The Portland Observatory: Portland's greatest historical landmark

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The Portland Observatory is one of the most recognizable landmarks in Portland, Maine. The building is one of the oldest landmarks in the city and is currently preserved by Greater Portland Landmarks as a museum for all to visit[1]. The Observatory was first commissioned in 1807 by Captain Lemuel Moody to be a communication hub for Portland's harbor[2]. Moody, who built the structure himself, constructed it on the top of Munjoy Hill, and ship owners could pay Moody a fee for him to notify others when their ships were approaching the harbor. The Observatory helped the Portland harbor prosper during the Golden Age of Sail, survived the Great Fire of 1866, and was used continuously until 1923, when the two-way radio was invented. The Observatory was also used as a watchtower during the War of 1812 and the Second World War[3] and has been repaired various times over its long life.

The Observatory is a timber truss tower[4], and it stands at eighty-seven feet tall[5], meaning that its architect, Lemuel Moody, had to climb over a hundred stairs every day to reach the top of the tower. It is one of the highest points in Portland[6], and octagonal and tapered at the top to be sturdier. In the center it is held up by a pine post, and the building is actually not connected to the ground directly and is instead weighed down by ballasts like a ship would be, reflecting Moody's area of expertise as a sailor[7]. At the top of the building sits a telescope in the lantern, which

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[1] "The Portland Observatory," Greater Portland Landmarks, accessed September 26, 2024, https://www.portlandlandmarks.org/observatory.
[2] "Portland Observatory," ASCE American Society of Civil Engineers, accessed September 27, 2024, https://www.asce.org/about-civil-engineering/history-and-heritage/historic-landmarks/portland-observatory.
[3] "Portland Observatory," ASCE American Society of Civil Engineers, accessed September 27, 2024, https://www.asce.org/about-civil-engineering/history-and-heritage/historic-landmarks/portland-observatory.
[4] Structurae, "Portland Observatory (Portland, 1807)," Structurae, accessed September 27, 2024, https://structurae.net/en/structures/portland-observatory.
[5] Greater Portland Landmarks display materials, 27 September 2024
[6] Greater Portland Landmarks display materials, 27 September 2024
[7] Interview with the Docent of the Observatory, 27 September 2024

Moody used so that he could see incoming ships with more accuracy, being able to see up to eighteen miles away[8]. There is also a compass rose on the ceiling which allowed him to gauge their direction. The building was able to survive the Great Fire of 1866, and a large number of the photos of the aftermath that we have today were taken from its deck. The tower is currently owned by Greater Portland Landmarks, a nonprofit dedicated to the preservation of Portland's most historically significant landmarks, founded after the demolition of Union Station in 1961. It is the only remaining signal tower in the nation[9], is on the National Register of Historic Places[10] and is a National Civil Engineering Landmark[11]. It has undergone multiple renovations, most notably in 1939 after it was donated to the City of Portland, and later in 1993 after extensive water damage was discovered. Today, it is a popular tourist attraction in Portland and is a destination for many children to go to in elementary school to learn about the history of the city.

Lemuel Moody, the architect of the Observatory, was a ship captain-turned entrepreneur after one of his ships was captured by French privateers[12]. Moody came up with a system to identify ships coming into the harbor through a series of flags, where ships would pay Moody a subscription for him to raise flags when he saw their ship entering the harbor. Moody was able to attract many investors due to his great enthusiasm, and he designed the entire tower himself, without any type of formal education[13]. The tower was constructed similar to a ship with a post in the center, and the base being held down by granite weights weighing about 122 tons[14],

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[8] Greater Portland Landmarks display materials, 27 September 2024
[9] "The Portland Observatory," Greater Portland Landmarks, accessed September 26, 2024, https://www.portlandlandmarks.org/observatory.
[10] "Portland Observatory," ASCE American Society of Civil Engineers, accessed October 1, 2024, https://www.asce.org/about-civil-engineering/history-and-heritage/historic-landmarks/portland-observatory.
[11] "Portland Observatory," ASCE American Society of Civil Engineers, accessed October 1, 2024, https://www.asce.org/about-civil-engineering/history-and-heritage/historic-landmarks/portland-observatory.
[12] Greater Portland Landmarks display materials, 27 September 2024
[13] Interview with the Docent of the Observatory, 27 September 2024
[14] "Portland Observatory," ASCE American Society of Civil Engineers, accessed October 1, 2024, https://www.asce.org/about-civil-engineering/history-and-heritage/historic-landmarks/portland-observatory.

modeled after a ship using ballasts to stabilize it. Once Moody was finished, however, he kept building, constructing a residence for himself and his family, as well as a banquet hall for the public, a dance hall, a stable, and even a bowling alley[15]. Moody took interest in the weather too and would often give weather reports to the local newspaper, keeping detailed records of conditions from 1815 until his death in 1845, and his son continued to keep records until 1852[16]. Moody was an active correspondent regarding his signal system, shown in documents such as a letter in 1827 to John R. Parker, a former Boston merchant who was a telegraph officer known for his authority on semaphore signals[17]. Moody was also able to calculate the coordinates of Portland almost exactly just through observations of the sun[18], calculating it as 43 degrees, 37 minutes, 18 seconds north and 70 degrees, 11 minutes, and 10 seconds west. This was only one minute off from the actual position, being 43 degrees, 37 minutes, 18 seconds north and 70 degrees, 12 minutes, and 10 seconds west[19]. Moody helped to make the maps of the islands around Portland harbor even more accurate as well, partially thanks to his large telescope that was able to overlook most of the harbor and capture inaccuracies in the maps.

