National Park Service • U.S. Department of the Interior

Sleeping Bear Dunes National Lakeshore
Michigan

North Manitou Island Life-Saving Station

Cultural Landscape Report

April 2026

Cover Illustration: Mundus Bishop, 2024.

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North Manitou Island Life-Saving Station
Cultural Landscape Report

Sleeping Bear Dunes National Lakeshore

Michigan

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Introduction

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Introduction

Figure 1-1. North Manitou Island Life-Saving Station (source: Mundus Bishop, 2024).

This document presents the Cultural Landscape Report (CLR) for North Manitou Island Life-Saving Station (the study area) within Sleeping Bear Dunes National Lakeshore (the national lakeshore).

This CLR is the primary treatment document for the cultural landscape associated with North Manitou Island Life-Saving Station. This CLR presents detailed documentation of the historical development, existing condition, analysis of integrity, and identification of contributing features of the study area. This document establishes a treatment philosophy and recommendations to guide long-term care and stewardship of the cultural landscape.

This work builds upon previously developed studies, investigations, and documentation for the study area. These include the 2022 Sleeping Bear Dunes National Lakeshore Foundation Document, 2008 Sleeping Bear Dunes General Management Plan, Wilderness Study and Environmental Impact Statement, 2000 History of Agricultural Landscapes on North Manitou Island, 1998 North Manitou Island Life-Saving Station National Register of Historic Places (NRHP) nomination, and relevant plans and resources reports.

The planning and design of improvements to provide safe and reliable boat access to North Manitou Island was underway during the development of this CLR. Construction of improvements occurred after CLR site reconnaissance and is not documented in existing condition documentation or evaluated in the integrity analysis.

Study Area

Sleeping Bear Dunes National Lakeshore is in the northwestern portion of Michigan's Lower Peninsula. The 71,318-acre national lakeshore consists of a portion of mainland Benzie and Leelanau counties and North and South Manitou Islands. The national lakeshore protects natural features along the north-northwest shore of Lake Michigan, including its most notable feature—the perched dunes—three U.S. Life-Saving Service Stations along Manitou Passage, one lighthouse, coastal villages, and picturesque farmsteads reflecting its rich maritime, agricultural, and recreational history.

North Manitou Island Life-Saving Station is seven miles north-northeast of the mainland portions of the national lakeshore. The three-acre study area is on the northeast side of North Manitou Island where it was historically located to aid and assist in navigating travelers through Manitou Passage.

Euro-American settlement of North Manitou Island began in the early 1840s with the rise in maritime traffic on Lake Michigan. Settlers established logging operations on North Manitou Island to supply cordwood to steamships crossing Manitou Passage. The rise of shipping through Manitou Passage corresponded with a surge in the number of shipwrecks. Navigating through sandy shoals to the safety of harbors was challenging in favorable conditions and was notoriously treacherous during storms. Residents of North Manitou Island recognized the importance of the shipping industry to their local economy and petitioned for federal funds to establish a maritime life-saving station.

The study area was initially developed as a Volunteer Rescue Station and the first life-saving station along Manitou Passage in 1854. The study area expanded after the creation of the U.S. Life-Saving Service (USLSS) in 1871 and the establishment of the U.S. Coast Guard (USCG) in 1915. The study area represents the evolution of lifesaving stations from early volunteer efforts to the USLSS to the USCG. It is significant as the only life-saving station from these three periods known to exist.

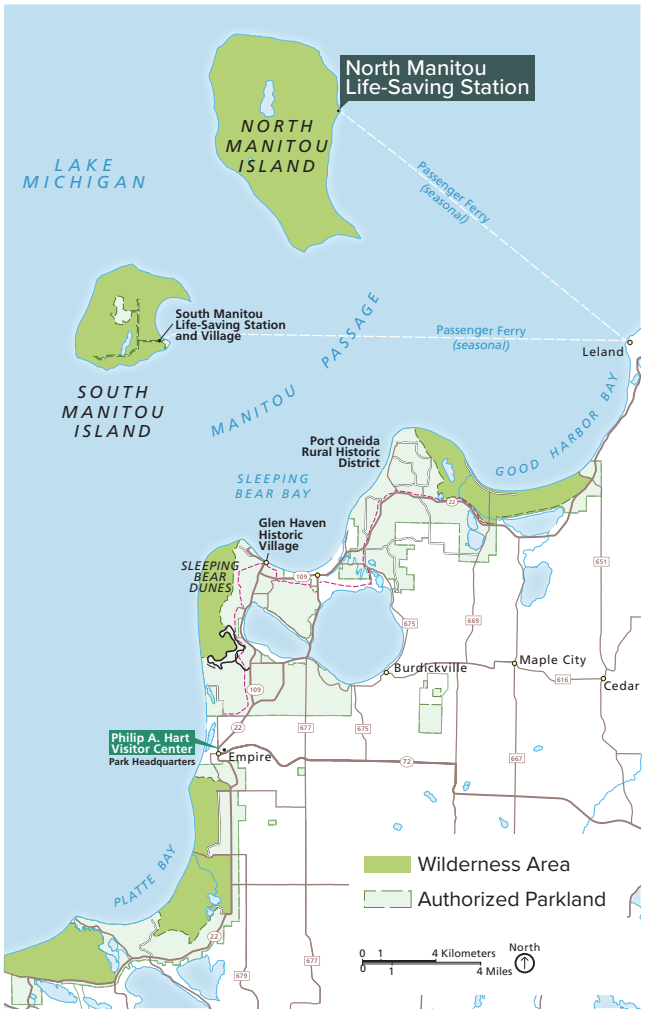

Figure 1-2. North Manitou Island Life-Saving Station is a component of Sleeping Bear National Lakeshore (source: Mundus Bishop, adapted from NPS SLBE Map).

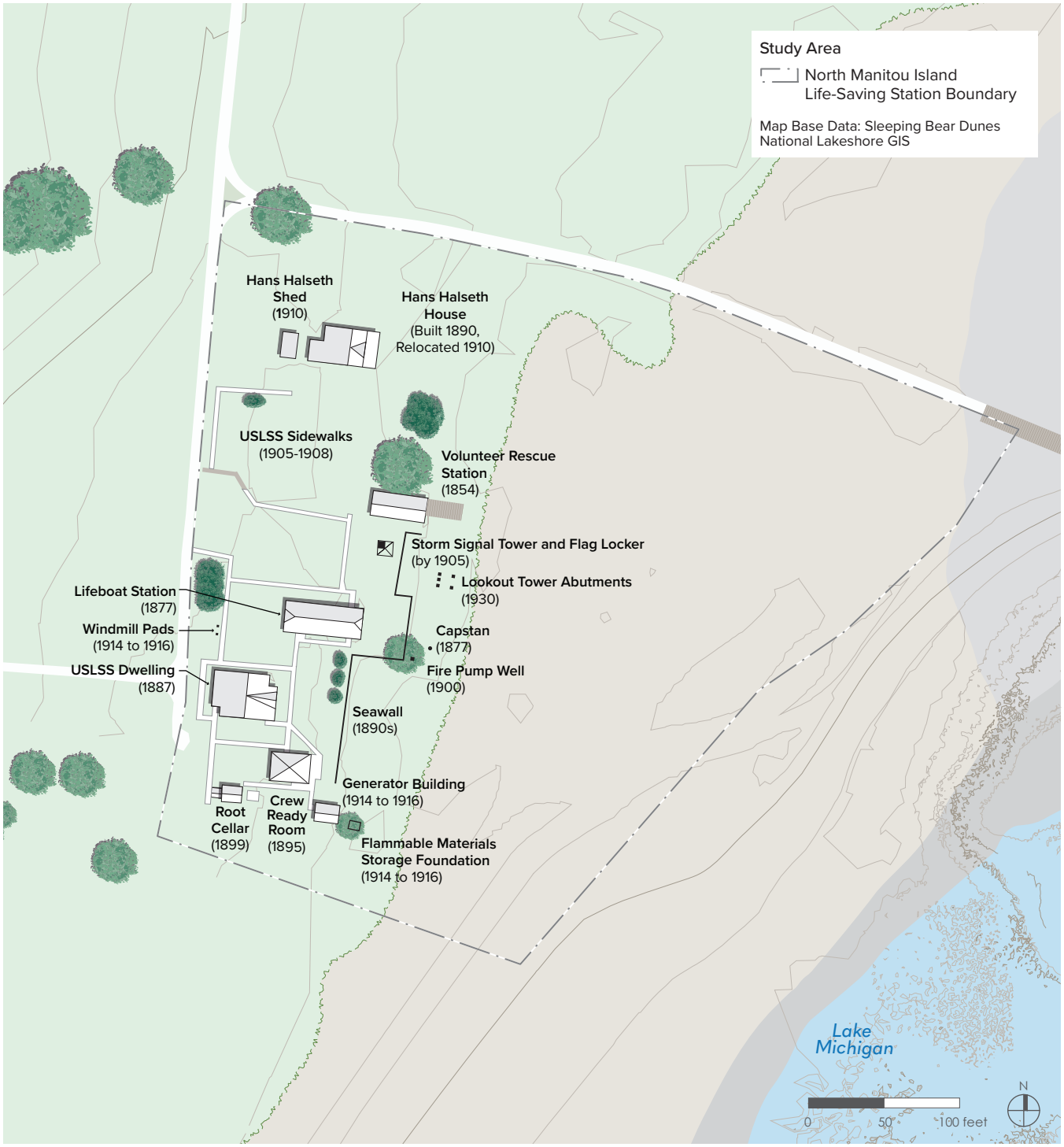

Figure 1-3. Existing condition of North Manitou Island Life-Saving Station. The cultural landscape includes spatial patterns, buildings, structures, circulation, and small scale features established by early volunteer life-saving efforts, the USLSS, and the USCG (source: Mundus Bishop, 2025).

Figure 1-4. North Manitou Island Life-Saving Station (source: Sleeping Bear Dunes National Lakeshore, undated).

As the USCG shifted toward motorboats for rescues, North Manitou Island Life-Saving Station became less functional as its harbor was too shallow to launch these newer lifeboats. North Manitou Island Life-Saving Station was deemed unnecessary by 1933 and permanently closed in 1938.[1.1]

The USCG sold North Manitou Island Life-Saving Station to William Angell, the majority owner of Manitou Island Association (MIA), in 1938. MIA had been in control of much of North Manitou Island's land and economy since the mid-1920s and envisioned the island as a summer resort after the logging industry declined. MIA's use of the study area included employee housing, administration, and lodging for visitors who visited the island to hunt.

MIA sold North Manitou Island to the National Park Service (NPS) after years of negotiations for inclusion in Sleeping Bear Dunes National Lakeshore in 1984. The NPS manages the study area for park employee housing and interpretation.

North Manitou Island Life-Saving Station was listed on the National Register of Historic Places (NRHP) on August 5, 1998, with a period of significance of 1854 to 1932 with four significant dates—1854, 1877, 1887, and 1915. It was also designated as a National Historic Landmark (NHL) on August 5, 1998, with a period of significance of 1854 to 1932, with four significant dates—1854, 1877, 1887, and 1915. The NHL is significant under NHL Criterion A at a national level for its association with three distinct periods of life-saving history: early volunteer efforts, the USLSS, and the USCG.

1.1 William Herd and Kimberly Mann, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, ed. Candace Clifford (prepared for the National Park Service, 1998), 28.

Project Objectives

This CLR addresses the preservation and protection of the cultural landscape of North Manitou Island Life-Saving Station. This document provides baseline documentation, records changes to the cultural landscape over time, supplements existing historical data, provides recommendations for further study, and provides holistic guidance for the treatment of the cultural landscape and resource protection.

- Summarize how historic activities influenced the current landscape.
- Identify contributing features.
- Update the condition assessment of the study area.
- Identify additional opportunities for accommodating universally accessible amenities in addition to those developed as part of the 2025 dock relocation.
- Identify additional opportunities for waysides in addition to those developed as part of the 2025 dock relocation.
- Provide an overall rehabilitation plan for the study area with prioritized actions to implement the treatment.

Report Methodology

This document was conducted at a thorough level of investigation and documentation for historical research, existing condition assessment, and analysis. This research methodology, as defined by the NPS, focuses on the use of select documentation of known and presumed relevance including readily available primary and secondary sources. This document was prepared in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties and Guidelines for the Treatment of Cultural Landscapes.[1.2]

Review of select documentation included readily available primary and secondary sources, including the National Archives in College Park, Maryland and Leelanau Historical Society Museum Research Center in Leland, Michigan. Document review included planning documents, administrative reports, technical reports, natural resource studies, correspondence, drawings, and photographs.

Drawings and illustrations were prepared using background data provided by the NPS. This data was supplemented by site reconnaissance in June 2024 to document existing conditions and evaluate integrity. These investigations were conducted according to best practices. Archeological investigations were not included. Noninvasive archeological investigation was completed as part of the 2024 Environmental Assessment for Improved Boat Access at North and South Manitou Islands.[1.3]

1.2 Page, Robert R., Cathy A. Gilbert, and Susan A. Dolan, *A Guide to Cultural Landscape Reports: Contents, Processes and Techniques,* (Washington D.C.: National Park Service, 1998).

1.3 National Park Service, *Sleeping Bear Dunes National Lakeshore: Improved Boat Access at the Manitou Islands Environmental Assessment,* (Empire, MI: National Park Service, 2024).

Park Purpose and Significance

Sleeping Bear Dunes National Lakeshore was authorized by Public Law 91-479 on October 21, 1970, to "preserve outstanding natural features along the northeastern shore of Lake Michigan, including forests, beaches, dunes, wilderness character, and glacial phenomena in their natural setting and protect them from developments and uses that would destroy the scenic beauty and natural character of the area, for the benefit, inspiration, education, recreation, and enjoyment of the public."[1.4]

The Foundation Document for Sleeping Bear Dunes National Lakeshore describes its significance in the following statements.[1.5]

- The national lakeshore contains features of continental glaciation that are of global importance due to their relatively unimpacted state, the variety of features present, and their proximity to one another.

- The national lakeshore preserves outstanding scenic and publicly accessible resources. Its massive glacial headlands, expansive Lake Michigan beaches, remote islands, diverse habitats, impeccable wilderness opportunities, superb water resources, and rich human history offer an exceptional range of recreational, educational, and inspirational opportunities.

- The collection of historic sites and landscapes—indigenous, maritime, agricultural, and recreational—in the national lakeshore is of a size and quality unsurpassed on the Great Lakes and rare elsewhere on the U.S. coastline.

- The national lakeshore's native plant and animal communities, especially the northern hardwoods, coastal forests, dune communities, and interdunal wetlands, are of a scale and quality that is rare on the Great Lakes shoreline. These relatively intact communities provide an opportunity for continuation of the ecological processes that have shaped them.

1.4 United States Department of the Interior, National Park Service. *Sleeping Bear Dunes National Lakeshore Foundation Document*. (Empire, Michigan: Sleeping Bear Dunes National Lakeshore, 2022), 4.

1.5 United States Department of the Interior, National Park Service. *Sleeping Bear Dunes National Lakeshore Foundation Document*. (Empire, Michigan: Sleeping Bear Dunes National Lakeshore, 2022), 5.

2

Site History

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Introduction

Figure 2-1. North Manitou Island Life-Saving Station crew, 1902 (source: Sleeping Bear Dunes National Lakeshore).

North Manitou Island Life-Saving Station evolved as part of a network of life-saving stations established through an act of Congress in 1848. North Manitou Island Life-Saving Station was initially developed as a Volunteer Rescue Station and the first station along Manitou Passage in 1854. The U.S. Government took a renewed interest in improving the life-saving network in the 1870s and provided funds for U.S. Life-Saving Service Stations to be built and manned by full-time crews. By the time the U.S. Life-Saving Service (USLSS) became the U.S. Coast Guard (USCG) in 1915, North Manitou Island Life-Saving Station had developed as a complex of separate buildings and spaces providing specific functions—administration, living quarters, life-saving training, and operations. North Manitou Island Life-Saving Station was rendered obsolete as it lacked a protected harbor and water depths necessary to accommodate the USCG's larger motorboats, which had become their standard life-saving vessel. North Manitou Island Life-Saving Station was permanently closed in 1938.

This chapter provides the historical context, an overview of physical development, and a statement of significance for North Manitou Island Life-Saving Station. A period of significance of 1854 to 1932 captures the development and use of North Manitou Island Life-Saving Station by the Volunteer Rescue Service, USLSS, and USCG.

A summary and chronology describe North Manitou Island Life-Saving Station through six periods of physical development and change that document its evolution in greater detail.

Historical Context and Overview

North Manitou Island Life-Saving Station is representative of the nearly 200 stations that historically composed the USLSS and illustrates the evolution of federal maritime lifesaving from its beginnings as a volunteer service through the establishment and operation of the USLSS and USCG.

The opening of the Erie Canal in 1825 established the Great Lakes as a cost-effective and efficient shipping route to facilitate the movement of people and goods from the Atlantic coast to the Midwest. Manitou Passage, east of North Manitou Island, was the most important route to the Straits of Mackinac, which linked Lake Michigan with the other Great Lakes, the Erie Canal, and the coastal ports of the Eastern seaboard and offered well-sheltered and deep ports. This rise of traffic through Manitou Passage created a surge in the number of shipwrecks along the route, as navigating through its sandy shoals to the safety of harbors was challenging in good conditions and was notoriously treacherous during storms.

The federal government had a vested interest in promoting maritime safety as the United States' growth depended on effective maritime transportation and it began to invest in shore rescue operations in the 1840s. Federal funds were allocated for the purchase of lifesaving vessels and equipment along the Atlantic coast. The success of these early rescue operations soon led community leaders in the Great Lakes region to advocate for similar assistance.

Federal Lifesaving Programs: 1848 to 1950

The federal government's role in maritime lifesaving began in 1848 when the U.S. Congress appropriated funds to the U.S. Treasury Department to build and equip lifesaving boathouse stations along the New Jersey coast. This program, administered by the U.S. Revenue Marine Service, expanded to other states and was staffed by crews of local volunteers who mobilized in response to an emergency and were rewarded for successful rescues.

The U.S. Congress appropriated funds to the U.S. Revenue Marine Service to hire paid employees to staff its system of federally supported lifesaving stations in 1871. The number of federal lifesaving stations and the competency of the staff who operated them increased. The U.S. Life-Saving Service (USLSS) was established as a separate agency within the Treasury Department in 1878. Stations generally included a station building with integral living quarters and boat storage space, flagpole, wreck pole, lookout tower, equipment storage sheds, privy, and a water collection system. Many stations had separate crew dwellings and boathouses.

The U.S. Life-Saving Service merged with the Treasury Department's Revenue Cutter Service to form the U.S. Coast Guard in 1915. Maritime lifesaving continued as an important U.S. Coast Guard mission. The Coast Guard's lifesaving branch was permitted to maintain U.S. Life-Saving Service organization structure, including operating the same land-based stations and using the same lifeboats, surfboats, and lifesaving equipment.[2.1]

2.1 United States Department of the Interior, National Park Service. *National Register of Historic Places Multiple Property Documentation Form - U.S. Government Lifesaving Stations, Houses of Refuge, and pre-1950 U.S. Coast Guard Lifeboat Stations* (Washington, D.C: HDR, 2013), 1, 11.

Nicholas Pickard, who had opened a cordwood station on North Manitou Island in the 1840s, advocated for improved shipping conditions along Manitou Passage. North Manitou Island's hardwood forests supplied fuel to steamships and it was an important stop on the heavily traveled Manitou Passage. Pickard, along with other North Manitou Island community members, applied to the Department of Treasury for a Francis Metallic surfboat, a boat specifically designed for maritime rescue on the Great Lakes. The community of North Manitou Island received the surfboat and was responsible for maintaining and building a structure to house the boat. The community built the Volunteer Rescue Station in 1854 based on federally provided plans. It consisted of a single room on the first floor to house the surfboat and a loft for storage of other lifesaving equipment.[2.2]

2.2 Herd, William and Kimberly Mann. *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*. (Washington, D.C: 1998), 6.

Figure 2-2. Volunteer Rescue Station with Storm Signal Tower and international maritime signal flag used by the U.S. Life-Saving Service to communicate with ships, mid 1800s (source: Leelanau Historical Society).

Figure 2-3. U.S. Life-Saving Station, late 1800s (source: Leelanau Historical Society).

The New York Herald called for reforms and improvements to life-saving stations, which had been underfunded and neglected during the Civil War. The U.S. Congress passed an act on June 20, 1874, that provided funds for fifty-one stations with paid six-man crews on the Atlantic Coast and Great Lakes. A 40' by 20' tract of land on North Manitou Island was leased from Nicholas Pickard three months later. This lot size corresponds to the size of the 1854 Volunteer Rescue Station.[2.3]

Increased investment in the USLSS during the late 1800s led to the expansion of North Manitou Island Life-Saving Station and the establishment of its first full-time crew in 1878. Additional buildings and structures supported the full-time crew's twenty-four-hour occupation of the station. The USLSS Dwelling was built in 1887 and included room for the captain's living quarters on the first floor and the crew on the second. The Crew Ready Room, built in 1895, provided a place for on-duty men to assemble as they waited for a possible shipwreck, and the Root Cellar, built in 1899, provided a place for the crew to store produce purchased from the island farmers.[2.4]

North Manitou Island Life-Saving Station developed as a complex of separate buildings and spaces providing specific functions—administration, living quarters, life-saving training, and operations. The distinct spaces were essential for the efficient operations of the station. The areas around the structures were landscaped with Lombardy poplar trees, and sidewalks were established throughout the station. Lombardy poplar trees became an emblematic feature of USLSS stations. Their stark, columnar shape made them visible from a distance and was a signal to ship captains that a lifesaving station was nearby. They were also selected for their fast-growing, tall, slender form that created windbreaks for stations.

2.3 William Herd and Kimberly Mann, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, ed. Candace Clifford (prepared for the National Park Service, 1998), 22, 23.

2.4 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 9, 10, 11.

Figure 2-4. U.S. Life-Saving Station, 1905 to 1915 (source: Leelanau Historical Society).

The Hans Halseth House was moved to its present-day location north of the Volunteer Rescue Station in 1910. Halseth, a USLSS crewman, built his private residence near Nicholas Pickard's dock in 1890 and moved it south to a complex of six houses occupied by USLSS crewmen and their families adjacent to North Manitou Island Life-Saving Station.[2.5]

The USLSS merged with the U.S. Revenue Cutter Service in 1915, forming the U.S. Coast Guard (USCG). Improvements to North Manitou Island Life-Saving Station after the establishment of the USCG included the addition of the Generator Building, Flammable Materials Shed, and Windmill from 1914 to 1916, and the Lookout Tower in 1930.

As the USCG transitioned to motorized rescue boats, North Manitou Island Life-Saving Station became less functional, since its harbor was too shallow for launching the newer vessels. The USCG declared North Manitou Island Life-Saving Station obsolete in 1933 and reduced staffing to a limited crew of at least two men who maintained the station and manned the motor surfboat if needed.[2.6]

North Manitou Island Life-Saving Station was permanently closed in 1938. William Angell, the majority owner of Manitou Island Association (MIA), purchased the station from the USCG. MIA had control of much of North Manitou Island's land and economy since the mid-1920s and envisioned the island as a summer resort after the logging industry declined and the island's economy transitioned to agriculture. While many settlers had come to farm the cleared land, the sandy soils at the southern end of the island were not productive for farming. These lands were, however, prime real estate for those seeking the solitude and beauty of North Manitou Island.

2.5 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 12.

2.6 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 27, 28.

Large tracts of land began to be purchased by wealthy Chicago businessmen in the 1880s. These wealthy landowners eventually formed the MIA.[2.7]

MIA's business ventures included agriculture, timber harvesting, and recreation. MIA adapted the Lifeboat Station and Crew Ready Room for employee housing and the USLSS Dwelling as a lodge for paying hunters.[2.8]

By 1949, William Angell owned ninety-five percent of MIA and used his shares to establish a charitable non-profit organization, the Angell Foundation. Angell died four months after establishing his charity, and the board of the Angell Foundation assumed management of MIA. They made a modest profit over the following decades but remained ambivalent about continuing business on North Manitou Island.[2.9]

U.S. Congress authorized the creation of Sleeping Bear Dunes National Lakeshore in 1970. The National Park Service (NPS) offered Angell Foundation $4.5 million for North Manitou Island in 1977. Angell Foundation believed this valuation, based on the recreational use of the island, should consider the potential profitability of the island's untouched resources—timber harvesting, cherry farming, and sand and gravel mining. Angell Foundation accepted a sale price of $11 million in 1983.

Improvement of North Manitou Island Life-Saving Station after NPS acquisition primarily addressed restoration and rehabilitation of U.S. Life-Saving Station buildings and structures. This included the rehabilitation of the Hans Halseth House, Lifeboat Station, Crew Ready Room, and USLSS Dwelling to provide housing for park employees and restoration of the Hans Halseth Shed and Volunteer Rescue Station.

North Manitou Island Life-Saving Station was listed on the National Register of Historic Places and designated as a National Historic Landmark on August 5, 1998.[2.10]

2.7 Eric MacDonald and Arnold R. Alanen, *Tending a 'Comfortable Wilderness': A History of Agricultural Landscapes on North Manitou Island, Sleeping Bear Dunes National Lakeshore, Michigan* (Omaha: Midwest Field Area, National Park Service, 2000), *54*.

2.8 MacDonald, *Tending a 'Comfortable Wilderness,' 62*.

2.9 MacDonald, *Tending a 'Comfortable Wilderness,' 58*.

2.10 MacDonald, *Tending a 'Comfortable Wilderness,'* 267.

Statement of Significance

North Manitou Island Life-Saving Station is part of a formalized network of life-saving stations established by the federal government in the mid-1800s. It is significant for its association with navigation and life-saving measures developed on the Great Lakes to support the shipping industry that made development of the Midwest feasible. North Manitou Island's hardwood forests supplied fuel to steamships and established the island as an important stop on the heavily traveled Manitou Passage. Manitou Passage was the most important route to the Straits of Mackinac, linking Lake Michigan with other Great Lakes, Erie Canal, and coastal ports of the Eastern seaboard. North Manitou Island Life-Saving Station was vital to safely traveling through Manitou Passage's many natural dangers.

