HISTORIC STRUCTURES REPORT
for
LITTLE SABLE POINT LIGHT STATION
(PETITE POINTE au SABLE)
Golden Township (Oceana County), Michigan

Owner:
State of Michigan
Department of Natural Resources
Parks and Recreation Division

Prepared for:
Sable Points Lighthouse Keepers Association
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FINAL REPORT
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PART I – INTRODUCTION

A) EXECUTIVE SUMMARY

The Historic Structures Report (HSR) is a planning tool used to document the history, current conditions and use, and to guide the preservation of an historic site or building. This Historic Structures Report covers an important coastal light station located south of Ludington, Michigan on the eastern shore of Lake Michigan known as Little Sable Point. The purpose of this report is to define the historic character of the light station, document current existing conditions at this present date in time and to guide the future use, preservation and rehabilitation.

In the early 1850s a remote area on the eastern shoreline of Lake Michigan known as Petite Pointe au Sable, between the growing communities of Ludington and Muskegon, Michigan, began to develop with the establishment of sawmills serving the lumbering industry. Due to its remoteness and lack of roads, development in this area was slow compared to other communities located on a river or natural harbor. Eventually Petite Pointe au Sable was selected as a site for a navigation light when such lights were being placed at regular intervals along the shoreline of the Great Lakes. In 1870 a recommendation by the Lighthouse Board was presented to the United States Congress for establishment of a light at Petite Pointe au Sable amongst other locations, and in 1872 funds were appropriated for construction. Work began at the site in the spring of 1873 and the light first became operational in 1874. As with many light stations on the Great Lakes, the late 1800s and early 1900s were periods of growth and activity in terms of construction, personnel and operations. In 1906, as part of a process to anglicize names by the federal government, Petite Pointe au Sable was officially changed to Little Sable Point. In the 1950s electrification and automation of the light led to the elimination of permanent staff and abandonment with subsequent deterioration of various buildings. Demolition of all buildings and structures in the late 1950s, except for the light tower, resulted in the present day appearance of the lone tower as a reminder of the former station.

The Little Sable Point Light Station is often referred to as Little Sable Point Light because the cylindrical light tower is the only remaining structure of the former light station. Under the ownership of the State of Michigan since 1995, it is now part of the very popular Silver Lake State Park operated by the Parks and Recreation Division of the Department of Natural Resources. This historic maritime structure is an important element of the Silver Lake State Park that features a unique fresh water coastal dune environment. The non-profit preservation group known as the Sable Points Lighthouse Keepers Association, in conjunction with the Department of Natural Resources, works to promote public awareness and appreciation of the region's lighthouse heritage through the preservation, rehabilitation and interpretation of Little Sable Point Light Station.

Sanders & Czapski Associates, PLLC of Marquette, Michigan, was retained by Sable Points Lighthouse Keepers Association in 2013 to prepare this Historic Structures Report. Consultants include U. P. Engineers & Architects of Houghton, Michigan, responsible for hazardous material testing and analysis. On site research and documentation of the light was conducted in September 2013. Special appreciation is extended to staff and volunteers of the Sable Point Lighthouse Keepers Association for their assistance at the site and contribution of historic material, photos and drawings that are included in this report.

This project has been funded in part by a grant from the State of Michigan through the Michigan Lighthouse Assistance Program. This grant has been awarded by, and is administered through the State Historic Preservation Office, Michigan State Housing Development Authority.

The public can help fund the restoration and preservation of Michigan's lighthouses by purchasing a lighthouse vehicle license plate. Further information about this program is available by contacting a local Secretary of State office or the State of Michigan's website www.michigan.gov.

Aerial View of Little Sable Point Light, Golden Township,
Oceana County, Michigan, September 2013.
Photo Credit: Aerial Photography, John L. Wagner,
East Lansing, Michigan.

B) ADMINISTRATIVE DATA

The Little Sable Point Light Station is located west of the village of Mears, Michigan within the boundaries of Silver Lake State Park. The state park, located in Benona and Golden Townships, Oceana County, is bounded by Lake Michigan on the west with various land parcels in the general area as shown on the park map. The state park's address is 9679 W. State Park Road, Mears, Michigan, 49436. The light station is situated on a section of land known as "Petite Pointe au Sable", or "little point", and is reached by traveling through the park south on Lighthouse Drive, a paved road that dead ends at the light station. The Little Sable Point Light Station is located in Golden Township, T14N, R18W. Its Latitude/Longitude location is 86º 32' 22.28" W and 43º 39' 04.90" N.

The Little Sable Point Light Station, under the ownership of the State of Michigan, Department of Natural Resources, Parks and Recreation Division, is listed on the United States Department of the Interior National Register of Historic Places, Reference Number 84001827, with a Certification Date of 07/19/1984. It is also listed on the State Register of Historic Places, Site ID #P24495. Its Historic Use is stated as "Defense/Coast Guard Facility and Transportation/Water Related". Its Current Use is stated as "Transportation/Water Related". The Period of Significance is identified as 1866 – 1900 with a Significant Date of 1873. A State of Michigan historical marker for Petite Pointe Au Sable Lighthouse, site No. 2243, was placed at the site in the summer of 2014.

The work covered by this Historic Structures Report includes the following:

- Light Tower, constructed in 1873
- Non-extant buildings including the Keeper's Dwelling, Privy, Stable/Barn, Coal/Wood Shed, Oil House (masonry), Oil House (metal), Small Shed and Large Shed
- Non-extant structures including the Well, Crib Structures, Sidewalks, Docks and Flagpoles.
- Site

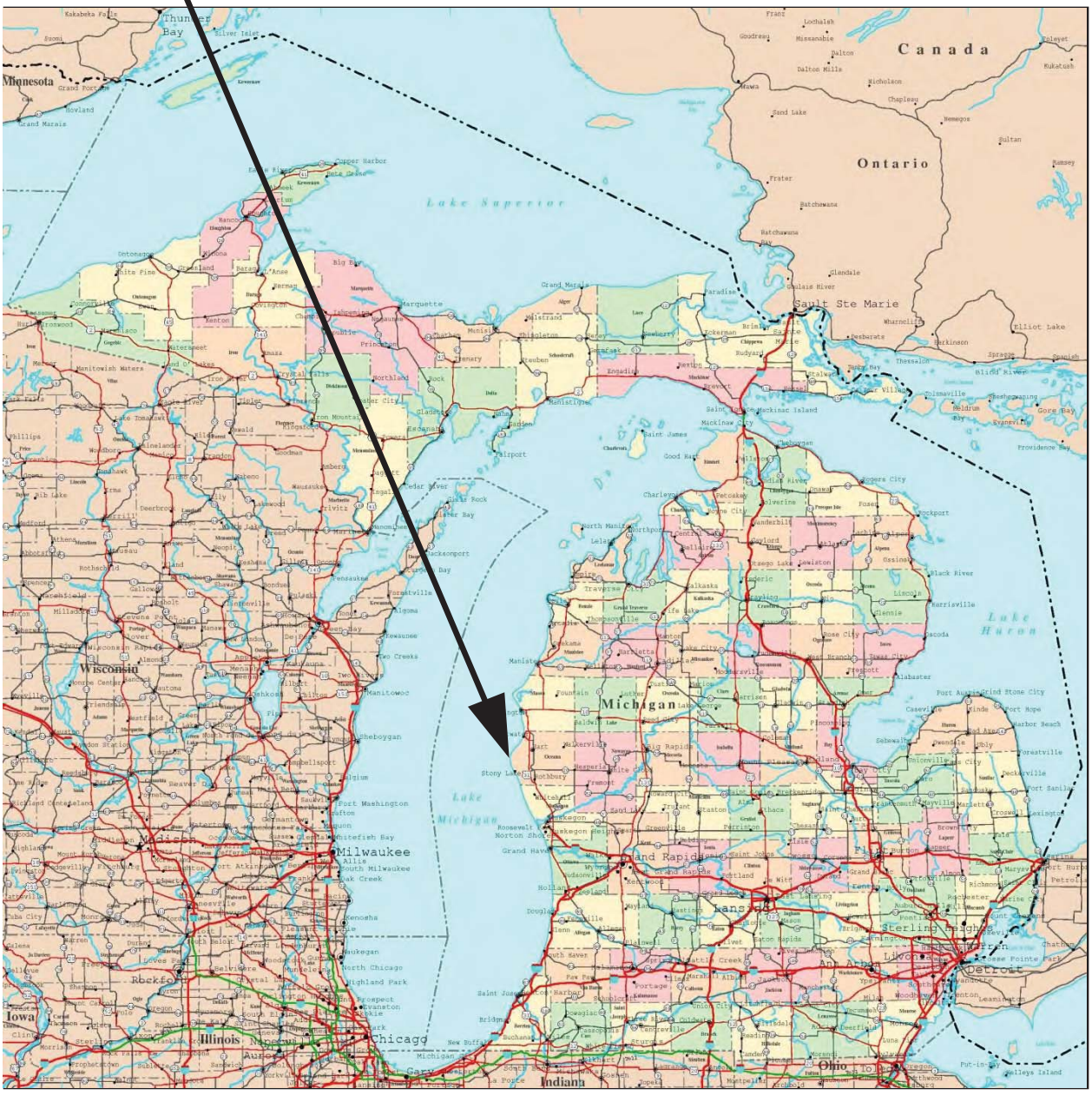
Sanders & Czapski Associates, PLLC gratefully acknowledges the assistance of the following individuals who assisted with site access, field assistance and furnishing other information and documentation:

- Mr. Peter Manting, Executive Director, Sable Points Lighthouse Keepers Association (SPLKA)
- Ms. Cindy-Beth Davis Dykema, past Executive Director, SPLKA
- Mr. Matt Varnum, SPLKA Operations Manager

A note of appreciation is also extended to volunteers Judy Ashley, Richard Ashley, Ignatius Aloysius and Joyce Slomski who were present at the Light Tower during the inspection.

