

XI. SUMMARY OF BUILDING CONSTRUCTION AT KALAUPAPA
SETTLEMENT DURING 1931-1938

The following are the principal accomplishments at Kalaupapa during the 1931-38 rehabilitation period. During the rehabilitation program, 160 dwellings, dormitories, and industrial buildings and 310 garages, outbuildings, and miscellaneous structures were demolished. Reconditioned structures, under the same classifications, numbered 85 and 45 respectively; and constructed new, 90 and 65.

A. McVeigh Home (for Men and Women).

As of July 1, 1931, that unit consisted of two twelve-room dormitories equipped with toilet and bathing facilities, a central dining room-kitchen building, an old wash house, a water tank, and five or six scattered small cottages and outbuildings that were later removed or demolished, except for one small cottage. From July 1, 1931, to June 30, 1938, the following additions and improvements were made at McVeigh:

1. Patients' Quarters

Twenty-one two-room and two four-room cottages were built and the two dormitories and one old cottage remodelled and reconditioned, providing a normal capacity for seventy-four patients. A two-bedroom cottage was also built for non-patient employees. The dorms and all cottages had electric service, hot and cold water connections, shower and/or tub baths, patent toilets, sinks, and lavatories.

2. Dining Room-Kitchen

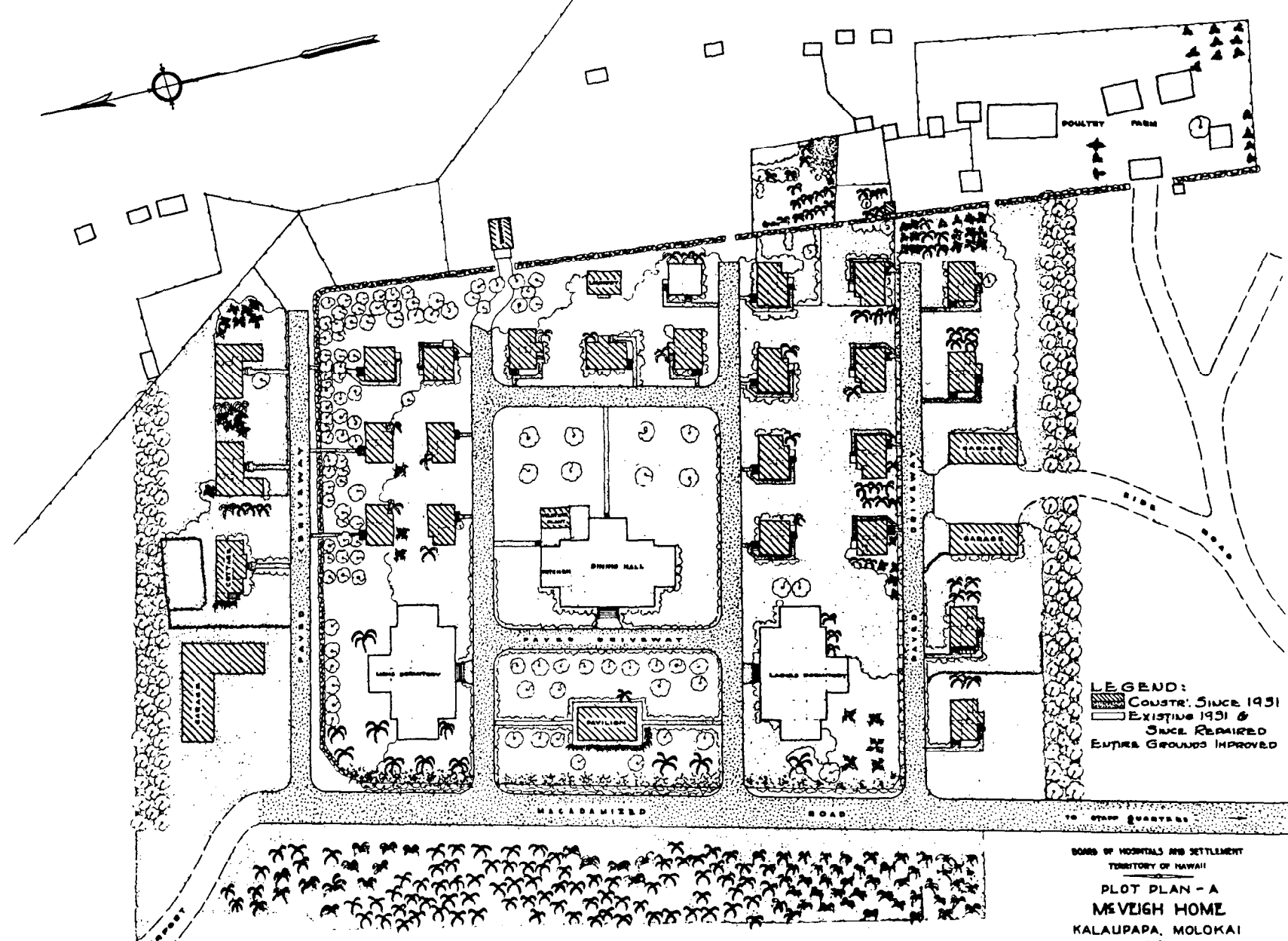
This building, with a capacity for about eighty patients, was reconditioned and remodelled.

3. Laundry

A small laundry pavilion for the use of patients, with electricity, hot and cold water, laundry trays, electric washer, and irons, replaced the old building, which was demolished.

Map No. 9. Plot plan A, McVeigh Home, Board of Hospitals and Settlement, June 1938, Annual Report for the Fiscal Year Ended June 30, 1938.

479



LEGEND:
 [Hatched Box] CONSTR. SINCE 1931
 [Solid Box] EXISTING 1931 &
 SINCE REPAIRED
 [Dotted Area] EXTRA GROUNDS IMPROVED

BOARD OF HOSPITALS AND SETTLEMENT
 TERRITORY OF HAWAII
PLOT PLAN - A
MEVEIGH HOME
 KALAUPAPA, MOLOKAI

H. C. ...
 ARCHITECT

4. Hot Water Plant and Circulating System

This system was installed with connections to all cottages, dormitories, the laundry, and the kitchen-dining room.

5. Medical Dressing Station

This building was overhauled and modernized with a part-time attendant attached to the medical staff in charge.

6. Recreation Building

This structure was equipped with a pool table, games, and reading matter.

7. Garages

Three garages for patients' use were built, providing fifteen stalls and one storeroom.

8. Paved Driveways and Concrete Walks

Contributing to the attractive appearance of the home was the system of driveways and walks serving all sections of the compound. Along with planting of trees and shrubs, it greatly added to the morale of the patients.¹

B. New Baldwin Home (for Men and Boys).

Upon completion of the new hospital, the old hospital was ~~reconditioned~~ and equipped as a unit with a capacity for about thirty patients, under the supervision of the Brothers of the Sacred Hearts. The patients and brothers, who had long been at the original Baldwin Home at Kalawao, were then moved to Kalaupapa. The old home was dismantled and demolished, all of the buildings being beyond repair. The board wanted all patients brought to Kalaupapa for better supervision, more ~~direct~~ contact, and to better avail themselves of various services supplied by the board. Of the old hospital group, four or five

1. Board of Hospitals and Settlement, Territory of Hawaii, Annual Report for the Fiscal Year Ended June 30, 1938, pp. 23-24.

outbuildings were demolished; the former nursery, reconditioned and refurnished throughout, was then occupied by the brothers; the nurses' cottage housed four or five patients; and the main building was remodelled to provide accommodations for about thirty patients plus dining room and kitchen facilities.