North Manitou Island Life-Saving Station was initially developed as a Volunteer Rescue Station and the first life-saving station along Manitou Passage in 1854. Improvement of the station expanded after the creation of the USLSS in 1871 and establishment of the USCG in 1915. North Manitou Island Life-Saving Station is an excellent representation of the evolution of lifesaving stations from early volunteer efforts to the USLSS to the USCG—and is significant as the only life-saving station from these three periods known to exist.[2.11]

North Manitou Island Life-Saving Station exemplifies the federal government's vested interest in promoting maritime safety in the mid-1800s. The Volunteer Rescue Station is believed to be the only remaining station in the country from the 1854 appropriation to provide surfboats primarily along the shores of the Great Lakes. The U.S. Treasury Department shared specifications with communities that requested plans for building a boathouse. The Volunteer Rescue Station closely matches official written descriptions of 1854 stations and retains a high degree of integrity of design, material, and workmanship.[2.12]

Design and improvement by the USLSS in the late 1800s and early 1900s established North Manitou Island Life-Saving Station as a complex of separate buildings and spaces providing specific functions—administration, living quarters, life-saving training, and operations—essential for the efficient functionality of the station and connected by a network of orthogonal sidewalks. Extant features are representative of typical U.S. Life-Saving Stations. These include a station building, flagpole, lookout tower (foundations), equipment storage sheds, crew dwelling buildings, and boathouses.

North Manitou Island Life-Saving Station was listed on the National Register of Historic Places and designated as a National Historic Landmark on August 5, 1998.

The period of significance for North Manitou Life-Saving Station is 1854 through 1932. This captures the establishment of the 1854 Volunteer Rescue Station through 1932, the last year the station was operational with a full-time crew.

2.11 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 4.

2.12 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 6, 28.

Periods of Landscape Development

Six periods of landscape development describe the physical evolution of the cultural landscape from the earliest use of the area by indigenous peoples through the present day. The beginning and end of each period corresponds to and documents major physical changes in the cultural landscape. Three periods of landscape development occur during the station's period of significance of 1854 to 1932.

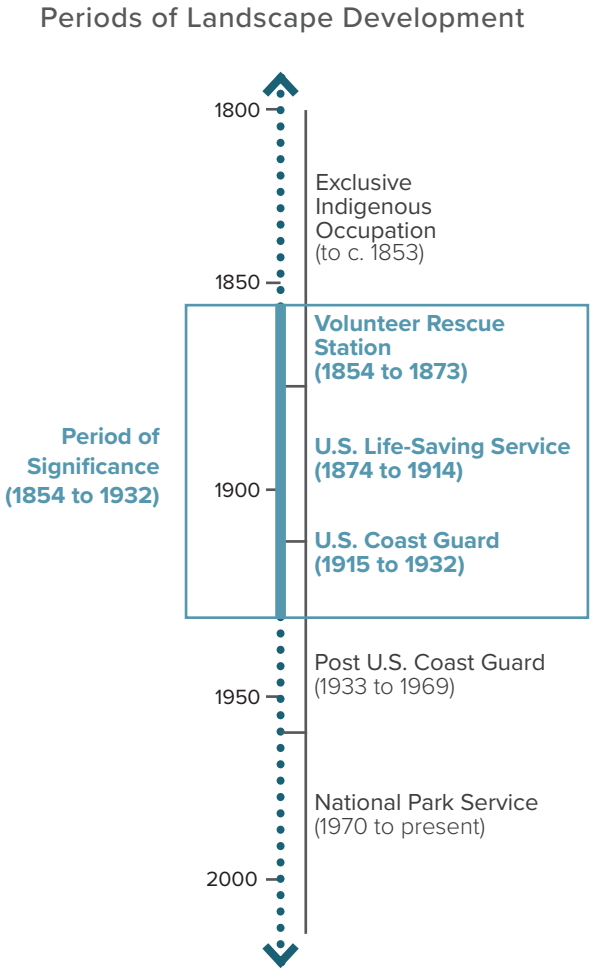


Figure 2-5. Six periods of landscape development describe the evolution of North Manitou Island Life-Saving Station.

Exclusive Indigenous Occupation to c. 1853

North and South Manitou Islands are part of the ancestral home of the Anishinaabek people, comprised of Ottawa/Odawa, Chippewa/Ojibway, and Potawatomi/Bodawatomi peoples, and have provided Anishinaabek with food, shelter, medicine, and cultural significance for thousands of years. Archeological studies indicate North Manitou Island was used seasonally by 1000 BCE and from 1000 CE to Euro-American contact in 1630 CE to 1650 CE. Archeological sites are concentrated along the eastern shore of North Manitou Island. One archeological site is substantial in size and suggests the site was occupied by a large group or several successive smaller groups over a longer period.[2.13]

Life in the upper Great Lakes was radically altered after contact with Europeans in the early 1600s, as fur trading upended traditional economies, leading to warfare amongst tribes, coupled with a series of disease epidemics. Drastic population shifts led to a reshuffling of traditional villages, with Ottawa and Ojibwa coexisting on the Leelanau Peninsula by the early 1800s. During this era, they had at least seven villages in present-day Leelanau and Benzie counties, but no major settlements on South and North Manitou Islands, although both areas were probably used for hunting and fishing.[2.14]

No major settlements are documented on North Manitou Island after Euro-American contact, but it was likely the site of seasonal hunting and fishing. An account from 1823 describes mounds that stretched half a mile along the beach at North Manitou. Topped by wooden frames and surrounded by footprints, the mounds appeared to be a part of a game or training exercise, suggesting North Manitou Island may have held cultural significance beyond hunting and fishing.

2.13 MacDonald, *Tending a 'Comfortable Wilderness,'* 17, 18; 1. "Anishnaabek Aki" - Land of the Anishnaabek [Wayside Interpretive Panel] (Empire, MI: National Park Service, 2023).

2.14 NPS, *Coming through with Rye,* 21; MacDonald, *Tending a 'Comfortable Wilderness,'* 19 to 21.

Facing economic hardship and sustained pressure from the United States, Anishinaabek leaders signed the Treaty of Washington in 1836, ceding their claim to the Upper Peninsula. The treaty opened the region to Euro-American settlement while reserving permanent reservation lands and the rights to hunt, fish, and gather.[2.15]

1843

Nicholas Pickard established North Manitou Island's first cordwood station on the southeastern shore of the island.[2.16]

1846

William Cullen Bryant's steamship stopped at Pickard's cordwood station. Bryant reported that "on the shore were two loghouses inhabited by woodsmen, one of whom drew a pail of water for refreshment of some of the passengers from a well dug in the sand by his door."[2.17]

1847

Thurlow Weed, editor for Albany, New York's *Evening Journal*, visited North Manitou and reported that "one family is living on the island, and forty men were employed cutting and hauling wood."[2.18]

Government land surveyor Orange Risdon landed on North Manitou Island at Pickard's dock. Risdon noted development at the dock included a wood yard, a 150' long by 60' wide dock, two homes, a grocery store, a blacksmith shop, a warehouse, and several outbuildings.

Risdon noted vegetation on the island's eastern coastal plain was a forest of hemlock, beech, and sugar maple intermixed with white pine, red pine, white cedar, and birch.[2.19]

1849

Neil McFadyen purchased two parcels of land on North Manitou Island and became the first recorded landowner on the island.[2.20]

1850

Nicholas Pickard moved his cordwood station to the northeast side of North Manitou Island and built a dock.[2.21]

2.15 MacDonald, *Tending a 'Comfortable Wilderness,'* 19 - 21; NPS, "Anishnaabek Aki" - Land of the Anishnaabek.

2.16 William Herd and Kimberly Mann, *USDI/NPS NRHP Registration Form: North Manitou Island Life-Saving Complex* (prepared for the National Park Service, Midwest Regional Office, 1995), v.

2.17 MacDonald, *Tending a 'Comfortable Wilderness,' 27*.

2.18 MacDonald, *Tending a 'Comfortable Wilderness,'* 27.

2.19 MacDonald, *Tending a 'Comfortable Wilderness,' 27*.

2.20 U.S. Department of the Interior, National Park Service, Denver Service Center, *History Data Report on North Manitou Island, Leelanau County, Michigan*, 3.

2.21 Herd, *USDI/NPS NRHP Registration Form*, v.

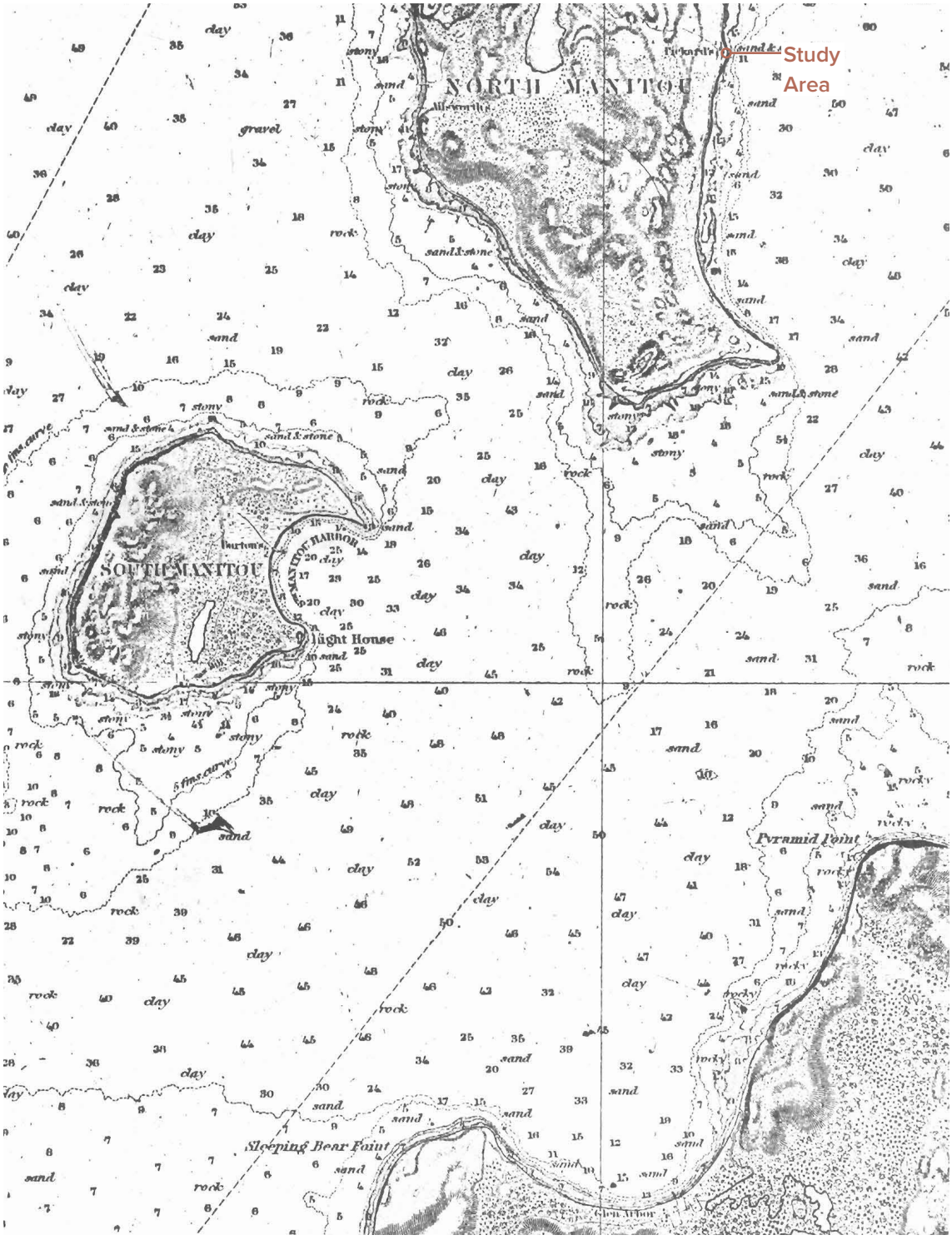


Figure 2-6. Manitou Passage Navigational Map, 1863 (source: U.S. Army Corps of Engineers).

Figure 2-7. 1847 Orange Risdon Survey of North Manitou Island (source: General Lane Office, U.S. Bureau of Land Management).

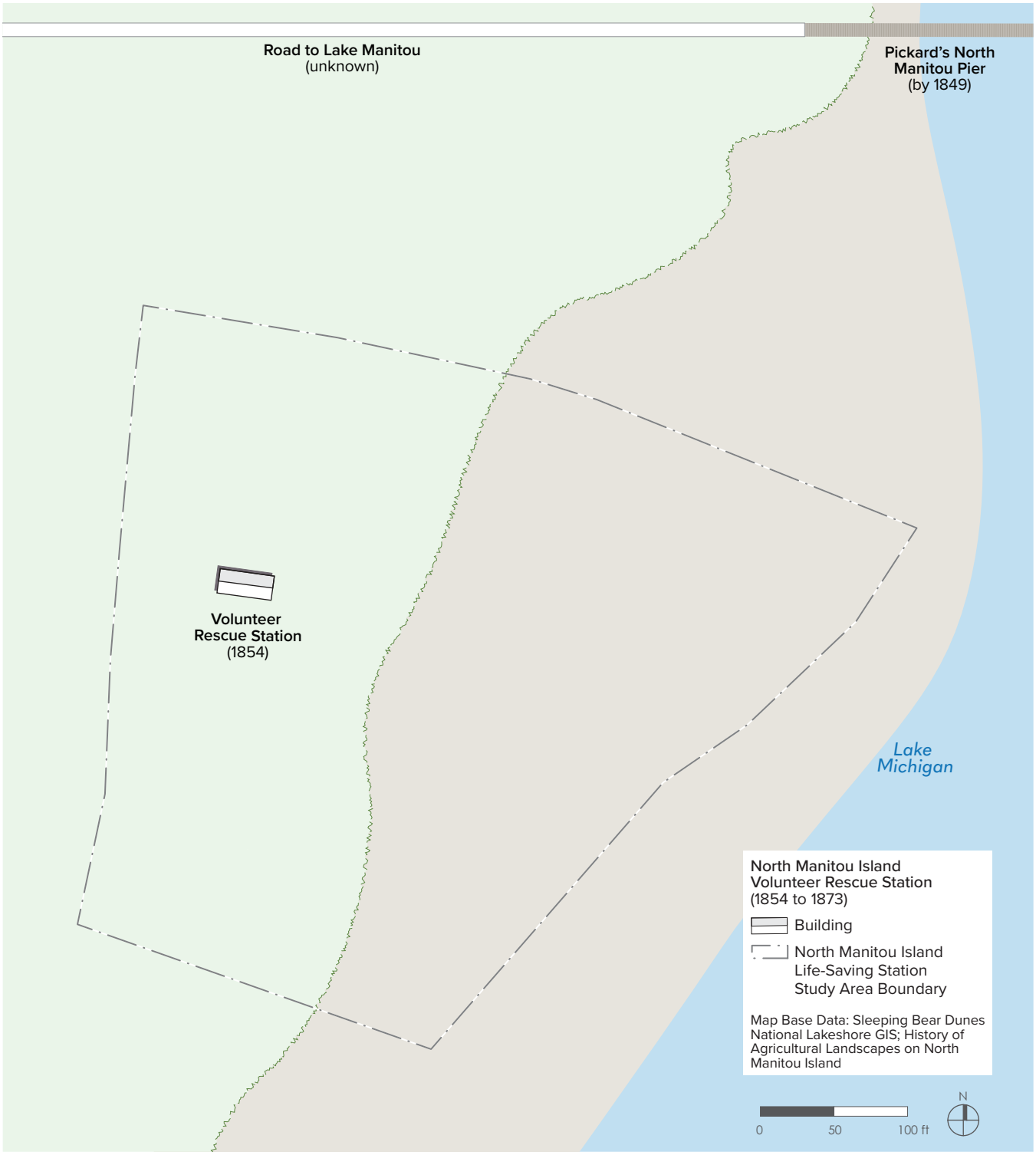


Figure 2-8. North Manitou Island Volunteer Rescue Station, 1854 to 1873 (source: Mundus Bishop, 2025).

Volunteer Rescue Station (1854 to 1873)

The Volunteer Rescue Station was established in 1854 with a crew of local volunteers who performed maritime rescues and were responsible for maintaining lifesaving equipment, including a Francis Metallic surfboat, provided by the U.S. Department of Treasury. North Manitou Island's community built a boathouse, the Volunteer Rescue Station, on land south of Pickard's dock. The Volunteer Rescue Station was set along the shoreline of Lake Michigan with clear lines of sight to Manitou Passage and direct access to the lake. The sandy beach enabled crews to launch the lifeboat into shallow waters near the shore.

1854

Secretary of the U.S. Treasury Department Gutherie received a bond from Nicholas Pickard and other North Manitou Island Community members and ordered a surfboat be delivered to the island from the Francis Metallic Life-Boat Company of Brooklyn, New York.

Pickard requested and received plans from the U.S. Treasury Department to build a boathouse for the surfboat—the Volunteer Rescue Station. It is unknown if he also received funds to build the Volunteer Rescue Station. The Volunteer Rescue Station closely matches boathouse specifications provided by the U.S. Treasury Department. The department designed boathouses that were functional and inexpensive for communities to build. The Volunteer Rescue Station is the only extant boathouse built from the 1854 specifications.[2.22]

1855 to 1870

The U.S. Treasury Department appropriated funds to Volunteer Rescue Stations for the salaries of superintendents and keepers. Federal funds were not allocated for regular drills, crew salaries, and the maintenance of buildings, boats, and other life-saving equipment.[2.23]

1869

The U.S. Treasury Department created the U.S. Revenue Marine Service in 1869. The U.S. Revenue Marine Service was responsible for the Revenue Cutters, Life-Saving Stations, Steamboat Inspection Service, and Marine Hospitals.[2.24]

1871

The U.S. Life-Saving Service was created.[2.25]

2.22 Herd, *USDI/NPS NRHP Registration Form*, 6, 12, 21.
2.23 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 22.
2.24 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 22.
2.25 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 16.

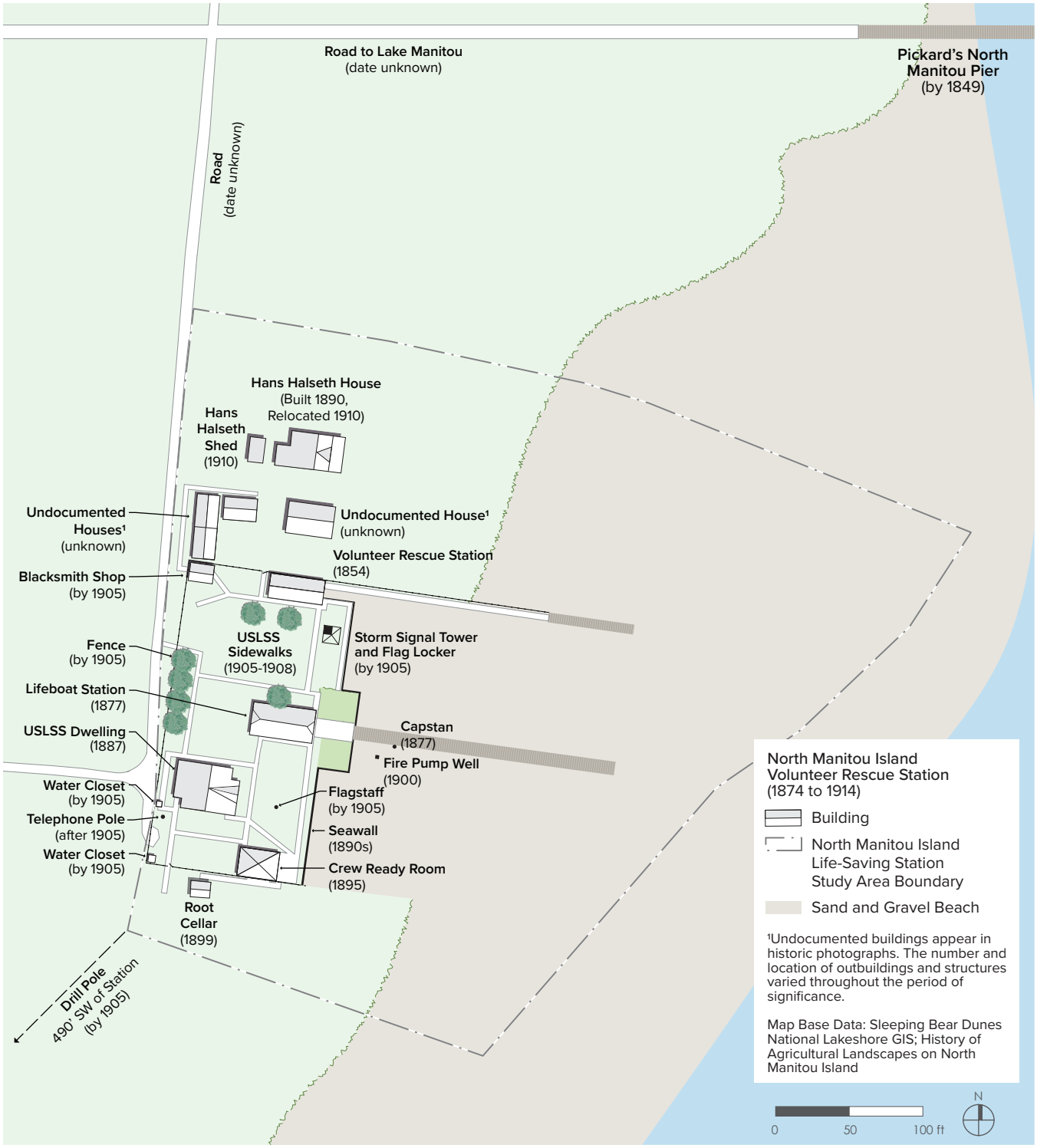


Figure 2-9. North Manitou Island Life-Saving Station, 1874 to 1914 (source: Mundus Bishop, 2025).

U.S. Life-Saving Service (1874 to 1914)

USLSS was established as a separate agency within the U.S. Treasury Department in 1878. The federal government increased investment in the USLSS, and this funding provided for the expansion of North Manitou Island Life-Saving Station.

Design and improvement by the USLSS in the late 1800s and early 1900s established North Manitou Island Life-Saving Station as a complex of separate buildings and spaces essential for its efficient functionality. A network of orthogonal sidewalks connected buildings, and Lombardy poplar trees were planted as a signal to ship captains that a life-saving station was nearby.

Additions supported the full-time crew's twenty-four-hour occupation of the station and lifesaving operations. This included the USLSS Dwelling, Crew Ready Room, Root Cellar, Blacksmith Shop, Storm Signal Tower and Flag Locker, and Seawalls. The Hans Halseth House was relocated to the station in 1910. Buildings were arranged in an orthogonal grid along the shore of Lake Michigan with clear sight lines to Manitou Passage and direct access to the lake.

1877

The USLSS built the Lifeboat Station using a modified floor plan based on a design by Francis W. Chandler. The building included one large equipment room for boats and gear with a balcony under the clipped gable end on the waterside where the keeper or a volunteer could stand watch in bad weather.

The Capstan was installed along the south side of the Lifeboat Station's Launchway with metal tracks to hoist lifeboats toward the lake or shore.

Marvin Lee Core was appointed keeper on April 24, 1877, and left by June 7, 1887, when Daniel L. Buss was appointed keeper.

1884

James Flynn was appointed keeper on August 30, 1883, and was transferred to Station Grand Point Au Sable on March 18, 1884.

Charles Lyssaght was appointed keeper on March 19, 1884.[2.26]

2.26 https://media.defense.gov/2017/Jul/04/2001772869/-1/-1/0/NORTHMANITOU.PDF

Figure 2-10. North Manitou Island Life-Saving Station crew performing drill with beach cart, c. 1893 (source: Official Coast Guard Photo, 26-CGS-3).

Figure 2-11. Nicholas Pickard's dock (source: Sleeping Bear Dunes National Lakeshore, undated).

1887

The USLSS Dwelling was completed in 1887. Its design may have been produced by Albert Bibb, the architect for the U.S. Treasury Department, who designed a prototypical station for the U.S. Life-Saving Station at Marquette, MI. This building served as the living quarters for the captain and the crew.

The station was fully operational as a life-saving station and included a paid captain and crew.[2.27]

Charles Lyssaght was transferred to Station White River on January 13, 1887, and John Missel was appointed keeper on January 11, 1887. His appointment was revoked on March 7, 1887, and John H. McKenzie was appointed keeper.[2.28]

1888

John H. McKenzie was transferred to Station South Haven on June 10, 1888, and Peter Olsen was appointed keeper on April 3, 1888.[2.29]

1890

The Hans Halseth House was built near Nicholas Pickard's dock (Hans Halseth House was moved to its present location in North Manitou Island Life-Saving Station in 1910). Halseth, a USLSS crewman, built the one-and-a-half-story, wood-frame, side-gabled structure with a central gabled dormer as a private residence.[2.30]

1890s

The USLSS built the fieldstone seawall east of the station.[2.31]

2.27 MacDonald, *Tending a 'Comfortable Wilderness,'* 219; Herd, *USDI/NPS NRHP Registration Form*, vi.
2.28 https://media.defense.gov/2017/Jul/04/2001772869/-1/-1/0/NORTHMANITOU.PDF
2.29 USCG History Program, *Station North Manitou Island*.
2.30 Herd, *USDI/NPS NRHP Registration Form*, 216.
2.31 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 12.

Figure 2-12. Crew Ready Room, USLSS Dwelling, Lifeboat Station, and Volunteer Rescue Station (from left to right), 1893 (source: Official Coast Guard Photo, 26-CGS-2).

1895

The Crew Ready Room, initially used as a supply building, was completed. On-duty crew members later used the room as they waited to respond to maritime rescues.[2.32]

1896

Peter Olsen transferred to Station Baileys Harbor on March 3, 1896.[2.33]

1899

The USLSS crew built the Root Cellar to store carrots, onions, cabbage, and other items purchased from North Manitou Island farmers.[2.34]

Telesford St. Peter was appointed keeper on December 6, 1899.[2.35]

1900s

The USLSS received directions to landscape areas surrounding buildings. Lombardy poplar trees were planted as a navigational aid for ships. Historical accounts indicate ship captains relied on Lombardy poplar trees to locate lifesaving stations.[2.36]

2.32 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 11.
2.33 USCG History Program, *Station North Manitou Island*.
2.34 MacDonald, *Tending a 'Comfortable Wilderness,'* 220.
2.35 USCG History Program, *Station North Manitou Island*.
2.36 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 13.

Figure 2-13. Crew Ready Room (left), USLSS Dwelling (center), and Lifeboat Station (right), undated (source: Sleeping Bear National Lakeshore).

Figure 2-14. Walks and a grass-covered mound south of Lifeboat Station, 1902 (source: Leelanau Historical Society).