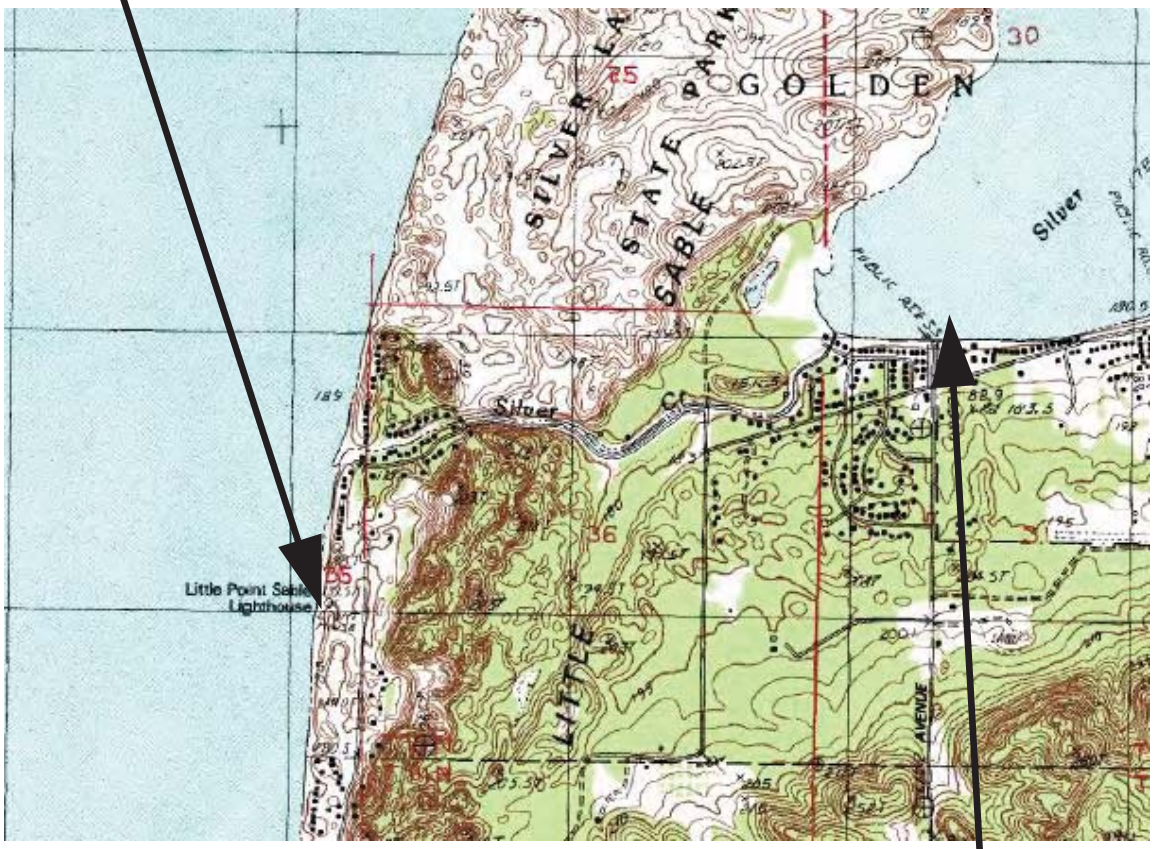
Copies of the final Historic Structures Report will be kept at the office of the Sable Points Lighthouse Keepers Association, Ludington, Michigan, the State Historic Preservation Office/Michigan State Housing Development Authority, Lansing, Michigan, the Silver Lake State Park headquarters office, Mears, Michigan and the office of Sanders & Czapski Associates, PLLC, Marquette, Michigan.

LITTLE SABLE POINT
LIGHT STATION
PROJECT LOCATION



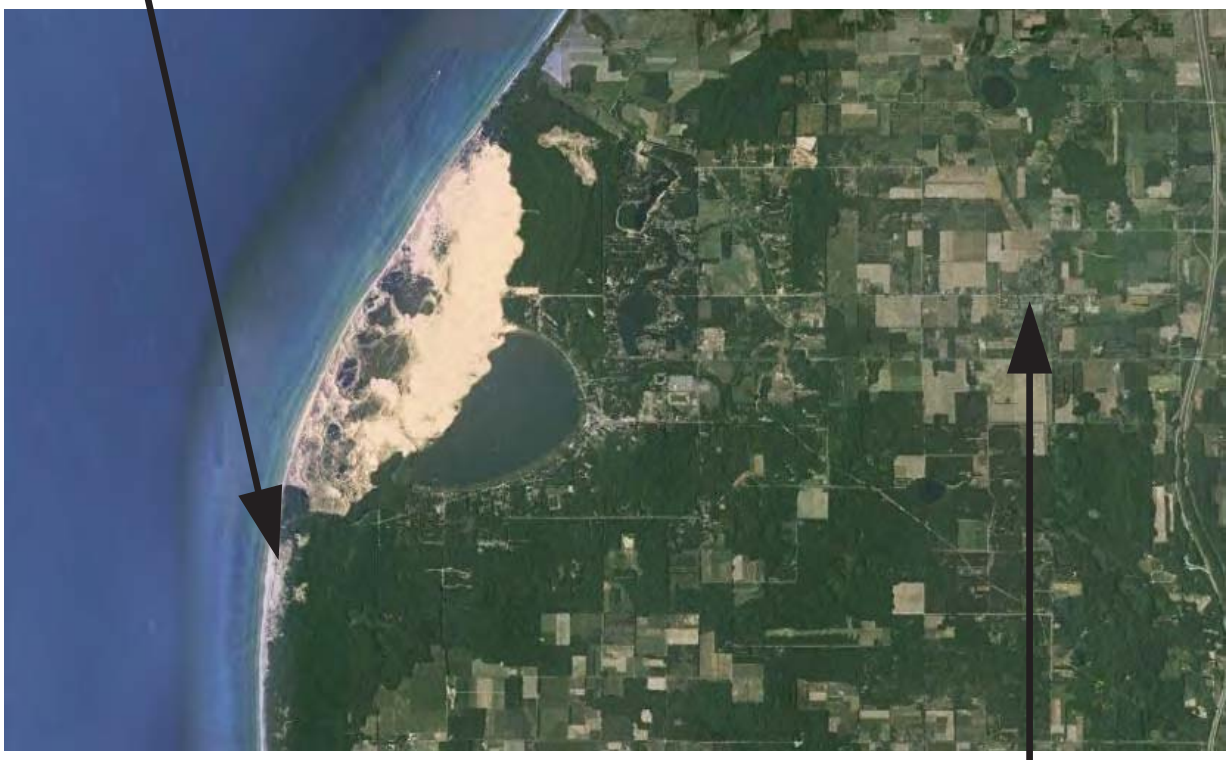
LOCATION MAP

LITTLE SABLE POINT
LIGHT STATION



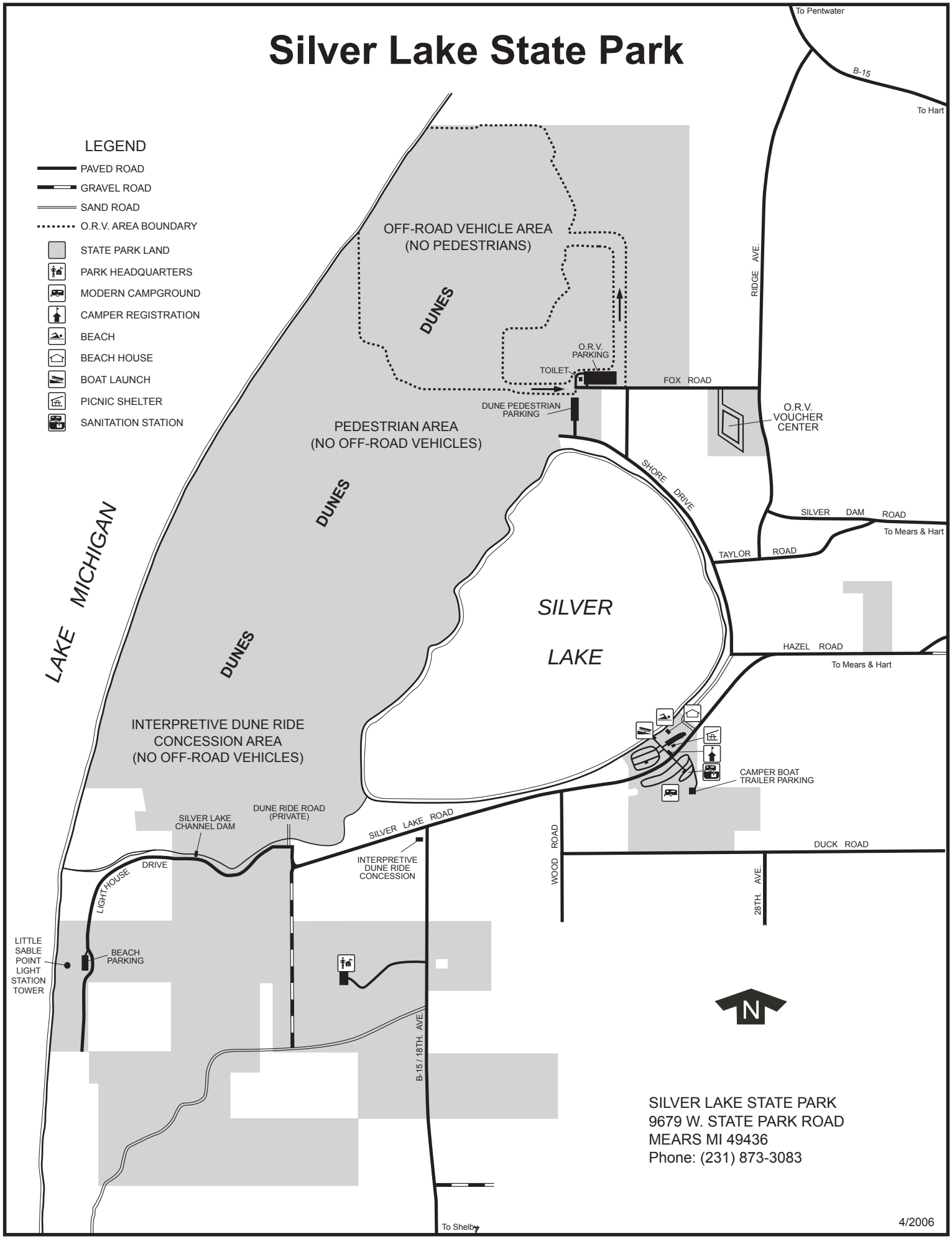
SILVER LAKE

LITTLE SABLE POINT
LIGHT STATION



MEARS, MICHIGAN

Silver Lake State Park



PART II – DEVELOPMENTAL HISTORY

A) HISTORICAL BACKGROUND AND CONTEXT

GENERAL

The U.S. Lighthouse Establishment was authorized by the United States Congress in 1789 to manage a small number of lighthouses constructed on the eastern coast of the United States and to oversee construction of new lighthouses. As development and maritime activity increased along ocean seaports and the Great Lakes in the 1800s the demand for maritime safety greatly increased and the U.S. Lighthouse Establishment became the U.S. Lighthouse Board in 1852 with twelve lighthouse districts. The original twelve districts were increased to sixteen districts in 1886, undoubtedly as construction of new lighthouses and light stations increased throughout the country. There was quite an advancement in lighthouse construction technology during the mid to late 1800s including skeletal, screwpile and iron towers as well as lights constructed on piers and breakwaters. In 1910 the U.S. Lighthouse Board became the U.S. Bureau of Lighthouses and the number of Districts was increased to nineteen. In 1939 the U.S. Bureau of Lighthouses was abolished along with the U.S. Life Saving Service and their functions were combined into a single agency, the newly formed U.S. Coast Guard. The U.S. Coast Guard embarked on a program to automate lighthouses at the end of World War II, and as a result, personnel and maintenance programs were drastically cut, if not eliminated entirely at some locations. With further increases in navigation technology in the late twentieth century, the U.S. Coast Guard began declaring many lighthouses and light stations as surplus property, making them available to state and local governments, private individuals, and other organizations, beginning a new period in lighthouse history.

LITTLE SABLE POINT

(This section of the report has been written by Terry Pepper, Lighthouse Researcher and President of the Great Lakes Lighthouse Keepers Association.)

The construction of the Erie Canal would have an impact that would reverberate throughout the Great Lakes. With the opening of the canal in 1825, a direct water connection was created between the overburdened population centers of the eastern seaboard and the Great Lakes at Buffalo, New York. Heeding the promise of a new start in the bounty of the western frontier, the opening of the canal spawned an unprecedented westward migration, with settlers cramming onto canal boats seeking cheap land and fortune throughout the Great Lakes.

With the lakes as yet uncharted, mariners began pressuring the federal government to erect lighthouses to guide the way, with Michigan's first lighthouse being erected at a small western frontier fort known as Fort Gratiot at the foot of Lake Huron in the same year the canal was opened.