A new wing was added to the brothers' cottage to provide a small chapel arranged for combined use by the brothers and the patients; a garage and shop and modern chicken unit were built for the brothers. Other features included a garage and a billiard and recreation room for patients. A considerable area was planted in bananas and papayas. This task was important in providing an ample supply of locally grown fruit to the settlement.²

C. Bay View Home (for the Aged and Blind)

On July 1, 1931, this home consisted of four twelve-room dormitories with toilet and bathing facilities, a central dining room-kitchen building, a hot water plant furnishing limited service, a store house for patients' belongings, a small chapel, and three cottages, two of which were later removed. After July 1, the following changes were made:

1. Patients' Quarters

A small extension was made to each of the four dormitories, all of which were reconditioned, including full screening. Capacity was increased from forty-four to fifty-six patients.

2. Other Cottages

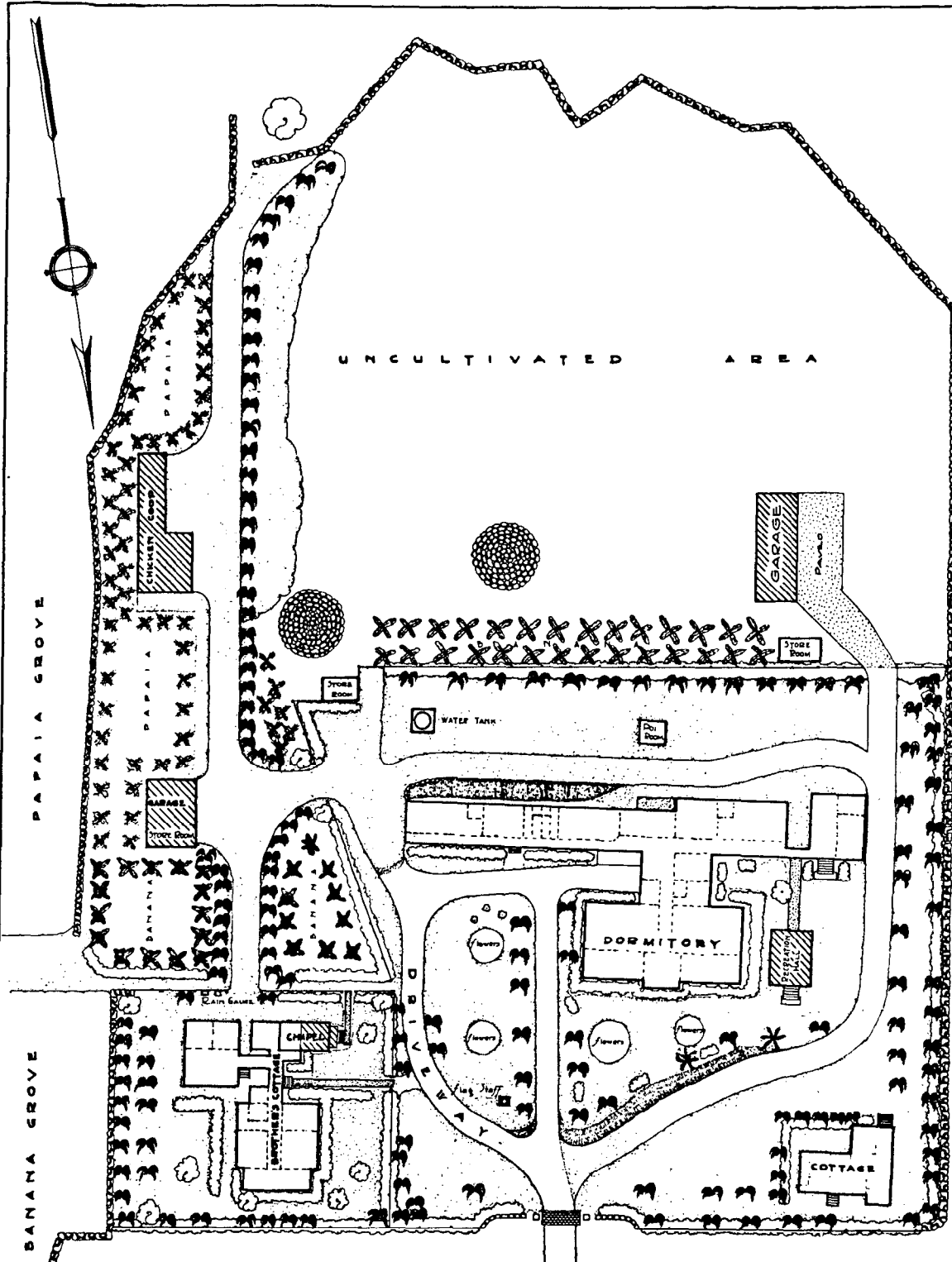
A new cottage was built for the home supervisor and the one old cottage was reconditioned for kitchen workers.

3. Dining Room-Kitchen



This unit was much improved by the addition of a meat and vegetable room, a covered service platform, and new equipment.

2. Ibid., pp. 24-25.

Map No. 10. Plot Plan A, Baldwin Home, Board of Hospitals and Settlement, June 1938, Annual Report for the Fiscal Year Ended June 30, 1938.



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LEGEND:
 New CONSTRUCTION SINCE 1931
 EXISTING 1931 & SINCE IMPROVED
 ENTIRE GROUNDS IMPROVED

BOARD OF HOSPITALS AND SETTLEMENT
 TERRITORY OF HAWAII

PLOT PLAN - A
BALDWIN HOME
KALAUPAPA, MOLOKAI

0 20 40 60 80 100
 JUN 1, 1936
H. H. Engel
 SUPERINTENDENT OF HOSPITALS & SETTLEMENT

Illustration 144. Building No. 3, Bay View Home, 1949. Courtesy Hawaii State Archives, Honolulu.

Illustration 145. Chapel, Bay View Home, later a recreation hall, no date. Courtesy Kalaupapa Historical Society, Kalaupapa.



Map No. 11. Plot plan A, Bay View Home, Board of Hospitals and Settlement, June 1938, Annual Report for the Fiscal Year Ended June 30, 1938.

