The Land Survey Division performs field and office survey work for Hawaii state agencies and the Land Court. The division is responsible for the preparation and maintenance of maps and descriptions of public lands, the verification of boundaries, maintenance of the depository of survey and boundary information, and verifying and processing all Land Court and File Plan maps. The division reviews all shoreline maps and performs research for the state attorney general on quiet title cases filed in the circuit courts.

The Survey Division is a successor agency to several offices. The Hawaiian Kingdom’s Survey Office was established in 1870 to prepare maps of the various islands to determine the extent and location of land held by the government, and to prepare surveys and descriptions of those lands. The office also surveyed harbors, ran street lines, performed engineering work for the Minister of Interior, and acted as the weather bureau of the Kingdom. When Hawaii became a Territory of the United States in 1900, the Organic Act expanded on the functions and duties of the office, to include triangulation, subdividing, reviewing land titles and boundaries, preparing metes and bounds descriptions, and marking land boundaries for all government lands.

REGISTERED MAPS

Quantity and Scope
Today, the Survey Division maintains a collection of approximately 3,125 Registered Maps which are official government survey maps created by both government and private surveyors. The collection consists primarily of cadastral maps of the main Hawaiian Islands, but also includes hydrographic charts of harbors and ocean channels; street, road, and subdivision maps; survey reference maps (triangulation); and other special purpose maps.

Time Span
The earliest map is dated 1825, but the bulk are from the 1850’s to ca. 1970.

Condition and Physical Qualities
The maps are generally in good condition and suitable for scanning, preferably on a flatbed scanner. Approximately 150 or 5% are too fragile for any kind of copying
without considerable conservation work. About 2,100 of the maps are tightly rolled, and so may be difficult to scan or photograph unless relaxed in some way. Humidification may not be an option to relax the maps because inks may be water-soluble and the tracing linen is sized with starch, which is also water-soluble.

The maps are primarily drawn or printed on mounted paper, tracing linen, or other papers. Mounted paper is a bond of heavy weight paper and fabric, usually linen. Although very durable, with heavy use and age, the bond breaks down and embrittled paper cracks and separates from the linen, especially along fold lines. Tracing linen is a fabric base heavily starched to produce a high-sheen printing/writing surface. Over time, tracing linen may embrittle, crack, splinter, and disintegrate.

Most maps are drawn in black India ink and are augmented with colored inks and pencil or watercolor washes. Maps post-1940’s are generally black line.

Size
The majority of maps have a short dimension under 42-inches wide but range up to 60-inches wide. About 1,000 are stored flat and are in the 30” x 22” size range. The remaining 2,100 are rolled maps and vary in length, at least one up to 24-feet long. Most are under 5-feet long.

Storage
Maps are currently stored flat in map cases or rolled in pigeonhole cabinets. The rolled maps are fairly tight, and depending on the kind of paper or fabric base, may be difficult to flatten.

Environmental Controls
The Survey Division office is air conditioned 24 hours a day, 7 days a week. The temperature is in the mid- to high-70-degrees F. with relative humidity about 80%. For optimum preservation, the temperature should be 60-65-degrees with relative humidity of 50%. As the map storage room is open to the other offices, it would be very difficult to maintain this kind of standard.
PRESERVATION SURVEY METHODOLOGY

I estimated that I could survey 100 maps for this review, and believing there were over 4,000 maps, I did a sampling of every 40th map in the number sequence 1 – 4159. I used a listing of maps provided by the Survey Office that had been compiled by a researcher/volunteer. I discovered the list was not complete, as certain categories of maps were omitted, such as non-Hawaii locations and street maps. However, having the list allowed me to pre-select by register number before I went in to the office. (The Survey Office has a more comprehensive catalog, but it is in the form of a rotary index file, has no copy, and cannot be removed from the map room.) Midway through the survey, I discovered 900 numbers had not been issued. This reduced the number of maps to 3259. In the end, I surveyed 84 maps across the full time period.

The following information was collected for this survey:
- Register number
- Brief title
- Location in the map room
- Date
- Surveyor
- Physical Condition including type of base (paper, linen);
- Size
- Media (printed, ink, colored pencil, etc)
- Whether the map is physically stable enough to be scanned, photographed, or not copied at all.

MAP COUNT
- Registered Map number sequence: 1 – 4159 4159
- Unissued numbers: 3100 – 3999 -900 3259

Registered maps transferred to Archives in 1967 = 20
Registered maps transferred to Archives in 1989 = 114 134 -134

3,125 maps

It was not possible to determine how many maps may be missing/misfiled. The Registered Maps are not easily retrievable because they are interfiled with other maps by geographic location.