With the lakes serving as the transportation conduit, within less than a decade after the opening of the Erie Canal, this population influx quickly extended to the most westerly waters of the Great Lakes. With seemingly endless pine and hardwood forests stretching from its shores, lumber became Lake Michigan's first cash crop, and served as the genesis for many of lake's early settlements. Remote mills quickly consumed all of the timber, and with the cost of dragging logs increasing distances to the mills along the shore consuming much of the profits, such isolated mills closed relatively quickly. The most successful lumbermen located their mills at the mouths of rivers. Remote winter lumber camps were then established deep in the forests along the rivers, allowing the logs to be piled on the frozen river surface. During spring thaw, the

rivers would carry the logs downstream to the mills where they would be processed into lumber and loaded onto vessels for transport to customers throughout the lakes. Lumberjacks and mill workers built homes around the mills, stores and saloons followed soon thereafter, and with the establishment of schools and churches, camps became villages, villages became towns, and towns would grow into cities.

With the lumber and other natural resources thus transported throughout the lakes and back down the canal to the east coast markets, maritime commerce on the lakes increased exponentially, with vessels being built throughout the lakes to exploit the growing trade potential. With no accurate charts of the lakes available, mariners navigated using a methodology known as “coasting,” whereby they made their way around the lakes keeping the shoreline in sight at all times while maintaining a sufficient distance from them to avoid the hidden shallows, rocks and shoals which extended into the lake from various points along the shore. As such, navigation in the Great Lakes was strictly a daytime endeavor, with mariners running to safe harbor or dropping anchor as the sun set each night. Since mariners were the “truck drivers” of the nineteenth century, earning their living by moving people and product, such nighttime stops were looked upon as a costly evil to be eliminated as soon as possible, with lighthouses being the solution to their dilemma.

With the passage of the ninth act of Congress on August 7, 1789, the establishment and maintenance of lighthouses and buoys was a Federal responsibility, and since 1820 this responsibility was squarely placed on the shoulders of Stephen Pleasonton, the Fifth Auditor of the Treasury. A tight-fisted man with absolutely no maritime experience, Pleasonton was not easily convinced of the economic necessity of erecting lighthouses on the Great Lakes. However, with pressure applied by local mariners and entrepreneurs and with the support of Territorial Legislators, Pleasonton acquiesced to the construction of a number of lighthouses on Lake Michigan throughout the 1830s. Key among these were lights at the river mouth settlements at St. Joseph in 1831, Chicago in 1832, and at Racine, Milwaukee, Kalamazoo River and Grand Haven in 1839.

By the early 1850s both Lumbermen Charles Mears and William Ferry were operating sawmills in the woods around a point approximately midway between Ludington and Muskegon known as Petite Point au Sable – a name given to the area by early French Voyageurs who paddled their canoes around the “little sandy point.” However, located far from any river transportation, the life of these remote operations was short.

By midcentury, dissatisfaction with the manner in which Pleasonton was administering the nation’s aids to navigation hit a point of critical mass. Mariners throughout the country began complaining about the sorry state of our lighthouses, and a congressional committee was formed to investigate the situation. After reviewing lighthouse administration here in the United States and throughout Europe, the committee concurred that our nation’s lighthouses were indeed poorly built, designed, located, maintained and lighted. The establishment of a “Lighthouse Board” to oversee and administer aids to navigation was recommended with the board operating out of Washington DC, and made up of a group of twelve Army Engineers, Navy officers, scientists and others with real maritime experience.

In order to effectively administer the incredible length of the salt and freshwater coasts, the country was divided into districts. Each district was provided with a chief engineer and staff to oversee the physical aspects of lighthouse construction and maintenance and an inspector whose duty was to oversee personnel and supply issues. Each district would operate out of a central depot from which all supplies and materials would be distributed and from which both engineer and inspector would operate. As such, in 1852 the Great Lakes were split into two

districts: the Tenth District including Lakes Ontario and Erie and the Detroit River to Detroit, and the Eleventh District including all of Lakes Superior, Michigan and Huron down to Detroit.

With administration and supply handled out of a large government depot in Detroit, the first order of business for the newly formed Eleventh Lighthouse District was to upgrade the ineffective Lewis style lamps, lenses and reflectors installed in the lighthouses under the Pleasonton administration, replacing them with lenses of the Fresnel lens system which had been widely in use in Europe since the 1830s. While the process took almost ten years, it was a welcomed change to the maritime community, as it significantly increased the visibility and reliability of the lights throughout the district.

With most of the prominent harbors along Lake Michigan's east coast lighted, the Lighthouse Board turned its attention to establishing lighthouses to serve general coastal navigation. It was the Board's intention to create a virtual "chain" of lights around the shores of the Great Lakes, with lights established along the coast at such interim distances that as a mariner began to lose sight of one light off his stern the next light in the chain would become visible off his bow. In this way, a mariner could safely make his way through the darkness from light to light. By making the characteristic of each light in a given geographical area different and readily identifiable from all others in proximity, a mariner would be able to know exactly where he was at any point in time.

Typical of such interim Lake Michigan coastal lights were those established at Point Betsie in 1858 and on Grande Pointe au Sable in 1867. Located on a prominent protrusion, Point Betsie lighthouse served to mark the turning point for vessels making their way in and out of the Manitou Passage to the north and to the growing harbor of Frankfort to the south. Located similarly on an a prominent point, the light on Grande Pointe au Sable served as an interim station between the harbor lights of Manistee and Ludington.

On March 24, 1870, Brevet Brigadier General Orlando Metcalfe Poe was transferred to Detroit to serve as Chief Engineer for the Eleventh Lighthouse District, and within four months of his appointment, the 1870 annual report of the Lighthouse Board contained his recommendations to Congress for the establishment of four identical 100-foot coast lights in the district. Evidently Congress concurred with Poe's justification for these lights, as on June 10, 1872, $35,000 was appropriated for the establishment of a light on Petite Pointe au Sable on Lake Michigan and $40,000 for establishing a light at Big Sable on Lake Superior. On March 3 of 1873, Congress followed up with appropriations for Poe's two remaining recommended 100-foot towers with $40,000 appropriations for the establishment of lights at Twin River Point on Lake Michigan and Outer Island on Lake Superior.

Fortunately, the State of Michigan held title to the land selected for the reservation at Petite Pointe au Sable, and supportive of the establishment of additional lighthouses in its waters, the state transferred 231.26 acres to the Federal government for lighthouse purposes. The reservation documents were signed by President U.S. Grant on July 2, 1872, and subsequently realizing that it did not require the entire reservation, the federal government transferred 191.86 acres back to the State, leaving the total lighthouse reservation at 39.4 acres of dune and scrub forest. Refer to the 1872 and 1885 site maps on pages 12 and 13.

The construction of the light at Petite Point au Sable was destined to be a daunting task, since the location was remote from any area of supply, and there was a total absence of roads to the site. Work began in April 1873 with the delivery of a small work crew at the point and the construction of a dock and a shack to serve as temporary housing for the full construction crew. On June 10, the lighthouse tender WARRINGTON was reported at the lighthouse depot in

Detroit loading with the huge volume of timber, bricks, cement and iron castings required for construction, departing soon after with two flat bottom scows in tow, bound for the point. After the flotilla steamed along the length of Lake Huron and down into Lake Michigan, it anchored off the point and the daunting task of transporting all the material from the vessel to shore. With the materials thus unloaded, the WARRINGTON left the point leaving the construction crew to begin work in earnest.

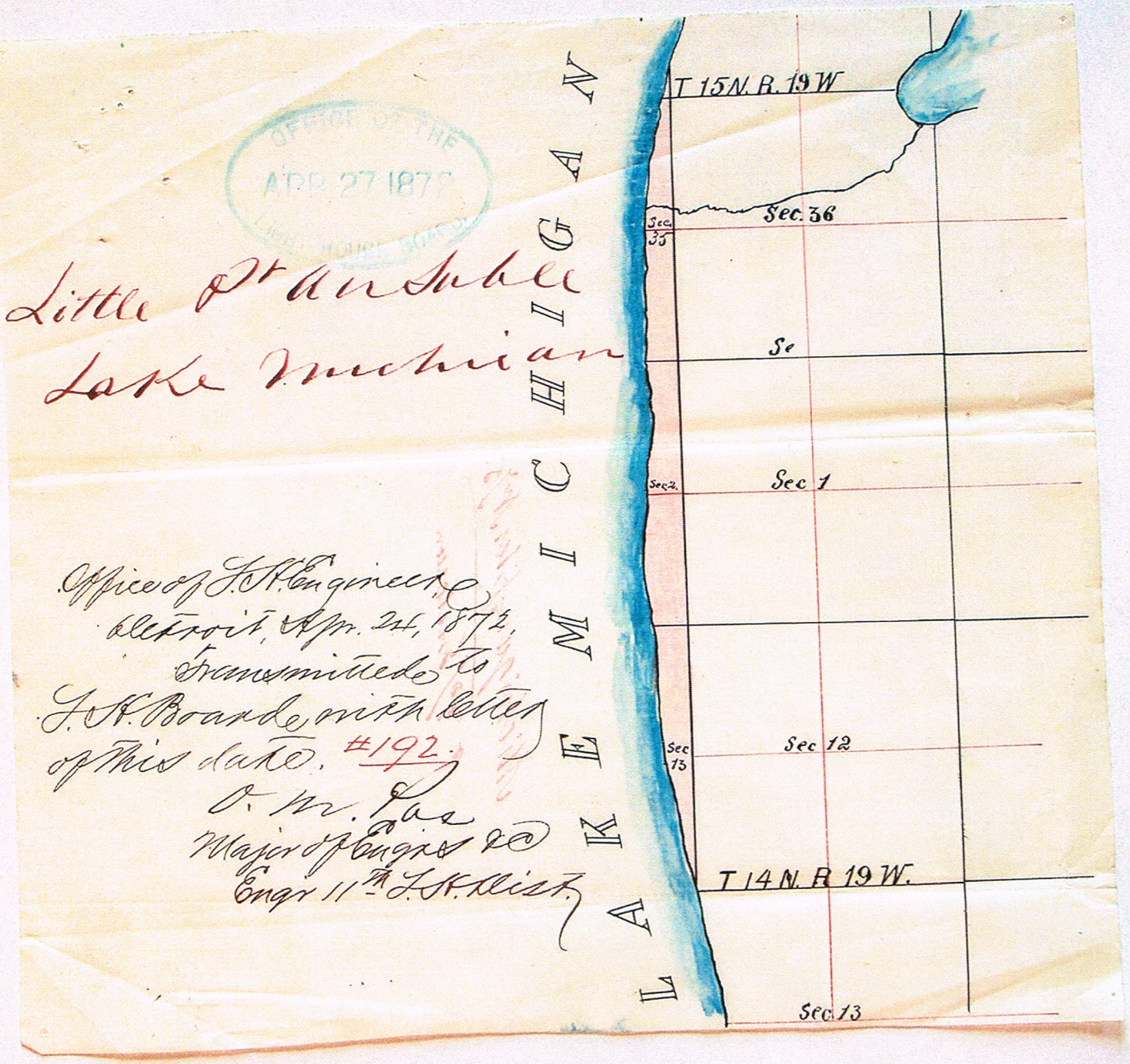
With the lighthouse tower to be built on sand close to the water's edge, a coffer dam was erected and steam pumps used to create a dry area in which to build the tower foundation. A pile driver was erected, and in accordance with Poe's plan, 109 one-foot diameter pilings were driven deep into the sand to a level nine feet below the surface in order to form a solid base on which to build the tower. Atop these pilings, twelve feet of concrete and cut stone was carefully laid to provide a solid and level base for the masonry tower. The tower was designed with a double masonry wall system with an air space between the inner and outer walls. Standing 19'-2" in diameter at its base, (at the bottom brick course) the tower tapered to approximately 12'-8" in diameter beneath the watch deck. Of double masonry wall construction with an air space in between the inner and outer walls, the walls tapered from a total thickness of five feet at the base to two feet at the gallery. All the taper was incorporated into the outer wall, with the inner wall taking the form of a straight vertical cylinder to house 139 sectional cast iron spiral stair castings. The tower masonry courses were laid in such a way that in every sixth course the bricks were laid with the short side of the brick exposed, creating a stronger bond between the thick outer walls.