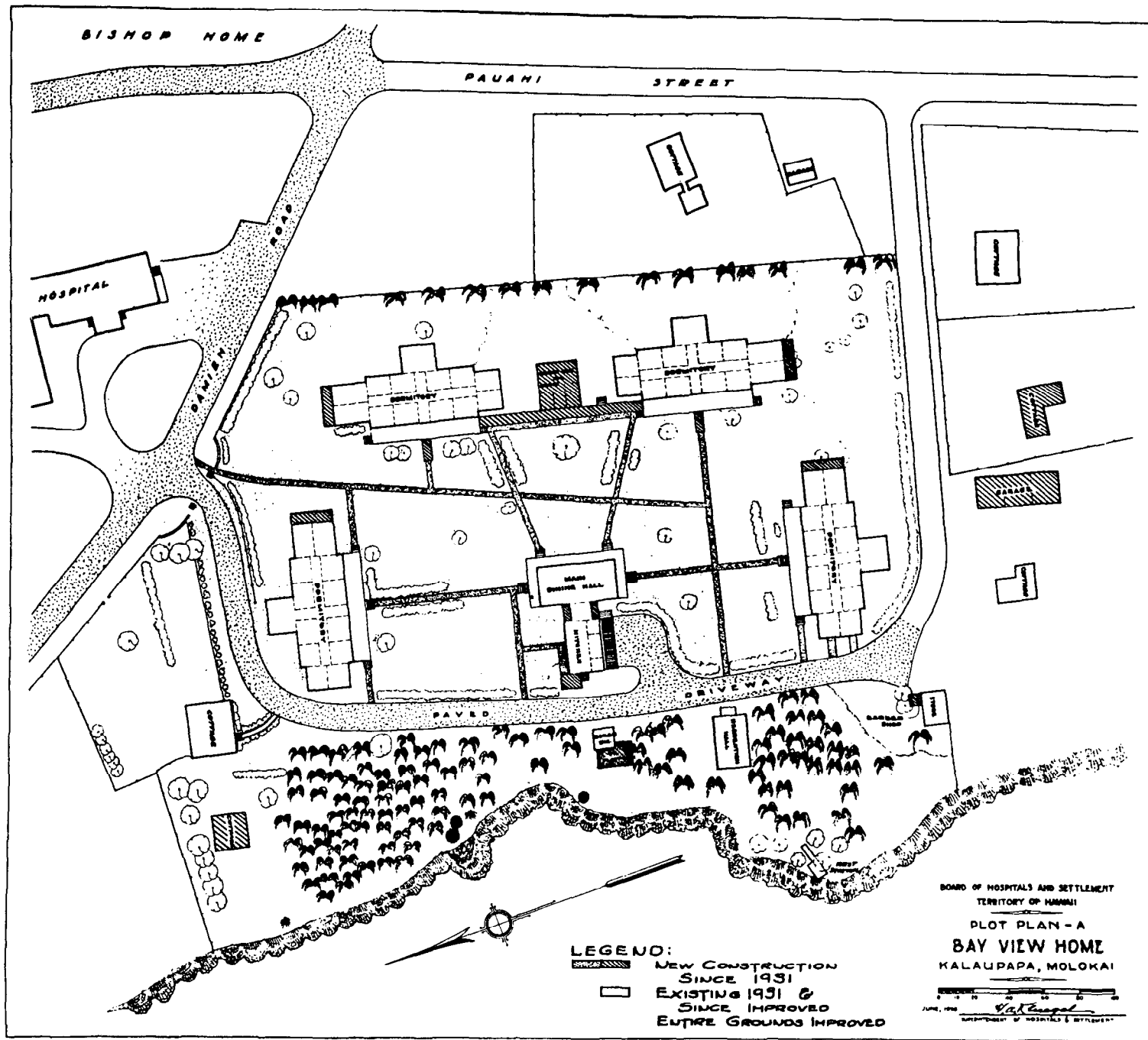


Illustration 146. Old Bishop Home infirmary, no date. Courtesy Hawaii State Archives, Honolulu.

Illustration 147. Bishop Home infirmary, 1938, after enlarging and reconditioning. Courtesy Kalaupapa Historical Society, Kalaupapa.



Illustration 148. Buildings Nos. 3 and 4, Bishop Home, no date.

Illustration 149. Building No. 2, Bishop Home, no date. Photos courtesy Hawaii State Archives, Honolulu.

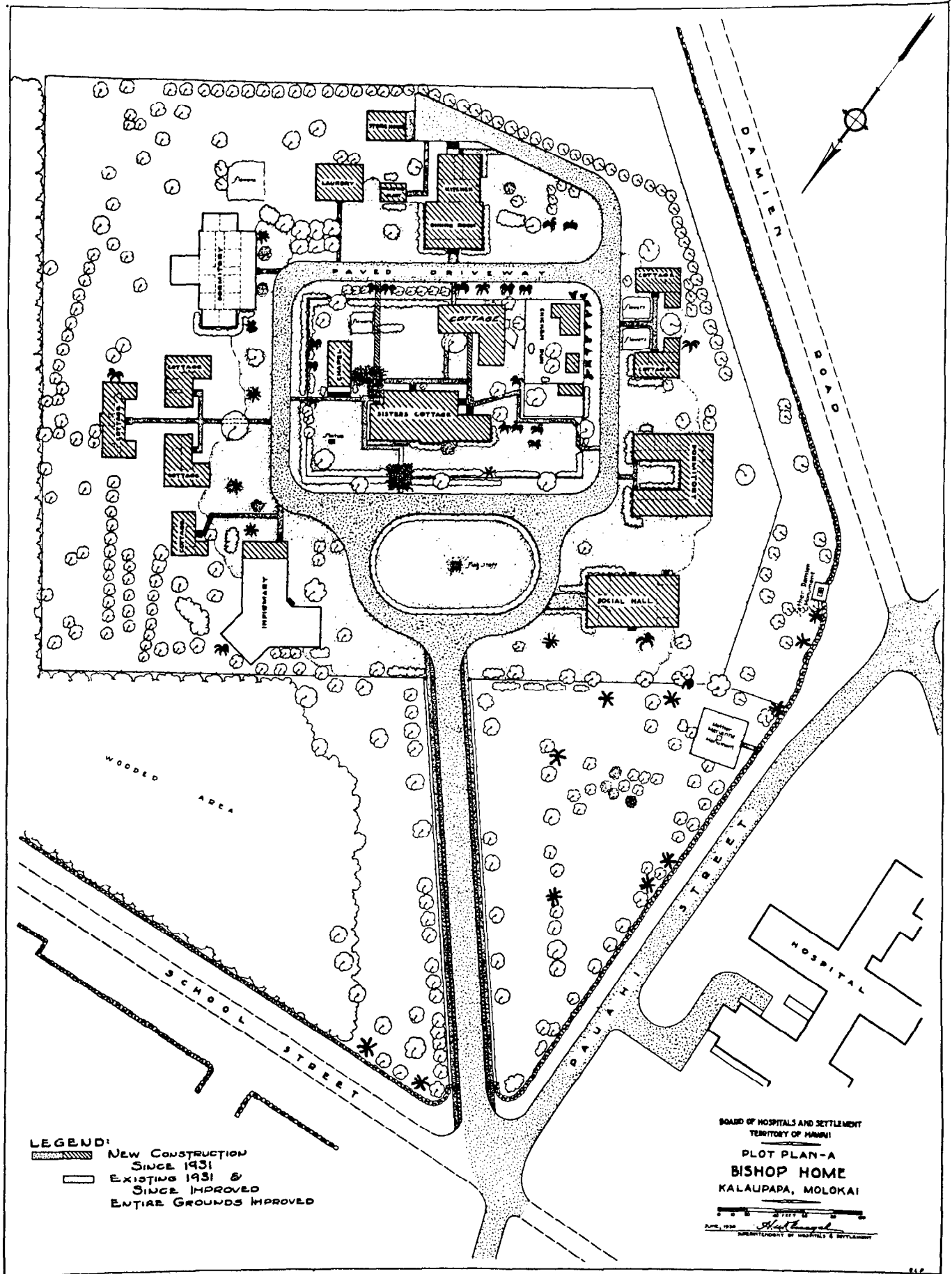


Illustration 150. Building No. 9, Bishop Home, no date.