Cottage Row

George W. and Carrie Blossom, Frederick H. and Mary Trude, and Silas Boardman began to develop the resort colony of "Cottage Row" southwest of North Manitou Island Life-Saving Station in 1894. Blossom and Trude subdivided a parcel they purchased from Boardman into ten water-facing lots measuring 102' wide by 300' deep and sold the lots to their friends in Chicago to build summer homes. A significant portion of the original parcel was reserved as a private park. A wooden plank walkway, gas lights, and shade trees lined the front of the private Cottage Row development. Cottages were set on the beach ridge overlooking North Manitou Island Life-Saving Station with views to Manitou Passage.

The summer resort colony remained active for 50 years and employed island residents year-round. The wives and children of farmers and North Manitou Island Life-Saving Station crewmen found employment with Cottage Row families, in the communal dining room, and at the hotel.

William Angell began purchasing Cottage Row properties in 1926 and continued to acquire properties through the 1940s. Several Cottage Row houses were occupied by Manitou Island Association (MIA) shareholders and their associates. The hotel and communal dining room at the north end of Cottage Row later served as the MIA lodge while many of the cottages fell into disuse during the 1950s.[2.37]

Figure 2-15. Cottage Row set on a slight rise behind North Manitou Island Life-Saving Station, before 1915 (source: Leelanau Historical Society).

2.37 MacDonald, *Tending a 'Comfortable Wilderness,'* 35, 221 to 223.

Figure 2-16. Storm Signal Tower and Flag Locker south of Volunteer Rescue Station. Timber and stone seawall appear east of U.S. Life Boat Station, unknown date (source: Leelanau Historical Society).

c. 1905

The Storm Signal Tower and Flag Locker were built south of the Volunteer Rescue Station by 1905. Their dates of construction are not documented, but the structures appear on a site plan dated April 19, 1905.[2.38]

President McKinley ordered the Weather Bureau to implement a hurricane warning system for ships in 1898. The storm signal towers were known officially as Coastal Warning Display (CWD) towers and were added at Great Lake Stations in coordination with the Weather Bureau. The National Weather Service retired its CWD network nationwide on February 15, 1989, and on June 1, 2007, the U.S. Coast Guard formally re-established a Coastal Warning Display (CWD) program at select small boat stations.

Sidewalks first appear on a 1905 site plan.[2.39]

c. 1910

The Hans Halseth House was moved from its original location near Pickard's dock to its present-day location. The shed was built west of the house around 1910.[2.40]

2.38 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 7.

2.39 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 13.

2.40 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 5.

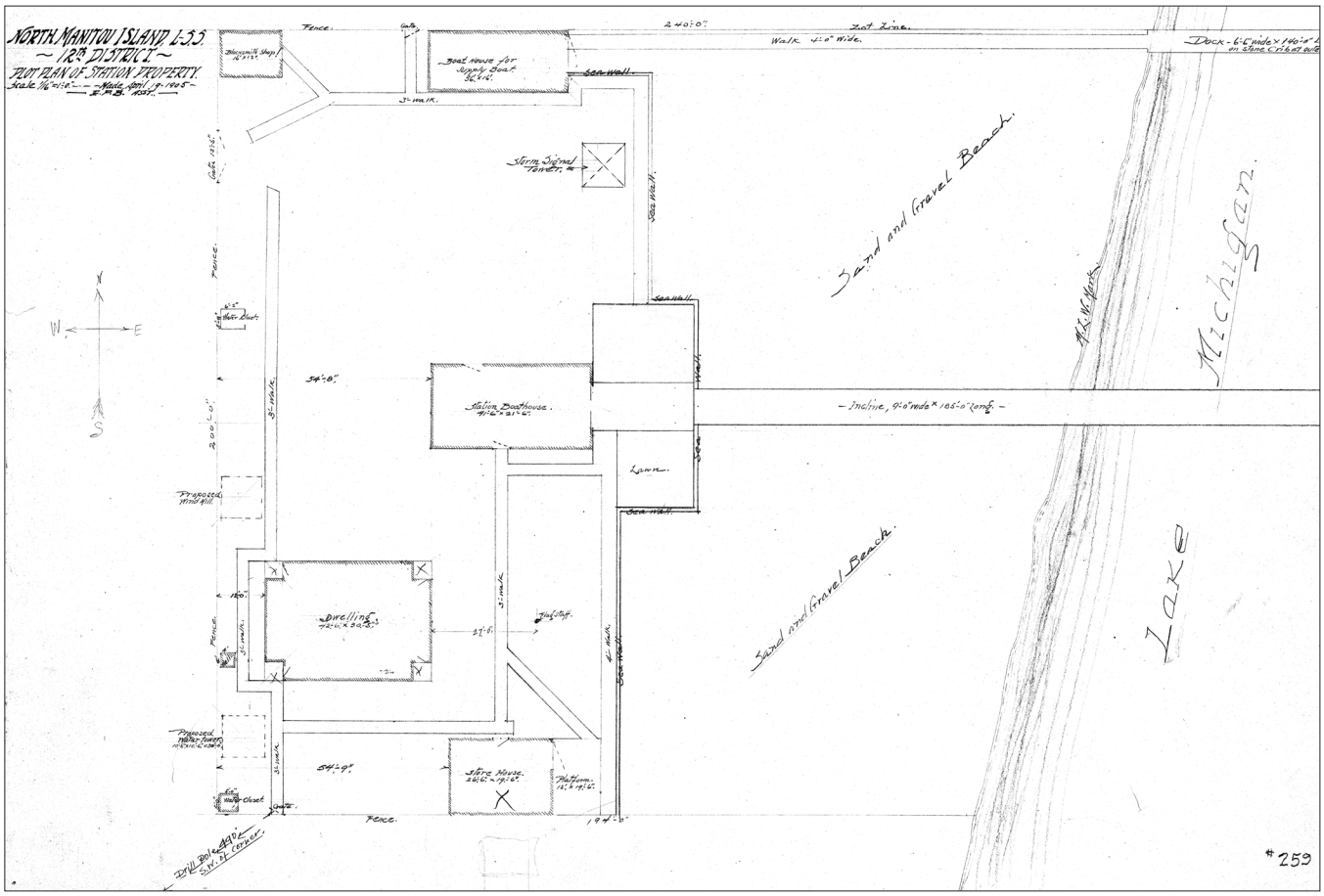


Figure 2-17. 1905 Plot Plan of North Manitou Island Life-Saving Station (source: National Archives, Map and Plans of the No. 259 North Manitou Island, Michigan Life Saving Station).

Telephone Lines

North Manitou Island Life-Saving Station provided crucial services for the relatively isolated island population. This included telephone service between North and South Manitou Island Life-Saving Stations, Sleeping Bear Point Life-Saving Station, and North Manitou Island Crib Light. The first telephone line was installed in 1905 and provided the USLSS and island residents with direct contact to the outside world.

The 1905 underwater cable continues to provide telephone service between South Manitou Island and mainland Michigan. The underwater cable to North Manitou Island was severed in the 1940s when a freighter dropped anchor during a storm and ripped the cable in two while raising its anchor. Many poles remain on North and South Manitou Islands with metal "USCG" markers, indicating that they were inventoried and maintained by the U.S. Coast Guard.[2.41]

2.41 *Mann, Kim. Manitou Passage National Historic Landmark Landscape Context Statement. Glen Arbor, Michigan: National Park Service, 2016.*

Figure 2-18. Photograph of Crew Ready Room (right), Generator Room (center), and Flammable Materials Storage Building (left) taken from the Lifeboat Station looking south, undated (source: Leelanau Historical Society).

1913

Telesford St. Peter was transferred to Station Pentwater on March 24, 1913.[2.42]

1914

John G. Sammet was appointed keeper in 1914.[2.43]

1914 to 1916

The Generator Building, a single-story, gable-roofed shed, and the Flammable Materials Storage building were completed.[2.44]

The new Capstan, Launchway, Walkways, Flagpole, Windmill, and Water Tower were completed.[2.45]

2.42 USCG History Program, *Station North Manitou Island*.

2.43 USCG History Program, *Station North Manitou Island*.

2.44 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 11, 12.

2.45 Herd, *USDI/NPS NRHP Registration Form*, 215.

Figure 2-19. Crew preparing to launch a boat from the Lifeboat Station with the USLSS Dwelling and Windmill in the background, undated (source: Leelanau Historical Society).

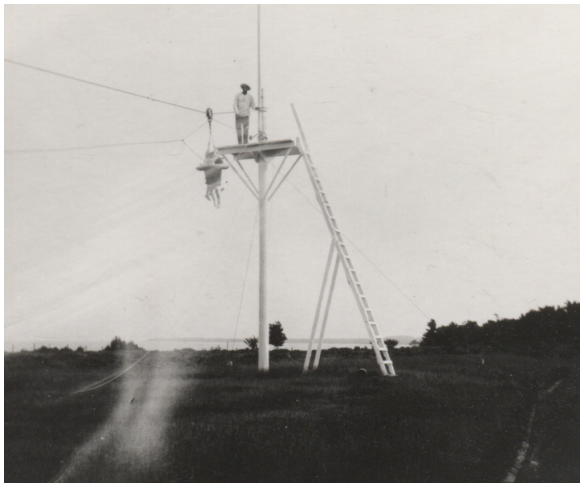
Figure 2-20. View of North Manitou Island Life-Saving Station from the west, undated (source: Leelanau Historical Society).

Life-Saving Drills

USLSS Stations included two common features– a signal pole and wreck pole. Crews used signal poles to communicate with passing ships by using coded flags to communicate their location and warn of offshore danger or weather conditions. A wreck pole simulated the mast of a ship and was used to practice the rescue of stranded mariners. This breeches buoy drill was performed twice a week as described below.

"For practice with the beach apparatus there is...a wreck-pole, to represent the mast of a stranded vessel...At drill the crew is mustered in the boat-room, and each man, upon his number being called, salutes the commanding officer and recites in proper sequence every act he is to perform in the exercise as prescribed in the Service Manual. At the proper words of command, they all fall into their allotted places at the drag-ropes of the apparatus-cart and draw it to the drill ground, where they perform the remainder of the exercise, which consists in effecting a mimic rescue by rigging the gear and taking a man ashore from the wreck-pole in the breeches buoy. The officer conducting the drill carefully notes the time which elapses from the moment he gives the initial command 'action' until the rescued man sets foot upon the shore.

If in one month after the opening of the 'active season' a crew can not accomplish the rescue within five minutes it is considered that they have been remiss in drilling, or that there are some stupid men among them. They are cautioned that if upon the next visit of the [Inspector of Stations] a marked improvement is not shown some decisive action will be taken to secure it. This usually produces the desired effect."[2.46]



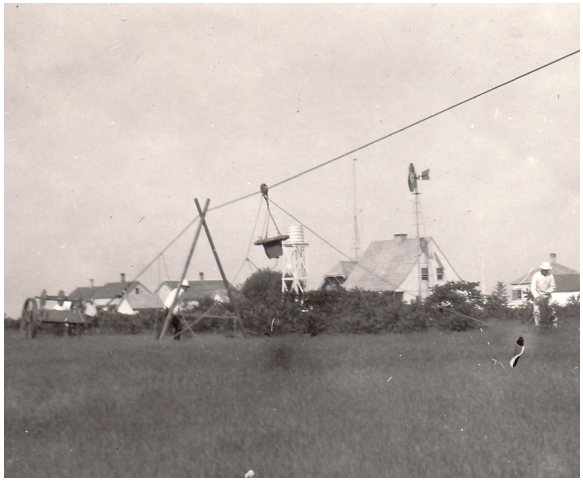


Figure 2-21. Life Saving Practice Drill, undated (source: Leelanau Historical Society).

2.46 Sumner I. Kimball, Organization and Methods of the United States Life-Saving Service (Washington, D. C.: U. S. Government Printing Office, 1890), 9.

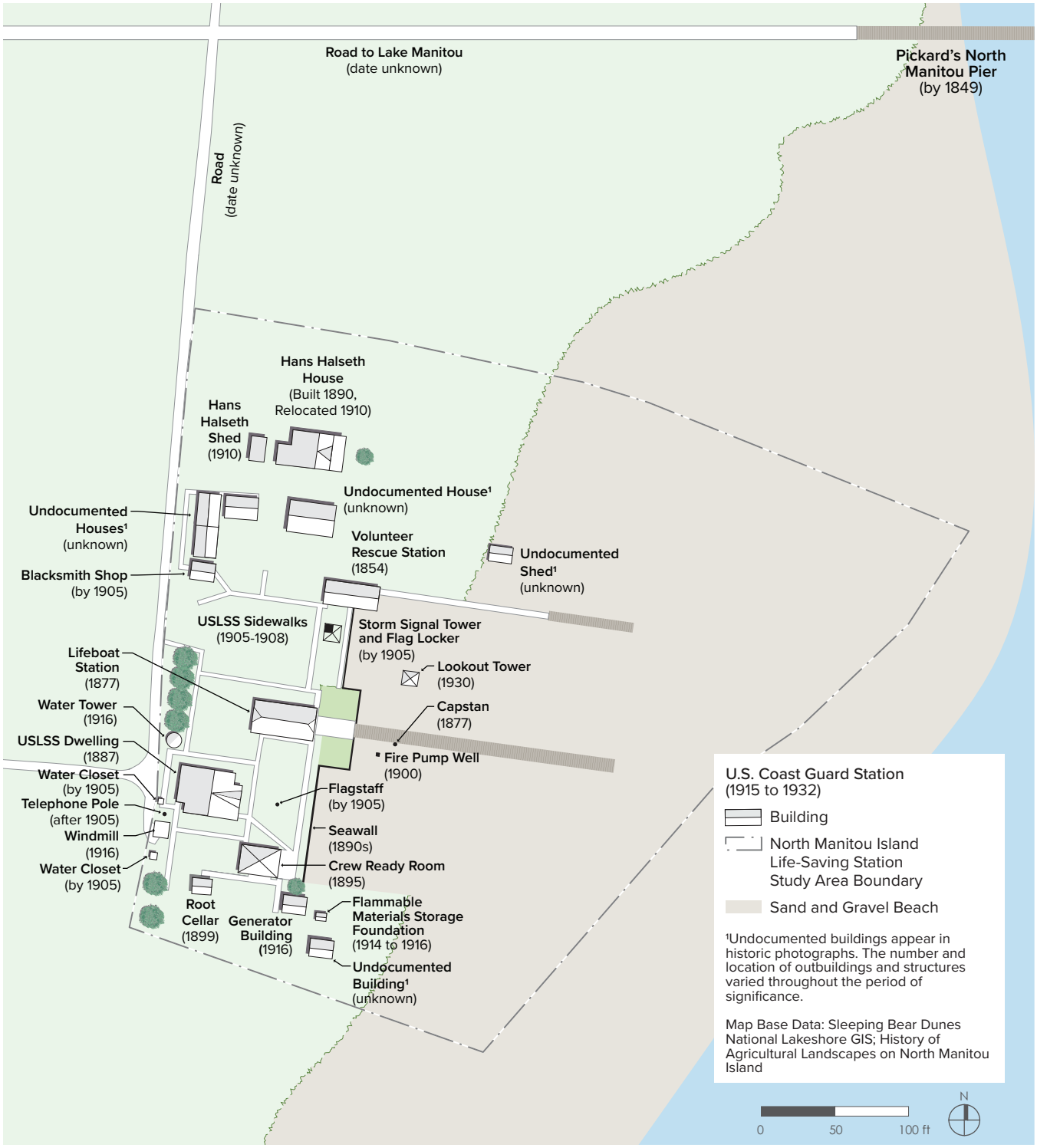


Figure 2-22. North Manitou Island Life-Saving Station, 1915 to 1932 (source: Mundus Bishop, 2025).

U.S. Coast Guard (1915 to 1932)

The USLSS merged with the U.S. Revenue Cutter Service in 1915, forming the U.S. Coast Guard (USCG). Improvements by the USCG included the addition of the Generator Building, Flammable Materials Shed, Windmill, and Lookout Tower. The USCG relocated the Volunteer Rescue Station one length closer to Lake Michigan, placing the building on a concrete foundation.

North Manitou Island Life-Saving Station became less functional as the USCG shifted toward motorboats for rescues. The waters of the station were too shallow to launch motorboats, and the USCG declared the station obsolete in 1933. North Manitou Island Life-Saving Station was left with a small crew of two men and permanently closed in 1938.

Figure 2-23. Lifeboat Station, taken between 1925 and 1927 (source: Leelanau Historical Society).

1915

John G. Sammet left North Manitou Island Life-Saving Station, and Nels Palmer was appointed keeper.[2.47]

The USLSS and Revenue Cutter Service merged to form the USCG in 1915.[2.48]

1930

The USCG built the Lookout Tower. The metal tower was 30'-0" in height and was set on five concrete abutments.[2.49]

1932

The USCG redesigned the USLSS Dwelling. The USLSS Dwelling was raised and placed on a full basement. A porch was added to the east side of the building, while the northwest corner porch was removed. Its interior was redesigned for lodging and administrative use.

2.47 USCG History Program, *Station North Manitou Island*.

2.48 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 5.

2.49 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 12.

Figure 2-24. North Manitou Island Life-Saving Station, c. 1932 (source: Sleeping Bear Dunes National Lakeshore).

Figure 2-25. North Manitou Island Life-Saving Station, c. 1932 (source: Sleeping Bear Dunes National Lakeshore).

Post U.S. Coast Guard (1933 to 1969)

The USCG sold North Manitou Island Life-Saving Station to William Angell, the majority owner of Manitou Island Association (MIA), in 1938. MIA owned large tracts of land and envisioned North Manitou Island as a resort for hunting and fishing. They modified the Lifeboat Station, Crew Ready Room, and USLSS Dwelling for lodging and storage.

1933

The USCG determined North Manitou Island Station to be obsolete. The crew was reduced to two men who served as caretakers for North Manitou Island Station.[2.50]

1938

North Manitou Island Life-Saving Station was permanently closed in 1938 and sold to a private corporation, Manitou Island Association (MIA).

after 1939

MIA modified the Lifeboat Station for lodging and storage. This included replacing the boat door with a picture window and pedestrian door, installing two windows at ground level on the west side of the building, removing the lookout tower on top of the building, and removing the Capstan.[2.51]

1940s

MIA remodeled the interior of the Crew Ready Room for use as living quarters.[2.52]

1953

MIA's lodge, housed in the former Cottage Row dining hall, was destroyed by fire in 1953. The USLSS Dwelling was remodeled to serve as a new lodge for hunters and other paying guests.

Figure 2-26. Lifeboat Station being remodeled for use by the MIA as a lodge, 1953 (source: Leelanau Historical Society).

2.50 Herd, *USDI/NPS NRHP Registration Form*, vii.

2.51 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 8.

2.52 MacDonald, *Tending a 'Comfortable Wilderness,'* 219.

National Park Service (1970 to present-day)

North Manitou Island became part of Sleeping Bear Dunes National Lakeshore in 1984. The NPS restored and rehabilitated North Manitou Island Life-Saving Station's buildings for interpretation and to provide housing for park employees.

1970

Sleeping Bear Dunes was designated a national lakeshore on October 21, 1970.[2.53]

1984

The federal government purchased North Manitou Island from the Angell Foundation. The island, including North Manitou Island Life-Saving Station, became part of Sleeping Bear Dunes National Lakeshore.[2.54]

1990

The NPS rehabilitated the Hans Halseth House to provide housing for park employees. This included removing aluminum siding, asphalt shingles, and a shed addition. Original wood siding was restored, and a historically accurate wood shingle roof was provided.[2.55]

The NPS rehabilitated the Lifeboat Station for dormitory use in 1990. Work included providing a kitchen, bedroom, and upper dormitory sleeping area with a bathroom as a separate structure that can be reversed to its original boathouse function.

The Crew Ready Room was rehabilitated for park living quarters.[2.56]

1992

The NPS completed restoration of the USLSS Dwelling. This included repairing and repainting the original interior plaster and exterior siding, restoring the 1932 front porch, restoring the original southwest corner porch, installing a partition in the open crew room to provide additional bedrooms, and adding a partition to the first-floor captain's bedroom to create a hallway from the living room to the bathroom.[2.57]

1993

The NPS stabilized and restored the Hans Halseth Shed to its historic appearance.[2.58]

1994

The NPS moved the Flag Locker from the north side of the island to its original location at the Storm Signal Tower and restored the Generator Building.[2.59]

by 1998

The NPS restored the Volunteer Rescue Station. Work included removing non-historic partitions and work surfaces from the interior, reinstalling the historic floor, and rebuilding the Launchway on the front of the building.[2.60]

1998

North Manitou Island Life-Saving Station was listed on the National Register of Historic Places and designated a National Historic Landmark on August 5, 1998. The Volunteer Rescue Station, completed in 1854, is considered to be the only remaining example of this building type.[2.61]

2.53 United States Department of the Interior, National Park Service. *North Manitou Island Life-Saving Station Cultural Landscape Inventory (CRIS-CL 500330)* (Glen Arbor, Michigan: Sleeping Bear Dunes National Lakeshore, 2022), *33.*

2.54 NPS, *North Manitou Island CRIS-HS Single Record Report, 34.*

2.55 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 5.

2.56 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 9, 11.

2.57 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 11.

2.58 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 6.

2.59 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 7, 11.

2.60 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 7.

2.61 MacDonald, *Tending a 'Comfortable Wilderness,'* 267.

2024

The Great American Outdoors Act (GAOA) Legacy Restoration Fund allocated funding to address the impact of natural processes, such as littoral drift (shifting sands) and high water levels, on North Manitou Island's existing dock. The NPS developed an Environmental Assessment (EA) to provide safe and reliable boat access. The following alternatives were developed.

- The no-action alternative would include the continued use of the existing dock at its current location.

- The action alternative (preferred) would improve boat access through the demolition of the existing dock and construction of a new flow-through, pile-supported dock at a new location (the former Pickard pier/dock). The new dock location would be approximately 400 feet north of the existing dock, and the dock would take advantage of the natural angling of the beach in this area to provide opportunities to dock in a variety of ways on the structure, depending upon prevailing winds. The existing road trace between the visitor contact station and the former dock location would be reestablished to formalize connection of the new dock to the existing park facilities and trail system. The existing dock and related infrastructure (access road and electrical service) would be demolished and associated areas of disturbance would be restored.[2.62]

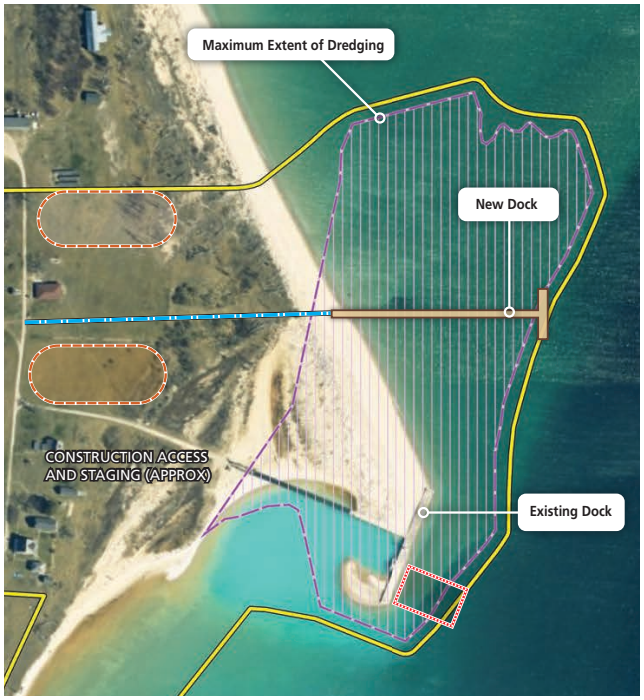


Figure 2-27. Proposed location of new dock (source: Sleeping Bear Dunes National Lakeshore, 2024).

2.62 National Park Service, *Sleeping Bear Dunes National Lakeshore: Improved Boat Access at the Manitou Islands Environmental Assessment* (National Park Service, 2024).

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3

Existing Condition, Analysis, and Treatment Guidance

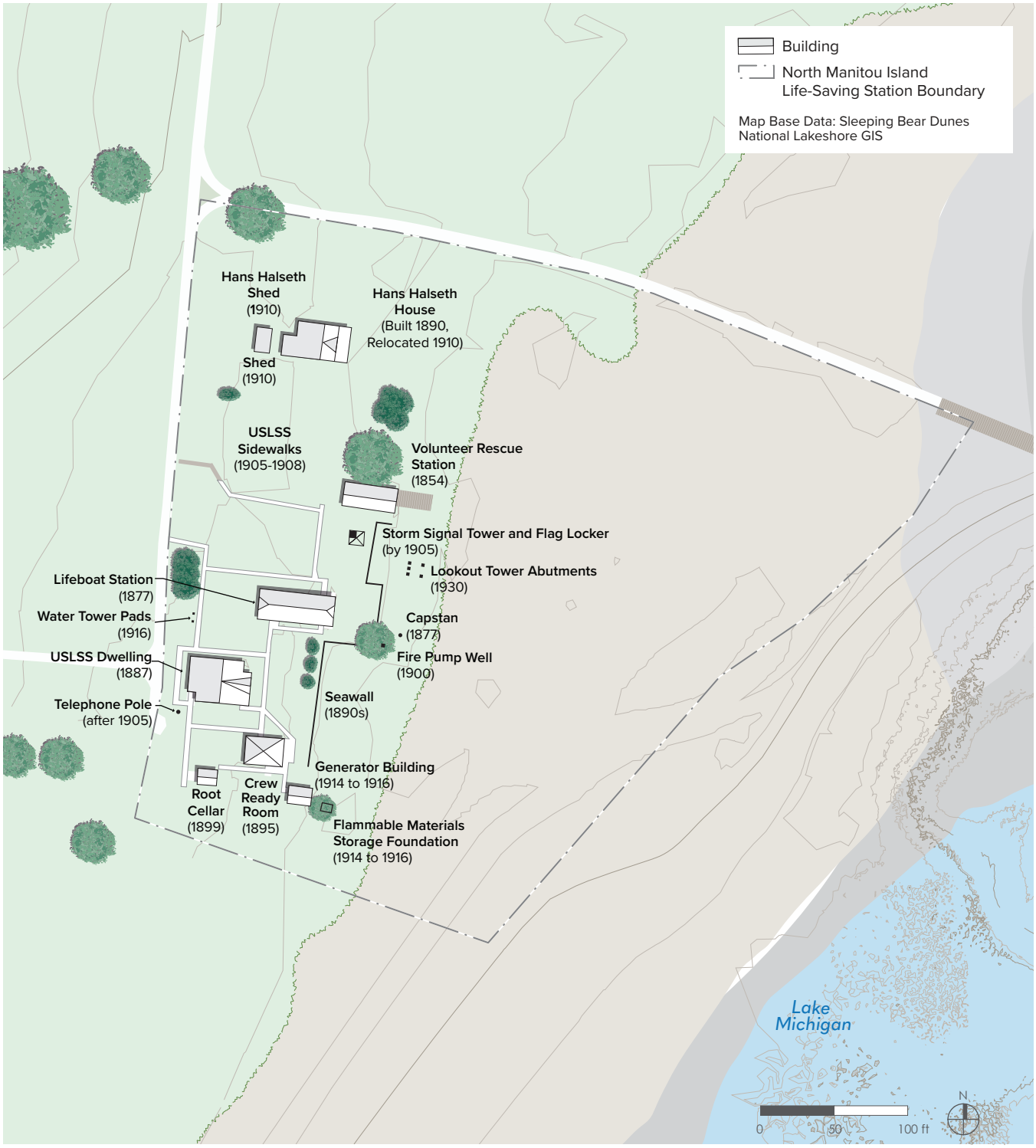

Figure 3-1. North Manitou Island Life-Saving Station Existing Condition Plan (source: Mundus Bishop, 2025).