Landward from the tower, a one and a half story brick dwelling took shape connected to the tower by means of an enclosed walkway. The first floor of the dwelling was fitted-out to serve as the accommodation for the station keeper, and the second floor for his assistant. A brick lean-to for wood storage attached to the rear of the dwelling and with the construction of a brick privy completed the station's structures. With the onset of winter, and increasingly adverse construction conditions, exterior work on both tower and dwelling were driven to completion, and secured from the ravages of winter, the crew was removed from the point to complete construction with the arrival of moderating weather conditions the following spring.

The work crew returned to the point early in the spring of 1874, completing the interior plaster work, woodwork, painting and grading the land around the station. The district Lampist arrived and carefully lifted the components of the flashing white third order Fresnel lens into the lantern, where it was assembled on its cast iron clockwork cabinet and raceway. The work crew pushed the work to completion at such a pace that the new light was exhibited for the first time on the opening of the 1874 season of navigation.

Being built of a particularly hard and durable type of brick, the decision was made to leave both the tower and ancillary structures in a natural, unpainted condition. This was no doubt a decision which sat well with the station's keepers, as painting was an activity in which the lighthouse inspectors held considerable stock, and the keepers at this lighthouse found themselves in the enviable position of not having to hang precariously from a boatswain's chair to whitewash the exterior masonry of the tower every year!

The third order lens installed at Petite Pointe au Sable was the only one of its kind ever used in a lighthouse on the Great Lakes. While a lens which exhibited a fixed light varied by white flashes was a common characteristic, the manner in which the flash was created at Petite Point au Sable was unique on the lakes.



1872 SITE MAP

PETITE POINTE AU SABLE

LIGHT STATION,

MICH.

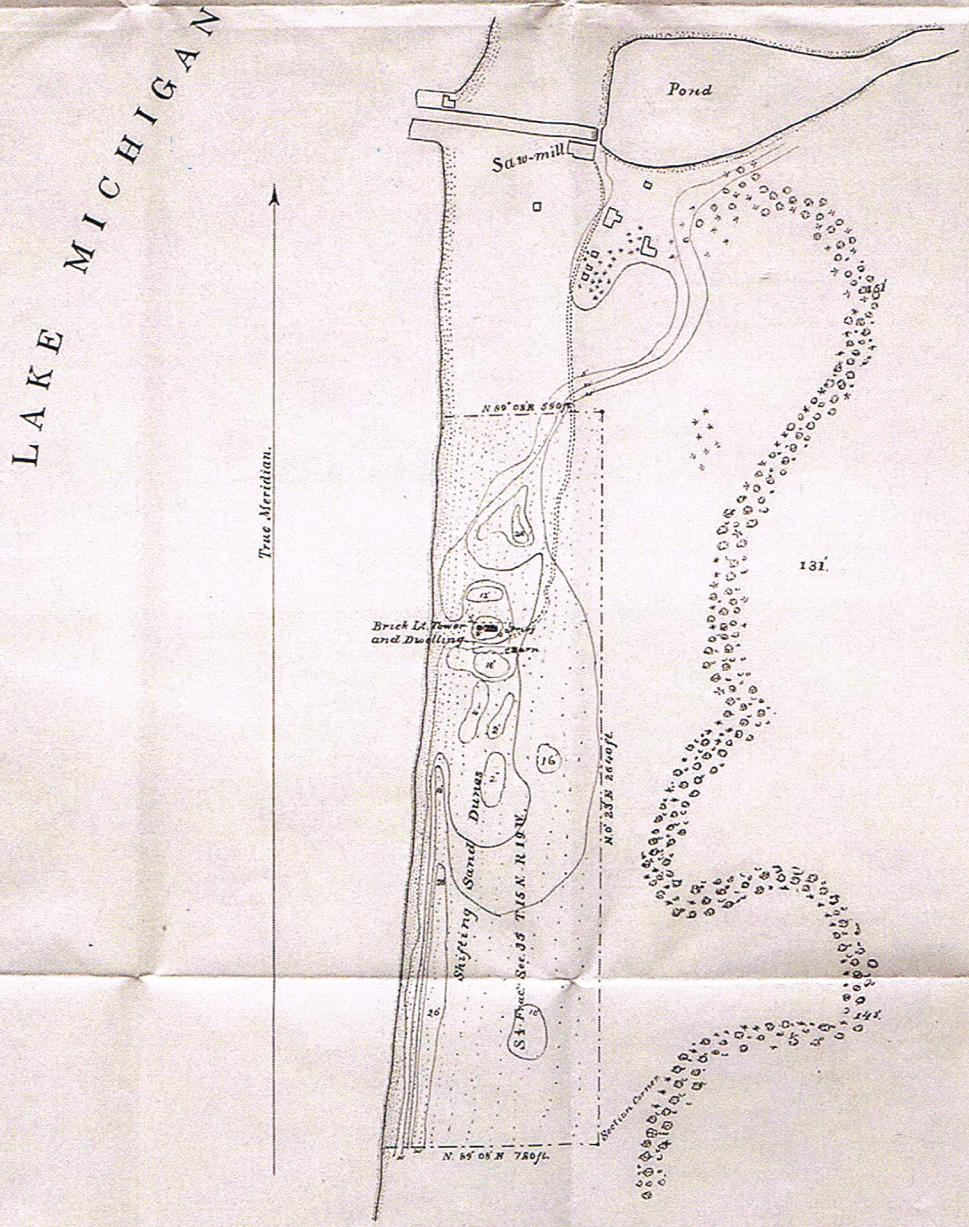
Lat. 43° 39' 11" N.
Long. 86° 32' 24" W.

Kind of Light	Const.
Order of Light	3d.
Characteristic of Light	F.V.W.F.
Base of Tower above water level	8 ft.
Focal Plane	108 ft.

Site Reserved by President of the U.S.	July 2. 1872.
Deed Recorded in	
First Buildings, when built	1873.
When rebuilt or renovated.	
Area of Reservation to M.H.W line.	3.94 Acres.
Area enclosed	0.3 "

Reservation Surveyed June 1-7 1883, by A. R. Flint.

Scale, 1/1000



— EXPLANATIONS. —

The Magnetic Declination in 1872 was estimated in 1887 by comparison of authorities, to have been 4° 16' E. the declination at time of survey was determined by observation of Polaris to be 3° 36' E. Courses given on plan are True bearings. Contours 5 ft. apart.

★ Light Tower.

—·—·— Boundary of Reservation.

M.H.W. Line. M.L.W. Line. ■ Stone Bound, 3 ft. long, 6" x 6" top cut thus:-

Feet.
500 0. 500 1000. 1500.

US LHE

J. Mumford
Major of Engrs.
Engr. 11th L.H. Dist.

OFFICE OF L.H. ENGR., DETROIT MICH. MARCH 16. 1887.

1885 SITE MAP

French physicist Augustin Fresnel began his work on lighthouse illumination in the 1820s, with his first operating optic being installed in the Corduan lighthouse in France in 1823. As part of his work, he developed a system of “orders” which related to the size and distance of visibility of his optics, ranging from the largest “first order” down to the smallest “sixth order” optic. The importance of the Petite Pointe au Sable light station is witnessed by the fact that it was a outfitted with a third order lens, the second largest order of lenses used in US lighthouses on the Great Lakes, there being only five lighthouses which used lenses of the larger second order. The lens at Petite Pointe au Sable was built under contract to the Lighthouse Board by the firm of L. Sautter & Cie. in Paris, France, and stood approximately 4 ½ feet in height and three and a quarter feet in diameter.

Lenses manufactured in accordance with Fresnel’s design principles consisted of three horizontal sections arranged in a vertical stack. The center belt was dioptric in design, taking the light emanating from the lamp at its central focal point and focusing it horizontally through the process of refraction. Immediately above and below this central belt, two catadioptric elements captured the remainder of the light from the focal point and directed it horizontally through a combination of refraction and reflection within the prisms of the array. In such a manner, the maximum amount of light was redirected horizontally out to sea to the mariner.

In order to obtain the desired “fixed varied by white flash” characteristic, sections of the dioptric belt were normally outfitted with “bulls eye” glass panels which concentrated the light in a manner similar to that in a magnifying glass. The entire lens array was then rotated around the lamp powered by a clockwork mechanism. As each of the bull’s eyes passed between the light source and the eye of the mariner at sea, the constant white light would appear to be penetrated by intermittent bright flashes.

At Petite Pointe au Sable, the fixed white varied by white flash characteristic was neither created by bull’s eye panels nor the rotation of the whole lens. Instead, the central dioptric belt and the lower catadioptric elements remained stationary in the manner of a fixed lens. Each section of the eight upper catadioptric array was made up of radially oriented catadioptric prisms which intensified the light. As such, only the upper catadioptric belt was rotated, creating the required flash every 30 seconds. Power for rotating the upper catadioptric element was provided by a clockwork mechanism which was powered by a cable attached to a 90-pound weight lowered 85 feet in the vertical space between the inner and outer tower walls. The reason that such a system was never used in any other lighthouse on the Great Lakes is as yet unknown, however it remains one of the most unique aspects of this light station.

The lamp which illuminated this majestic lens was of the Funck design and manufactured at the Lighthouse Board’s Staten Island lamp shop. It was fueled with lard oil, which was stored in a room within the dwelling, and featured three concentric wicks. The outer wick was 3 ½ inches in diameter, and each of the wicks independently adjustable in order to obtain an optimal flame. In combination with the third order lens, the light was visible at a distance of 18 ¼ miles at sea in clear weather conditions.

Mariners soon began complaining that the natural brick coloration made the tower difficult to see during daylight hours against the dune and forest background. Hearing such complaints lodged against a number of such natural brick towers throughout the district, in September 1875, then District Engineer Major Godfrey Weitzel issued an order that these towers be given a coat of whitewash. While whitewash did indeed make the towers more visible, it was not so much a paint as it was a thin mineral coating designed to allow air to permeate the masonry. As such, keepers assigned at the station would subsequently find themselves encumbered with the drudgery and danger of this annual whitewashing ritual.

With the nearest village to Petite Pointe au Sable being at Mears, approximately seven miles to the northeast over unimproved land and two-track trails, having a horse and cart was vital to the station's keepers in order to obtain supplies and to pick up and deliver their mail at the Mears post office. Thus, a work crew and materials were delivered to the station in in 1889 and an 18' by 24' barn was erected behind the lighthouse for the keeper's horse and related supplies.

After numerous experiments with different, more cost-effective illuminants, the Lighthouse Board switched from lard oil to kerosene as the primary illuminant in its lighthouses throughout the system in the 1880s. While far less viscous, cleaner burning and brighter burning than lard oil, there was concern that the increased volatility of large volume of kerosene required to fuel a station lamp throughout the season within dwellings represented a considerable liability in the case of a dwelling fire. Attached as they were directly to the dwellings, the towers which elevated the lenses would serve as a chimney in the case of a dwelling fire, drawing heat and flames up the tower, with devastating effects on the all-important lenses. To this end, in the early 1890s, the Lighthouse Board instituted a system-wide initiative to erect dedicated oil storage houses a safe, but convenient distance, at all lighthouses. To this end, a work crew arrived at Petite Pointe au Sable in the summer of 1893 and erected a prefabricated circular cast iron oil storage building of 360 gallon capacity 100 feet northeast of the tower.