Illustration 151. Cottages northeast of sisters' convent, Bishop Home, 1949. Photos courtesy Hawaii State Archives, Honolulu.



Map No. 12. Plot plan A, Bishop Home, Board of Hospitals and Settlement, June 1938, Annual Report for the Fiscal Year Ended June 30, 1938.



LEGEND:
 [Hatched Box] New Construction Since 1931
 [Solid Box] Existing 1931 & Since Improved
 [Dotted Area] Entire Grounds Improved

BOARD OF HOSPITALS AND SETTLEMENT
 TERRITORY OF HAWAII
PLOT PLAN-A
BISHOP HOME
 KALAUPAPA, MOLOKAI
 JUNE, 1936
Arthur H. ...
 DEPARTMENT OF HOSPITALS & SETTLEMENT

4. Serving Kitchen and Dining Room

A small serving kitchen and dining room for the blind was constructed between two dormitories occupied by those patients with a covered runway 206 feet long connecting the lānaís of the two dorms. The medical dressing station for Bay View was also located in this building.

5. Storerooms

Available space under the dining room and one dormitory was utilized for the construction of two storerooms, one for patients' effects and the other for home property.

6. Barber Shop

The old storehouse was remodelled and occupied by a patient operating a small store with adjoining barber shop.

7. Boiler Plant

The boiler plant and hot water circulating system was rebuilt.

8. Garage

A six-stall garage for patients' cars was built.

9. Recreation Hall

The former chapel was converted into a recreation room.

10. Driveways, Walks

The unit was given a new paved driveway and concrete walks. The grounds were also improved.³

D. Bishop Home (for Women and Girls)

On July 1, 1931, within the inner compound occupied by the sisters were a convent, chapel, and storeroom cottage. In the patients'

3. Ibid., pp. 25-26.

area were an infirmary, social hall and school room, dining room and kitchen, three store rooms, two wash houses, two large dormitories, five dormitory cottages for about six persons each, and several small outbuildings. After July 1, all of the above buildings were removed, with the exception of the infirmary, which was enlarged and reconditioned, the twelve-room dormitory, also reconditioned, and the small chapel, which was incorporated as part of a new chapel. Other new buildings and improvements were one nine-room dormitory, six cottage dormitories, a social hall, a dining room-kitchen unit, a laundry for patients, a hot water plant and circulating system connecting all buildings, fencing, paved driveways and walks, and improved grounds.

In the sisters' compound, a new convent, a chapel, a modern chicken unit, and a tool and fern house were built, and a six-room cottage was added to accommodate additional sisters included in the operation of the hospital.⁴

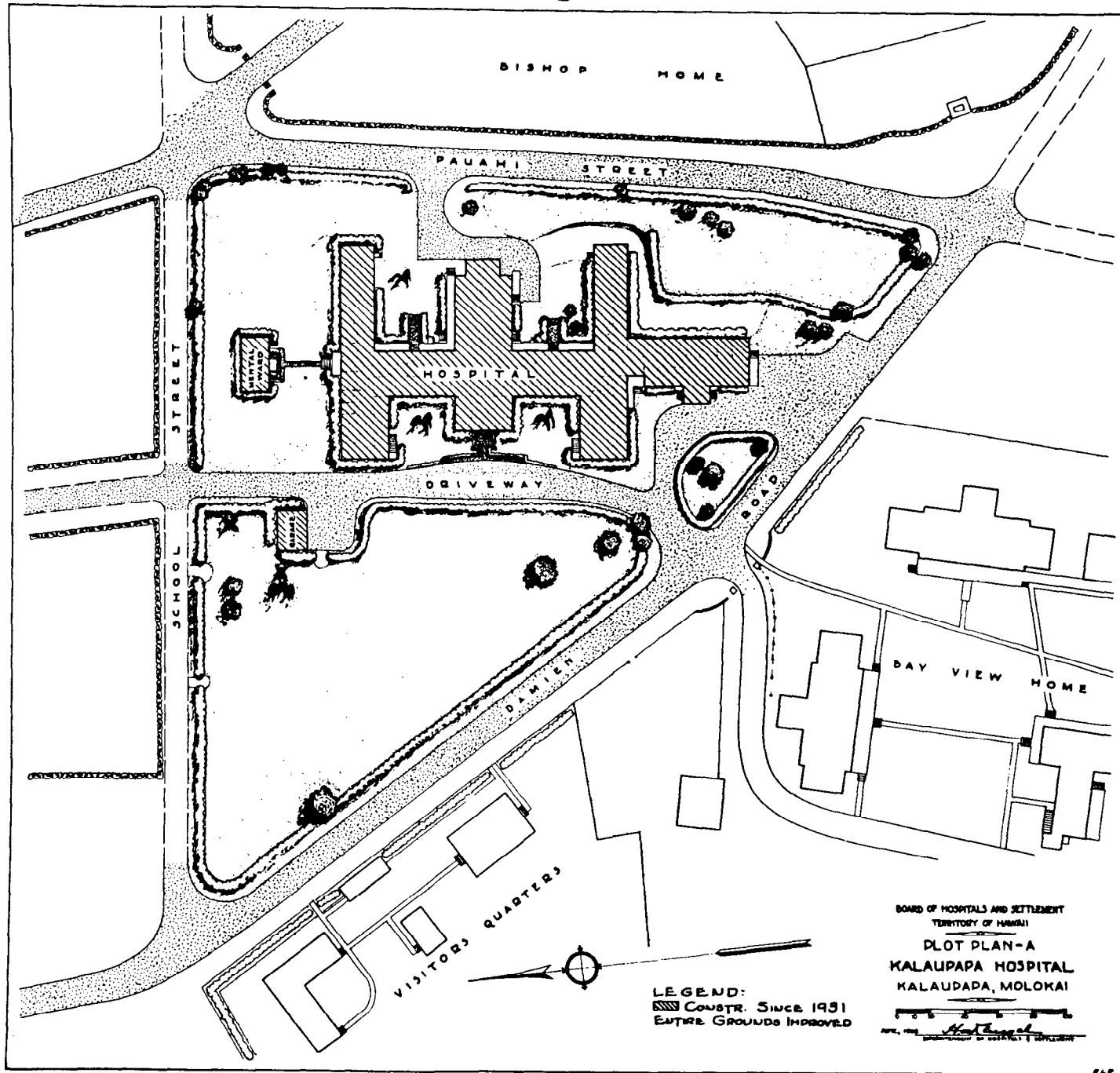
E. Hospital

In selecting a well-located and otherwise suitable area for the site of the new hospital, two improved blocks were designated for the purpose and the twelve houses and numerous outbuildings thereon were either removed to other locations or demolished. The triangular site of about two and one-half acres was bounded by Damien Road and Puahi and School streets. A dispensary unit for the treatment of outpatients was an integral part of the main structure, and a mental ward building with accommodations for four patients and attendant and a four-stall garage for the use of the staff were added. Paved driveways connected with paved streets on three sides of the site.⁵ In October 1938 the operation of the hospital was placed in charge of the Sisters of St. Francis. They supplied two nurses and other personnel with additional secular staff members supplied by the Board of Leper Hospitals and Settlement as required.

