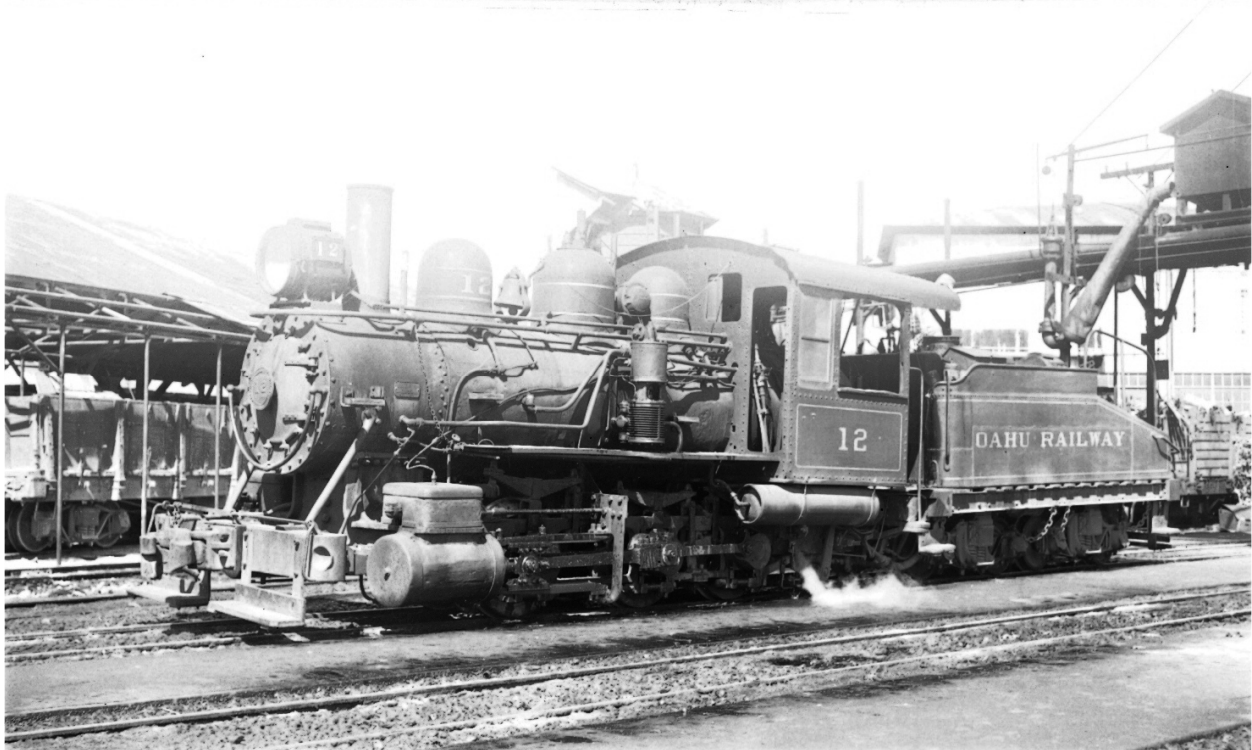


Restoration Planning for

Ex-Oahu Railway and Land Company Locomotive No. 12



Fred Stnidt Photograph, Hawaiian Railway Society Collection

Purpose:

This document is to document the 2010/1011 cosmetic restoration of ex-Oahu Railway and Land Company (OR&L) locomotive No. 12 for static display.

Background:

OR&L No. 12 was built by the American Locomotive Company (ALCO) in May 1912 at the Manchester Works in Manchester, New Hampshire. No. 12 has a 0-6-0 wheel arrangement and is ALCO construction No. 51165. No. 12 is a switching locomotive used primarily in the Honolulu Yard although she did see service at Waipahu. Following abandonment of the main line in 1947 all the OR&L steam locomotives were retired with the exception of Nos. 12 and 85 which were retained in service for possible use. Used sparingly between 1947 and 1951 No. 12's steam pressure was reduced from 165 PSI to 125 PSI. In the summer of 1952 No. 12 was pressed into service for several weeks following a broken axle suffered by diesel locomotive No. 15. Sometime in 1953 No. 12 with two coaches made the trip between Honolulu and Pearl Harbor for a children's birthday party. This was to be the last trip between these two points and the last time No. 12 was known to have operated under steam.

Significance:

OR&L No. 12 is one of only three remaining OR&L steam locomotives and the only remaining “switching” locomotive. Purpose built narrow gauge steam switching locomotives were rare to begin with which makes No. 12 especially noteworthy

Assessment:

No. 12 has spent the last 58 years “on display”. She was first displayed at the then new Ala Moana Shopping Center from about 1960 through 1966 and later at the Bishop Museum. No. 12 was transferred to the Hawaiian Railway Society at Lualualei in 1976 and to her present home at the Hawaiian Railway Society train yard in 1979. Cosmetic restoration was started by the Hawaiian Railway Society while the locomotive was still at Bishop Museum and has continued sporadically until present. Most of No. 12’s parts are stored with the notable exception of the cross heads which are missing. One brake cylinder is also missing. The lubricator for No. 12 was used on WACO No. 6 and will be returned to No. 12.

Restoration Philosophy:

OR&L No. 12 will be cosmetically restored to its ca. 1942 configuration. During the restoration, every effort will be made to replace missing or broken parts with original parts. In the event that original parts cannot be located suitable substitutes may be used following as close as possible the original form fit and function. Under no circumstances will changes be made that make it impossible to install an original part should one become available in the future. All substitutions must be approved by the restoration committee and the Director of Restoration.

Restoration Plan:

Mechanical – Mechanical restoration addresses the “moving” parts of the locomotive and includes but is not limited to wheels and axles, brakes including brake cylinder and operating mechanisms, springs, cylinders, cross heads, cross head guides, side rods, main rods, blow down cocks and linkages, reversing linkages, eccentrics, couplers etc. All these parts shall be restored to a point which will allow No. 12 to be safely moved and exercised.

Structural – Structural restoration will include repairs and preservation of the locomotive frame, cab, tender frame, water tank and oil tank.

Other – This category includes but is not limited to fabrication of a new boiler jacket and mounting of piping and accessory equipment.

Action –