In 1902, a trail was finally opened-up to the area, and wooden boardwalks were installed leading from the trail to the station and connecting with the station outbuildings. With this improvement, it was at last possible to bring supplies to the station by land. Also in this year, a second brick oil storage building was constructed.

As part of a general "Americanization" of place names, in 1906 the United States Board on Geographic Names decided that Petite Pointe au Sable should no longer be referred to by that name, but should instead be referred to as the anglicized "Little Sable Point," and from this year on this change in name was reflected in all official federal documents regarding the light station.

By this time, many in government began to perceive that the administration of the Lighthouse Board had become bloated with too many layers and redundancy, and there was a call for change in Washington. To this end, President Taft abolished the Lighthouse Board in 1909, and created the Bureau of Lighthouses under the direction of George Rockwell Putnam, the first Commissioner of Lighthouses. An accomplished engineer, manager and surveyor, Putnam was the perfect candidate for the position, and he quickly set about improving many of the ills which had plagued the old Lighthouse Board. The Lighthouse Board had always looked upon lighthouse keepers as a necessary evil, with little attention paid to their family needs or living accommodations. Under the Lighthouse Board, many light stations were established without any dwellings whatsoever, and keepers were thus forced to find whatever accommodations they could in the area. While many stations such as Petite Pointe au Sable were provided with substantial dwellings, the addition of assistants forced multiple families to cram themselves into dwellings really designed for one keeper. Such a situation appears to have been intolerable for Putnam, for this was one of the first areas on which he focused his attention after assuming responsibility for the nation's aids to navigation in 1910. The effects of this change in administration were felt quickly at Petite Pointe au Sable, with the arrival of a work crew at the station in May of 1911 who undertook a significant remodeling of the dwelling including large dormers to enlarge the former attic, creating a third floor to better accommodate the two keepers and their families who called Petite Point au Sable "home."

On October 15, 1915, district Lampist C.E. Eliasen arrived at the lighthouse and upgraded the lamp to an incandescent oil vapor light. In such a system, the kerosene was vaporized through pressurization with a hand pump, and the vapor burned on the surface of a mantle, creating a bright white light similar to that displayed by a modern Coleman lamp, but on a much larger scale. In combination with the third order lens, the intensity of the flash was thus increased to 24,000 candlepower, but with the visibility of the light controlled to a greater extent by the height of the light than its intensity, the increase in the distance of visibility was only recorded as penetrating an additional mile seaward.

No longer needing the entire 39.4 acres of the reservation for lighthouse purposes, on May 22, 1926, Congress passed an act authorizing the Secretary of Commerce to transfer unused portions of the lighthouse reservations at a number of locations around Michigan to the State for park purposes. As part of this act, most of the reservation at Little Sable Point, with the exception of the area immediately around the lighthouse, was transferred to the State to become part of the growing Silver Lake State Park, which had been established through an original donation of land in 1919 by a descendant of the former Lumber Baron Charles Mears.

The dissolution of the Lighthouse Board in 1910 was not the last effort the Federal government would make in streamlining and reducing the cost of administration and operation of the nation's lighthouses. On June 7, 1939, reorganization plan Number 11 was enacted by Congress, through which the Bureau of Lighthouses was dissolved and responsibility for lighthouses was transferred to the U.S. Coast Guard. Consolidating operations and crews and seeking every opportunity to reduce costs wherever possible, the U.S. Coast Guard embarked on a systematic automation of lights as advances in technology allowed.

As more people built summer homes on the remote Lake Michigan shores, the Oceana Rural Electric Cooperative ran electrical power closer and closer to Little Sable Point. With the advance of available power, the U.S. Coast Guard seized the opportunity to electrify and automate the Little Point Sable light. On May 18, 1954, the U.S. Coast Guard proposed electrification through the extension of Oceana REA power line to the tower. While the project was originally scheduled to be undertaken in August, it was not completed until December of that year. In order to ensure that the light would still be operable should the flow of power somehow be interrupted, an auxiliary generator was installed in the base of the tower to serve as a backup system. The incandescent oil vapor lamp was thus removed and a 1,000-watt incandescent electric bulb installed in its place at the focal point of the third order lens. To ensure that the light would continue operating when the bulb burned out, the bulb was installed in a spring-loaded automatic changing mechanism with a second bulb ready to automatically snap into place if the primary bulb ceased to operate. In order to eliminate the need to rotate the lens the station's characteristic was simultaneously modified from the "fixed white with a flash" it had exhibited for the past 80 years to a single white flash every thirty seconds, the flash automatically imparted by a solenoid wired into the electrical supply circuitry for the light.

With the light fully automated, the keepers were reassigned elsewhere. The buildings were completely emptied and boarded-up, and the station abandoned save for scheduled maintenance visits conducted by personnel from the Ludington Coast Guard station or whenever reports were received concerning the light not being properly visible to mariners.

Without the constant attention of full-time keepers, the station buildings started to deteriorate quickly. In addition, the abandoned and isolated buildings proved an irresistible attraction to local residents and tourists alike, who could not resist the urge to break-in and explore. Thus, with the station buildings serving as an attractive nuisance with all the associated liabilities, the U.S. Coast Guard determined the most viable solution was to demolish all buildings at the

station. To this end, the dwelling, oil storage buildings and privy were all demolished in 1955, leaving the tower and former covered way the only surviving structures. The covered way serving as the location of the gasoline tank which served the emergency generator at the base of the tower.

The tower remained in its white painted condition until 1977, when once again seizing the opportunity to reduce ongoing maintenance costs associated with painting, a crew arrived at the station, and sandblasted the tower, removing its white coloration. In 1988, the Coast Guard subcontracted the installation of riprap stone around the base of the tower to help prevent erosion, and in 1972, the General Services Administration transferred the few remaining acres of the lighthouse reservation to the State of Michigan for incorporation in the Silver Lake State Park. A parking lot was established behind the light tower, and the beach and area around the lighthouse tower have become a favorite area for bathing, picnicking and watching the incomparable Lake Michigan sunsets.

In 1985, with improvements in automated illumination system technology, the dual 1,000-watt lamp changer within the lens at Little Point Sable was removed and replaced with a four-station automated lamp changer. Outfitted with miniaturized 250-watt lamps, this change not only reduced operating costs, but the doubling of the number of bulbs reduced the number of service visits required on an annual basis.

In 1999, a local grass-roots organization known as the Little Sable Point Lighthouse Seekers was formed with a goal of opening the tower to the public. In 2005, the Michigan Department of Natural Resources entered into a 25-year lease with the Big Sable Point Lighthouse Keepers Association who have since undertaken maintenance and restoration of the tower and began interpreting the history of the station through guided tours of the tower. After signing a similar lease with the City of Ludington to restore and open the Ludington breakwater light to the public, the group changed its name to Sable Points Lighthouse Keepers Association to reflect their expanding role in overseeing multiple lighthouses, including Big Sable Light Station and the White River Light Station. In 2013 the U.S. Coast Guard decommissioned the navigation light, leaving Little Sable Point dark for the first time in many years. In 2014 the U.S. Coast Guard granted the Sable Points Lighthouse Keepers Association permission to illuminate the Light for historical display purposes.

Today the Sable Point Lighthouse Keepers Association continues its mission “to preserve, promote and educate the public and make our lighthouses accessible to all.”

B) CHRONOLOGY OF DEVELOPMENT AND USE

1840s	Establishment of local lumbering operations and sawmills in the area.
1860s	U. S. Lighthouse Board is petitioned for a lighthouse in the area.
1870	Annual Report of the U. S. Lighthouse Board recommends the establishment of four new lights in the district, including one at Petite Pointe au Sable.
1871	The schooner “Pride” runs aground near Petite Pointe au Sable, increasing the urgency for navigation aids in the area.
1872	U. S. Congress appropriates $35,000 for a new light at Petite Pointe au Sable. The State of Michigan transfers 231 acres to the Federal Government for the new light station site; 191 acres are then transferred back leaving a total of 39.4 acres for the light station site.
1873	Construction begins in the spring with the delivery of a work crew and supplies by ship. A small dock and temporary housing is constructed.
1874	Construction continues on the light tower and dwelling and the light is illuminated at the start of the shipping season.
1875	Constructed of brick and left with the natural brick finish, the light tower is “whitewashed” after complaints from mariners that the natural brick finish was difficult to see in the daylight.
1889	Barn and other out-buildings are constructed.
1893	After switching from lard oil to kerosene as fuel for the light, a prefabricated circular cast iron oil storage building is erected.
1902	A road is constructed from the light station to nearby towns. A second brick oil storage building is constructed.
1906	The name Petite Pointe au Sable officially changes to Little Sable Point.
1911	The original Keeper’s Dwelling is expanded.
1926	Unused land at the light station is transferred back to the State of Michigan to become part of Silver Lake State Park.
1954	Electricity brought to the site and the light is electrified and automated. Personnel are removed from the site and reassigned.
1955	The U.S. Coast Guard demolishes the dwelling, privy, barn and oil storage buildings.
1977	The U.S. Coast Guard removes the white paint from the light tower, returning it to its natural brick color.

1985	The remaining land at the light station site is transferred to the State of Michigan for inclusion in Silver Lake State Park.
2000	The National Historic Lighthouse Preservation Act (NHLPA) of 2000 is passed establishing a mechanism for the transfer of ownership of federally owned lighthouses to local government units and non-profit organizations.
2005	The Michigan Department of Natural Resources enters into a twenty-five year lease with the Big Sable Point Lighthouse Keepers Association, whose name is later changed to the Sable Points Lighthouse Keepers Association.
2013	U.S. Coast Guard decommissions the navigation light in the tower.
2014	The U.S. Coast Guard grants permission to the Sable Points Lighthouse Keepers Association to illuminate the navigation light for historical display purposes. A State of Michigan historical marker for Petite Pointe Au Sable Lighthouse (site No. 2243) is erected at the site.
Present	The State of Michigan, Department of Natural Resources and the Sable Points Lighthouse Keeper Association proceed with preservation and rehabilitation efforts.

EVALUATION OF HISTORIC AERIAL IMAGERY

Records of the Michigan State University Aerial Imagery Archives, East Lansing, Michigan, were investigated for the Little Sable Light Station site. Aerial images taken in 1938, 1952, 1958 and 1965 were found, and are shown on the following pages.

It was the intent to view the images taken prior to the demolition of all of the buildings in 1955 to verify the layout of the light station site, however, the resolution and scale of the original photographs, along with the digital enhancement, has not provided the desired quality.