Moody started selling shares in the Observatory in March of 1807, and sold shares for twenty dollars each[20]. Moody produced a hundred shares and sold all of them except for a few he kept for himself, though he bought them back over time until he was the sole owner of the tower. We have extensive information on the planning of the tower, but little documentation on how it was actually built. However, in the 1990s carpenter Paul Redlon built a series of scale models

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[15] Interview with the Docent of the Observatory, 27 September 2024
[16] Greater Portland Landmarks display materials, 27 September 2024
[17] "Letter to John R. Parker," Minerva Library Catalog, accessed September 27, 2024, https://minerva.maine.edu/search~S24?%2FdPortland%2BObservatory%2Fdportland%2Bobservatory%2F1%2C6%2C41%2CB%2Fframeset&FF=dportland%2Bobservatory%2Bportland%2Bme&9%2C%2C33%2Findexsort=-.
[18] Interview with the Docent of the Observatory, 27 September 2024
[19] Greater Portland Landmarks display materials, 27 September 2024
[20] Greater Portland Landmarks display materials, 27 September 2024

showing how it possibly could have been constructed. We know that it was built by around fourteen men and boys[21], and that it was completed in 1807, but everything else is mostly speculation. Redlon proposed that a center pole was raised first, and the building was weighed down by ballasts, followed by scaffolding around the base. The eight corner posts were then erected, and horizontal beams were installed at each floor and secured with wooden pins. With this frame in place, the floors, walls, and stairs were able to be installed. Lastly, exterior scaffolding was erected to install windows, trims, and shingles[22].

Moody would notify the docks when ships were coming in so that merchants could prepare, which increased the efficiency of Portland's harbor significantly. By the mid-1840s, over 100 captains subscribed to Moody's services[23], and he would use his signaling system continuously until his death, with his son Enoch continuing the job. Moody would raise a series of flags, pennants, and even balls added later on one of three poles on the tower, the three poles indicated the types of ships that were approaching, and the merchants and dockworkers down below could see which ships were coming in and prepare to receive the ships, which made the harbor much more streamlined. This was incredibly important for one of the nation's most prominent harbors, rivaling the likes of Boston and Providence at its peak during the Golden Age of Sail in the mid to late 1800s[24].

While the Observatory was able to dramatically increase the efficiency of Portland's harbor during its time, it was also instrumental in the towns defense in the War of 1812. The Observatory was able to warn residents of British ships approaching the city and was able to help evacuate many citizens before the British burned down the city. The Observatory was also used

[21] Greater Portland Landmarks display materials, 27 September 2024
[22] Greater Portland Landmarks display materials, 27 September 2024
[23] Interview with the Docent of the Observatory, 27 September 2024
[24] Greater Portland Landmarks display materials, 27 September 2024

during the Second World War as a watchtower to make sure that there were no Axis planes coming towards the city, even after it had ceased commercial use[25]. The Observatory was one of the only wooden buildings to survive the Great Fire of 1866, since Enoch Moody, Lemuel Moody's son, was able to save the Observatory by pouring water down the sides of the building to make it harder to burn[26]. The building survived the fire, and when a temporary tent city was set up, it was placed just below the Observatory at the foot of the hill.

Sadly, not everything lasts forever. The Observatory was decommissioned in 1923 due to the invention of the two-way radio and was donated to the City of Portland by Lemuel Moody's great-grandson, Edward H. York[27]. The building needed significant repair, and it secured a grant from Franklin Roosevelt's Works Progress Administration, being repaired for about six thousand dollars and reopening in 1939 to an address by Donald B. MacMillan, an Arctic explorer[28]. The Observatory would need repairs a second time in 1993, this time due to water damage and the possible infestation of powder post beetles. The building was closed to the public in 1994, and the City of Portland helped Greater Portland Landmarks repair it, committing over half a million dollars to the project. The Observatory was fully restored in March of 2000, costing 1.2 million dollars[29], and is currently open for tours for all to enjoy, operated by Greater Portland Landmarks. The building was added to the National Register of Historic Places in 1972[30] and was designated a National Historical Landmark and a National Civil Engineering Landmark in 2006[31].

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[25] Greater Portland Landmarks display materials, 27 September 2024
[26] Interview with the Docent of the Observatory, 27 September 2024
[27] Greater Portland Landmarks display materials, 27 September 2024
[28] Greater Portland Landmarks display materials, 27 September 2024
[29] Greater Portland Landmarks display materials, 27 September 2024
[30] "The Portland Observatory," Greater Portland Landmarks, accessed September 26, 2024, https://www.portlandlandmarks.org/observatory.
[31] "The Portland Observatory," Greater Portland Landmarks, accessed September 26, 2024, https://www.portlandlandmarks.org/observatory.

The Observatory's long history, impressive architecture, and unique architect make it one of the most interesting buildings in the Portland area. Its long history, from its original use to improve the efficiency of Portland's harbor, to its use as a watchtower during the War of 1812 and Second World War, to its use as a tourist attraction today, make it extremely important. Its architecture is also unique, with its octagonal base and its ship like construction. Its architect is also interesting, a sailor with no formal education who dedicated his life to the Observatory, and who was very interested in the sciences surrounding the ocean, such as cartography and meteorology. Overall, the Observatory has a wonderful place in Portland's history and is hopefully preserved for decades to come.

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