Introduction

This chapter presents evaluation, analysis and treatment guidance for North Manitou Island Life-Saving Station (the study area). This chapter describes the life-saving station's existing condition and presents an analysis of its integrity according to the National Register of Historic Places' seven aspects of integrity. Treatment guidance is presented in this chapter to inform current and future planning and design.

Existing Condition

This assessment of North Manitou Island Life-Saving Station was undertaken to understand the study area as a whole; to identify and document qualities that contribute to its historic character; and to identify individual features that contribute to its significance. Site investigations completed in the summer of 2024 documented the condition of the cultural landscape. Existing condition is evaluated using the following criteria.

- Good—Those features of the landscape that do not require treatment at this time. Only minor or routine maintenance is needed at this time.
- Fair—Some deterioration, decline, or damage is noticeable; the feature may require immediate intervention. If intervention is deferred, the feature will require extensive attention in a few years.
- Poor—Deterioration, decline, or damage is serious; the feature is seriously deteriorated, damaged, or presents a hazardous condition. Due to the level of deterioration, damage, or danger, the feature requires extensive and immediate attention.

Assessment of Integrity

This document evaluates North Manitou Island Life-Saving Station according to landscape characteristics that include tangible and intangible aspects. These landscape characteristics collectively create the historic character of the district and aid in understanding its cultural significance. The following landscape characteristics are included.

- Natural Systems are natural aspects that have influenced the development and physical form.
- Land Use is the organization, form, and shape of the land in response to land use.
- Spatial Organization is the arrangement of elements creating the ground, vertical, and overhead planes that define and create space, including topography, buildings, and vegetation.
- Topography is the three-dimensional configuration of the landscape surface.
- Views and Vistas are features that create or allow a range of vision that can be natural or designed and controlled.
- Circulation are features and materials that constitute systems of movement.
- Small Scale Features are human-scaled elements that provide detail and function.
- Buildings and Structures are three-dimensional man-made constructs.
- Vegetation is indigenous or introduced trees, shrubs, vines, groundcovers, herbaceous materials, and natural vegetative cover.

Assessment of Integrity

This document evaluates North Manitou Island Life-Saving Station according to landscape characteristics that are the tangible and intangible aspects of a cultural landscape. These landscape characteristics collectively create the historic character of the study area and aid in understanding its cultural significance.

Integrity is the ability of a cultural landscape to convey its significance. The study area was assessed to determine if the landscape characteristics that shaped the cultural landscape during the period of significance are present today. Integrity is evaluated according to seven aspects or qualities: location, setting, feeling, design, materials, workmanship, and association.[3.1]

The study area retains integrity through extant features and buildings, cluster arrangement, and circulation. It remains largely as originally designed by the USLSS and USCG and retains integrity in location, setting, materials, workmanship, design, and association. The cultural landscape has diminished integrity in feeling.

Location is the place where the cultural landscape was constructed, or a historic event occurred.
The physical environment associated with the development of the study area and its location along Lake Michigan and Manitou Passage remains from the period of significance.

Setting is the physical environment of the cultural landscape.
The study area's historic setting retains integrity. Original relationships between the study area, Lake Michigan, and beach and dune landscapes remain. The setting is modified by changes in use and the addition and removal of features, within the study area in the adjacent Village and Cottage Row areas, by MIA and the NPS after the period of significance.

Feeling is the cultural landscape's expression of the aesthetic or historic sense of a particular period of time.
The study area retains the original remote character of North Manitou Island, views to Lake Michigan and Manitou Passage, and features of when it was designed and built. It is no longer an active life-saving station and the feeling of a working maritime landscape no longer remains.

Materials are physical elements that were combined or deposited during the period(s) of time and in a particular pattern or configuration to form the cultural landscape. Workmanship includes the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
Materials from the original construction remain. Contributing features associated with the cultural landscape retain the simple material palette of the USLSS and USCG. This includes a simple material palette of concrete, stone, and wood used in both buildings and circulation routes and Lombardy poplar trees. Contemporary additions have continued to use this simple material palette and workmanship aesthetic.

Design is the combination of elements to create the form, plan, space, structure, and style of the cultural landscape.
The study area retains integrity of design. The cultural landscape retains its original arrangement of buildings and structures as a series of working spaces, connected by walks.

Association is the direct link between an important historic event or person and a cultural landscape.
The cultural landscape retains integrity of association with the USLSS and USCG, through the extant designed landscape and buildings.

3.1 NPS, *The Secretary of the Interior's Standards for Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*.

Contributing Features

Contributing features are individual elements or landscape characteristics extant from the period of significance that contribute to the cultural landscape of North Manitou Island Life-Saving Station.

Non-contributing features do not contribute to the district either because they were not present during the period of significance, do not relate to the documented significance of the property, no longer possess historical integrity, or are not capable of yielding important information relevant to the significance of the property.

Table 3-1. Contributing and Non-Contributing Features

Feature	Contributing / Non-Contributing
Relationship between historic buildings and Lake Michigan and Manitou Passage	Contributing
Settings of historic buildings	Contributing
View to Lake Michigan	Contributing
View to North Manitou Island Life-Saving Station	Contributing
Lifesaving Station Sidewalks	Contributing
Gravel Access Roads	Non-Contributing
Boardwalk	Non-Contributing
USLSS Dwelling	Contributing
Crew Ready Room	Contributing
Lifeboat Station	Contributing
Volunteer Rescue Station	Contributing
Generator Building	Contributing
Hans Halseth House	Contributing
Hans Halseth Shed	Contributing
Storm Signal Tower	Contributing
Storm Signal Flag Locker	Contributing
Root Cellar	Contributing
Flammable Materials Storage Foundation	Contributing
Lookout Tower Abutments	Contributing
Seawall	Contributing
Fire Pump Well Foundation	Contributing
Water Tower Concrete Pads	Contributing
Capstan	Contributing
National Historic Landmark Plaque	Non-Contributing
NPS signs	Non-Contributing
Clothesline	Non-Contributing
Picnic Tables	Non-Contributing
Telephone Pole	Contributing
Utility Pole	Non-Contributing
Lombardy Poplar	Contributing
Black Locust	Non-Contributing
Norway Maple	Non-Contributing
Ornamental Shrubs and Flowers	Non-Contributing
Lawn	Contributing

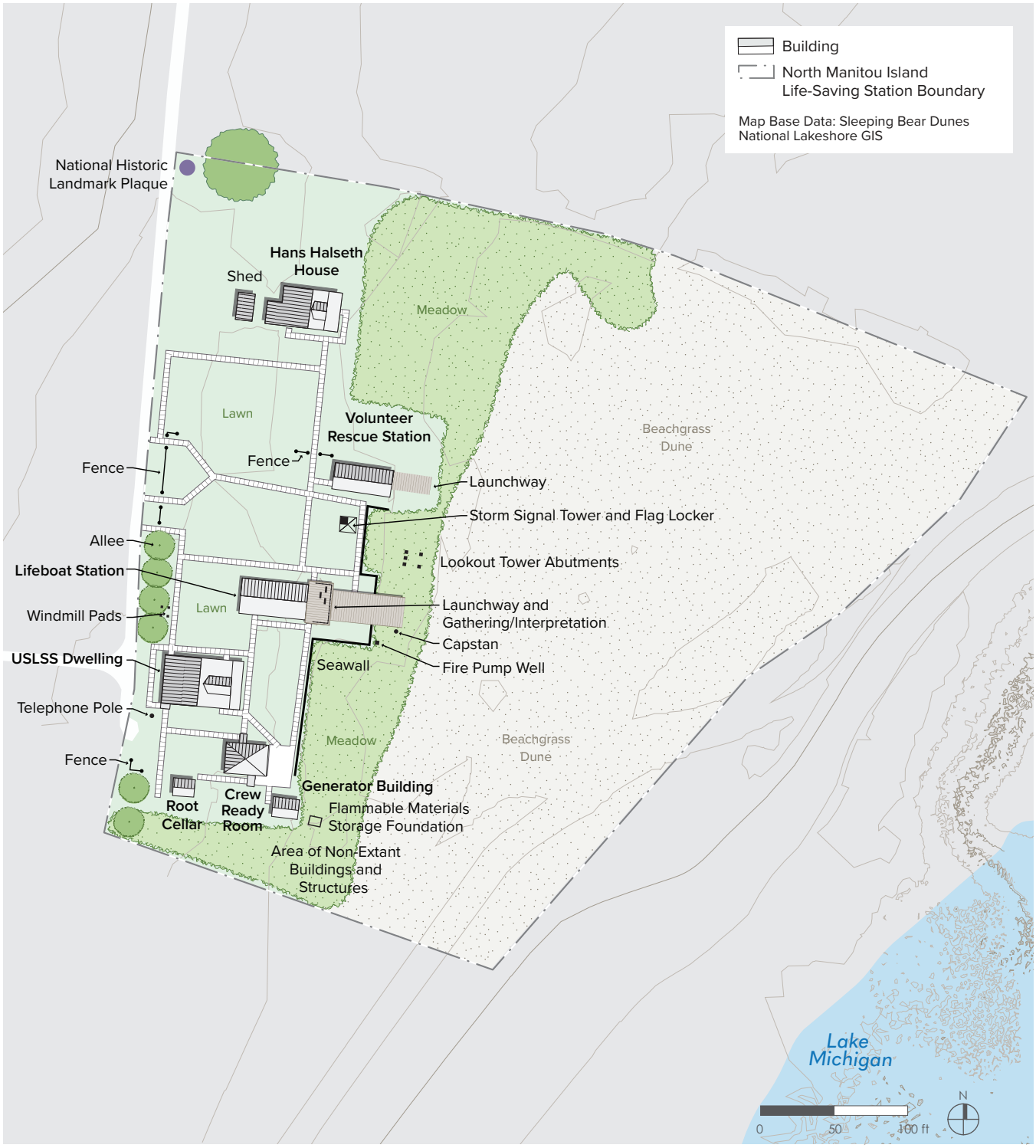

Figure 3-2. North Manitou Island Life-Saving Station Treatment Plan (source: Mundus Bishop, 2025).

Treatment

This chapter presents treatment guidance to inform current and future planning and design for North Manitou Island Life-Saving Station. General treatment guidance provides actions and recommendations to guide the rehabilitation of the study area. Detailed treatment guidance is provided for site design and individual landscape characteristics—natural systems and features, land use, spatial organization, circulation, buildings and structures, small scale features, and vegetation.

Guidance is based upon review of historical documentation, assessment of existing condition, analysis of integrity, and application of the Secretary of Interior's standards and guidelines as they apply to the treatment of historic landscapes. Treatment recommendations address management goals presented in Chapter 1, which includes protection of natural and cultural resources and additions for contemporary use.

This treatment guidance supports the rehabilitation of North Manitou Island Life-Saving Station through preservation and repair of contributing features and historic character, conservation of the natural landscape, and addition of appropriate compatible features.

Treatment Goals

The following goals assist in determining the desired landscape condition and appropriate stewardship guidance for protecting the character and ambiance of the cultural landscape.

- Provide an overall rehabilitation plan for circulation, views and vistas, vegetation, and small scale features.
- Preserve extant contributing features.
- Identify opportunities for introducing compatible scale features in the landscape, including ABAAS-compliant features and routes.
- Manage non-contributing ornamental tree and shrub species.

Rehabilitation Treatment Approach

The selected treatment for North Manitou Island Life-Saving Station is rehabilitation. This treatment approach emphasizes preservation of the study area and allows for the repair and addition of compatible improvements.

Rehabilitation is defined as the act or process of making possible a compatible use through repairs, alterations, or additions if those portions or features that convey its historic, cultural, or architectural values are preserved.

Rehabilitation allows for new additions to be integrated within the cultural landscape in a manner that preserves established patterns, spaces, features, and scale of the historic station. Additional actions include those that preserve, restore, or repair contributing features and qualities that contribute to the study area's historic character.

All future work planned for the study area will be guided by *The Secretary of the Interior's Standards for the Treatment of Cultural Landscapes*. Appendix A summarizes terminology used in this CLR to describe recommended actions.

Vision

The overall vision is to enhance the understanding and legibility of the study area as an active life-saving station and to improve functionality of the study area for NPS administrative and visitor use.

Treatment recommendations emphasize the historic design of the study area as an active life-saving station. Treatment recommendations identify locations where rehabilitation is needed to reveal historic features, retain character, and maintain integrity.

Rehabilitation will reveal components of the original landscape to enhance visitor understanding of daily activities associated with North Manitou Island Life-Saving Station.

Treatment Guidance

Treatment guidance directs the rehabilitation of North Manitou Island Life-Saving Station as a whole. These recommendations provide holistic guidance to protect significant cultural resources, repair contributing features, reestablish important views, and repair settings.

Education, Outreach, and Interpretation Recommendations

Continue to develop on-site and web-based resources to share values, stories, and connections to North Manitou Island Life-Saving Station.

Consider interpretive measures to allow visitors to experience the community of North Manitou Island Life-Saving Station and envision non-extant or below grade features of the study area by listening to oral histories and/or viewing digital media.

Climate Trends, Vulnerabilities, and Impacts

Treatment guidance provided in this report addresses resources that are currently or potentially threatened by these climate-driven environmental changes. These include warmer temperatures throughout the year, more extreme temperatures, increased and highly variable annual precipitation, and more intense and severe precipitation events.[3.2]

Extreme Temperatures: The number of extreme temperature days each year and average annual temperatures are projected to increase. Climate models project significant warming by 2050 with projected increases in average annual temperature ranging from +2.9 °F to +9.6 °F.[3.3]

Potential impacts to the study area could lead to the acceleration of weathering of structures and buckling and cracking of paved surfaces.

Vegetation: Small changes in temperatures may cause major shifts in vegetation.

Potential impacts to the cultural landscape include shifts in the composition of vegetation on North Manitou Island.

Invasive species and pests: Changing environmental conditions will accelerate the introduction and spread of invasive species. Extreme weather events may stress native species and create opportunities for invasive species to establish.

Potential impacts include increased invasive species and pests, shifts in the composition of vegetation in the study area, and damage to cultural resources by vegetation.[3.4]

Storm Events (wind and precipitation): The frequency and severity of storms, precipitation, and wind are likely to intensify. Rainfall during the four wettest days of the year has increased by 35 percent over the last half-century.[3.5]

Potential impacts from increased storm events include flood inundation, soil erosion, shoreline erosion, structural damage, and archeological site degradation/loss.

Increased and Variable Precipitation: Average annual precipitation is projected to be highly variable with considerably drier and wetter years than historically recorded.[3.6]

Potential vulnerabilities include increased flood inundation and shoreline erosion. Decreased ecosystem health associated with drought and floods, loss of drought-intolerant species, wildfires, decreased water quality, and loss or damage to infrastructure associated with floods and rising lake levels.

3.2 United States Department of the Interior, National Park Service. *Sleeping Bear Dunes National Lakeshore Climate Futures Study*. (Fort Collins, CO: National Park Service Climate Change Response Program, 2024).

3.3 NPS. *Sleeping Bear Dunes National Lakeshore Climate Futures Study*, 3.

3.4 NPS. *Sleeping Bear Dunes National Lakeshore Climate Futures Study*, 11.

3.5 United States Environmental Protection Agency. *What Climate Change Means for Michigan.* (Washington, DC: U.S. Global Change Research Program and U.S. Climate Change Science Program, 2016).

3.6 NPS. *Sleeping Bear Dunes National Lakeshore Climate Futures Study*, 5.

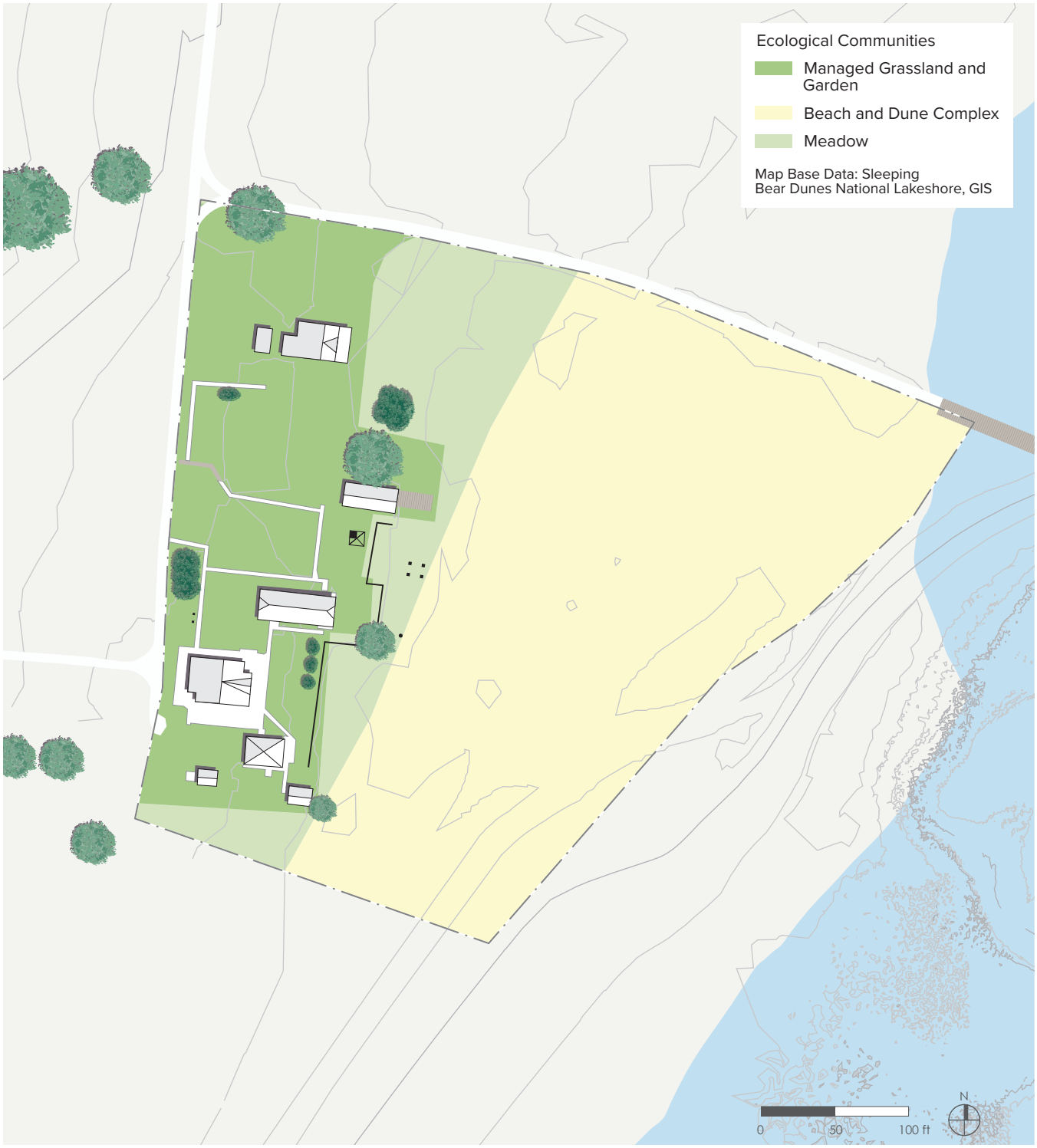

Figure 3-3. North Manitou Island Life-Saving Station Natural Systems and Features Existing Condition (source: Mundus Bishop, 2025).

Natural Systems and Features

Natural systems and features are important character-defining features and remain from the period of significance. Lake Michigan and the ecotypes of the study area—beach and dune complex, meadow, and managed lawns and gardens—contribute to its significance.

Existing Condition

Sleeping Bear Dunes National Lakeshore spans 35 miles of Lake Michigan's coastline on the lower peninsula of Michigan near Traverse City, and North and South Manitou Islands. The national lakeshore is set within Central Lowland physiographic province. The province extends from western New York to North Dakota and south to Texas. The national lakeshore is relatively flat and characterized by rolling hills and fertile plains, primarily shaped by glacial and post-glacial processes.

North Manitou Island is part of a 14-island archipelago extending northward within northeastern Lake Michigan. The chain of islands formed over a limestone ridge covered by glacial overburden material or moraine (e.g., rocks, gravel, sand, silt, and clay). Rising waters, waves, and wind in Lake Michigan have shaped and re-shaped the island archipelago into its current forms after the retreat of the last glacial ice sheet from the region.[3.7]

The landforms of North Manitou Island consist of rolling hills, narrow valleys, steep bluffs and escarpments, sand dunes, beaches, spits, and include two interior lakes–Lake Manitou and Tamarack Lake.

The littoral movement of the study area is generally north to south. A pier north of the study area extends 450' from shore and functions as a jetty. Longshore sand movement accumulates along the north side of the pier and spills over to the south side of the pier. Areas south and west of the pier are regularly dredged to maintain vessel access.[3.8]

The topography of the study area rises in a series of terraces from the shoreline of Lake Michigan. These terraces are indicative of historic shorelines, marking the variable water levels in Lake Michigan following the last glaciation. The soils of the study are part of the somewhat excessively drained Mancelona-East Lake loam sand soil association and are capable of supporting a diverse assemblage of native plant species.[3.9]

Active management of the study area has reduced the ecological communities to three ecotypes—beach and dune complex, meadow, and managed lawns and gardens.

Beach and Dune Complex

Beach and dune complex covers lands approximately 50' to 25' from the shoreline. This complex is consistent with the open dunes community as defined by Michigan Natural Features Inventory and is subject to near continuous wind and wave energy from Lake Michigan. Shoaling is also part of this overall complex as, over time, sand and organic matter are transported into and out of the system.[3.10]

The beach and dune complex is important habitat for the Pitcher's thistle (*Cirsium pitcher*), a federal and state threatened species.

3.7 NPS, *History of Agricultural Landscapes*; NPS, *Coming through with Rye*.

3.8 NPS, *Coming through with Rye;* MacDonald et al., 2000; Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. http://websoilsurvey.sc.egov.usda.gov/. (Last accessed November 5, 2024).

3.9 USDA, *Soil Survey 2024*.

3.10 Cohen, J.G., M.A. Kost, B.S. Slaughter, D.A. Albert, J.M. Lincoln, A.P. Kortenhoven, C.M. Wilton, H.D. Enander, and K.M. Korroch. 2020. Michigan Natural Community Classification [web application]. Michigan Natural Features Inventory, Michigan State University Extension, Lansing, Michigan. Available https://mnfi.anr.msu.edu/communities/classification. (Last accessed: December 5, 2024).; Kost, M.A., D.A. Albert, J.G. Cohen, B.S. Slaughter, R.K. Schillo, C.R. Weber, and K.A. Chapman. 2007. Natural Communities of Michigan: Classification and Description. Michigan Natural Features Inventory, Report No. 2007-21, Lansing, MI.

The widest portion of the beach and dune complex is subdivided into three distinct zones—beach, dune, and back-beach. The beach zone is adjacent to Lake Michigan and is the most affected by coastal processes and sediment transport. The zone is sparsely to moderately vegetated with American beachgrass (*Ammophila breviligulata*) as the dominant species with additional plants expanding into the zone from the more stable dune zone, including beach pea (*Lathyrus japonicus*), bladder campion (*Silene vulgaris*), common silverweed (*Argentina anserina*), and deer tongue (*Dichanthelium* spp.).

The dune zone is an area of relatively stable, accumulated sand pushed landward by wind and waves. The back-beach zone, set behind the dune zone, is relatively stable and less susceptible to consistent coastal processes but subject to irregular flooding. These zones are dominated by American beachgrass and other grasses, sedges, forbs, and woody plants. Common species include deer tongue, sedges (*Carex spp.*), beach pea, common silverweed, yellow salsify (*Trapogon dubi*s), great mullein (*Verbascum thapsus*), northern white cedar (*Thuja occidentalis*), smooth rose (*Rosa blanda*), and poison ivy (*Toxicodendron radicans*).

Beach and dune complex provides important shorebird and waterfowl habitat. Several areas of North Manitou Island beach are protected habitat for piping plover (*Charadrius melodus*), a federal and state threatened species. Other common shorebirds and waterfowl include Spotted Sandpiper (*Actitus macularis*), Ring-billed Gull (*Larus delawarensis*), Caspian Tern (*Hydroprogne caspia*), Killdeer (*Charadrius vociferus*), Common Merganser (*Mergus merganse*r), Great Blue Heron (*Ardea herodias*), and mallard (*Anas platyrhynchos*).[3.11]

Meadow

The meadow community is consistent with the dry sand prairie community as defined by Michigan Natural Features Inventory. The meadow consists of native grassland species mown once or twice a year.

The meadow was historically developed due to a combination of nutrient-poor soils and periodic fires. Today regular mowing largely maintains the structure that resulted from natural fires. Meadow vegetation is low to medium height and moderately sparse in coverage. Common species in and adjacent to the study area include little bluestem (*Schizachyrium scoparium*), poverty grass (*Danthonia spicata*), Pennsylvania sedge (*Carex pensylvanic*a), orchard grass (*Dactylis glomerata*), quack grass (*Elymus repens*), common milkweed (*Asclepias syriaca*), yellow salsify (*Tragopogon dubius*), hairy vetch (*Vica villosa*), threelobe spirea (*Spirea trilobate*), lance-leaved coreopsis (*Coreopsis lanceolata*), and northern dewberry (*Rubus flagellaris*).[3.12]

The meadow provides habitat to a range of species including insects like monarch butterfly (*Danaus plexippus*), eastern rhinoceros beetle (*Xyloryctes jamaicensis*); birds such as Barn Swallow (Hirundo rustica), Indigo Bunting (*Passerina cyanea*), and Song Sparrow (*Melospiza melodia*); reptiles like the common garter snake (*Thamnophis sirtalis*); and mammals such as eastern chipmunk (*Tamias striatus*) and coyote (*Canis latrans*).[3.13]

3.11 eBird. 2024. eBird: An online database of bird distribution and abundance [web application]. eBird, Cornell Lab of Ornithology, Ithaca, New York. Available: http://www.ebird.org. (Last accessed: December 5, 2024); iNaturalist. 2024. Available from https://www.inaturalist.org (Last accessed: November 20, 2024).