LITTLE SABLE POINT
LIGHT STATION

COUNTY: OCEANA
YEAR: 1938
FLYER: AAA
HOLDING AGENCY: NARS

AERIAL IMAGE 1
MICHIGAN STATE UNIVERSITY—AERIAL IMAGERY ARCHIVE
East Lansing, Michigan

LITTLE SABLE POINT
LIGHT STATION

COUNTY: OCEANA
YEAR: 1952
FLYER: PMA
HOLDING AGENCY: NARS

AERIAL IMAGE 2
MICHIGAN STATE UNIVERSITY—AERIAL IMAGERY ARCHIVE
East Lansing, Michigan

LITTLE SABLE POINT
LIGHT STATION

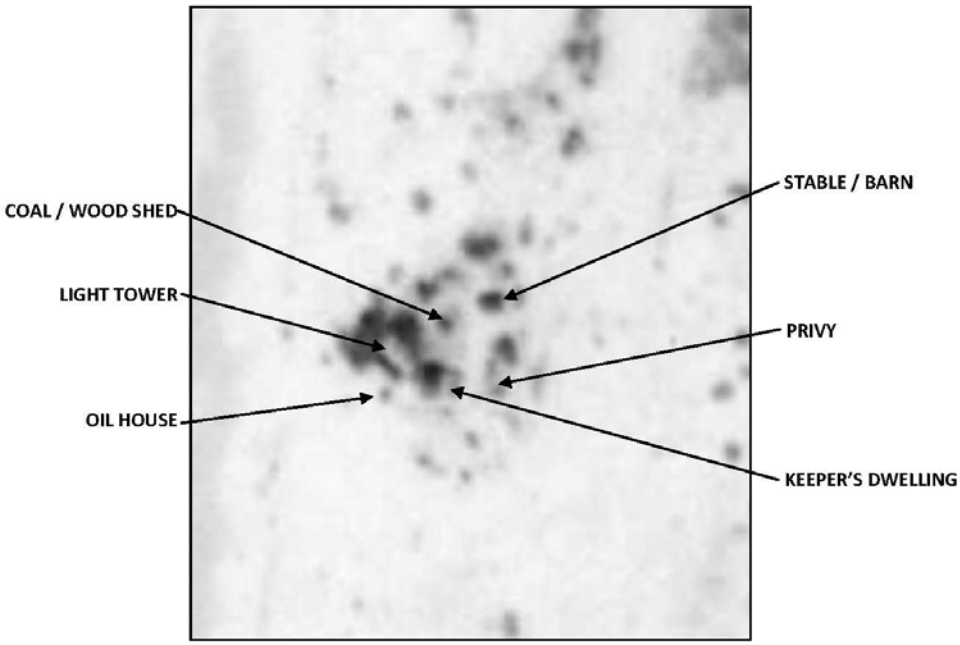
COUNTY: OCEANA
YEAR: 1958
FLYER: CSS
HOLDING AGENCY: FSA

AERIAL IMAGE 3
MICHIGAN STATE UNIVERSITY—AERIAL IMAGERY ARCHIVE
East Lansing, Michigan

LITTLE SABLE POINT
LIGHT STATION

COUNTY: OCEANA
YEAR: 1965
FLYER: ASCS
HOLDING AGENCY: FSA

AERIAL IMAGE 4
MICHIGAN STATE UNIVERSITY—AERIAL IMAGERY ARCHIVE
East Lansing, Michigan



ENLARGED VIEW OF 1938 AERIAL IMAGE

OF

LITTLE SABLE POINT LIGHT STATION

Due to the scale of the aerial image the resolution of the enlarged image is poor; major buildings are identifiable.

Year Station Established 1874 **Year Station Discontinued** ____

Also known as: ____ Rebuilt: ____ Auto: 1955

Position	Last Name	First Name	I	Born	Died	Start D	Start M	Start Year	End D	End M	End Year	Comment
Kpr.	Davenport	James		1847		26	12	1873	16	9	1879	Trsfd.
Act. 1st Asst.	Larley	John				15	4	1874	20	9	1875	Perm. Appt.
1st Asst.	Larley	John				20	9	1875	19	4	1878	Rmvd.
Act. 1st Asst.	Teachout	Fred	W.			19	4	1878	13	3	1879	Rsgd.
Act. 1st Asst.	Lasley	James				13	3	1879	1	7	1880	Perm. Appt.
Kpr.	Bourissau	Gabriel			1885	16	9	1879	11	4	1885	Died
1st Asst.	Lasley	James				1	7	1880	13	9	1880	Rsgd.
Act. 1st Asst.	Bourissau	F.	G.			13	9	1880	22	7	1881	Perm. Appt.
1st Asst.	Bourissau	F.	G.			22	7	1881	28	10	1881	Rmvd.
Act. 1st Asst.	Jones	B.	M.			21	11	1881	14	7	1882	Perm. Appt.
1st Asst.	Jones	B.	M.			14	7	1882	16	11	1882	Trsfd.
1st Asst.	Gauthier	Antony				16	11	1882	16	11	1882	Appt. Cancelled
Act. 1st Asst.	Killmurry	Lawrence			1886	9	1	1883	20	8	1884	Perm. Appt.
1st Asst.	Killmurry	Lawrence			1886	20	8	1884	16	4	1885	Prmtd.
Act. Kpr.	Killmurry	Lawrence			1886	16	4	1885	20	10	1886	Died
Act. 1st Asst.	Cumming	John	T.			27	4	1885	6	5	1886	Rsgd.
Act. 1st Asst.	Millidge	John			1904	6	5	1886	11	7	1887	Perm. Appt.
Act. Kpr.	Buttars	George				20	10	1886	11	7	1887	Perm. Appt.
Kpr.	Buttars	George				11	7	1887	15	8	1890	Trsfd.
1st Asst.	Millidge	John			1904	11	7	1887	15	3	1888	Trsfd.
Act. 1st Asst.	Wixson	Robert				14	4	1888	13	7	1888	Perm. Appt.
1st Asst.	Wixson	Robert				13	7	1888	7	7	1889	Rsgd.
Act. 1st Asst.	Margeson	Belden	J.			5	8	1889	5	6	1890	Rsgd.
Act. 1st Asst.	Hunter	J.	A.			5	6	1890	20	9	1890	Perm. Appt.
Act. Kpr.	Hanson	Joseph				15	8	1890	21	4	1891	Perm. Appt.
1st Asst.	Hunter	J.	A.			20	9	1890	1	7	1899	Prmtd.
Kpr.	Hanson	Joseph				21	4	1891	30	6	1899	Rsgd.
1st Asst.	Chamberlin	George	W.			1	7	1899	15	2	1910	Rsgd.
Kpr.	Hunter	J.	A.			1	7	1899	15	2	1910	Temp. Leave
Kpr.	Hunter	Mrs. H. G.				15	2	1910	11	3	1910	Rsgd.
Kpr.	Hunter	J.	A.			11	3	1910	31	5	1922	Retired
1st Asst.	Patterson	Guy				19	3	1910	1	4	1922	Trsfd., Prmtd.
1st Asst.	Hahn	John	J.	1894		1	1	1922	27	3	1922	Temp. Duty
1st Asst.	Olsen	Henrik	G.	1890	1970	20	4	1922	30	4	1924	Trsfd.
Kpr.	Hall	Wallace	S.			22	6	1922	30	11	1923	Trsfd.
Kpr.	Allard	Lewis	N.			30	11	1923	4	4	1924	Trsfd.
1st Asst.	Almquist	Arthur	S.	1887		4	5	1924	4	8	1925	Trsfd.
Kpr.	Lennis	Charles				31	5	1924	30	6	1930	Retired
1st Asst.	Peterson	Royal	G.			4	8	1925	20	9	1925	Trsfd.
1st Asst.	Leslie	Frederick	W.	1893		19	12	1925	31	5	1926	Trsfd.
1st Asst.	Ledwell	Edward	R.			1	6	1926		4	1935	Retired
Kpr.	Almquist	Arthur	S.	1887		1	7	1930	20	3	1935	Trsfd.
Kpr.	Martin	D.	E.			1	4	1935	31	5	1939	Trsfd.
1st Asst.	Winkle	F.	R.				4	1935	1	6	1939	End date unsure
Kpr.	Kruwell	William		1883		1	6	1939	5	5	1941	
1st Asst.	Vavrina	Henry		1905		1	6	1939	21	9	1942	Rsgd.
Kpr.	Kinkaid	William				1	10	1941	1	2	1945	End date unsure
1st Asst.	O' Connor	W.				21	9	1942	1	2	1943	End date unsure
1st Asst.	Robinette	Raymond		1891		20	2	1943	1	2	1945	Prmtd.
1st Asst.	Vavrina	Henry		1905		1	9	1945	1	8	1948	Prmtd.
Kpr.	Robinette	Raymond		1891		1	2	1945	1	8	1948	
1st Asst.	Chance	Willis	G.			1	2	1945	1	9	1945	Rsgd.
Kpr.	Vavrina	Henry		1905		1	8	1948	31	12	1954	Trsfd.
USCG	Bellows	James				1	8	1948	31	12	1954	Trsfd Start date unsure.

PART III – EXISTING CONDITIONS / PHYSICAL DESCRIPTIONS

Documentation of existing conditions at the Little Sable Point Light Station was performed by Mr. Ken Czapski, AIA, a registered architect in Michigan, during a site visit on September 19-21, 2013. An earlier, and less extensive, site visit was also made on October 30, 2012. Information and photographs from both visits are used as documentation in this report. This section includes a general assessment of the tower and adjacent site features.

A) SITE

The original site of the Little Sable Point Light Station was approximately 39 acres in size in a remote location along the Lake Michigan shoreline. With only the lone standing light tower as a reminder of the former station, the site continues to have a remoteness and solitude associated with many sites along the Great Lakes shoreline. Silver Lake State Park is a very unique and popular park with diverse recreational opportunities that include camping, beach activities along the Lake Michigan shoreline and the inland Silver Lake shoreline, boating on Silver Lake, off-road vehicle trails, interpretive dune rides offered by private vendors, woodland and dune hiking trails, various winter activities, and maritime interpretation. A view of the expansive dune area is seen in Photo III-A-1. Located along the southern boundary of the park, the light station is separated from other recreational activities.

PHOTO III-A-1

The approach to the light station is along a paved asphalt road known as Lighthouse Drive, as seen in Photos III-A-2 and III-A-3. A driveway off Lighthouse Drive provides entry to a large public parking lot for visitors accessing the sand dunes and beach as well as the Little Sable Point Light Tower. The driveway, Photo III-A-4, passes a small state park contact station, Photo III-A-5, where staff is occasionally stationed to verify state park permits as required for entry. Adjacent to the contact station are two vault toilet buildings for public use. The vault toilets, as seen in Photos III-A-6 and III-A-7, are barrier free accessible. The magnificent light tower rises above the dunes and is clearly seen from this parking lot entry point, Photo III-A-8.

PHOTO III-A-2

PHOTO III-A-3

PHOTO III-A-4

PHOTO III-A-5

PHOTO III-A-6

PHOTO III-A-7

PHOTO III-A-8

The large asphalt paved parking lot, Photos III-A-9 and III-A-10, provides convenient parking for lighthouse visitors. A wood rail fence with stone posts marks the edge of the concrete sidewalk that runs the length of the parking lot. Barrier free parking spaces are located adjacent to the concrete sidewalk that leads to the light tower. Refer to Photo III-A-11. Additional views of the parking lot and the circular turn-around drive at the south end of the lot are shown in Photos III-A-12 and III-A-13. The concrete sidewalk, 7'-2" wide, provides a solid, barrier free accessible walkway through the sand dunes to the light tower. This sidewalk, installed in 2006, is in very good condition as seen in Photos III-A-14, III-A-15, III-A-16 and III-A-17. Park staff and lighthouse volunteers keep drifting sand from the concrete walk for the safety of visitors.