4. Ibid., p. 26.

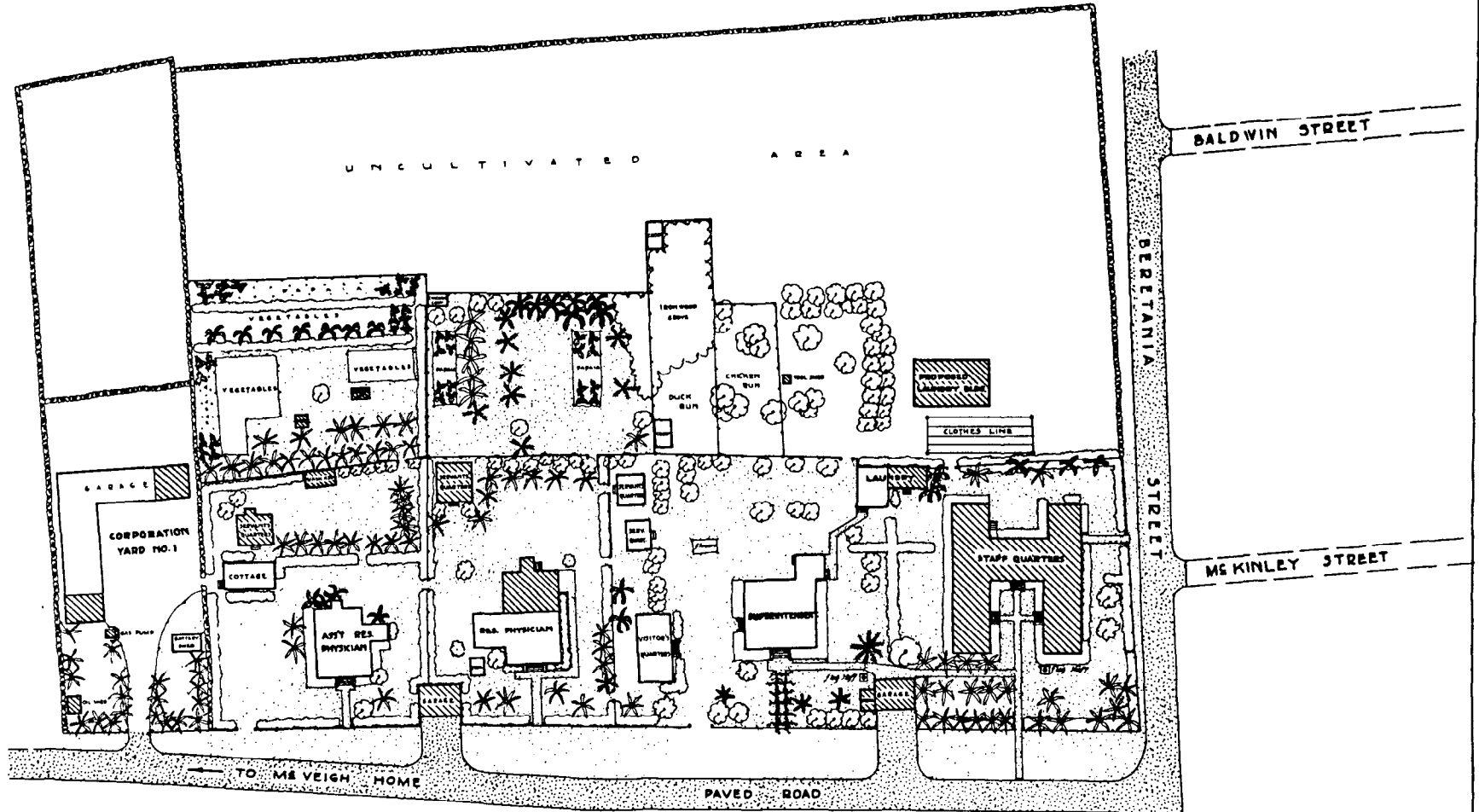
5. Ibid., pp. 26-27.

Map No. 13. Plot plan A, Kalaupapa hospital, Board of Hospitals and Settlement, June 1938, Annual Report for the Fiscal Year Ended June 30, 1938.



Map No. 14. Plot plan A, Staff Row, Board of Hospitals and Settlement, June 1938,
Annual Report for the Fiscal Year Ended June 30, 1938.

501



LEGEND:
 [Hatched Box] New Construction Since 1931
 [Solid Box] EXISTING 1931 & SINCE REPAIRED
 [Dotted Box] ENTIRE GROUNDS IMPROVED

DIVISION OF HOSPITALS AND SETTLEMENT
 TERRITORY OF HAWAII
PLOT PLAN-A
STAFF ROW
KALAUAPAPA, MOLOKAI

F. Staff Row

In Staff Row were the homes of the resident and assistant physicians, the superintendent, and their families. Also present were quarters for certain personnel and visitors and for servants, and garages. After July 1, 1931, certain changes were made:

1. Resident Physician's Home

After July 1, the kitchen-washroom section of the dwelling was replaced with new equipment, the old servants' quarters were replaced and refurnished, and the old dispensary was moved to a better location and reconditioned for use as a storeroom.

2. Assistant Resident Physician's Home

This dwelling was reconditioned and refurnished and new servants' quarters were built, as were a new washhouse and store room: also a fruit and vegetable garden area was developed with a fern house and pigeon loft.

3. Superintendent's House

The superintendent's residence and the adjoining servants' quarters, laundry, and former guest cottage, now occupied by personnel, were reconditioned and refurnished.

4. Staff Cottage

A new staff cottage with dining room and kitchen and eleven rooms and baths was built to accommodate certain personnel and visitors.

5. Central laundry

The most recent improvement was a central laundry and hot water plant and circulating system serving all buildings on Staff Row. The old administration office, formerly in this area, was removed and the offices of the superintendent were located in the old visitors' quarters near the landing. Two two-stall garages replaced the three former one-stall units.⁶

6. Ibid., p. 27.

G. Industrial Center and Other Structures

The development of the industrial center constituted a particularly outstanding accomplishment of the board's program after 1931. Also added were various features of a quasi-public nature throughout the settlement:

1. Store and Service Station; Post Office-Courtroom

These structures were of semi-fireproof construction using locally made hollow tiles.

2. General Warehouse

This building was of reinforced concrete and measured thirty by sixty feet.