3.12 Kost et al, 2007; Cohen et al., 2020.

3.13 eBird, 2024; iNaturalist, 2024.

Managed Grassland and Garden

Managed lawn and garden areas are generally not considered a natural community but are ubiquitous in developed areas. The community includes lawn areas planted with cool season grasses that are regularly mown and native and non-native shade trees, ornamental trees, fruit trees, shrubs, and other flowering plants.

Common lawn grasses include fescues (*Festuca* spp.) and bluegrasses (*Poa spp.*). Clover (*Trifolim* spp.), plantain (*Plantago* spp.), dandelion (*Taraxacum officinale*), crabgrass (*Digitaria* spp.) and various tree and shrubs species including black locust (*Robinia pseudoacacia*), butternut hickory (*Carya cordiformis*), sugar maple (*Acer saccharinum*), red oak (*Quercus rubra*), white cedar (*Thuja occidentalis*), Norway maple (*Acer platanoides*), apple (*Malus* spp.), cherry (*Pyrus* spp.), steeplebush (*Spirea* spp.), and lilac (*Syringa vulgaris*) are interspersed within lawn and garden areas.

Wildlife common to the meadow are also found in lawn and garden areas. Additional species that may favor the managed setting are species such as Black-capped chickadee (*Poecile atricapillus*), Tufted titmouse (*Baeolophus bicolor*), House sparrow (*Passer domesticus*), and mice (*Peromyscus* spp.).[3.14]

Figure 3-4. Beach and dune complex (source: Mundus Bishop, 2024).

Figure 3-5. The back-beach zone provides important habitat for Pitcher's thistle a Federal- and State-threatened species (source: Mundus Bishop, 2024).

Figure 3-6. Edge of the meadow community (left) and managed grassland and garden area (right) (source: Mundus Bishop, 2024).

3.14 eBird, 2024; iNaturalist, 2024.

Figure 3-7. Natural systems and features are a characteristic feature of the cultural landscape and remain similar to the period of significance (source: Mundus Bishop, 2025).

Analysis

Natural systems and features are characteristic features of the cultural landscape and remain similar to the period of significance. North Manitou Island Life-Saving Station was located on a beach protected from prevailing northwest winds and set on a low terrace near the shoreline where sloping ramps were used to launch boats directly into Lake Michigan. Buildings were arranged with clear lines of sight to Lake Michigan and Manitou Passage. Lake Michigan, Manitou Passage, beach and dune complex, meadow, and managed lawns and gardens contribute to the historic character of the study area.

Treatment

The setting and natural system and features of the study area that contribute to its historic character will be preserved and protected. This includes Lake Michigan and the ecotypes of the study area—beach and dune complex, meadow, managed grassland—and relationships from North Manitou Island Life-Saving Station to the surrounding natural features.

Continue to monitor and remove non-native plant species in the beach and dune complex. Protect threatened and endangered species.

Protect and enhance federally listed species known to be present in the study area, including Pitcher's thistle (*Cirsium pitcherii*) and piping plover (*Charadrius melodus*). Conduct regular field surveys to verify known and record new occurrences of Pitcher's thistle and piping plover. Manage Lombardy poplar trees as invasive species within the beach and dune zone.

Re-evaluate vegetation management practices periodically to incorporate best available science, lessons learned from internal experience and external resources (NPS, USFWS, other jurisdictions, etc.), and new research, trends, and mitigation strategies of changing environmental conditions.

Monitor littoral drift for aggradation and degradation of habitat around the island. A loss of beach or dune in one area may be replaced elsewhere. However, in anticipation of imminent net loss of federally listed species habitat or individuals, a management plan should be in place and implemented as necessary. The management plan may include habitat stabilization or creation, or species transplantation.

Prioritize native, non-horticultural species that support or enhance multiple ecological functions such as milkweed (*Asclepias spp.*) for monarch butterflies.

Land Use

Land use within North Manitou Island Life-Saving Station has changed since the sale of the study area to Manitou Island Association (MIA) and the subsequent establishment of Sleeping Bear Dunes National Lakeshore. The continued use of Hans Halseth House and USLSS Dwelling for housing, Volunteer Rescue Station for display of a historic surfboat, and Generator Building, Root Cellar, and Halseth Shed has retained historic uses of the study area.

Existing Condition

North Manitou Island Life-Saving Station is within Sleeping Bear Dunes National Lakeshore and is owned and managed by the NPS. Land use includes housing, storage/administration, and interpretation. The NPS provides park housing in the Hans Halseth House, USLSS Dwelling, Lifeboat Station, and Crew Ready Room. The Volunteer Rescue Station displays a historic surfboat and is used for interpretation.

Analysis

The land use of the study area has changed since the period of significance. The sale of the study area to MIA and later establishment of Sleeping Bear Dunes National Lakeshore introduced new uses supporting staff housing and interpretive activities. Uses historically associated with lifesaving and daily operations of the working life-saving station are no longer present. When the USCG ceased operations, the site no longer served its founding mission to rescue boats and crewmen on Lake Michigan.

Use during the period of significance included daily activities associated with a working life-saving station—crew housing, lifesaving drills, standing watch, and performing regular maintenance and upkeep of the life-saving station.

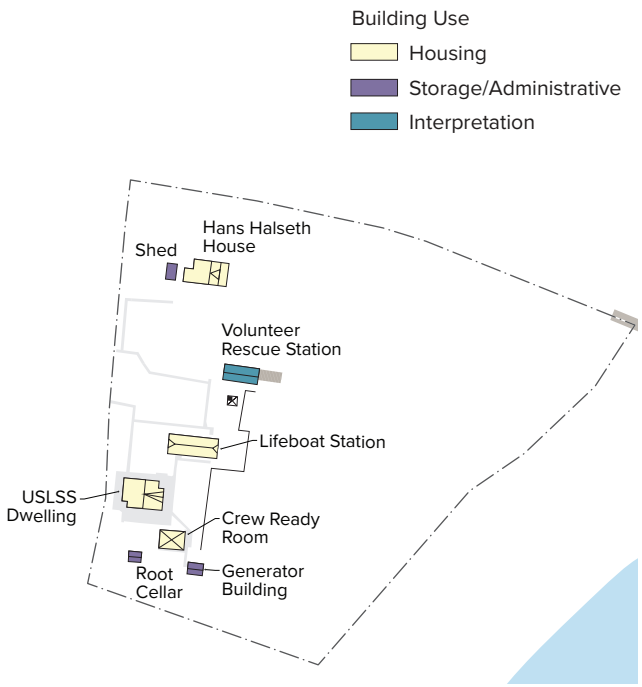

Figure 3-8. North Manitou Island Life-Saving Station Existing Land Use (source: Mundus Bishop, 2025).

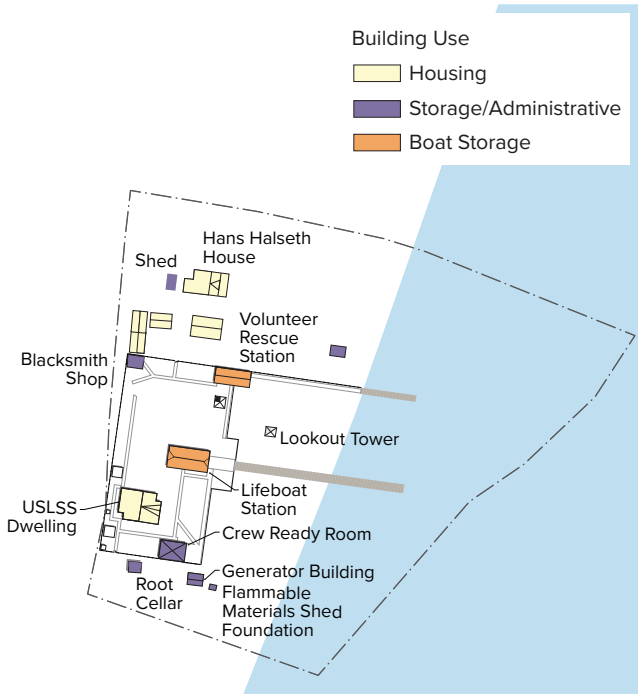

Figure 3-9. North Manitou Island Life-Saving Station Period of Significance Land Use (source: Mundus Bishop, 2025).

Treatment

The cultural landscape will be protected and historic uses associated with North Manitou Island Life-Saving Station will be protected to continue to provide housing and storage/administrative uses. Uses to support administration and visitor contact will be maintained to aid in the function of site and to interpret the history of maritime life-saving.

Preserve historic land use patterns and features. Repair features, spaces and patterns that express historic land use.

Preserve uses that assist in the interpretation of the historic working life-saving station—interpretation at the Volunteer Rescue Station and housing at the Hans Halseth House and USLSS Dwelling.

Design and locate new day use or interpretive features to minimize disruption to historic land use patterns and features.

Spatial Organization, Topography, and Views

North Manitou Island Life-Saving Station is characterized by its compact cluster of development organized along a grid and set on a low terrace within the beachgrass dune on the edge of Lake Michigan with views to the lake, Manitou Passage, and mainland Michigan. The study area retains its original cluster of development and relationship to Lake Michigan.

Existing Condition

North Manitou Island Life-Saving Station is arranged along Lake Michigan with buildings oriented to the lake. The study area is defined by gravel access roads to the north and west and Lake Michigan to the east. A seawall defines the eastern edge of the Lifeboat Station, USLSS Dwelling, Crew Ready Room, and Generator Building. The USLSS Dwelling is prominently set near the center of the site with the Volunteer Rescue Station, Lifeboat Station, Flag Tower, and Hans Halseth House to the north and the Crew Ready Room, Generator Building, and Root Cellar to the south.

Buildings are arranged on a grid with primary facades oriented towards Lake Michigan and walks providing direct connections between the buildings. Lawn surrounds each building. The overall appearance of the cultural landscape reflects a formal military aesthetic of trimmed lawns, orthogonal organization, and clear lines of site.

The topography at buildings is primarily level with dunes creating low ridges east of the buildings.

Primary views include views from the study area to Lake Michigan, Manitou Passage, and mainland Michigan, views between station buildings, and views from Lake Michigan to the study area.

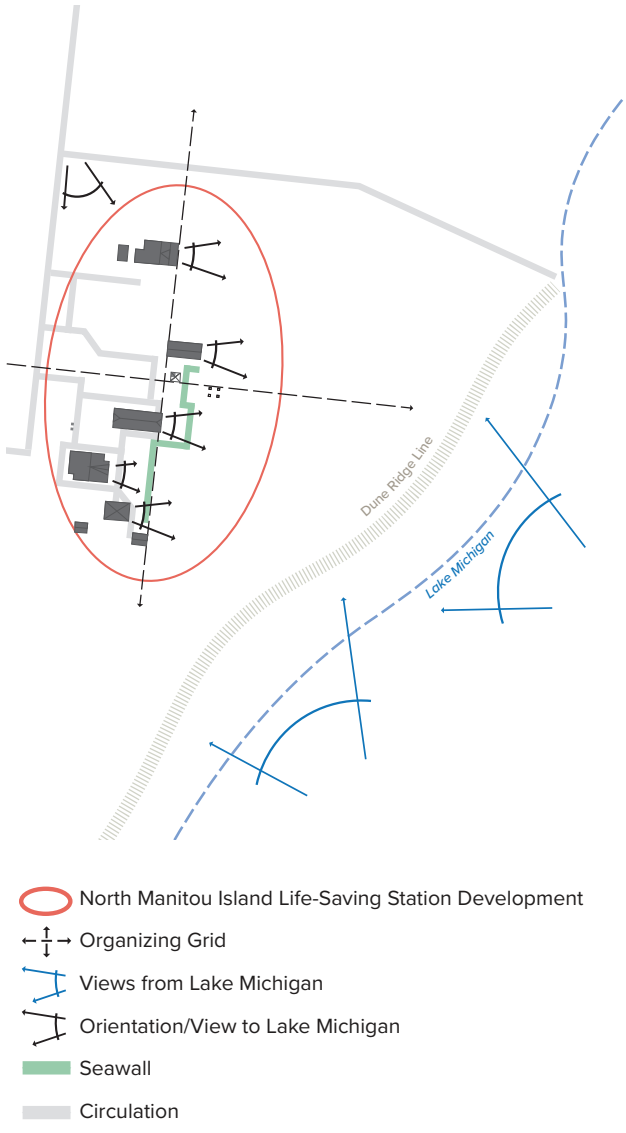

Figure 3-10. The study area is arranged along Lake Michigan with buildings oriented to Lake Michigan and oriented on a grid with orthogonal walks providing direct connections between buildings (source: Mundus Bishop, 2025).

Figure 3-11. Views from Lake Michigan to the study area (source: Mundus Bishop, 2024).

Figure 3-12. Views from the Lookout Tower Abutments to Lake Michigan (source: Mundus Bishop, 2024).

Figure 3-13. Building orientation to Lake Michigan (source: Mundus Bishop, 2024).

Analysis

The spatial organization and cluster arrangement of North Manitou Island Life-Saving Station retain integrity and contribute to the significance of the study area. The study area remains in its original location as a defined cluster of development arranged along the shoreline of Lake Michigan with buildings oriented to the lake to the east. Spatial organization and relationships are modified by the removal of buildings and by changes to the shoreline and the extent of land area between the study area and the historic shoreline of Lake Michigan.

The study area was located on a beach protected from prevailing northwest winds and set on a low terrace near the shoreline where ramps along the gently sloping beach were used to launch boats directly into Lake Michigan. Buildings were arranged with clear lines of sight to Lake Michigan, Manitou Passage, and adjacent station buildings.

USLSS and USCG development expanded as staffing and operational needs grew and ensured the established grid was preserved as new buildings and features were added. The study area was designed and organized as a complex of separate buildings providing specific functions with life-saving and rescue uses to the north, residential and administrative uses to the south, and residential use to the north. The spaces and features were essential for the efficient functionality of the life-saving station and were connected visually and physically by walks.

Sand accumulation east of the study area has expanded the beach toward Lake Michigan and formed dune ridgelines since the period of significance. Buildings, walls, and ramps that were originally established along the edge of the lake are now located over 200' from Lake Michigan. Coastal processes continue to modify the shoreline and form dune ridgelines along the originally gently sloping land between the life-saving station and shoreline.

Views at the life-saving station have changed since the period of significance. Views were historically clear between buildings and Lake Michigan. The establishment of dune vegetation, including taller grasses and volunteer trees, and dune ridgelines obscures historic views.

Treatment

The spatial arrangement of the study area, characterized by its compact cluster of development organized along a grid and set along the edge of Lake Michigan on a low terrace with views to the lake, Manitou Passage, and mainland Michigan, will be protected by preserving its compact cluster of development and protecting and repairing views between buildings and to Lake Michigan, Manitou Passage, and mainland Michigan.

Preserve North Manitou Island Life-Saving Station as a well-defined cluster of development along Lake Michigan with buildings oriented to the water and along a grid connected with walks providing direct connections between buildings.

Preserve the views and spatial relationship of buildings and structures sited in relation to Lake Michigan and Manitou Passage.

Repair and manage contributing views.

- Maintain clear sight lines to Manitou Passage and Lake Michigan. Prune and selectively remove vegetation to maintain and repair these views.

Repair and maintain the original open clearing at North Manitou Island Life-Saving Station. Maintain 65-foot (minimum) fire buffers around buildings. Allow removal of trees that present a hazard to buildings.

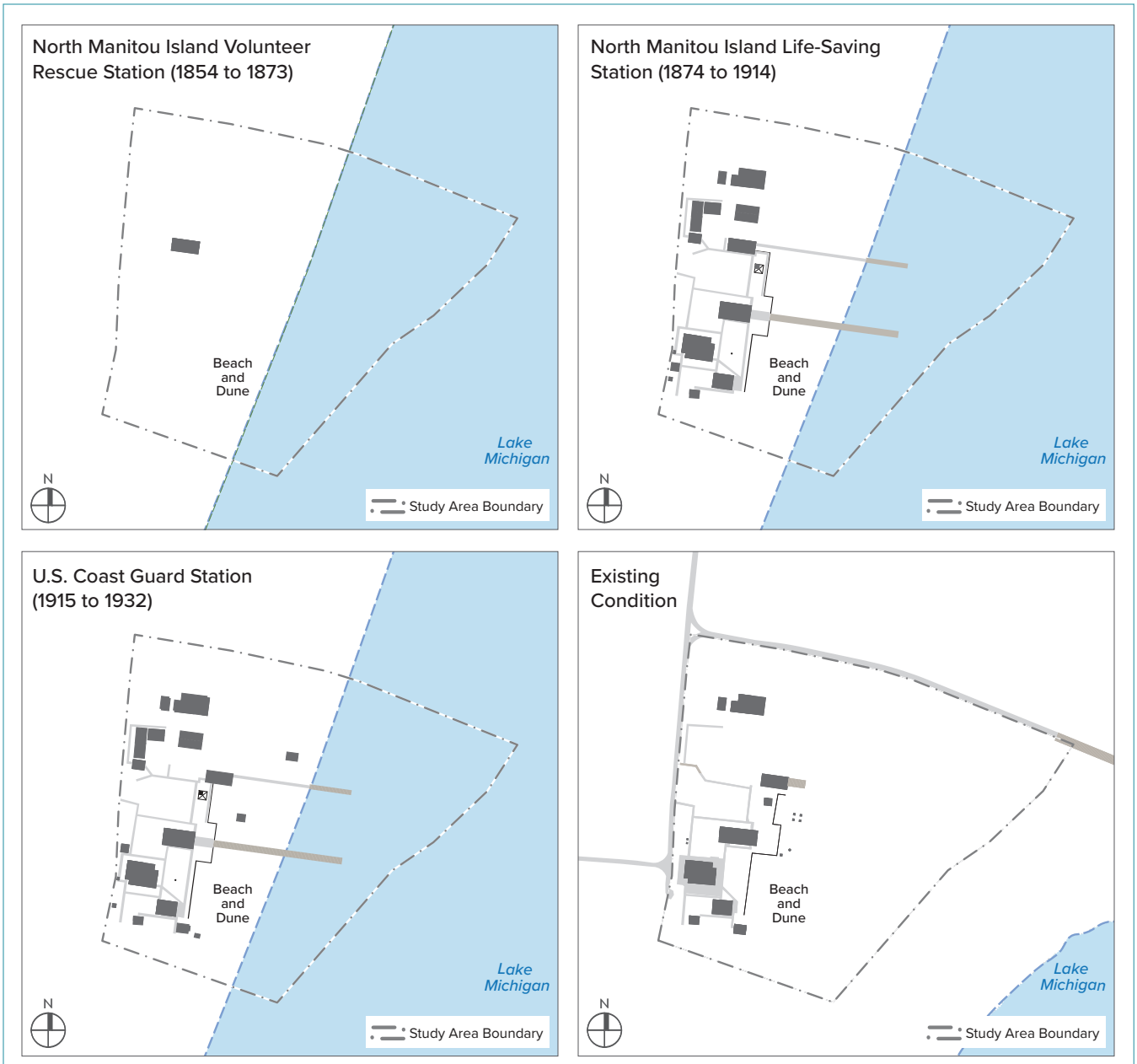

Figure 3-14. The number of buildings and site features evolved throughout the period of significance. The original grid arrangement and orientation to Lake Michigan established by the USLSS were maintained as the study area expanded. Volunteer Rescue Station was moved one full length toward Lake Michigan and placed the building on a concrete foundation shortly after the establishment of the USCG.

Spatial organization and relationships are modified by the removal of buildings and by changes to the shoreline and the extent of land area between the life-saving station and the historic shoreline of Lake Michigan (source: Mundus Bishop, 2025).

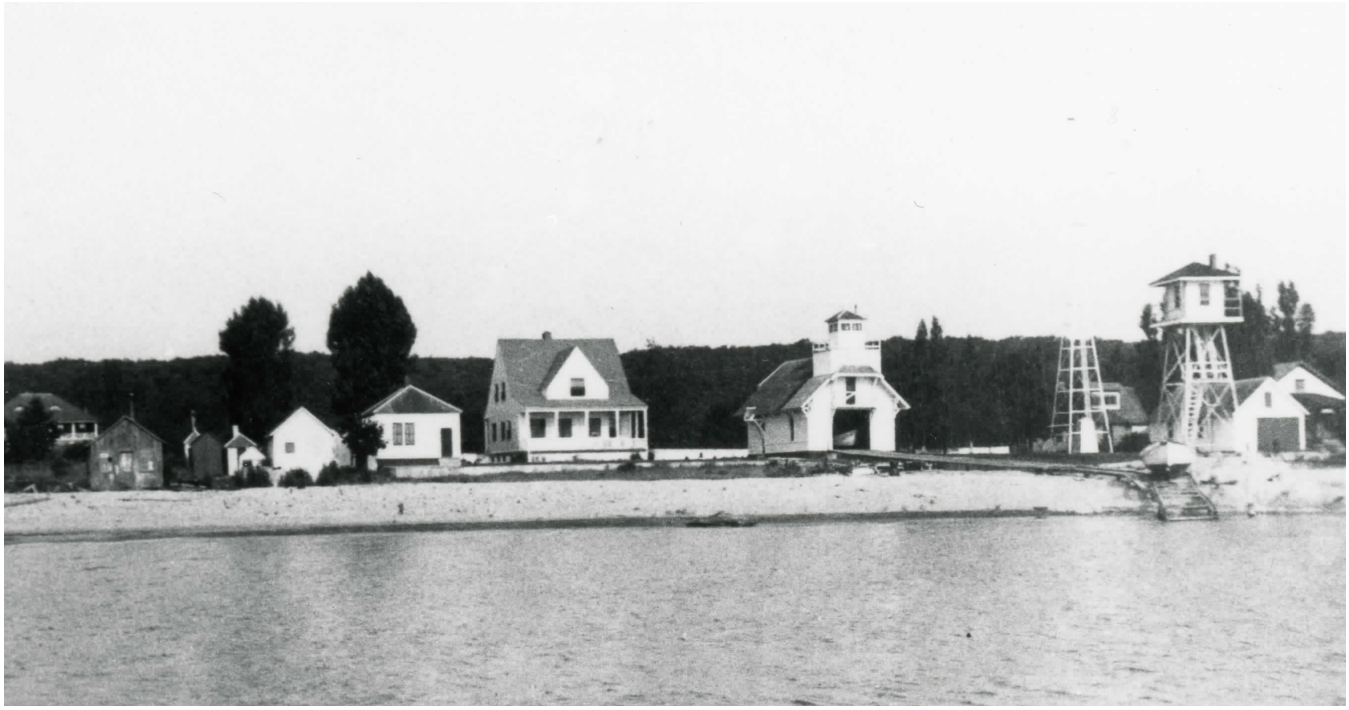

Figure 3-15. North Manitou Island Life-Saving Station, 1935 (source: Sleeping Bear Dunes National Lakeshore).

Figure 3-16. North Manitou Island Life-Saving Station, 2024 (source: Mundus Bishop).

Treatment (continued)

Preserve the natural topography of the study area, characterized by the shifting sand that creates subtle variations in grade. Allow for natural processes to modify the topography so long as cultural resources are not damaged.

Ensure positive drainage away from building foundations, regrading the topography as needed.

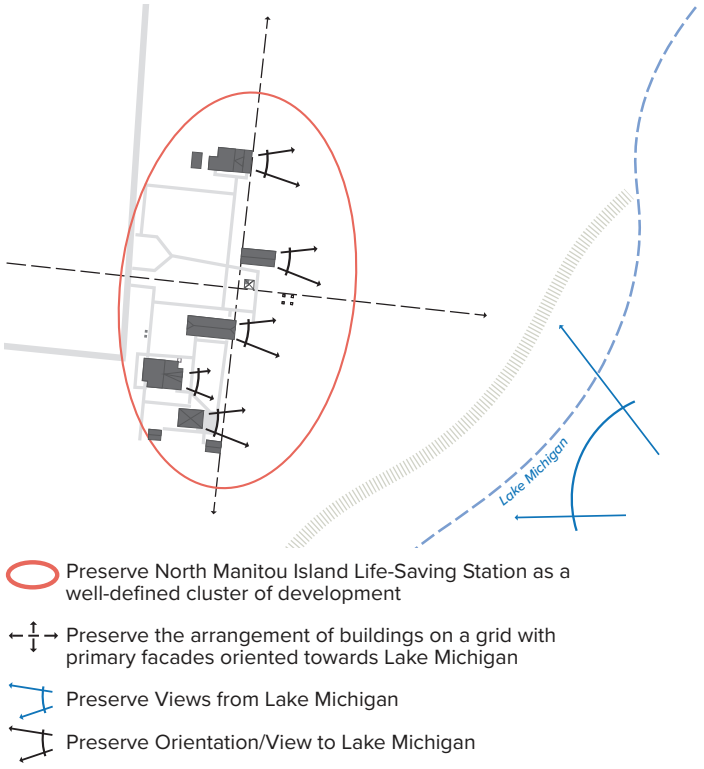

Figure 3-17. Preserve the arrangement of North Manitou Island Life-Saving Station along Lake Michigan with buildings oriented to the lake and oriented on a grid with orthogonal walks providing direct connections between buildings (source: Mundus Bishop, 2025).

