphic Description .....71

Table 8. T-6 Stratigraphic Description .....74

Table 9. T-7 Stratigraphic Description .....77

Table 10. T-8 Stratigraphic Description .....79

Table 11. T-9 Stratigraphic Description .....82

Table 12. T-10 Stratigraphic Description .....85

Table 13. T-11 Stratigraphic Description .....88

Table 14. T-12 Stratigraphic Description .....90

Table 15. T-13 Stratigraphic Description .....93

Table 16. T-14 Stratigraphic Description .....94

Table 17. T-15 Stratigraphic Description .....96

Table 18. T-16 Stratigraphic Description .....97

Table 19. T-17 Stratigraphic Description .....99

Table 20. Summary of Historic Artifacts .....101

Table 21. Historic Properties Identified within or near the Current Project Area .....115

Table 22. Summary of All Features and Sub-features Associated with SIHP # -2719 .....125

Table 23. Results of Community Consultation (Fa’anunu et al. 2012:57-62) .....261

Table 24. Archaeological Historic Property Integrity, Significance, and Mitigation  
Recommendations.....268