3. Laundry

A fully equipped fireproof building, it rendered free service to patients.

4. Shops Building

This was a fireproof building housing the carpenters, plumbers, electricians, and blacksmiths.

5. Ice and Cold Storage Plant

This fireproof building had the capacity of making about one ton of ice per day with separate refrigeration compartments and accessory features.

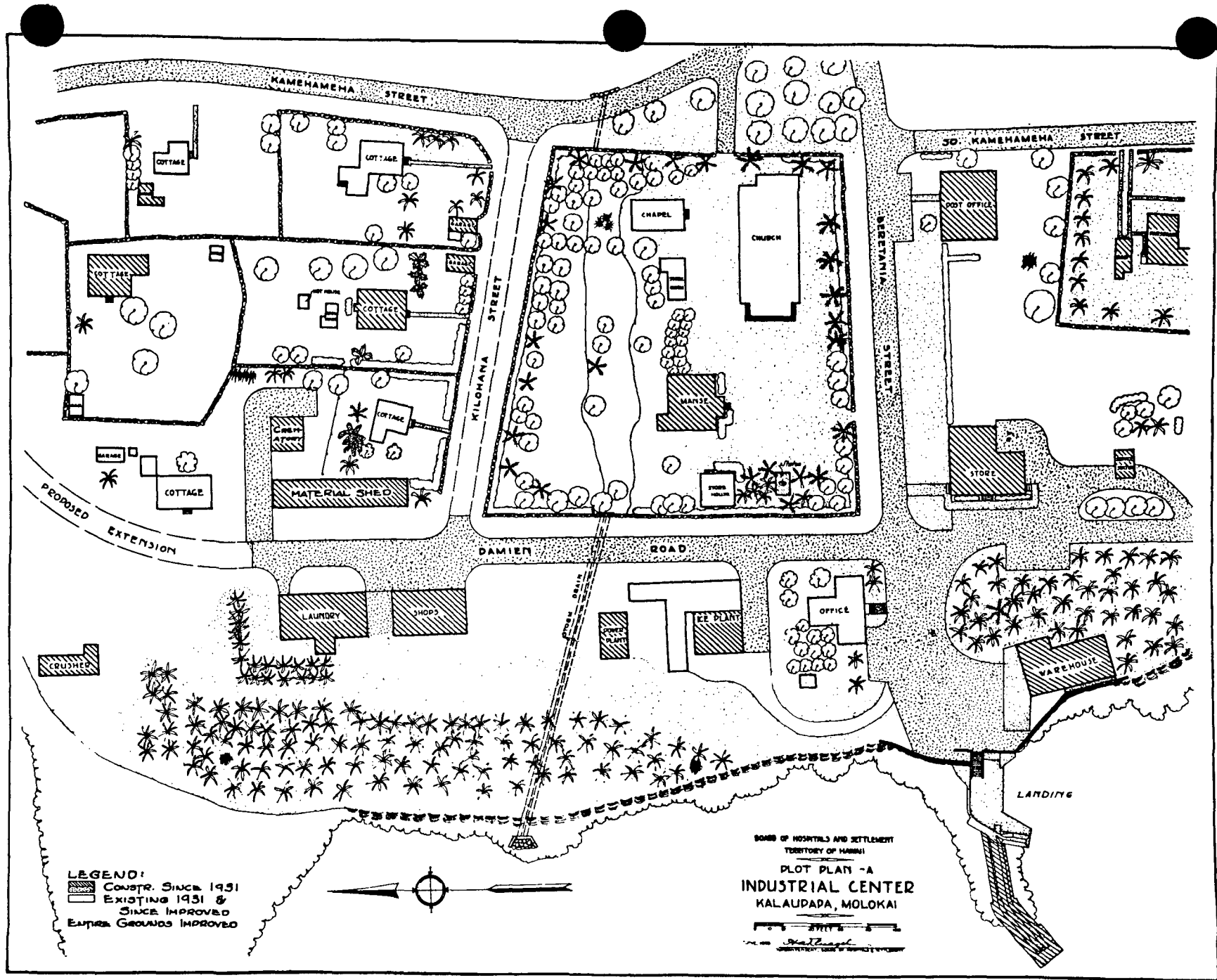
6. Poi Shop and Food Department

This building was remodelled and new equipment added.

7. Power House

The power house was enlarged and electric service extended to the entire settlement.

Map No. 15. Plot plan A, Industrial Center, Board of Hospitals and Settlement, June 1938, Annual Report for the Fiscal Year Ended June 30, 1938.



LEGEND:
 [Hatched Box] Constr. Since 1951
 [Solid Box] Existing 1951 & Since Improved
 [Dotted Area] Entire Grounds Improved

BOMB OF HOSPITALS AND SETTLEMENT
 TERRITORY OF HAWAII
 PLOT PLAN - A
 INDUSTRIAL CENTER
 KALAUPAPA, MOLOKAI
 [Scale Bar]
 [Signature]

Illustration 152. Old bathhouse, old dispensary that has just burned, and Wilcox Memorial Building in background, 1932. Site now occupied by visitors' quarters. Courtesy Kalaupapa Historical Society, Kalaupapa.



Illustration 153. New visitors' quarters dormitory, no date.

Illustration 154. New visitors' quarters kitchen-dining room, no date.
Photos courtesy Hawaii State Archives, Honolulu.



Illustration 155. Visiting room at visitors' house, no date. Courtesy
Hawaii State Department of Health, Honolulu.



Visitors bring their own food, stay inside the compound (unless accompanied by an officer) and visit with the patients on the outside of the screen.

8. Material Shed and Tile Plant

This plant supplied concrete hollow tile for various uses.

9. No. 2 Corporation Yard

This area was fully equipped with a repair shop, service station, and gasoline storage tanks.

10. Rock Crushing Plant

This plant was electrically operated with a capacity of about forty tons of crushed rock per day.

11. Crematory

This structure was of approved design for use on a noncompulsory basis.

12. Visitors' Quarters

This new unit comprised a two-wing dormitory with separate dressing room facilities for men and women, a kitchen-dining room building, and a visiting pavilion. It was used by visitors to patients on periodic trips to Kaluapapa.

13. Bakery

This was operated by nonpatient personnel.

14. Mission Cottages

One cottage had been built adjoining the Latter Day Saints Church, a residence had been constructed for the Catholic priest, and a parsonage and garage erected for the resident minister of the Calvinist Church.

15. Social Hall

New movie equipment and screens were installed and the entire building reconditioned.

16. Police Headquarters

The former courthouse was reconditioned and was used as the residence of the sheriff and as police headquarters.

17. Administration Building

With the construction of the new visitors¹-to-patients quarters, the old unit was remodelled to provide for the superintendent's office, the staff post office, and other administrative functions.

18. Kalaupapa Airport

This facility was opened officially August 2, 1933, by Lt. Col. Gerald Brandt, Air Officer, Hawaiian Department, United States Army. Frequent but not regular service was maintained by Inter-Island Airways. Landings occasionally were made by army and navy planes. The field had a 1,900-foot runway and a varying width of 250 to 500 feet. It was maintained by the Board of Leper Hospitals and Settlement.