PHOTO III-A-9

PHOTO III-A-10

PHOTO III-A-11

PHOTO III-A-12

PHOTO III-A-13

PHOTO III-A-14

PHOTO III-A-15

PHOTO III-A-16

PHOTO III-A-17

The concrete sidewalk terminates at a small wood deck structure at the base of the light tower. The deck, approximately 7'-2" x 9'-10" in size as seen in Photo III-A-18, provides an area for lighthouse volunteers to greet visitors, as well as a solid platform surface for entry into the tower. A 5'-0" x 2'-0" metal grate built into the deck allows for removal of sand. Wood rails surround two sides of the deck and also provide a place for signage, as seen in Photo III-A-19. A wood ramp, Photo III-A-18 and III-A-20, at the east end of the deck transitions from the sidewalk to the sandy site, providing easy access for visitors walking around the light tower or accessing the beach.

PHOTO III-A-18

PHOTO III-A-19

PHOTO III-A-20

The site around the light tower consists of sand, small vegetation, stone rip-rap, and some remnants of concrete slabs placed around the tower base. Refer to Photos III-A-21, III-A-22 and III-A-23. The top of a small 1'-1" wide concrete retaining wall located on the west side of the tower is also seen in Photo III-A-22. Other sloped sections of concrete are poured against the tower, as seen in Photo III-A-24. The grade of the site drops off on the west side of the site facing the lake and undoubtedly the earlier elements, such as the concrete slabs and retaining wall, and the more recent stone rip-rap have been placed to protect the base of the light tower from high water levels. In the recent past Lake Michigan, along with the other Great Lakes, have been in a period of record low water levels. On the date of this inspection, the water's edge was approximately 250 feet from the west face of the light tower. The base of the sand dune, indicative of the high water line, was approximately 100 feet from the tower. Although lake levels and erosion are not currently a problem, it can be expected that water levels will rise at some point in the future and once again pose a threat to the tower. Views of the light tower, beach and dunes are shown in Photos III-A-25 and III-A-26.

PHOTO III-A-21

PHOTO III-A-22

PHOTO III-A-23

PHOTO III-A-24

PHOTO III-A-25

PHOTO III-A-26

As seen in a many of the previous photographs, the light tower at Little Sable Point Light Station is surrounded by the constantly moving sand dunes, some of which have increased to considerable height. There is no visible evidence of any of the former buildings or structures that once were part of the light station, although it is possible that remnants of footings and foundations remain buried in the sand.

B) LIGHT TOWER

The light tower is the only remaining element of the Little Sable Point Light Station and it is a prominent landmark, rising over 100 feet from its base to the lantern. Constructed in 1874, the tower is a tapered cylindrical brick and stone masonry structure with a diameter of approximately 19'-2" at the base and 12'-8" below the watch deck. The masonry walls above the watch deck are a uniform 11'-2" diameter up to the lantern base. The inner stair tower walls are a cylinder with an 8'-0" inside diameter that remains constant the entire height of the tower. The masonry structure is topped with a ten sided lantern that houses a Third-Order Fresnel Lens. The light tower, shown in Photo III-B-1, is of a similar design as others on the Great Lakes including the Presque Isle Light on Lake Huron located in Presque Isle County north of Alpena, Michigan and the Seul Choix Point Light on Lake Michigan located in Schoolcraft County south of Gulliver, Michigan.

PHOTO III-B-1

The dwelling, and passageway that connected the dwelling to the tower, are no longer extant. Figure One, a copy of an original drawing of the Light Tower, indicates the various levels and spaces in the tower referred to in this report.

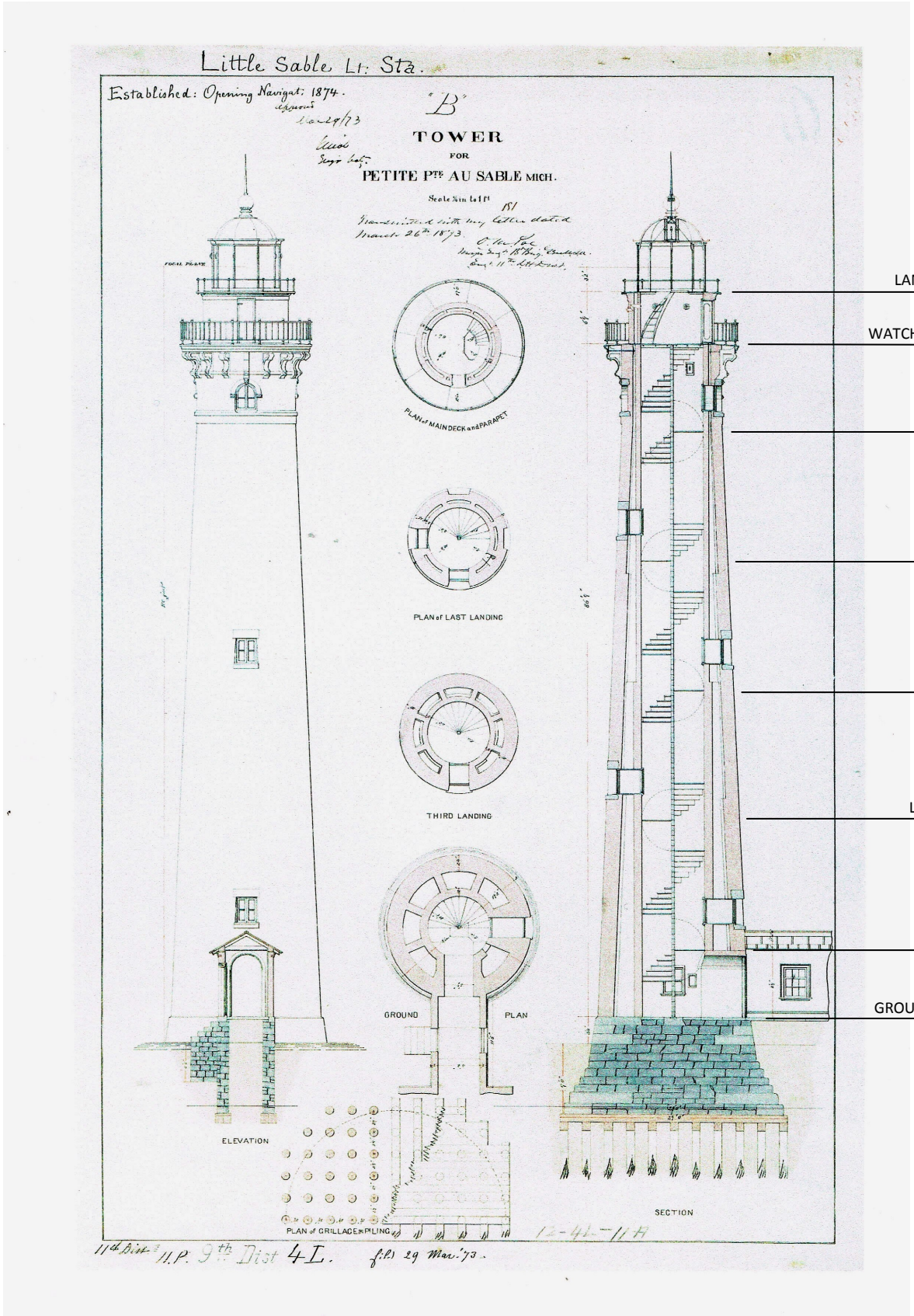


FIGURE ONE

DIAGRAM OF THE LIGHT TOWER AT LITTLE SABLE POINT LIGHT STATION

NOT TO SCALE

STRUCTURAL SYSTEMS ANALYSIS

The light tower is a brick masonry structure constructed on a limestone base. Original drawings indicate a series of wood piles of unknown depth sunk into the ground that provide support for the masonry tower. Historic documents indicate one hundred nine (109) twelve inch diameter wood piles were driven to a termination point nine feet below the surface. The brick and stone masonry is in exceptionally good condition throughout. The cut stone base is exposed on the west side of the tower where the grade drops, as seen in Photos III-B-2 and III-B-3. Where the sand is washed away, an area of the rough stone foundation is exposed, as seen in Photos III-B-4, III-B-5 and III-B-6. The exposed uncut stone has been coated with a cement wash. All stone and mortar joints are in very good condition. Refer to Photo III-B-7.

PHOTO III-B-2

PHOTO III-B-3

PHOTO III-B-4

PHOTO III-B-5

PHOTO III-B-6

PHOTO III-B-7

The load bearing brick masonry walls are also in exceptionally good condition with very minor areas of deterioration. The brick masonry walls are approximately 5'-6" thick at the base and taper to approximately 1'-7" thick at the top. The exterior face of the brick masonry walls are in very good condition, as seen in Photos III-B-8, III-B-9, and III-B-10. A few damaged bricks with fractured or spalled surfaces are located in some areas, as seen in Photos III-B-11 and III-B-12. Some cracking has occurred in the brick near the entry door where a metal embed, Photo III-B-13, is partially exposed. There is evidence that masonry repairs have been made in the past based on the presence of bricks with a slightly larger face dimension and surface texture, as seen in Photos III-B-14 and III-B-15. In these areas the color match of the brick is very good. Because the mortar color and texture is quite consistent on the exterior walls of the tower it is possible that repointing of the joints was done in the past. Originally painted, reports indicate that paint was removed by "sandblasting". The exact method of paint removal is not known, however, damage to the brick and mortar surfaces appears to be minimal.

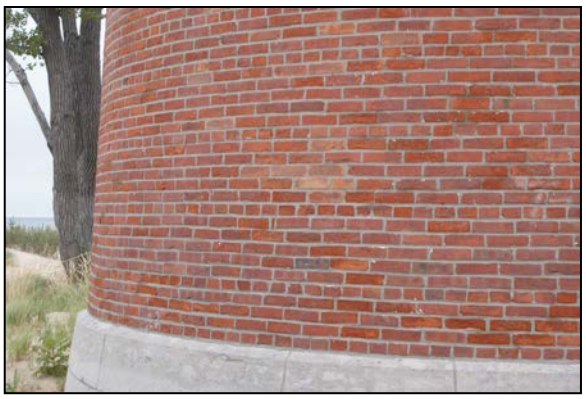


PHOTO III-B-8

PHOTO III-B-9

PHOTO III-B-10

PHOTO III-B-11

PHOTO III-B-12

PHOTO III-B-13

PHOTO III-B-14

PHOTO III-B-15

Metal components at the lantern deck appear in good condition. Additional discussion of these elements is found in the following section.

EXTERIOR CONDITIONS AND ANALYSIS

The exterior of the Little Sable Point Light Station light tower is unpainted brick and stone which is in excellent condition as discussed in the previous section. Cut stone lintels and sills are located at all window openings. At one former window location on the north side that has been bricked in, the lintel and sill remain exposed. Refer to Photo III-B-16. These stone elements are in good condition. Near the top of the tower the smooth brick surface transitions to brick corbelling and a cut stone band below four arch top windows. Metal corbels provide a decorative element below the watch deck. These elements are shown in Photo III-B-17. A second band of cut stone is located at the lower end of the metal corbels. All metal elements and the paint finish appear in good condition. Decorative cut stone arches cap the window openings at this level.

PHOTO III-B-16

PHOTO III-B-17

The exterior tower walls at the Watch Deck level are also brick masonry, as seen in Photo III-B-18. The upper most brick course is corbelled where it transitions to the underside of the metal lantern deck, as seen in Photo III-B-19. The brick and mortar joints are in very good condition at this upper level with some minor areas of deterioration near the deck surface, shown in Photo III-B-20, and some cracking above the door, Photo III-B-21. Five metal vents, Photo III-B-22, are set in the masonry at this level.