Table 3-2. Spatial Organization, Topography, and Views Contributing Features

Feature	Description	CLI Feature ID	CRIS-HS Resource ID	FMSS Record Type	FMSS Record Number	Condition	Contributing/ Non-Contributing
Relationship between historic buildings and Lake Michigan and Manitou Passage	Design of the study area, arranged along the shoreline and oriented to Lake Michigan and Manitou Passage	—	—	—	—	—	Contributing
Settings of historic buildings	Design of buildings set in open lawn with primary facades oriented toward Lake Michigan and orthogonal walks	—	—	—	—	—	Contributing
View to Lake Michigan	Views to Lake Michigan from the study area	142949	—	—	—	—	Contributing
View to North Manitou Island Life-Saving Station	Views to the study area from Lake Michigan	—			—	—	Contributing

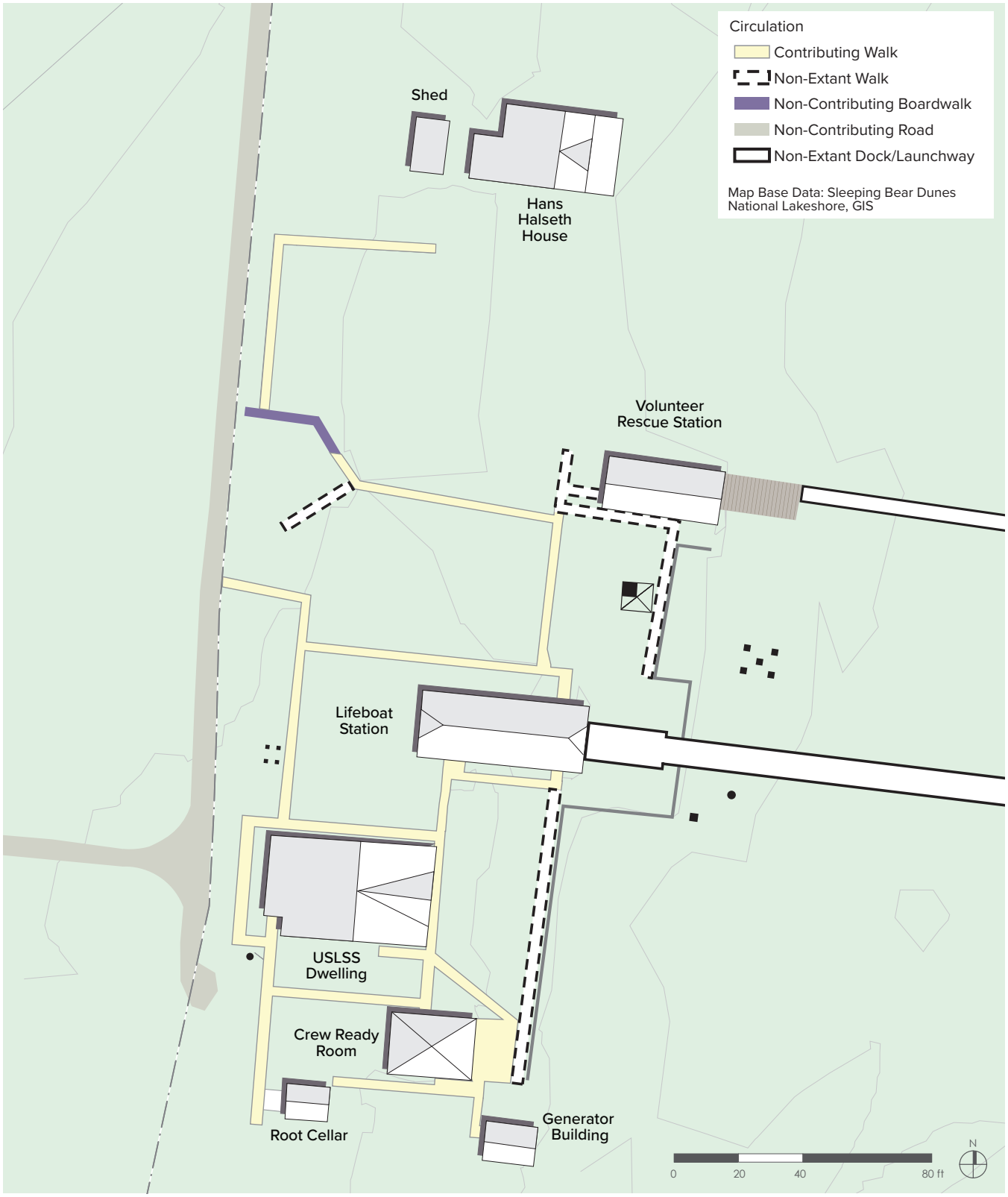

Figure 3-18. North Manitou Island Life-Saving Station Contributing and Non-Contributing Circulation Features (source: Mundus Bishop, 2025).

Circulation Features

North Manitou Island Life-Saving Station circulation is characterized by its orthogonal, utilitarian walks that provide connections between building entrances and reinforce the formality and efficiency of the historic life-saving station. The overall hierarchy and alignment of circulation remain similar to the period of significance and contribute to the study area.

Existing Condition

Circulation includes concrete walks providing access between buildings. Walks parallel building facades, reinforcing the formality of the cultural landscape. Walks are 3' wide except for the walk between the Crew Ready Room and the Lifeboat Station, which is 4' wide. Walks are generally in fair to poor condition with areas of cracking, spalling, and missing material.

A wood boardwalk connects segments of concrete walk west of the Volunteer Rescue Station and is in good to fair condition.

Analysis

The overall hierarchy and alignment of circulation remains similar to the period of significance and contributes to the study area. Modifications to circulation are primarily associated with walks that have been buried under sand and sod and the establishment of boardwalks along buried portions of walks and gravel access roads.

Walks retain historic alignments as illustrated on a 1905 site plan of the life-saving station and contribute to the significance of the study area. Historic walks are modified by the movement of sand on the island. Sand and sod cover segments of walks throughout the study area. Historic walks covered by sand or removed include a walk from the Lifeboat Station to the Volunteer Rescue Station parallel to the seawall, walks at the Volunteer Rescue Station, and a segment northwest of the Lifeboat Station.

Figure 3-19. Orthogonal walks parallel building facades and are generally in fair to poor condition (source: Mundus Bishop, 2024).

Figure 3-20. A wood boardwalk connects segments of concrete walk west of the Volunteer Rescue Station (source: Mundus Bishop, 2024).

A 35'-0" long wood boardwalk follows the alignment of an original concrete walk. The original walk may remain buried below sand and the boardwalks.

Gravel access roads along the perimeter of the study area were established after the period of significance and are not historic.

Figure 3-21. Recent removal of sand and grass to expose a segment of original walk northwest of the Volunteer Rescue Station (source: Mundus Bishop, 2024).

Figure 3-22. Original walk west of the Volunteer Rescue Station is covered by sand (source: Mundus Bishop, 2024).

Figure 3-23. Non-extant features include a walk paralleling the seawall east of the Crew Ready Room and USLSS Dwelling. The diagonal walk and portions of the concrete pad east of the Crew Ready Room remain (source: Mundus Bishop, 2024).

Treatment

North Manitou Island Life-Saving Station's contributing circulation routes and hierarchy will be preserved and repaired and the sustainability and accessibility of circulation features will be improved.

Preserve the historic width, alignment, and material of contributing concrete walks.

- Repair contributing concrete walks, ensuring level surfaces and grades for accessibility and safety.
- Continue investigations to identify the location of historic concrete walks currently covered by sand, vegetation, and/or boardwalks. Ensure site investigations are completed in consultation with the Midwest Archeological Center (MWAC) and informed by historic maps.

Re-establish non-extant concrete walks, including a walk from the Lifeboat Station to the Volunteer Rescue Station (parallel to the seawall), walks at the Volunteer Rescue Station, and a walk northwest of the Lifeboat Station. Maintain historic alignments and connections based on historic documentation.

Allow boardwalks if concrete walks are not feasible or if needed to protect resources. Ensure a seamless transition between walks and boardwalks to prevent tripping hazards.

Consider providing ABAAS accessible routes to the Lifeboat Station and USLSS Dwelling. Provide landing/resting areas to meet current ABAAS requirements.

Maintain the non-contributing gravel access road along the western boundary of the station to provide for operational and visitor use. Maintain the primitive character of the route.

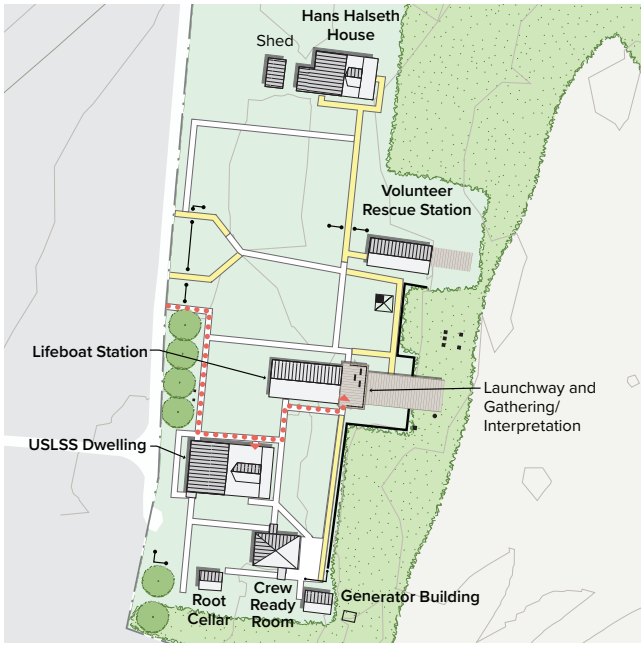

Figure 3-24. Preserve and repair contributing circulation routes (source: Mundus Bishop, 2025).

Table 3-3. Circulation Contributing Features

Feature	Description	CLI Feature ID	CRIS-HS Resource ID	FMSS Record Type	FMSS Record Number	Condition	Contributing/ Non-Contributing
Lifesaving Station Walks	3'-0' and 4'-0' wide concrete walks.	72713	135548	Asset	225086	Varies	Contributing
Gravel Access Roads	Gravel roads along the western and northern boundaries.	—	—	—	—	Varies	Non-Contributing
Boardwalk	35'-0' wood boardwalk west of the Volunteer Rescue Station.	—	—	—	—	Varies	Non-Contributing

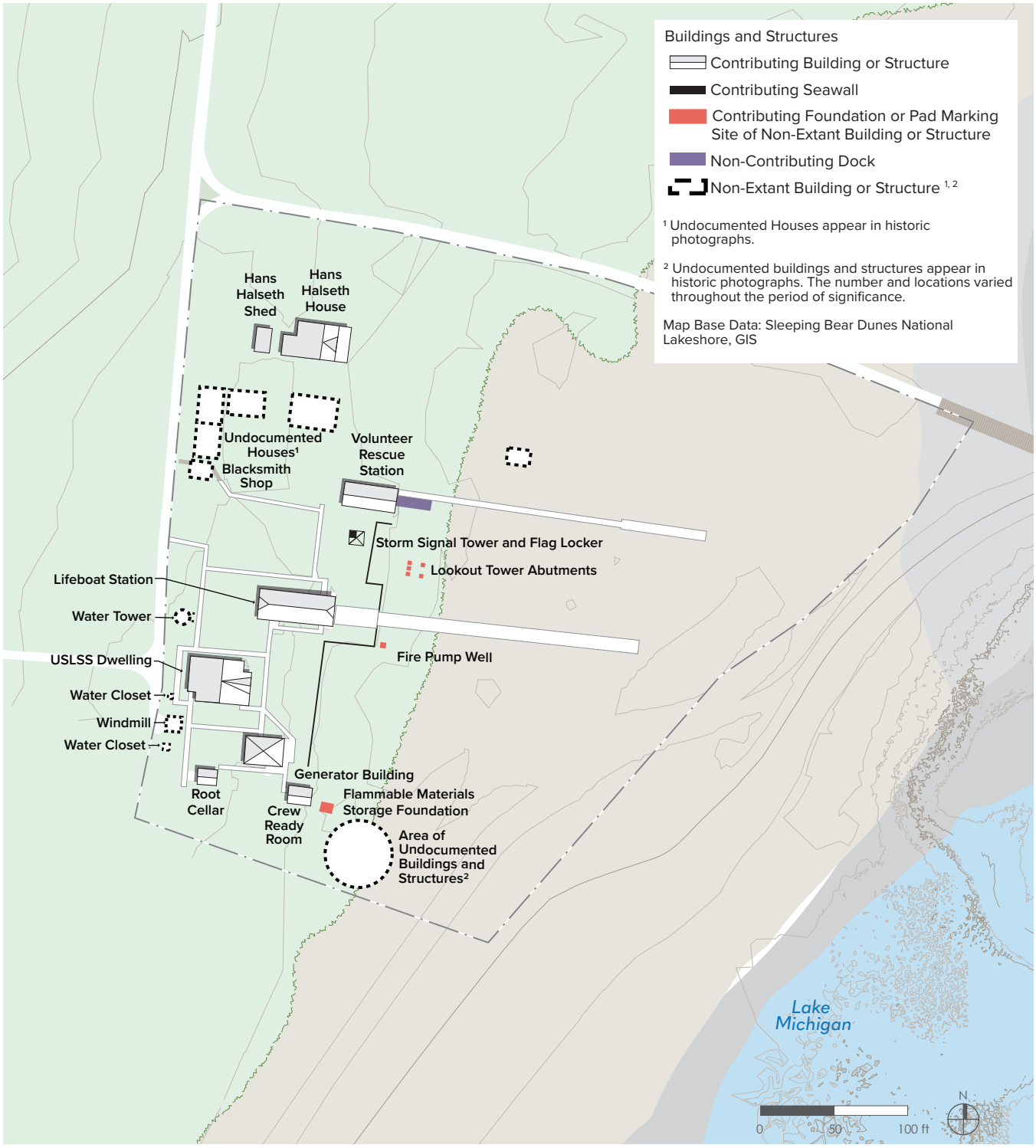

Figure 3-25. North Manitou Island Life-Saving Station Contributing and Non-Contributing Buildings and Structures (source: Mundus Bishop, 2025).

Buildings and Structures

The study area includes eight buildings, several structures, and foundations of non-extant structures built by the Volunteer Rescue Service, USLSS, and USCG. The overall arrangement of buildings and structures retains integrity and represents facilities critical to the operations of a working life-saving station.

Existing Condition

Prominent buildings of the study area include the Lifesaving Station, USLSS Dwelling, Crew Ready Room, Lifeboat Station, Volunteer Rescue Station, and Hans Halseth House. Structures include Flag Locker, Storm Signal Tower, Seawall, and Fire Pump Well Foundation.

Buildings and structures are generally in good condition. The condition of the Fire Pump Well Foundation is impacted by vegetation growth within the foundation.

Concrete pads mark the location of the non-extant Water Tower, concrete abutments mark the location of the non-extant Lookout Tower, and concrete foundations mark the location of the non-extant Flammable Materials Shed.

Analysis

North Manitou Volunteer Rescue Service, USLSS, and the USCG established buildings and structures during the period of significance for housing, administrative, and operational uses. Extant buildings and structures, along with their orthogonal configuration and orientation to Lake Michigan, contribute to the significance of the study area. The overall arrangement of buildings retains integrity but is modified by the removal of the Blacksmith Shop, Windmill, Water Tower, Lookout Tower, Flammable Materials Storage Shed, and two water closets.

Historic photographs indicate the number of buildings and structures varied throughout the period of significance. Four houses appear north of the non-extant Blacksmith Shop with additional outbuildings and structures located throughout North Manitou Island Life-Saving Station. These buildings are not included in historic plans or written documentation. Use and ownership of these buildings is largely unknown.

Figure 3-26. Hans Halseth House (source: Mundus Bishop, 2024).

Figure 3-27. Volunteer Rescue Station, Flag Locker, and Storm Signal Tower (source: Mundus Bishop, 2024).

Figure 3-28. Lookout Tower Abutments (source: Mundus Bishop, 2024).

Figure 3-29. Seawall (source: Mundus Bishop, 2024).

Figure 3-32. USLSS Dwelling (source: Mundus Bishop, 2024).

Figure 3-30. Fire Pump Well Foundation (source: Mundus Bishop, 2024).

Figure 3-33. Crew Ready Room (source: Mundus Bishop, 2024).

Figure 3-31. Lifeboat Station (source: Mundus Bishop, 2024).

Figure 3-34. Generator Building (source: Mundus Bishop, 2024).

Figure 3-35. Flammable Materials Shed (source: Mundus Bishop, 2024).

Figure 3-36. Root Cellar (source: Mundus Bishop, 2024).

Figure 3-37. Concrete pads mark the location of the non-extant Windmill (source: Mundus Bishop, 2024).

Figure 3-38. Historic photograph illustrating undocumented outbuildings east of the Volunteer Rescue Station, c. 1932 (top image) and south of Crew Ready Room, 1935 (bottom image). Documentation of these buildings does not exist and their ownership and association with North Manitou Island Life-Saving Station is unknown (source: Sleeping Bear Dunes National Lakeshore).

Treatment

The historic building patterns and relationships of North Manitou Island Life-Saving Station will be preserved.

Preserve contributing buildings and structures.

Maintain the non-contributing dock at the Volunteer Rescue Station to facilitate interpretation of North Manitou Island Life-Saving Station.

Rehabilitate the setting of the Lookout Tower Abutments, Fire Pump Well Foundation, Flammable Materials Storage Foundation, and Seawall by removing vegetation.

Allow new buildings or structures so long as they harmonize with the natural landscape, are compatible with contributing buildings, and respect the original spatial arrangement of buildings in the study area. Architectural language, including scale, massing, fenestration, and materials, should be consistent throughout the study area.

Provide interpretation of the non-extant Blacksmith Shop and four houses to its north.

Preserve foundations and below grade resources. Identify stabilization and repair based on each feature's condition. Preservation approaches include protecting foundations, abutments, concrete pads, and other extant resources from further damage (e.g., water and weather); stabilizing and repairing features to elongate their lifespan, and protecting below-grade features.

Establish and maintain positive drainage away from buildings and ensure roof runoff is directed away from the building. Repair previous soil erosion.

Consider rebuilding portions of the historic Launchway at the Lifeboat Station for interpretation, ABAAS access to the building, and to repair historic relationships between the Lifeboat Station, Launchway, and Capstan.

- Ensure the design and placement of the Launchway does not detract from the historic setting, respects the established spatial organization of the Lifeboat Station, and does not diminish or obstruct views.

- Ensure the design of the gathering and interpretive area is designed in a contemporary style and does not convey a false sense of history.

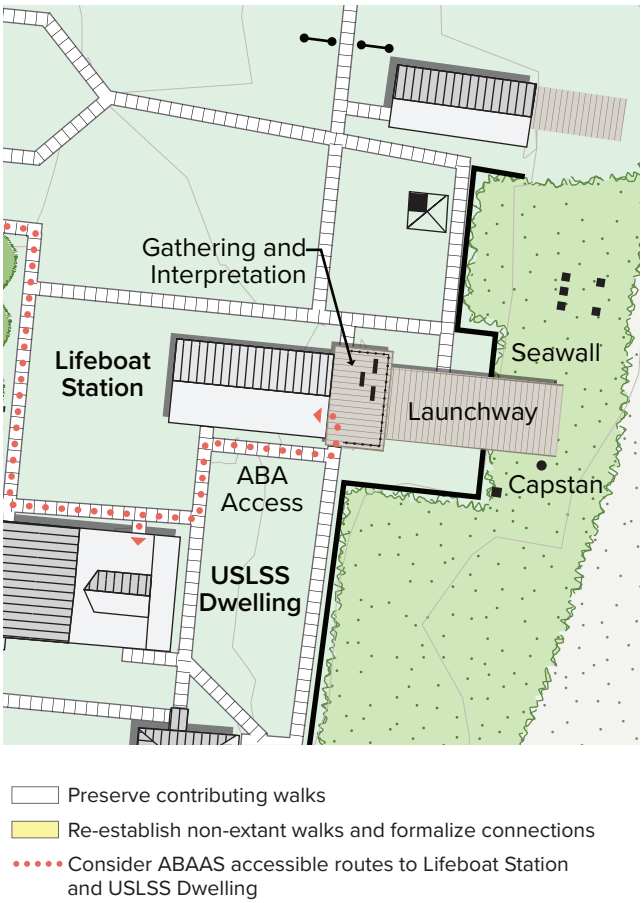

Figure 3-39. Preserve and repair contributing circulation routes (source: Mundus Bishop, 2025).

Table 3-4. Buildings and Structures Contributing Features

Feature	Description	CLI Feature ID	CRIS-HS Resource ID	FMSS Record Type	FMSS Record Number	Condition	Contributing/ Non-Contributing
USLSS Dwelling	Two-story building designed to house the captain's living quarters on the first floor with a large open room on the second floor for the crew's bunks. The U.S. Coast Guard added a basement, new bathroom, and a porch along the east elevation in 1932. The existing porch was removed to provide a basement stairwell.	135522	72700	Location	1848	—	Contributing
Crew Ready Room	Pyramidal hipped roof building designed for on-duty surfmen to await summons for a rescue. Adapted by the MIA in the 1940s, the structure ultimately became park living quarters in 1990.	135524	72701	Location	1850	—	Contributing
Lifeboat Station	One-story boathouse with clipped gable shelters an open balcony where the lookout keeps watch. A roof observation deck was added prior to 1900 and was removed by the MIA around 1938. This structure was adapted into a dormitory in 1990.	135526	72702	Location	1849	—	Contributing
Volunteer Rescue Station	One-and-a-half story frame boathouse with a single room on the first floor.	135528	72703	Location	1997	—	Contributing
Generator Building	Single story shed with gabled ends.	135530	72704	Location	2649	—	Contributing
Hans Halseth House	One-and-a-half story side-gabled building moved to its present location in 1910 and rehabilitated for park employee housing in 1990.	135532	72705	Location	1851	—	Contributing
Hans Halseth Shed	One-story building with wood shingle roof and wood siding.	135534	72706	Location	1986	—	Contributing
Storm Signal Tower	Triangulated metal trusses with a 57'-0" mast and yardarms extending 7'-0" to each side for storm warning flags.	135536	72707	Asset	6556	—	Contributing
Storm Signal Flag Locker	8'-0" tall metal locker at the base of the Storm Signal Tower.	135538	72708	Asset	543279	—	Contributing
Root Cellar	Field stone and mortar building with a wood shingle gabled roof. "1899" is carved into the stone lintel.	135540	72709	Location	1990	—	Contributing
Flammable Materials Storage Foundation	Poured concrete foundation.	135542	72710	Asset	543344	—	Contributing
Lookout Tower Abutments	Five large concrete squares with steel shafts protruding and are all that remains of the Coast Guard constructed tower that once stood 30'-0" tall.	135544	72711	Asset	543277	—	Contributing
Seawall	Field stone seawall east of study area buildings.	135546	72712	Asset	543278	—	Contributing
Fire Pump Well Foundation	5'-0" by 5'-0" foundation with 6" thick concrete walls. Historic photos illustrate a pump on a wooden deck thought to have been built around 1900.	135550	72716	Asset	543345	—	Contributing
Water Tower Concrete Pads	Four concrete pads marking the location of the non-extant Water Tower.	—	—	—	—	—	Contributing

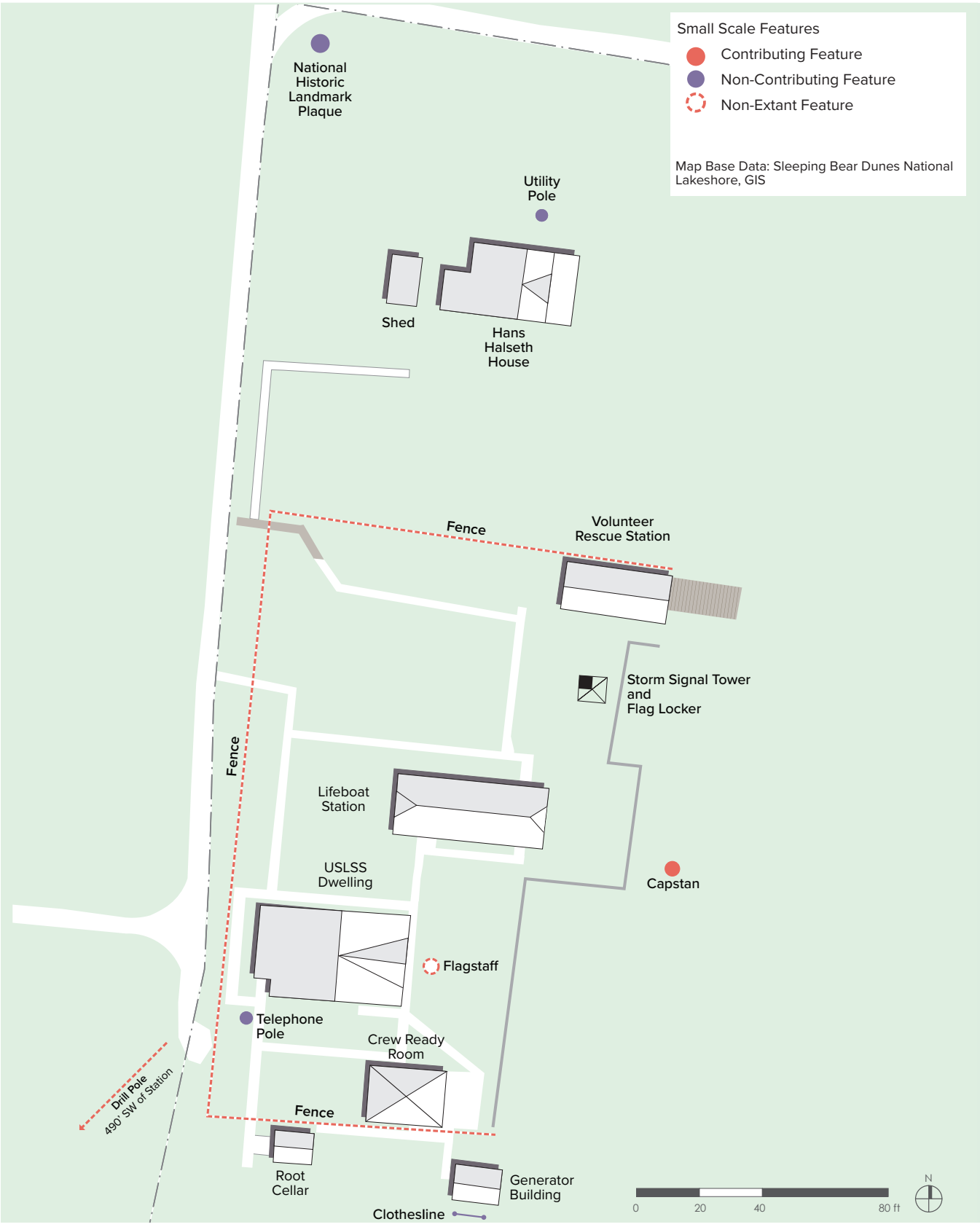

Figure 3-40. North Manitou Island Life-Saving Station Contributing and Non-Contributing Small Scale Features (source: Mundus Bishop, 2025).

Small Scale Features

Small scale features were established during the period of significance to support daily operations of the life-saving station. Contributing features include the Capstan historically used to hoist surfboats seaward or shoreward.