19. Road Paving

This program started in 1935. By 1938 about 3.2 miles of pavement had been laid, including driveways, parking areas, streets, and a portion of the road to the airport. The pavement was asphalt macadam, laid only about three inches thick because of the natural rocky base existing in the area.

20. Boat Landing

An extension was made to the breakwater and the boat channel was cleared of rocks.⁷

H. Waikolu Water Supply System

A number of improvements were made to the water supply system beginning in 1937. The following excerpt clearly describes what this work entailed:

7. Ibid., pp. 28-29.

Illustration 156. Old courthouse, reconditioned and used as police headquarters, no date.

Illustration 157. Interior of social hall, 1939. Photos courtesy Kalaupapa Historical Society, Kalaupapa.

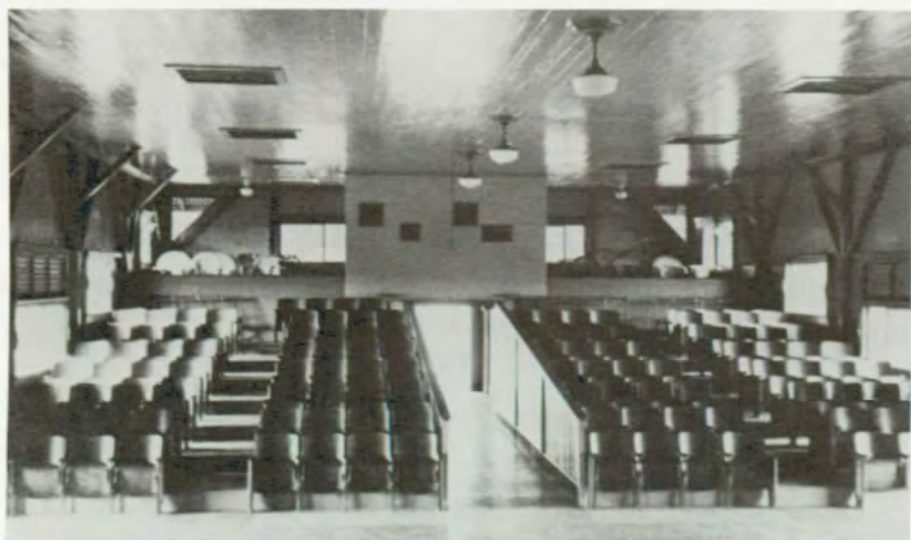
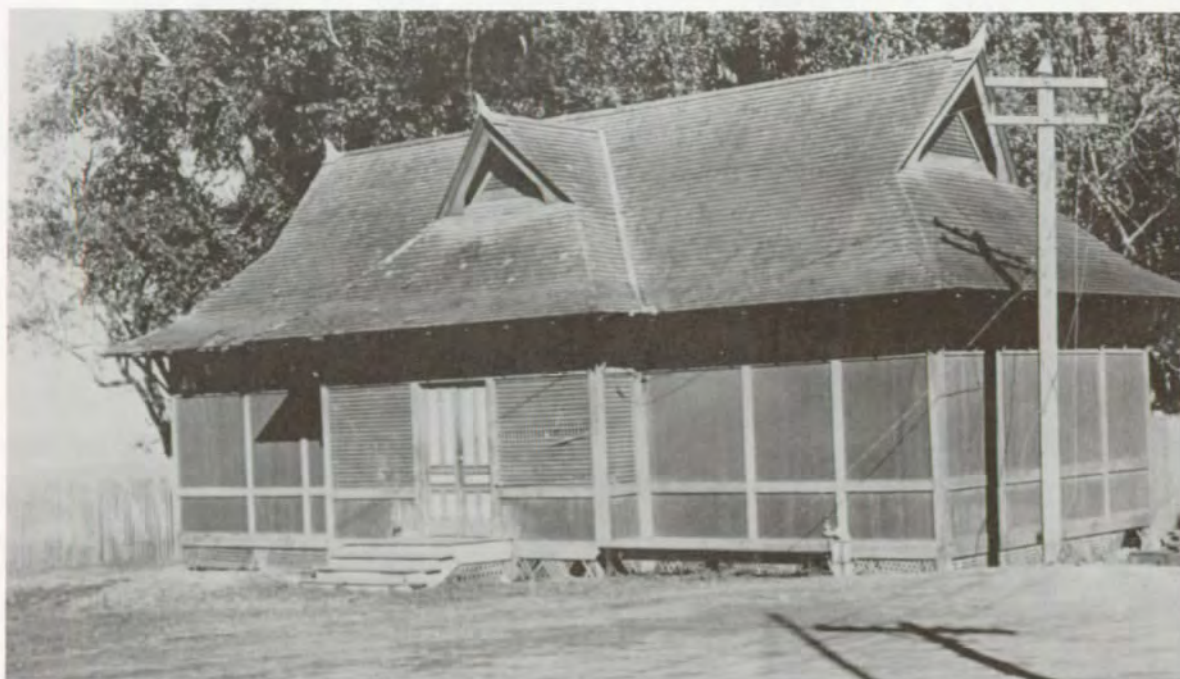


