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SOUTHWEST LEDGE LIGHT
NEW HAVEN, CONN.

Southwest Ledge Light Station, a white octagonal house built on a brown cylindrical pier, rests on the tip of a reefed breakwater ledge extending east of the main entrance to New Haven (Conn.) Harbor. Reaching to 57 ft. focal point, the 1,700 candlepower light, automatically operated, is visible for 13 miles.

The light was established in 1877 at the discontuance of old New Haven Light located about a mile inside the harbor on Five Mile Point.

Definite plans for the light began formulating following a resolution adopted by Congress on April 16, 1872. At first the question arose as to whether the rocky ledge, which lay in the middle of the main ship-channel into the harbor, should be removed by the Army Corps of Engineers as a hazard to navigation, or whether a light and fog signal should be erected to keep vessels from running upon it and other dangerous rocks in the vicinity. It was decided finally that the old New Haven Light was not nearly as beneficial to navigation as a new light situated on the rocky ledge would be for mariners confronted by the many hazards existing in the area of the harbor.

The estimated cost for building the light was $117,800. The first of appropriations from Congress by an act on March 3, 1873, in the amount of $50,000 allowed for commencing the construction of a foundation for the structure. The Lighthouse Board decided the foundation should be an iron tube 24 feet in diameter, filled with concrete and surrounded by riprap.

The surface of the ledge was made to approximate a level by a layer of concrete at least 4 feet thick. Two courses of masonry, each 18 inches thick were laid on the concrete. The upper surface of the masonry measured 4 feet below mean low water, and 10 feet below mean high water, and 11 feet 3 inches below extreme high water. The foundation cylinder rested directly on the masonry. It was composed of cast iron plates 6 feet high, 4 feet wide, and 2 inches thick, with a curve of 15 degrees, which were bolted together. The cylinder ran 24 feet wide in diameter and about 30 feet high. The top of its gallery scanned the water a fraction over 18 feet above extreme high tide. It was filled in solid with concrete to the top. An enrockment of about 3,000 tons of large granite blocks surrounded the pier.

The tubular foundation was surmounted then by an irregular octagonal house and tower from which shown a fourth-order fixed white light, 57 feet above the level of the sea. The light flashed for the first time on the night of January 1, 1877.

Because of severe winter storms, which tossed boulders into the foundation ring, work was delayed considerably, and not until July of 1876 was the foundation finally completed. Much of the carpentry work during this time was done at a nearby lighthouse depot, from where it was taken to the light station in October, and the principal part of the work completed in November.

The peculiar feature of this structure was that being round it offered slight obstacle to floating ice, and it was a monolith of artificial stone surrounded by a vaneering of iron sufficient to retain it in place until concrete filling gained the requisite hardness by age. It was the first of its kind. Its stability was first tested in the hurricane of September 1892. (Lighthouses on Tubular Foundations - Mod. LHS 1899.)

During the next several years following the lighting of the new station, the keepers encountered much difficulty from storms. Tons of riprap had to be brought in to replace boulders tossed out of the ring by pounding waves. Keepers complained of the station taking in every rain, and being very damp and uninhabitable, and that water caught from roof tanks proved unfit to drink. Landing spaces for the keepers' boats were filled up with stones forced in by the storms.

In 1880, the outside of the structure received repairs and a red coat of paint. About 1888, four new davits were set up, the south boat landing cleared of stone, duplicate second-class Daboll hot-air engines for the fog signal and reservoirs installed in the cellar, two water tanks removed from the cellar and replaced by coal bins, and minor repairs made. A red panel was fitted in the lantern covering Branford Reef and Gangway Rock, which was first exhibited on May 15, 1889.

A crane was attached to the tower in 1891, for hoisting the keepers' boats and materials out of the water. The following year saw the addition of an oil house with a capacity of 50 boxes outside the landing gallery. On January 1, 1893, the caloric engines and Daboll trumpet fog signal were discontinued. A new clock cord was fitted for the bell.

On March 30, 1897, there was established an improved fog signal consisting of a second class Daboll trumpet, operated by compressed air.

Between 1899 and 1911, new light stations and other improvements made to aid navigation in the New Haven Harbor area, somewhat lessened dependency on Southwest Ledge Light.

By 1950, the Commander, 3rd Coast Guard District and Coast Guard Headquarters in Washington, D. C., began exchanging proposals for changes on the Southwest Ledge Light. Deterioration of living quarters, equipment, and the

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exterior of the structure necessitated a decision. In June 1953, work was undertaken to make the light an unattended station.

Heavy galvanized metal covering and a weather proof type ventilator, replaced the old leaking sheet metal roofing. All the mechanical equipment, furniture, household equipment, heating system, and the refrigerator were removed.

The station previously lighted by kerosene lamps received a new electrical treatment. The old IOV type lighting system was replaced by a 375 MM electric lantern installed on the same steel lantern pedestal. The electric lantern was equipped with a 32-volt, 250 watt C5A filament lamp complete with a 4-lamp lampchanger. This supplied the present characteristics of the 1,700 candlepower light visible for 13 miles - - - red flash every 5 seconds, light 2 seconds, eclipse 3 seconds.

The old Ingersoll-Rand Waukashaw units that air operated the tyfon type fog horn since 1927, of which the compressor units had to be hand cranked, was replaced by a one horsepower electric siren. The new fog horn, installed in duplicate, was located approximately in the same position as the old. Characteristics of the new fog signal consist of one blast every 20 seconds; blast 4 seconds, silent 16 seconds.

The light, controlled by a timer clock, and the fog signal apparatus receive commercial power by means of a submarine cable connected to the light station with an electric switch installed on shore at Morgan Point. An emergency light operated by a fully automatic gasoline-driven generating plant is ready to take over in event of failure of the regular light.

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This generating plant, an automatic Diesel engine driven 5 KW, 115-Volt, 60 cycle, single phase AC generator stands by on the concrete-covered first floor of the light station.

The four Coast Guardmen--a Boatswain's Mate, 1st class; an Engineman, 2nd class; a Seaman; and a Fireman--who manned the station were assigned to other district units, and replaced by a lamplighter. The lamplighter operates the switch from shore, and has the duties of painting the structure, the servicing and operation of the generator, and the responsibility of taking care of minor repairs.

After disestablishing the former light on 28 July 1953, conversion of Southwest Ledge Light from an attended to/an automatic light station was completed the following month on 15 August 1953.

(Historical data from National Archives; other data from CG HQ A/N files.)