Existing Condition

Small scale features include those extant during the period of significance and additions from after the period of significance. Contemporary small scale features serve utilitarian and visitor functions. These include NPS signs, a National Historic Landmark plaque, a clothesline, picnic tables, and a telephone pole. These features are generally in good condition.

Extant small scale features include the Capstan. It is missing a nameplate from the top of the feature, and its condition is impacted by rust and biological growth.

Analysis

Contributing features include the Capstan which was historically used to hoist surfboats seaward or shoreward. The Capstan was historically set south of the non-extant Launchway with metal tracks.

Non-extant small scale features include a flagstaff at the USLSS Dwelling and white picket fences that originally extended from the Volunteer Rescue Station west to the non-extant Blacksmith Shop and from the non-extant Blacksmith Shop south to the Crew Ready Room. The fence included several gated entrances.

Figure 3-41. Capstan (source: Mundus Bishop, 2024).

Figure 3-42. Picnic table, clothesline, and telephone pole (source: Mundus Bishop, 2024).

Treatment

Small scale features that contribute to the historic character of North Manitou Island Life-Saving Station will be preserved and compatible additions will be provided to accommodate visitor and operational functions in a manner that protects the cultural landscape and views and vistas.

Preserve and repair small scale features that contribute to the historic character of the cultural landscape, including the Capstan.

- Remove biological growth and its monitor condition. Consider relocating the Capstan to a location protected from weather if it begins to deteriorate or becomes vulnerable to flooding, erosion from waves or storm surges, or littoral drift.

Allow for the reestablishment of the historic perimeter fence. Consider building segments of the fence at key locations (i.e., historic gated entrances, corners of the historic property line) to assist in interpretation.

- Ensure fencing does not convey a false sense of history, is designed in a contemporary style, and is compatible with the historic setting. Avoid mimicking or replicating the historic fence.

Allow signage at select locations for wayfinding and interpretation if the number is minimized, and the design and placement do not detract from the historic setting.

Figure 3-43. View from the roof of Lifeboat Station to the Launchway, Capstan, and Fire Pump, 1926 to 1928 (source: Sleeping Bear Dunes National Lakeshore).

Figure 3-44. Non-extant white picket fence with gates defining perimeter of station (source: Sleeping Bear Dunes National Lakeshore).

Allow compatible small scale features that facilitate visitor and operational and provide a needed function (e.g., propane tanks, picnic tables, signage).

- Ensure the placement of new infrastructure does not detract from the historic setting, does not diminish or obstruct view or vistas, and does not negatively interrupt the visitor experiences—e.g. views and sounds.
- Ensure infrastructure is of a scale, material, and color that harmonizes with the historic setting and aesthetic.
- Ensure new features respect but do not imitate historic features, are designed in a contemporary style, and are products of their own time. Avoid introducing new features conveying a false sense of history.

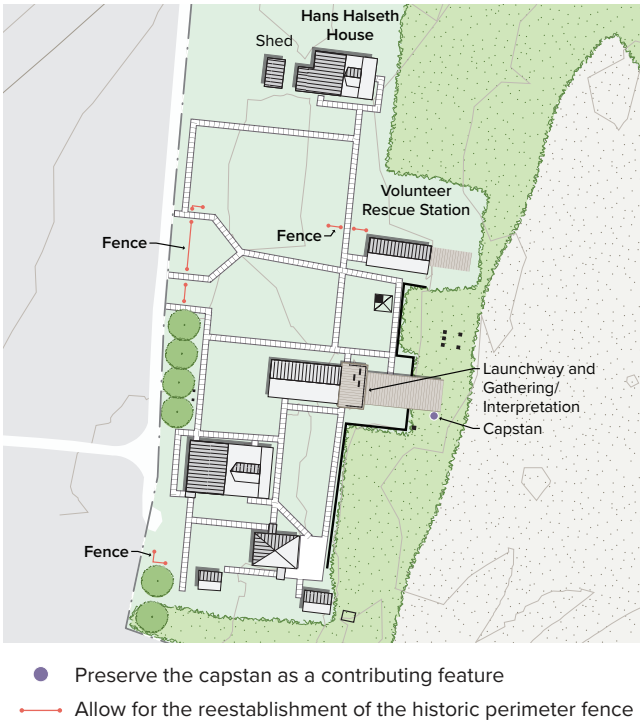

Figure 3-45. Preserve small scale features that contribute to North Manitou Island Life-Saving Station and allow additions will to accommodate visitor and operational use (source: Mundus Bishop, 2025).

Table 3-5. Small Scale Contributing Features

Feature	Description	CLI Feature ID	CRIS-HS Resource ID	FMSS Record Type	FMSS Record Number	Condition	Contributing/ Non-Contributing
Capstan	The Capstan east of the Lifeboat Station. It is missing a name plate on top and is rusting.	142879	72702	Asset	543276	Poor	Contributing
National Historic Landmark Plaque	Plaque set on a rustic stone base identifying the life-saving station as a National Historic Landmark.	142881	—	—	—	Good	Non-Contributing
NPS signs	Signs and bulletin boards.	—	—	—	—	Varies	Non-Contributing
Clothesline	Clothesline south of the Generator Building.	142939	—	—	—	Fair	Non-Contributing
Picnic Tables	Picnic tables throughout station.	—	—	—	—	Varies	Non-Contributing
Telephone Pole	Telephone pole at the USLSS Dwelling.	—	—	—	—	Good	Contributing
Utility Pole	Utility pole at the USLSS Dwelling with radio antenna.	143083	—	—	—	Good	Non-Contributing

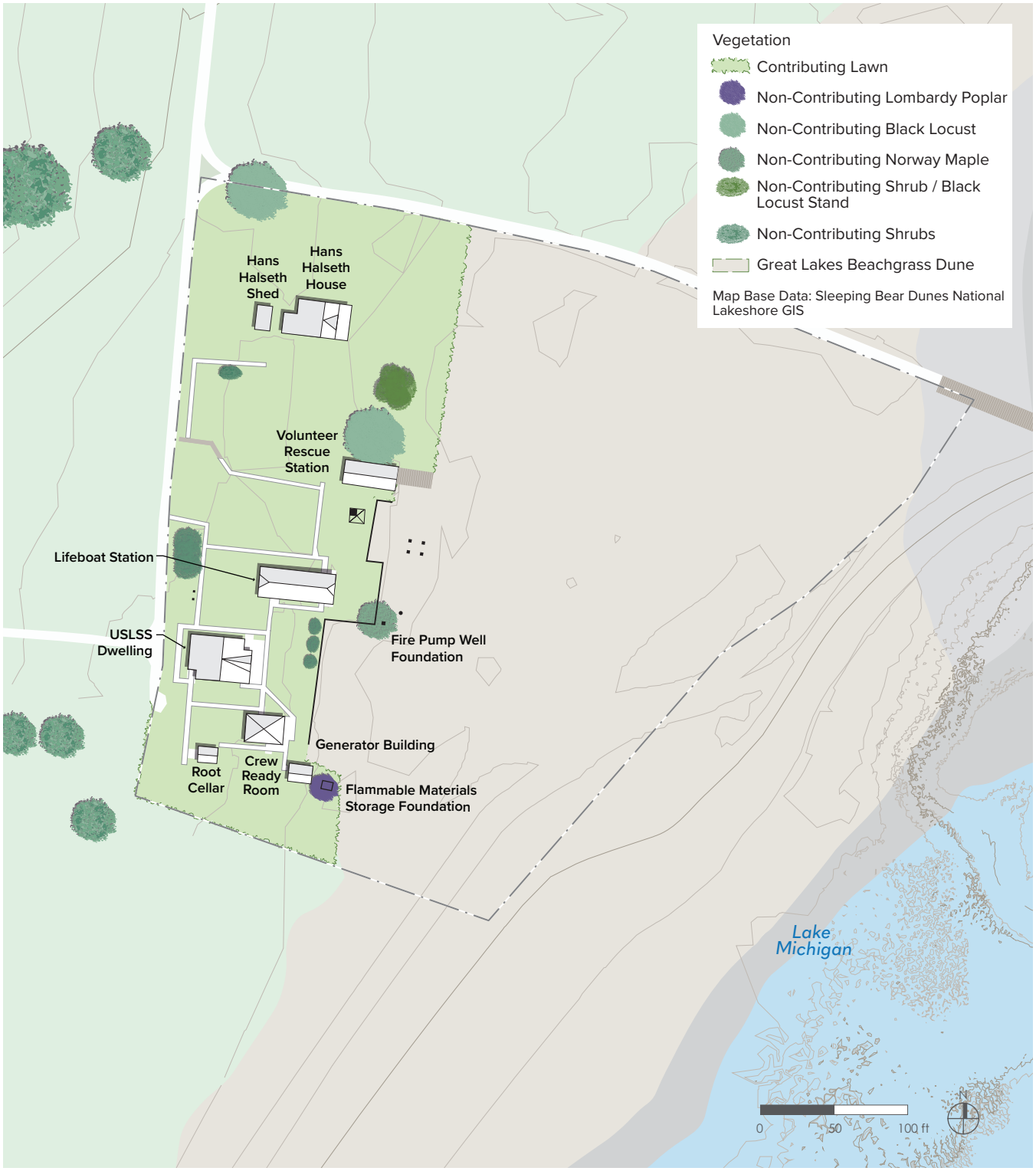

Figure 3-46. North Manitou Island Life-Saving Station Contributing and Non-Contributing Vegetation (source: Mundus Bishop, 2025).

Vegetation

The planting design during the period of significance was minimal and reflected a formal military aesthetic of trimmed lawns and Lombardy poplar trees planted in straight rows. Lawn remains and contributes to the historic design of the formal landscape.

Existing Condition

Vegetation includes lawns, shrubs, mature trees, and dune vegetation. Lawn surrounds buildings within the life-saving station. Mature canopy trees include a black locust tree northwest of the Hans Halseth House, a Norway maple tree southeast of the Lifeboat Station, and a Lombardy poplar tree at the Generator Building. Ornamental plantings are sparse and include spirea, lilacs, daylilies, and poppies. Volunteer trees and shrubs are located north of the Volunteer Rescue Station and east of the Lifeboat Station.

Dune vegetation occurs east of the buildings and seawall and is characterized as Great Lakes Beachgrass Dune. This plant community is dominated by one or a combination of American beachgrass (*Ammophila breviligulata*), prairie sand reed (*Calamovilfa longifolia*), and little bluestem (*Schizachyrium scoparium*) with significant field sagewort (*Artemisia campestris*), and Pitcher's thistle (*Cirsium pitcheri*). Pitcher's thistle is a federal and state threatened species.

Figure 3-47. Mown lawn, mature Norway Maple tree, and shrubs north of the Lifeboat Station (source: Mundus Bishop, 2024).

Figure 3-48. Lombardy poplar tree at the Generator Building (source: Mundus Bishop, 2024).

Figure 3-49. Establishment of vegetation within the Fire Pump Well Foundation (source: Mundus Bishop, 2024).

Analysis

The historic planting design of North Manitou Island Life-Saving Station was minimal. Recommendations for the design of the grounds were not extensive but came with standard USCG guidance: “the grounds shall present a neat appearance, rough places shall be leveled, lawns and shrubbery, if any, shall be trimmed.” Manicured lawn was established at buildings and transitioned to native dune vegetation outside of walks and walls.

The areas around the structures were landscaped with Lombardy poplar trees, a signal to ship captains that a life-saving station was nearby. The tree species was often selected at life-saving stations for their ability to provide shade without obstructing views of Lake Michigan, to delineate property boundaries, and to serve as wind breaks.[3.15]

Lawn remains at buildings and contributes to the historic design of a formal space. Historic vegetation is modified by the loss of most Lombardy poplar trees planted during the period of significance, addition of trees and shrubs by Manitou Island Association, including black locust, Norway maple, lilac, spirea and ornamental poppies, and establishment of volunteer shrubs and trees throughout the study area.

Historic photographs indicate the number of Lombardy poplar trees varied throughout the period of significance. Four Lombardy poplar trees west of the Lifeboat Station and two Lombardy poplar trees southwest of the Station Dwelling appear in historic photographs. The Lombardy poplar tree at the Generator Building is the last remaining Lombardy poplar tree within the study area and was planted after the period of significance.

Figure 3-50. Non-extant white picket fence with gates defining perimeter of station (source: Sleeping Bear Dunes National Lakeshore).

3.15 Herd, *National Historic Landmark Nomination: North Manitou Island Lifesaving Station*, 13.

Treatment

The minimal planting design and formal military aesthetic of trimmed lawns and Lombardy poplar trees planted in straight rows established during the period of significance will be repaired and maintained to reflect the design and use of North Manitou Island Life-Saving Station.

Repair historic patterns of tree allées west of the Lifeboat Station and southwest of the Station Dwelling. Lombary poplar trees are not recommended as they are considered invasive on North Manitou Island, have short life spans, and their shallow root systems make them susceptible to wind damage. Select trees with a columnar form similar to historic tree allées that are tolerant of high winds and sandy conditions and have a taproot and slower growth rate. Consider species such as *Quercus 'Crimschmidt'*, *Populus x canescens 'Tower'* and *Populus tremula 'Erecta*.'

- Ensure consistent tree spacing and species selection and consider views and spatial patterns when replacing or determining locations of new trees.
- Consider archeobotanical sampling techniques to identify species and confirm tree species present during the period of significance.
- Perform pruning and thinning to maintain tree form and health. Replace mature trees when they become hazards or die. Allow new infill trees in anticipation of aging or hazard tree removal.
- Mow around trees to prevent establishment of volunteer trees.

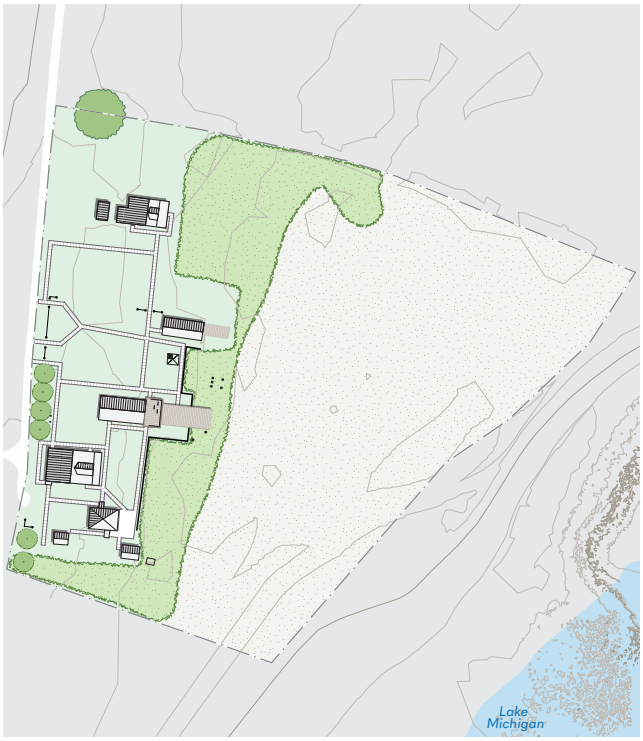

Figure 3-51. Preserve vegetation that contributes to North Manitou Island Life-Saving Station and allow additions will to accommodate visitor and operational use (source: Mundus Bishop, 2025).

Maintain historic patterns of open landscape surrounding North Manitou Island Life-Saving Station buildings.

- Perform pruning and thinning to maintain 65' minimum fire buffers, to maintain tree form and health, to prevent damage to buildings and structures, and to maintain mature trees that provide windbreaks. Establish low growing, grasses or groundcovers to maintain the open setting.

- Provide a park-approved seed mixture of native and hardy sod-forming grasses and forbs with a maintained lawn appearance. Allow grasses to seed periodically. Monitor for weeds and bare patches. Repair damaged areas and maintain the lawn with an even cover of grass. Remove invasive and volunteer plants from the lawn.

- To the greatest extent possible use, mechanical methods over chemical methods to manage non-native invasive species.

Remove non-contributing foundations plantings at buildings and replace with stone. Ensure positive drainage from the building.

Preserve established native vegetation where it does not damage the integrity of historic views or the spatial organization of the cultural landscape.

Protect native meadow and beachgrass dune vegetation and discourage visitor use and the creation of social trails in dunes.

Select native, non-horticultural species in habitat restoration, supplemental planting, or individual plant replacement. Continue to manage existing non-native ornamental plants and replace with native species when necessary.

Table 3-6. Vegetation Contributing Features

Feature	Description	CLI Feature ID	CRIS-HS Resource ID	FMSS Record Type	FMSS Record Number	Condition	Contributing/ Non-Contributing
Lombardy Poplar	Lombardy poplar tree at the Generator Building.	142969	—	Asset	543376	Good	Non-Contributing
Black Locust	Black locust tree northwest of the Hans Halseth House.	172288	—	Asset	543373	Good	Non-Contributing
Norway Maple	Norway maple tree southeast of the Lifeboat Station.	172290	—	Asset	543362	Good	Non-Contributing
Ornamental Shrubs and Flowers	Daylilies, lilacs, poppies, and spirea throughout the study area.	—	—	—	—	Varies	Non-Contributing
Lawn	Mown lawn surrounding buildings.	—	—	—	—	Varies	Contributing

4

Implementation

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Implementation Guidance

Further Research and Investigation Recommendations

The following research and investigation are recommended to inform future planning, design, and management of North Manitou Island Life-Saving Station.

- Conduct further archeological investigations to identify archeological sites and additional information related to North Manitou Island Life-Saving Station, e.g., walks, outbuildings, patrol posts, outbuildings, etc., in collaboration with the NPS Midwest Archeological Center (MWAC) and federally recognized tribes.

- Document and further research foundations and other resources discovered through vegetation management and other park activities.

Implementation Priorities

The NPS will consider recommendations identified in this plan as funding becomes available. Treatment guidance is described as a series of prioritized work orders with subtasks identified. Work plans are organized by site and correspond with class “C” cost estimates included in this chapter. This will assist the park in preparing Project Management Information System (PMIS) project statements to seek project funding.

- Phase 1 work plans include actions that are critical for repair of contributing features or are needed for safety, access, and interpretation at sites with high visitation.

- Phase 2 work plans include actions needed to preserve integrity.

- Phase 3 work plans include long-term, routine maintenance.

Table 4-1. Implementation

Priority	FMSS Data			Cultural Landscape Feature to FMSS Data Crosswalk - Treatment Summary			
	FMSS Number	Feature Name	IN FMSS?	CLR Treatment Project Component Task / FMSS Work Order	FMSS Work Type / Sub-Type	Contributing/ Non-Contributing	Recurring Maintenance Needed
Natural Systems and Features							
3	Park to assign	Park to assign	N	Protect and enhance federally listed species known to be present in the study area, including Pitcher's thistle (Cirsium pitcherii) and piping plover (Charadrius melodus). Conduct regular field surveys to verify known and record new occurrences of pitcher's thistle and piping plover. Manage Lombardy poplar trees as invasive species within the beach and dune zone.	Facility Maintenance / Deferred Maintenance	Non-Contributing	Y
Spatial Organization, Topography, and Views							
2	Park to assign	Park to assign	N	Maintain clear sight lines to Manitou Passage, and Lake Michigan. Prune and selectively remove vegetation to maintain and repair these views.	Facility Maintenance / Deferred Maintenance	Contributing	Y
1	Park to assign	Park to assign	N	Maintain 65-foot (minimum) fire buffers around buildings.	Facility Maintenance / Deferred Maintenance	Contributing	Y
1	Park to assign	Park to assign	N	Ensure positive drainage away from building foundations, regrading the topography as needed.	Facility Maintenance / Deferred Maintenance	Non-Contributing	Y
Circulation							
3	225086	Lifesaving Station Walks	Y	Re-establish non-extant concrete walks, including a walk from the Lifeboat Station to the Volunteer Rescue Station (parallel to the seawall), walks at the Volunteer Rescue Station, and a walk northwest of the Lifeboat Station. Allow boardwalks if concrete walks are not feasible or if needed to protect resources.	Facility Maintenance / Deferred Maintenance / Capital Improvement	Contributing	Y

Table 4-1. Implementation (continued)

Priority	FMSS Data			Cultural Landscape Feature to FMSS Data Crosswalk - Treatment Summary			
	FMSS Number	Feature Name	IN FMSS?	CLR Treatment Project Component Task / FMSS Work Order	FMSS Work Type / Sub-Type	Contributing/ Non-Contributing	Recurring Maintenance Needed
3	Park to assign	Park to assign	N	Consider providing ABAAS accessible routes to Lifeboat Station and USLSS Dwelling. Provide landing/ resting areas to meet current ABAAS requirements.	Capital Improvement	Non-Contributing	Y
Building and Structures							
1	543277	Lookout Tower Abutments	Y	Apply a clear, penetrating water repellent sealer with corrosion inhibitor.	Facility Maintenance / Deferred Maintenance	Contributing	Y
1	543345	Fire Pump Well Foundation	Y	Remove vegetation.	Facility Maintenance / Deferred Maintenance	Contributing	Y
1	543344	Flammable Materials Storage Foundation	Y	Remove vegetation.	Facility Maintenance / Deferred Maintenance	Contributing	Y
1	543278	Seawall	Y	Remove vegetation.	Facility Maintenance / Deferred Maintenance	Contributing	Y
3	Park to assign	Water Tower Concrete Pads	N	Preserve concrete.	Facility Maintenance	Contributing	Y
3	1849	Lifeboat Station	Y	Consider rebuilding portions of the historic Launchway at the Lifeboat Station for interpretation, ABAAS access to the building, and to repair historic relationships between the Lifeboat Station, Launchway, and Capstan.	Capital Improvement	Contributing	Y

Table 4-1. Implementation (continued)

Priority	FMSS Data			Cultural Landscape Feature to FMSS Data Crosswalk - Treatment Summary			
	FMSS Number	Feature Name	IN FMSS?	CLR Treatment Project Component Task / FMSS Work Order	FMSS Work Type / Sub-Type	Contributing/ Non-Contributing	Recurring Maintenance Needed
Small Scale Features							
1	543276	Capstan	Y	Remove biological growth and monitor condition. Consider relocating the Capstan to a location protected from weather if it begins to deteriorate or becomes vulnerable to flooding, erosion from waves or storm surges, or littoral drift.	Facility Maintenance / Deferred Maintenance	Contributing	Y
3	Park to assign	Park to assign	N	Allow for the reestablishment of the historic perimeter fence.	Capital		
Vegetation							
3	543376	Lombardy Poplar Tree	Y	Preserve existing Lombardy poplar tree at the Generator Building continuing to perform routine pruning to maintain tree form and health. Do not replace in current location.	Facility Maintenance / Deferred Maintenance	Non-Contributing	Y
2	Park to assign	Park to assign	N	Repair historic patterns of tree allees west of the Lifeboat Station and southwest of the Station Dwelling.	Capital Improvement	Contributing	Y
3	543373	Black Locust	Y	Preserve existing black locust tree northwest of the Hans Halseth House, continuing to perform routine pruning to maintain tree form and health.	Facility Maintenance / Deferred Maintenance	Non-Contributing	Y
3	543362	Norway Maple	Y	Preserve existing black locust tree northwest of he Hans Halseth House, continuing to perform routine pruning to maintain tree form and health. Do not replace when tree is lost or removed.	Facility Maintenance / Deferred Maintenance	Contributing	Y
2	Park to assign	Ornamental Shrubs and Flowers	N	Remove non-contributing foundations plantings at buildings and replace with stone. Ensure positive drainage from the building.	Facility Maintenance	Non-Contributing	Y
3	Park to assign	Lawn	N	Maintain historic patterns of open lawn surrounding North Manitou Island Life-Saving Station buildings. Provide a park-approved seed mixture of native and hardy sod-forming grasses and forbs with a maintained lawn appearance.	Facility Maintenance	Contributing	Y

Class C Cost Estimate

AE IGE Checklist

Architect/Engineer (AE) to review and complete prior to each submission to NPS.

Class C Estimate

Has estimator reviewed NPS Estimating Requirements Handbook prior to starting estimate?	Yes
Has estimator visited the project site and checked existing conditions, scopes of work, and other site visit requirements?	No
Has a second estimator reviewed this estimate for accuracy and formatting?	Yes
Has estimate been checked for formula errors throughout?	Yes
Using the **Wage Factor** worksheet/tab, has State Wage decision been compared to Federal Wage decision and adjusted if needed?	Yes
Have production rates have been reviewed and adjusted appropriately for this project?	Yes
Have calls been made for pricing for large commodity items, i.e. asphalt, within the project area?	Yes
Has AE firm conducted a quality assurance (QA) review and made appropriate adjustments to this estimate prior to submission NPS?	Yes

Basis of Estimate and Cost Summary - Project Information

Park Acronym:	SLBE
Park Name:	Sleeping Bear Dunes National Lakeshore
Project Title:	North Manitou Island Cultural Landscape Report
Park Management Information System (PMIS) Number:	TBD
Design Phase:	Cultural Landscape Report
State:	Michigan
County work location:	Leelanau County
Database Name:	ACC Proprietary Database
Database Year:	2026
Estimate Type:	Class C Estimate
Current Estimate Date:	2/11/2026
Construction Start Date:	5/1/2026
Project Period of Performance (Months):	6
Architect/Engineer (A/E) Company:	Mundis Bishop
Estimating Company:	ACC Cost Estimating
Estimator Name:	Todd Slater
Estimate Reviewed By:	Seth Pszczolkowski
Estimate Reviewed Date:	2/11/2026
Estimator Phone:	503-718-0075
Project Description (Scope of Work):	This CLR addresses the preservation and protection of the cultural landscape of North Manitou Island Life-Saving Station and Village. This document provides baseline documentation, records changes to the cultural landscape over time, supplements existing historical data, provides recommendations for further study, and provides holistic guidance for the treatment of the cultural landscape and resource protection.
Estimate Assumptions:	Assumed Construction Start - May 2026 Assumed Project Duration - 9 Months Assumed Contracting Method - Full & Open Use 5%.
Source of Cost Data:	**ACC Proprietary Database - 2026** ACC maintains a cost database dedicated to NPS projects. Pricing is derived from current market conditions through continuous contact with materials suppliers, NPS contractors, and local non-NPS contactors. The database is able to adjust for local labor rates and productivity factors. ACC uses input from separate mechanical and electrical estimators as well.
Schedule Clarification:	ACC has made its best guess at a project schedule.
Other Clarifications or Exclusions:	The American Innovation and Manufacturing (AIM) Act was enacted on December 27, 2020. In 2024, the total quantity of allowed HFC production and consumption will drop a further 30%. The final rule, signed on Oct. 5, 2023, restricts the use of higher-GWP HFCs in new aerosol, foam, and refrigeration, air conditioning, and heat pump (RACHP) products and equipment. The rule operates by prohibiting the manufacture and import of products that use higher-GWP HFCs, prohibiting the sale, distribution, and export of those products three years after the manufacture and import restriction, and prohibiting the installation of new RACHP systems that use higher-GWP HFCs. In summary, several of the HVAC systems typically used in NPS projects are required to change the refrigerant they use by January 1, 2025. These changes may impact the cost of systems and the integration of these systems into buildings. In addition, there may be impacts to lead times for equipment. Please note, that changes in refrigerants will continue to occur through 2029 as the AIM Act requires reduction of GWPs.
Documentation:	- Communication with local sales reps was conducted for specific materials pricing as warranted, to either update existing or include materials not priced.
Standard Clarifications:	• **This estimate is the NET Construction costs** of the project which includes direct cost of construction, location factor, remoteness factor, federal wage rate factor, historic preservation factor, design contingency, permitting, contracting method of procurement, testing, general conditions, bonds, permits and contractor overhead, profit, & escalation. • This estimate **does NOT include Gross costs** which Includes Construction Contingency and NPS Construction management. • This estimate **does NOT include the Total costs** of compliance, predesign, design, and supplemental services.