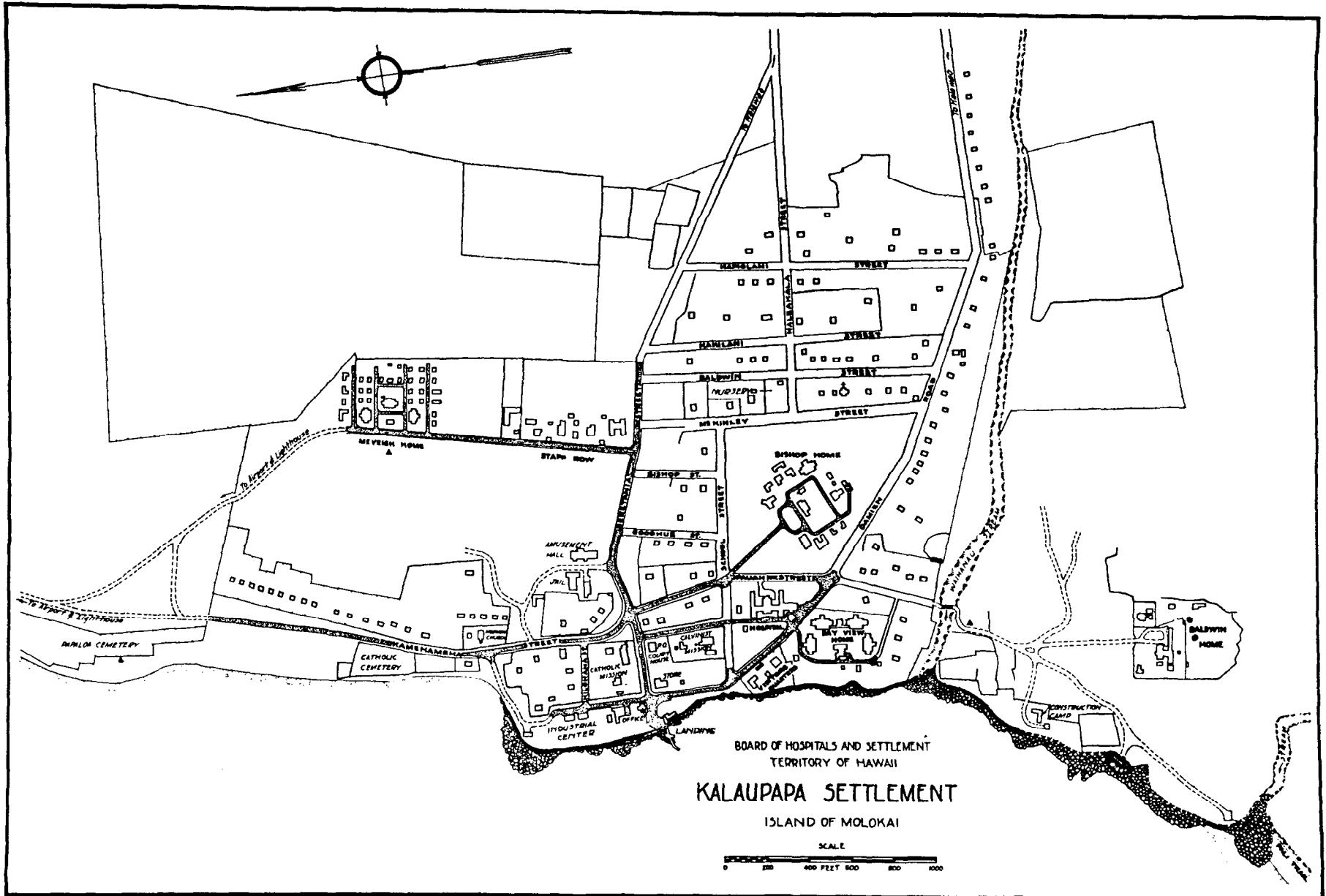
Illustration 158. Old visitors' house, 1932. Courtesy Kalaupapa Historical Society, Kalaupapa.

Illustration 159. Main office, 1949. Courtesy Hawaii State Archives, Honolulu.



Map No. 16. Layout of Kalaupapa settlement, Board of Hospitals and Settlement, June 1938, Annual Report for the Fiscal Year Ended June 30, 1938.

519



For present purposes [1938], the supply is considered to end at the 750,000 gallon storage tank (with inlet elevation of 303) on the Kalawao Road about 6500 feet southeast of Kalaupapa.

The improvements described were started in October, 1937, and constituted the only work of this permanent character performed on the system since its installation about forty years ago, except occasional repairs to breaks in flume or pipe.

The old system consisted of a wooden flume which carried water from a diversion ditch off the main Waikolu Stream at an elevation of about 520 feet. The flume extended 1800 feet down the valley, emptying into a concrete box, from which an 8-inch cast iron line ran to the 750,000 gallon tank. The flume was not covered, and was supported over several gulch crossings on wooden trestles. The secondary supply, from Notley Springs, originated farther down and to the eastern side of the valley at elevation 380 feet. The flow from the springs was collected behind a low concrete wall, creating a small basin, and then led down to the main line through an 8-inch cast iron line. From this point the main line continued to the mouth of the valley, along the seacoast at the foot of the pali, over the former Federal Reservation, and thence to the 750,000-gallon storage tank above Kalaupapa.

The first unit of work was the construction of a new dam at Notley Springs, the secondary (but more stable) source of supply. This dam is of reinforced concrete, varying from six to ten feet in height, and about 65 feet long. The springs supply about 1 million gallons of water per day, of which the pipe line can take about 345,000 gallons. This source cannot be used simultaneously with the main source because of the difference in their elevations; however, if irrigation is restricted, it can well supply the Settlement in the event of interruption at the Waikolu diversion. As a matter of fact, it did act as the source during the period of several months when the new structures were being placed at the main headworks.

The work at the main intake was as follows: A new dam was constructed, blocking a diversion ditch mentioned in the description of the old system. This dam is located about 200 feet above the secondary source, and about 1900 feet farther up the valley; it is of reinforced concrete ten feet high at the center and 35 feet long, fitted with the necessary accessories for overflow, cleaning, and screening of the supply. It forms a pool which is important only as a collecting and rough sedimentation basin.

From here, the water travels in a covered box culvert, of concrete, to the aerator, also of concrete, located 100 feet downstream from the dam.

The aerator is of the step type, and serves to make the water less corrosive; the water from the main stream is slightly acid, and aeration tends to give it a neutral or even basic reaction, thus protecting the pipelines below.

Downstream from the aerator, and connected by another section of covered box culvert, is a sedimentation chamber of concrete, baffled so as to change the course of the stream, and of such size that the velocity of the stream is reduced. Those two conditions allow the suspended matter to drop out, and the clear water continued into the new pipe line.

These structures comprise the headworks of the system. From the last of these, the sedimentation chamber, starts the new section of pipe, replacing the old wooden flume. The section is about 1800 feet long and is laid with 8-inch concrete hume pipe. The line is placed well against the slopes along which it runs and is not vulnerable to slides that may occur above it. This feature alone is a distinct improvement over the old flume, which by its nature was a trap for whatever debris came down the slopes. We now have a completely closed conduit from the headworks to the storage tanks, and this must be counted a major advance in the water system. The 1800-foot section ends where the wooden flume ended, and connects to the old 8-inch cast iron pipe.

The existing line was bolstered in several weak points, notably two stream crossings in Waikolu Valley, another at the mouth of Waialaea [sic] Valley, and a ravine crossing within the Federal Reservation. At the stream crossings the pipe was encased in a concrete jacket, and at the ravine a flanged section was installed, resting upon concrete piers on each side of the ravine, the pipe being self supporting for the short distance between. The 8-inch line branches into a 4 and a 6-inch line in this locality, and the connections formerly spread over a distance of 400 feet, an impractical and unhandy arrangement. The fittings have been centralized, and the reduction and branch now occur at one point. One new clean-cut branch and valve was placed in the line at the low point just preceding the rise to the Federal Reservation, and this completed the repairs to the old line proper.

At the 750,000 gallon steel tank, the inlet line and overflow line were moved up to the limiting positions for these lines, creating extra storage space in the tank. The tank was cleaned inside and out, painted aluminum outside, and given an interior treatment of waterproof, rust-resisting material. The two smaller tanks of masonry are being repaired at this time to the extent of having their roofs replaced, the old galvanized iron roofs having deteriorated badly.

The entire project took 15 months to complete. The length of time is explained by the fact that all material had to be transported by pack animals, there were no mechanical aids

such as mixers used in the work, and the earthquake in February of 1938 damaged the old line extensively, necessitating immediate work on repairs to keep the water system in operation. The bulk of the imported materials used were landed at the mouth of Waikolu Valley by the steamer, temporary facilities having been provided for handling such cargo. This arrangement eliminated a substantial stretch of difficult packing, and also eliminated the necessity of handling the materials twice.

Improvements to the Distribution System throughout the Settlement should be undertaken in the near future.

8. Ibid., pp. 30-32.