During its inspection of Old Cape Henry tower in 1872, the Light-House Board noticed troubling structural damage to the landmark. The inspector described “large cracks or openings, extending from the base upward,” on six of its eight walls. “Four of these,” the report noted, “are apparently less dangerous than the other two, and alone would not warrant any great apprehension of danger, but the latter, viz those on the north and south faces, where the strength of the masonry is lessened by openings for windows, are very bad, extending from the base almost to the top of the tower.” The inspector concluded that a new tower must be built, for the old one was “in danger of being thrown down by some heavy gale.”

Over the next six years much the same warning was issued repeatedly at each inspection. Finally, an appropriation of $75,000 was granted in June of 1878 for the purpose of replacing Cape Henry’s light. Having delayed the project for the better part of a decade, the Light-House Board now proved itself more than eager to begin. In its 1879 annual report, the Board enthusiastically reported that “drawings and specifications for a new 1st-order light house are now completed and ready for distribution to bidders.” Negotiations for six acres of land were also underway, and the search was on for contractors to complete the metal work. As this new light was to be comprised of enormous cast iron plates bolted together, this was a tall

order indeed (the tallest cast iron, fully enclosed light house in the United States, in fact). The Board was emphatic that “no unnecessary delay will be made in the prosecution of this important work.” They requested another $25,000 in funds.

In 1880 the Board insisted that steady progress was being made, in spite of delays in completing the metal work and land negotiations: “...about one third of the wrought iron work has been completed. The base section, comprising about 16 feet in height of the tower, is nearly completed.” An 1880 photograph shows construction materials strewn around the new base section emerging from the sand, with the reliable old stone tower standing staunchly in the background. Progress would remain frozen at this point for some time, however, as a number of obstacles presented themselves.

First there were complications in purchasing the required land, as the original 1878 allocation failed to make full provisions for this purpose. Once these were obtained, a pier needed to be constructed to cope with the tons of heavy materials and equipment needed to finish the light-house. The pier was completed in August of 1880, and soon thereafter “the broken stone for concrete, the hoisting-engines and steam concrete mixer, 600 barrels of imperial Portland cement, brick for the fog signal building and the fog siren machinery, with the exception of the boilers, were landed” at the site. After

enduring these tons of bricks and machines, the pier proved too fragile for a load of the tower iron work. The bridge which led from the loading pier onto the shore broke under the strain of a fully loaded car, and all the materials had to be taken to Norfolk by a hastily procured schooner for winter storage. Scarcely a day after they were rescued the pier collapsed entirely. This was not entirely the fault of the pier-builder; examination of the wood revealed that a boring worm had devoured much of the structure and weakened it considerably. Lacking a proper defense against the worms, the Light-House board elected to use scows (flat bottomed freight boats) to transport their cargo.

When work was suspended for winter in November of 1880, “the foundation excavation had been finished and filled with concrete to a depth of eight feet.” Also, a brick fog signal building, covered by a corrugated iron roof, had been built. One worker remained behind in this building to watch over the property and supplies. Work resumed next spring on May 30th, 1881, and progressed smoothly from this point forward. By mid June the extensive preparatory work had been completed; this included “putting hoisting engines in order, erecting derricks and preparing cars for hauling.” The metal plates, their completion long delayed by inept contractors, were finally ready to be shipped from their foundries. A first order lens was

ordered, and on December 14, 1881, the light was removed “from the old Cape Henry tower and placed in the newly constructed iron tower.” Keeper Jay D. Edwards transferred his attention to the new structure, and the old light-house instantly became an historic landmark.

Both of the towers stand on the southerly Cape of the Chesapeake Bay, one of the most important shipping channels in the nation. The vital ports of Norfolk, Newport news, Baltimore and Washington all are accessed through the Chesapeake, and the Cape Henry light-houses have provided nearly 220 twenty years of uninterrupted aid to navigation. New Cape Henry Light is adorned with one of the most distinctive paint jobs to be found on a light-house anywhere in the world. Its stark octagonal tower alternates between white and black rectangles on its various faces and provides an unmistakable day mark to travelers. This serves to distinguish Cape Henry from the white tower of Cape Charles to the North and the red brick tower at Currituck Beach to the South. The shaft is built mostly of cast iron plates “bolted together along their flanged edges. The entrance at the foot of the tower gives access to the ground floor, consisting of an octagonal room of ornate design.” A cast iron spiral staircase ascends to the lantern 150 feet above the ground; the lamplight is visible at a distance of 19 miles.

During the twentieth century the light-house has seen many

technological upgrades; these have accumulated to make it the very modern aid to navigation station that it is today. The “five concentric oil-burning wicks” originally installed were in 1912 converted to a an incandescent oil-vapor lamp. The pattern of light was originally a fixed white with a fixed red sector, the latter covering “the shoals outside of Cape Charles and the Middle Ground that extend from the entrance into the Chesapeake Bay.” In 1922, when the station was converted to electricity, this lighting arrangement was changed to a distinctive group flashing light, and was accompanied by two machine operated bells struck simultaneously every five seconds. The light-house is also augmented by a compressed air fog signal synchronized with a radio beacon, so that approaching vessels can ascertain their distance from shore during foggy conditions. The beacon was installed in 1929, making Cape Henry the second light-house in the United States to utilize such a device. A fog signal testing laboratory also resides at the station, “where investigations are conducted for the benefit of the entire Lighthouse Service.” Indeed the station has been of great scientific importance, as experiments in fog signals, radio, radar and even wind powered electricity have all been conducted there. In 1996, Cape Henry leaped into the twenty first century when a Differential Global Positioning System was installed.

Since 1984 the Cape Henry light has been fully automated,

rendering the presence of the Keeper obsolete. Since this time the light-house has been subject to U.S. Coast Guard concerns about the “prohibitive costs of maintaining the historical integrity of the structure.” The Coast Guard maintains about 50,000 aids to navigation, such as lighted buoys; only about 500 of these are lighthouses. Of these 500, all but one are fully automated. In a recent memo the commander of the 5th Coast Guard District defended his charge: “You...recommended that we excess the structure and...build a skeleton tower for the required optic...as the program manager, it is my decision to retain this lighthouse as one of the major landfall aids for the Chesapeake Bay entrance. A skeleton tower would not present the same visual daymark as the current 165-foot tower.” Some within the Coast Guard have purported to seek to demolish the tower, with the real aim of encouraging a historical interest group to assume responsibility for its maintenance. This has not transpired thus far, and the New Cape Henry Tower is still maintained by the Coast Guard as an active aid to navigation.

Resources:

Cape Henry Lighthouse, the First Lighthouse Built by the Federal Government. The Keeper’s Log- Spring 1999.

The Two Towers of Cape Henry. The Keeper's Log, Vol. 1, No. 4.

Why Preserve Lighthouses? The Historic Lighthouse Preservation Handbook. http://www.cr.nps.gov/maritime/handbook/part1.pdf