Project Specific Markups & Tax Allocations

Tax Allocations

- After verifying with the local tax jurisdictions and NPS tax requirements, enter **X** in fields which require project taxes. This will populate the appropriate taxes throughout the estimate.

Material	Labor	Equipment	Other
			x

Project Specific Markups

- **Refer to Cost Estimating Requirements Handbook > Chapter 4 Estimate Markups for guidance on this section.**
- This chart shows how markups are applied at different phases of design.
- Add required markups in column **C** and specific descriptions in column **D**. These entries will populate throughout the estimate.
- Re-evaluate markups at each phase of design as details develop and added to the estimate. Adjust percentage as appropriate in individual CLINs.
- **If no X is shown in a field, costs previously applied in the percentage need to be fully applied within the direct costs, either as actual activities or increases to individual unit costs and a 0% shown in the markups.**

	Markups	Percent %	Description *Overwrite instructions to provide detailed description for each markup and how it was determined.*	Class C Conceptual	Class C Schematic	Class B Design Development	Class A Construction Documents
A	Park Location Factor (PLF):	5.33%	A combination of the city cost index and remoteness to the Park Visitor Center. The Park Location Factor (PLF) is automatically inputted when the park acronym is inserted on the Price Schedule.	X	X	X	
B	Project Specific Remoteness:	54.25%	Added cost of remoteness from the Park Visitor Center to the project specific location in the Park. Use minimum 7.75% for every 10 miles for water only access. Includes Barge/Transport Costs.	X	X	X	
C	Federal Wage Rate Factor:	0.00%	Using the attached Wage Rate Calculator wage rate needs to be adjusted. Applied to 60% of Other Cost.	X	X	X	
D	State & Local Taxes:	6.00%	Sales Tax applied to 40% of Other Cost.	X	X	X	
E	Historic Preservation Factor:	0.00%	(Approximate Range 5% to 10%) Based on level of work on historical resources	X	X		
F	Design Contingency:	20.00%	This ranges based on ASTM E2516 Expected Accuracy Range/Tolerance for design contingency and estimators best professional judgement based on phase of design, complexity, and size of project.	X	X	X	X
	TOTAL DIRECT CONSTRUCTION COSTS						
G	Standard General Conditions:	39.64%	(Approximate Range 4% to 20%) Standard field general requirements and conditions for duration of project, based on previous park projects.	X	X		
H	Government General Conditions:	5.00%	(Approximate Range 5% to 10%) Government requirements including, quality assurance and safety requirements. (See Division 1 Specifications for guidance.)	X	X		
I	Testing & Inspections:	1.00%	(Approximate Range 1% to 3%) Soils, structural, material, and MEP (mechanical, electrical & plumbing) testing with inspection requirements.	X	X	X	
J	Permits & Fees:	1.00%	(Approximate Range 0% to 2%) Wetlands, local fire requirements, sanitary, water, electrical local utility agency fees.	X	X	X	
	SUBTOTAL NET CONSTRUCTION COST						
K	Home Office Overhead:	16.00%	(Approximate Range 4% to 18%) Applicable for type and size of construction per previous park projects.	X	X	X	X
L	Profit:	10.00%	Can not exceed 10% per FAR (Federal Acquisition Regulation) requirements.	X	X	X	X
M	Performance Bond:	2.00%	(Approximate Range 1% to 2.5%) Construction bonding for contractor and subcontractors. The smaller the company the higher the rate.	X	X	X	X
	ESTIMATED NET CONSTRUCTION COST						
N	Contracting Method Adjustment:	5.00%	Verify with project team which contracting method is to be used. Recommendations are 2 step Best Value Full and Open 5%.	X	X	X	X
O	Inflation Escalation Annual Rate:	5.00%	Aggregate Rate - Use 5% for 2026	X	X	X	X
	CURRENT DATE TO MIDPOINT OF CONSTRUCTION (Months):	5	Include construction start / finish dates with duration of work in months.				

Summary NET Cost Schedule

Park Acronym: SLBE
Park Name: Sleeping Bear Dunes National Lakeshore
Project Title: North Manitou Island Cultural Landscape Report
Park Management Information System (PMIS) Number: TBD
Current Estimate Date: 2/11/2026

- Estimator to start estimate by completing gray cells with initial project information and CLIN titles per line item designated by NPS for the project.
- Information added on this worksheet will populated the rest of the template.
- Click on the CLIN to route to corresponding CLIN worksheet/tab.

Contract Line Item Number (CLIN) & Option Number	Contract Line Item Title	Quantity	Unit of Measure	Unit Price	Total Price
CLIN 1	NMI Life-Saving Station	1	Lump Sum (LS)	1,435,519	$1,435,519.11
				TOTAL BASE PRICE (CLIN 1)**:**	**$1,435,519.11**

CLIN NET Cost Summary

Project Title: North Manitou Island Cultural Landscape Report
Park Name: Sleeping Bear Dunes National Lakeshore

Park Management Information System (PMIS) Number: TBD
Park Acronym: SLBE

Bid Item Number	Bid Item Description	Overall Quantity	Unit of Measure	Total Material Cost	Total Labor Cost	Total Equipment Cost	Total Other Cost	Total Direct Construction Costs	Total Markups	NET Bid Item Total	NET Bid Item Unit Cost
CLIN 1	NMI Life-Saving Station	1	Lump Sum (LS)	$ 1,170	$ 10,530	$ -	$ 380,660	$ 392,360	$ 1,043,159	$ 1,435,519	$ 1,435,519
			Total CLIN Items:	**$ 1,170**	**$ 10,530**	**$ -**	**$ 380,660**	**$ 392,360**	**$ 1,043,159**	**$ 1,435,519**	
									Total Base Costs:	**$ 1,435,519**	

Estimate Type: **Class C Estimate**

CLIN Number: CLIN 1
CLIN Title: NMI Life-Saving Station
Park Acronym: SLBE
PMIS Number: TBD

Overall Period of Performance: 6
Individual CLIN Period of Performance (as needed):

Overall Quantity: 1
Unit of Measure: Lump Sum (LS)
Asset Code: 4100 Building
Facility Type: 4110 Office

Estimator Name: Todd Slater
Current Estimate Date: 2/11/2026
Estimate Reviewed By: Seth Pszczolkowski
Estimate Reviewed Date: 2/11/2026

Go to Cost Schedule

- *No Allowances or Lump Sums can be used with Class B or Class A estimates. Estimate will be rejected if used.*
- *Rounding or Plug numbers are not acceptable. Estimate will be rejected if used.*
- *To the left of the **Uniformat II WBS Codes** (Work Breakdown Structure), click outline symbol **+** (plus) to show/expand groups required for the IGE and begin entering details. For full use of the worksheet, unprotect the sheet in the **Review** ribbon.*

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		OTHER		DIRECT CONSTRUCTION		NET CONSTRUCTION	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Other Cost/Unit	Total Other Cost	Total Cost/Unit	Total Cost	Total Cost/Unit	Total Cost
A10	TOTAL FOUNDATIONS	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
A20	TOTAL BASEMENT	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
B10	TOTAL SUPERSTRUCTURE	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
B20	TOTAL EXTERIOR ENCLOSURE	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
B30	TOTAL ROOFING	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
C10	TOTAL INTERIOR CONSTRUCTION	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
C20	TOTAL STAIRS	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
C30	TOTAL INTERIOR FINISHES	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
D10	TOTAL CONVEYING SYSTEMS	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
D20	TOTAL PLUMBING	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
D30	TOTAL HVAC (Heating, Ventilation, and Air Conditioning)	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
D40	TOTAL FIRE PROTECTION	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
D50	TOTAL ELECTRICAL	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
E10	TOTAL EQUIPMENT	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
E20	TOTAL FURNISHINGS	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
F10	TOTAL SPECIAL CONSTRUCTION	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
F20	TOTAL SELECTIVE DEMOLITION	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
G1020	**Site Demolition & Relocations**														
MF-2004 Code	**Circulation Improvements**														
MF-2004 Code	Remove Concrete Walks	5610	Sf	$ -	$0	$ -	$0	$ -	$0	$ 5.00	$28,050	$ 5.00	$28,050		
MF-2020 Code	Haul & Dispose - Load & Haul to Nearest Commercial Center	4	Load	$ 207.50	$830	$ 1,867.50	$7,470	$ -	$0	$ -	$0	$ 2,075.00	$8,300		
MF-2004 Code	**Vegetation**														
MF-2004 Code	Remove Vegetation	3200	Sf	$ -	$0	$ -	$0	$ -	$0	$ 2.75	$8,800	$ 2.75	$8,800		
MF-2020 Code	Haul & Dispose - Load & Haul to Nearest Commercial Center	2	Load	$ 170.00	$340	$ 1,530.00	$3,060	$ -	$0	$ -	$0	$ 1,700.00	$3,400		
MF-2004 Code	Description	0	Unit	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0		
Subtotal	**Site Demolition & Relocations**	**1**	**LS**	**$ 1,170.00**	**$1,170**	**$ 10,530.00**	**$10,530**	**$ -**	**$0**	**$ 36,850.00**	**$36,850**	**$ 48,550.00**	**$48,550**		
G1030	**Site Earthwork**														
MF-2004 Code	ESC - Allowance	1	Sum	$ -	$0	$ -	$0	$ -	$0	$ 2,500.00	$2,500	$ 2,500.00	$2,500		
MF-2004 Code	Mobilization/De-Mobilization	1	Ea	$ -	$0	$ -	$0	$ -	$0	$ 31,500.00	$31,500	$ 31,500.00	$31,500		
MF-2004 Code	**Circulation Improvements**														
MF-2004 Code	Clear & Grub/Grading	3300	Sf	$ -	$0	$ -	$0	$ -	$0	$ 0.65	$2,145	$ 0.65	$2,145		
MF-2004 Code	Topographic Survey - Allowance	1	Sum	$ -	$0	$ -	$0	$ -	$0	$ 5,000.00	$5,000	$ 5,000.00	$5,000		
MF-2004 Code	**Buildings and Structures**														
MF-2004 Code	Grading - Establish Positive Drainage From Building	7	Ea	$ -	$0	$ -	$0	$ -	$0	$ 1,000.00	$7,000	$ 1,000.00	$7,000		
MF-2004 Code	Description	0	Unit	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0		
Subtotal	**Site Earthwork**	**1**	**LS**	**$ -**	**$0**	**$ -**	**$0**	**$ -**	**$0**	**$ 48,145.00**	**$48,145**	**$ 48,145.00**	**$48,145**		
G10	TOTAL SITE PREPARATION	1	LS	$ 1,170.00	$1,170	$ 10,530.00	$10,530	$ -	$0	$ 84,995.00	$84,995	$ 96,695.00	$96,695	$ 353,775.90	$353,776
G2030	**Pedestrian Paving**														
MF-2004 Code	**Circulation Improvements**														
MF-2004 Code	Re-Establish Concrete Walks	3300	Sf	$ -	$0	$ -	$0	$ -	$0	$ 11.34	$37,431	$ 11.34	$37,431		
MF-2004 Code	Concrete Paving - Repair Contributing Concrete Walks	5610	Sf	$ -	$0	$ -	$0	$ -	$0	$ 11.34	$63,632	$ 11.34	$63,632		
MF-2004 Code	Concrete Paving	1100	Sf	$ -	$0	$ -	$0	$ -	$0	$ 11.34	$12,477	$ 11.34	$12,477		
MF-2004 Code	Wood Ramp - ADA - 5' Wide	400	Sf	$ -	$0	$ -	$0	$ -	$0	$ 110.52	$44,207	$ 110.52	$44,207		
MF-2004 Code	Handrails	160	Lf	$ -	$0	$ -	$0	$ -	$0	$ 225.00	$36,000	$ 225.00	$36,000		
MF-2004 Code	**Buildings and Structures**														
MF-2004 Code	Wood Deck	950	Sf	$ -	$0	$ -	$0	$ -	$0	$ 69.08	$65,622	$ 69.08	$65,622		
MF-2004 Code	Handrails	45	Lf	$ -	$0	$ -	$0	$ -	$0	$ 225.00	$10,125	$ 225.00	$10,125		
MF-2004 Code	Wood Benches	3	Ea	$ -	$0	$ -	$0	$ -	$0	$ 775.00	$2,325	$ 775.00	$2,325		
MF-2004 Code	Description	0	Unit	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0		
Subtotal	**Pedestrian Paving**	**1**	**LS**	**$ -**	**$0**	**$ -**	**$0**	**$ -**	**$0**	**$ 271,817.52**	**$271,818**	**$ 271,817.52**	**$271,818**		
G2050	**Landscaping**														
MF-2004 Code	**Vegetation**														
MF-2004 Code	Tree - 2.5" Cal.	6	Ea	$ -	$0	$ -	$0	$ -	$0	$ 2,000.00	$12,000	$ 2,000.00	$12,000		
MF-2004 Code	Maintain Lawn	42725	Sf	$ -	$0	$ -	$0	$ -	$0	$ 0.10	$4,273	$ 0.10	$4,273		
MF-2004 Code	Description	0	Unit	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0		
Subtotal	**Landscaping**	**1**	**LS**	**$ -**	**$0**	**$ -**	**$0**	**$ -**	**$0**	**$ 16,272.50**	**$16,273**	**$ 16,272.50**	**$16,273**		
G2060	**Site Furnishings**														
MF-2004 Code	**Small Scale Features**														
MF-2004 Code	Interpretive Panels	1	Ea	$ -	$0	$ -	$0	$ -	$0	$ 975.00	$975	$ 975.00	$975		
MF-2004 Code	Perimeter Fence - White Picket	100	Lf	$ -	$0	$ -	$0	$ -	$0	$ 25.00	$2,500	$ 25.00	$2,500		
MF-2004 Code	Preserve/Repair Capstan	1	Sum	$ -	$0	$ -	$0	$ -	$0	$ 2,500.00	$2,500	$ 2,500.00	$2,500		
MF-2004 Code	Preserve/Repair Lookout Tower Abutments - Apply Sealer	1	Sum	$ -	$0	$ -	$0	$ -	$0	$ 1,600.00	$1,600	$ 1,600.00	$1,600		
MF-2004 Code	Description	0	Unit	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0		
Subtotal	**Site Furnishings**	**1**	**LS**	**$ -**	**$0**	**$ -**	**$0**	**$ -**	**$0**	**$ 7,575.00**	**$7,575**	**$ 7,575.00**	**$7,575**		
G20	TOTAL SITE IMPROVEMENTS	1	LS	$ -	$0	$ -	$0	$ -	$0	$ 295,665.02	$295,665	$ 295,665.02	$295,665	$ 1,081,743.21	$1,081,743

Estimate Type: **Class C Estimate**

CLIN Number: CLIN 1
CLIN Title: NMI Life-Saving Station
Park Acronym: SLBE
PMIS Number: TBD

Overall Period of Performance: 6
Individual CLIN Period of Performance (as needed):

Overall Quantity: 1
Unit of Measure: Lump Sum (LS)
Asset Code: 4100 Building
Facility Type: 4110 Office

Estimator Name: Todd Slater
Current Estimate Date: 2/11/2026
Estimate Reviewed By: Seth Pszczolkowski
Estimate Reviewed Date: 2/11/2026

Go to Cost Schedule

- *No Allowances or Lump Sums can be used with Class B or Class A estimates. Estimate will be rejected if used.*
- *Rounding or Plug numbers are not acceptable. Estimate will be rejected if used.*
- *To the left of the **Uniformat II WBS Codes** (Work Breakdown Structure), click outline symbol + (plus) to show/expand groups required for the IGE and begin entering details. For full use of the worksheet, unprotect the sheet in the **Review** ribbon.*

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		OTHER		DIRECT CONSTRUCTION		NET CONSTRUCTION	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Other Cost/Unit	Total Other Cost	Total Cost/Unit	Total Cost	Total Cost/Unit	Total Cost
G30	TOTAL SITE MECHANICAL	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
G40	TOTAL SITE ELECTRICAL	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
G50	TOTAL OTHER SITE CONSTRUCTION	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0
G50	TOTAL GENERAL CONDITIONS & REQUIREMENTS	1	LS	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0	$ -	$0

Estimate Type: **Class C Estimate**

CLIN Number: CLIN 1
CLIN Title: NMI Life-Saving Station
Park Acronym: SLBE
PMIS Number: TBD

Overall Period of Performance: 6
Individual CLIN Period of Performance (as needed):

Overall Quantity: 1
Unit of Measure: Lump Sum (LS)
Asset Code: 4100 Building
Facility Type: 4110 Office

Estimator Name: Todd Slater
Current Estimate Date: 2/11/2026
Estimate Reviewed By: Seth Pszczolkowski
Estimate Reviewed Date: 2/11/2026

Go to Cost Schedule

- *No Allowances or Lump Sums can be used with Class B or Class A estimates. Estimate will be rejected if used.*
- *Rounding or Plug numbers are not acceptable. Estimate will be rejected if used.*
- *To the left of the **Uniformat II WBS Codes** (Work Breakdown Structure), click outline symbol + (plus) to show/expand groups required for the IGE and begin entering details. For full use of the worksheet, unprotect the sheet in the **Review** ribbon.*

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		OTHER		DIRECT CONSTRUCTION		NET CONSTRUCTION	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Other Cost/Unit	Total Other Cost	Total Cost/Unit	Total Cost	Total Cost/Unit	Total Cost
	DIRECT COSTS			$1,170		$10,530		$0		$380,660		$392,360			
	TAXES			$0		$0		$0		$9,136		$9,136			

TOTAL NET CONSTRUCTION

Total Direct Construction:	$392,360	$ 1,435,519.11	$1,435,519
		Variance Check:	$1,435,519.11

(Check for formula errors if cell is RED)

- *MARKUP PRECENTAGES will initially be populated from the **Markups** worksheet/tab but can be overwritten as the design is developed or for changing requirements of the individual CLIN.*

	Markup ALLOWED	MARKUP TYPES		Markups and Factors DESCRIPTION	TOTALS
A	Class C,B	**Park Location Factor (PLF):**	5.33%	A combination of the city cost index and remoteness to the Park Visitor Center. The Park Location Factor (PLF) is automatically inputted when the park acronym is inserted on the Price Schedule.	$20,897.67
B	Class C,B	**Project Specific Remoteness:**	54.25%	Added cost of remoteness from the Park Visitor Center to the project specific location in the Park. Use minimum 7.75% for every 10 miles for water only access. Includes Barge/Transport Costs.	$212,855.31
C	Class C,B	**Federal Wage Rate Factor:**	0.00%	Using the attached Wage Rate Calculator wage rate needs to be adjusted. Applied to 60% of Other Cost.	$0.00
D	Class C,B	**State & Local Taxes:**	6.00%	Material: 0 Labor: 0 Equipment: 0 Other: x	$9,135.84
E	Class C,B	**Historic Preservation Factor:**	0.00%	(Approximate Range 5% to 10%) Based on level of work on historical resources	$0.00
F	Class C,B,A	**Design Contingency:**	20.00%	This ranges based on ASTM E2516 Expected Accuracy Range/Tolerance for design contingency and estimators best professional judgement based on phase of design, complexity, and size of project.	$78,472.00
				Total Direct Construction Costs:	**$713,720.85**
G	Class C	**Standard General Conditions:**	39.64%	(Approximate Range 4% to 20%) Standard field general requirements and conditions for duration of project, based on previous park projects.	$282,918.94
H	Class C	**Government General Conditions:**	5.00%	(Approximate Range 5% to 10%) Government requirements including, quality assurance and safety requirements. (See Division 1 Specifications for guidance.)	$35,686.04
I	Class C,B	**Testing & Inspections:**	1.00%	(Approximate Range 1% to 3%) Soils, structural, material, and MEP (mechanical, electrical & plumbing) testing with inspection requirements.	$7,137.21
J	Class C,B	**Permits & Fees:**	1.00%	(Approximate Range 0% to 2%) Wetlands, local fire requirements, sanitary, water, electrical local utility agency fees.	$7,137.21
				Subtotal NET Construction Cost:	**$1,046,600.25**
K	Class C,B,A	**Home Office Overhead:**	16.00%	(Approximate Range 4% to 18%) Applicable for type and size of construction per previous park projects.	$167,456.04
L	Class C,B,A	**Profit:**	10.00%	Can not exceed 10% per FAR (Federal Acquisition Regulation) requirements.	$104,660.02
M	Class C,B,A	**Performance Bond:**	2.00%	(Approximate Range 1% to 2.5%) Construction bonding for contractor and subcontractors. The smaller the company the higher the rate.	$20,932.00
				Estimated NET Construction Cost:	**$1,339,648.32**
N	Class C,B,A	**Contracting Method Adjustment:**	5.00%	Verify with project team which contracting method is to be used. Recommendations are 2 step Best Value Full and Open 5%.	$66,982.42
O	Class C,B,A	**Inflation Escalation Annual Rate:**	5.00%	Aggregate Rate - Use 5% for 2026	28888.37121
		CURRENT DATE TO MIDPOINT OF CONSTRUCTION (Months):	5	Include construction start / finish dates with duration of work in months.	

Total Estimated NET Cost of Construction:	$1,435,519.11	**Total percentage markup** 366%
Variance Check:	$1,435,519.11	*(Check for formula errors if cell is RED)*

Wage Rate Factor Analysis

Park:	Sleeping Bear Dunes National Lakeshore		
Project Title:	North Manitou Island Cultural Landscape Report	Date Updated:	1/2/2026
Published Market Center:	Traverse City, Michigan	Estimate Data Source:	ACC Proprietary Database
Project County:	Leelanau County	Market Center Adjustment Factor:	81.2%
Davis Bacon Decision:	WD # MI20260130	Estimator:	Todd Slater

Trade	2026 RSMeans National Average Direct Wage Rates	Market Adjusted Wage Rates for Traverse City, Michigan	Davis Bacon with Fringe Wage Rates for the county of: Leelanau County	Wage Difference	Wage Adjustment Factor
Equipment Operator (average)	$ 72.18	$ 58.61	$ 64.75	$ 6.14	10.5%
Ironworker (Structural/reinforcement)	$ 74.13	$ 60.19	$ 66.06	$ 5.87	9.7%
Common Laborer	$ 53.76	$ 43.65	$ 39.68	$ (3.97)	-9.1%
Truck Drivers (average)	$ 62.84	$ 51.02	$ 21.95	$ (29.07)	-57.0%
Average Wage & Adjustment Factor:	**$ 65.73**	**$ 53.37**	**$ 48.11**	**$ (5.26)**	**-11.5%**

Conclusion:

Davis Bacon Wage Rates for Leelanau County are on average -11.5% more/less than RSMeans

Trades represent the workforce composition which will staff the majority of this project and also closely match the adjusted RSMeans rates.

When greater than 0%, add appropriate Wage Adjustment Factor percentage to Federal Wage Rate Factor in the Markups.

If Wage Adjustment Factor is less then 0%, then the rate used for the estimate Federal Wage Rate Factor should be 0%.

Note: Adjustment Factor should only be applied to the Labor of the estimate.

Davis Bacon Wage Rates (Wage Determinations)

Continue wage rate comparison and conclusion narrative:

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Appendix

Appendix A: Treatment Terminology

The following terminology is used in this report to describe recommended actions.[A.1]

Consider is to routinely evaluate if a treatment action can be undertaken. Budget constraints and long-term maintenance may result in delayed treatment action. As circumstances change, the treatment action should be reevaluated and eventually completed.

Design intent refers to the creative objectives that were applied to the development of a historic property.

Introduce is the addition of a new, nonhistoric feature compatible with the cultural landscape. This may also include the replacement of a missing historic feature.

In-kind refers to the replacement of features extensively deteriorated or missing parts of features using materials that match the historic detail, configuration, and appearance as closely as possible.

Maintain refers to measures that sustain the form, integrity and materials of contributing features, either on a regular basis or as a nonrecurring event.

Preserve refers to those measures necessary to sustain the existing form, integrity, and materials of contributing features. It includes initial stabilization work, where necessary, as well as ongoing preservation maintenance and repair of historic materials and features.

Protect refers to actions to safeguard a historic feature by defending or guarding it against further deterioration or loss. Such action is generally of temporary nature and anticipates future preservation treatment.

Reconstruct refers to the act or process of depicting, by means of new work, the form, features, and detailing of a non-surviving historic structure or any part thereof, for the purpose of replicating its appearance at a specific time in its original location.

Rehabilitate refers to the act or process of allowing a compatible use through repair, alteration, or additions as long as those features that convey the historical, cultural, or architectural values are preserved.

Repair refers to those measures that are necessary to correct deteriorated, damaged, or faulty materials of features. These measures are more extensive than regular maintenance and undertake work necessary to bring a contributing feature or area to good condition.

Restore refers to those measures necessary to accurately depict the form, features, and character of a property as it appeared during a particular period of time by means of the removal of features from other periods in history and reconstruction of missing features from the restoration period.

Retain are those actions that are necessary to allow a feature (contributing or noncontributing) to remain in place in its current configuration and condition.

Stabilize refers to those measures that require more work than standard maintenance practices, and that are necessary to prevent the further deterioration, failure, or loss of contributing features.

A.1 Adapted from The Secretary of the Interior's Standards for the Treatment of Historic Properties as amended and annotated, 1995 and http://www.nps.gov/dscw/definitions.htm.

Sleeping Bear Dunes National Lakeshore

North Manitou Island Life-Saving Station
Cultural Landscape Report

April 2026