PHOTO III-B-18

PHOTO III-B-19

PHOTO III-B-20

PHOTO III-B-21

PHOTO III-B-22

The exterior Watch Deck surface is 3'-0" wide and surrounded by a 3'-4" high metal guardrail. The guardrail has two horizontal bars measuring 2 1/8" x ¾" with vertical 5/8" diameter bars spaced 5" on center. Twelve 1 ¼" diameter metal posts capped with a 3 ¼" diameter ball are equally space around the perimeter. The guardrail is shown in Photo III-B-23. All guardrail components are in good condition. The paint finish is also in good condition. The exterior metal floor surface of the Watch Deck is painted with a textured paint. Except for one crack, as seen in Photo III-B-24, the metal deck is in good condition. The paint finish is also in good condition.

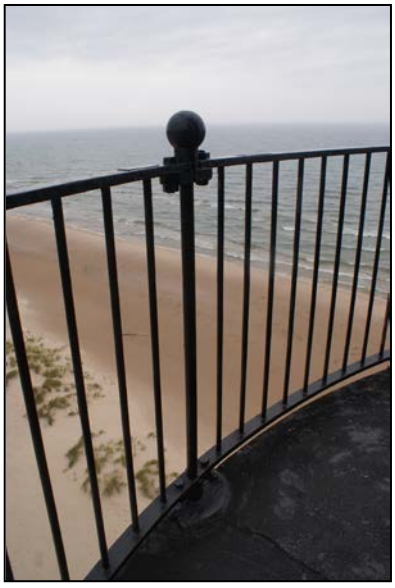


PHOTO III-B-23

PHOTO III-B-24

The exterior Lantern Deck is located 6'-6" above the Watch Deck surface and provides a narrow, 1'-6 ½" wide, walkway around the ten-sided lantern. A simple 1'-7" high guardrail with a single horizontal metal bar, 1 ½" x ½" in size, surrounds the deck, as seen in Photos III-B-25 and III-B-26. Ten 1 1/8" diameter metal posts are located around the perimeter in alignment with the corners of the lantern. Refer to Photo III-B-27. All guardrail components are in good condition, however, the paint finish is in poor condition. The Lantern Deck floor surface is a checkered metal pattern, as seen in Photos III-B-28 and III-B-29. All metal surfaces are in good condition, however, the paint finish is in very poor condition.

PHOTO III-B-25

PHOTO III-B-26

PHOTO III-B-27

PHOTO III-B-28

PHOTO III-B-29

The ten-sided lantern, Photo III-B-30, has large glass panels measuring 2'-8 ½" wide x 5'-10" high. All glass panels are in good condition providing protection for the Fresnel Lens, Photo III-B-31. Vertical glazing bars include safety handles, as seen in Photo III-B-32. All exterior glazing bars are in good condition, however, as with other exterior lantern components, the paint finish is in poor condition. The metal roof of the lantern is capped with a ventilation ball and lightning rod. The lantern roof has built-in gutters with drainage tubes that penetrate the simple metal cornice. These are also seen in Photo III-B-32. All metal components are in good condition, however, the paint finish is in poor condition.

PHOTO III-B-30

PHOTO III-B-31

PHOTO III-B-32

A single entry door is located at the base of the light tower in a recessed masonry opening. The door is a 2'-2" x 5'-6" gasketed, water-tight metal door, as seen in Photos III-B-33 and III-B-34. This style of door has a continuous frame at the bottom of the opening, Photo III-B-35, requiring extra caution when stepping through. The door hardware consists of a padlock hasp and hinges on the exterior and a multi-point lock mechanism on the interior. All door components are in good condition and good operating order. The paint finish on the door and frame is in good condition. The numerals "1874" are painted on the metal wall surface above the door.

PHOTO III-B-33

PHOTO III-B-34

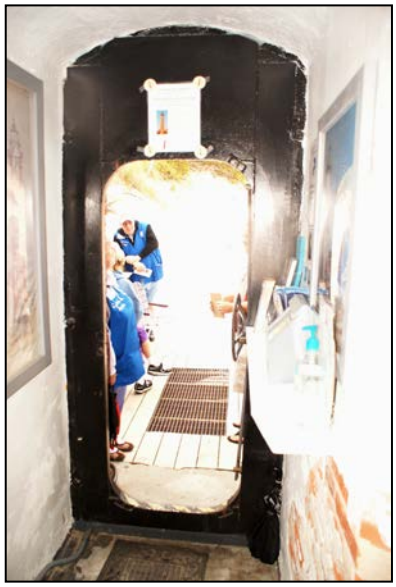


PHOTO III-B-35

At the Watch Room level there is a small door opening with inner and outer doors that provides access to the exterior Watch Deck. On the inside there is a pair of outward swinging wood doors with a paint finish that each measure 0'-10 ¼" wide x 5'-4" high x 1 ¼" thick. Each door has two inset panels, as seen in Photo III-B-36. Door hardware on these doors includes hinges, pull handles and surface mounted flush bolts at the top. There is no hardware on the exterior face of these doors, as seen in Photo III-B-37. The doors and paint finish are in good condition. The outer door is an outward swinging metal plate door that measures 1'-9" wide x 5'-6 ½" high. This door is shown in Photo III-B-38. Door hardware includes hinges, knob and hold-open. The hinges, as seen in Photo III-B-39, are in poor condition. The knob and hold-open, used to secure the door to the masonry wall in an open position, shown in Photo III-B-40, are in good condition. The door is in good condition and the paint finish is in good condition.

PHOTO III-B-36

PHOTO III-B-37

PHOTO III-B-38

PHOTO III-B-39

PHOTO III-B-40

There are a number of windows and former window openings along the length of the light tower. At the tower entry level, referred to as Level One in this report, there is one former window opening that has been bricked in on the north side of the tower, as seen in Photo III-B-41, with the cut stone lintel and sill exposed. The inner wall surface at this former opening is plastered solid. It is not known if any window frame or sash components remain buried within the wall. A small electrical grounding cable passes through the masonry at this former window location.

PHOTO III-B-41

PHOTO III-B-42

At Level Two of the tower directly above the entry door, Photo III-B-42, there is another former window opening that has been modified. At this masonry opening, which measures 2'-8" wide x 3'-6" high, the former wood window sash have been removed and replaced with a modern fixed metal ventilation louver, as seen in Photo III-B-43. This metal louver, with 5" metal blades, is covered with a removable metal insect screen on the interior face, as seen in Photo III-B-44, and allows for continuous ventilation in the tower. Some wood trim and window frame components remain on the interior. The metal louver is in good condition.

PHOTO III-B-43

PHOTO III-B-44

Three rectangular window openings with wood windows are located on the tower, two facing west at Levels Three and Five, as seen in Photo III-B-45, and one facing east at Level Four. All masonry openings have the cut stone lintel and sill exposed on the exterior. All wood windows have a pair of outward swinging side hinged sash with two 10" x 16" glass lights in each sash, as seen in Photo III-B-46. Each sash measures 1'-2" wide x 3'-2" high. The pair of inside inward swinging sash matches the style and dimensions of the outer sash. An inside view of the window at Level Three is shown in Photo III-B-47 and a view of the window at Level Four is shown in Photo III-B-48. Hardware includes one pair of hinges on each sash and a surface mounted flush bolt at the bottom of one sash. A wood astragal forms the seal between each sash in a pair. All wood trim, frame and sash appear in good condition. The paint finish is in fair condition with some deteriorated areas. Some glazing material in various locations is also deteriorated but in overall fair condition.

PHOTO III-B-45

PHOTO III-B-46

PHOTO III-B-47

PHOTO III-B-48

At Level Six there are two arch top wood windows, although there are four arched masonry openings at this level. All four masonry openings have cut stone sills and cut stone arched lintels. Arched openings on the north and west are infilled with brick as seen in Photo III-B-49. Similar to the other windows, the two windows at this level have pairs of inner and outer sash. Each sash measures 1'-2" wide x 3'-2" high and has a quarter circle arch. Outside sash are side hinged outward swinging and inside sash are side hinged inner swinging. An inside view is seen in Photo III-B-50. Hardware includes one pair of hinges on each sash and a surface mounted flush bolt at the bottom of one sash. A wood astragal forms the seal between each sash in a pair. As with the lower windows, all wood trim, frame and sash components appear in good condition. The paint finish is in fair condition with some deteriorated areas and some glazing material is deteriorated, but in fair overall condition.

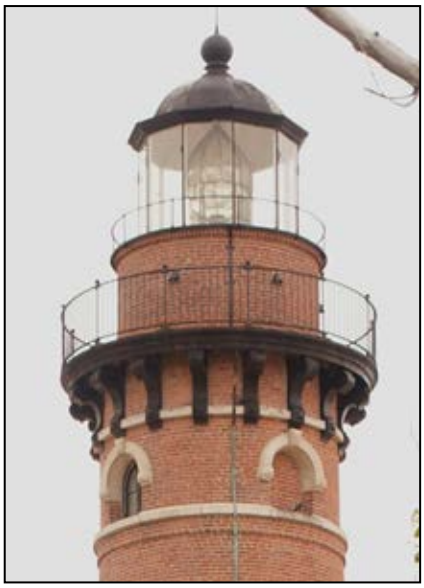


PHOTO III-B-49

PHOTO III-B-50

INTERIOR CONDITIONS AND ANALYSIS

The interior of the Little Sable Point Light Tower is a simple cylindrical stairwell with a diameter of 8'-0" that provides access to the lantern. The tower is entered at the ground floor level, Level One, through the water tight metal door where care must be taken to step over the 7 ½" sill that forms the lower door frame, as seen in Photo III-B-51. Photo III-B-52 shows a view of this ground floor level which is used by volunteers for storage. A narrow built-in shelving unit, Photo III-B-53, is actually a hinged door assembly, as seen in Photo III-B-54, that opens to a small room that measures 3'-0" x 3'-5". This room, Photo III-B-55, is also used for storage of cleaning supplies and other items as well as containing the electrical service panel. There is a small 3 ½" high step outside the doorway leading into this room, as seen in Photo III-B-56. The floor at this ground floor level is concrete with remnants of a dark gray paint finish. The concrete floor slab, partially shown in Photo III-B-57, is in good condition. The paint finish is in poor condition. Interior wall surfaces are plaster applied directly over brick. There are many areas where the plaster is missing in large sections, as seen in Photo III-B-58, and other areas where there is surface deterioration of the plaster and paint finish, Photo III-B-59. There is a considerable amount of peeling paint on the plaster wall surfaces at this level. Other features at this ground level of the tower include a small shelf adjacent to the door that is seen in Photo III-B-59 and a small 11" wide x 17" high metal door, as seen in Photo III-B-60. This door, which is curved to match the curvature of the inner walls, provides access to an inner wall chamber used for the counterweight assembly of the light mechanism. This door and metal frame, including the paint finish, are in good condition. A small metal hook, Photo III-B-61 is mounted to the wall near the wood shelf.

PHOTO III-B-51

PHOTO III-B-52

PHOTO III-B-53

PHOTO III-B-54

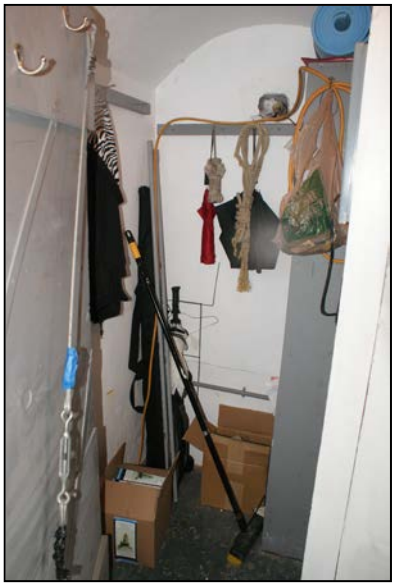


PHOTO III-B-55

PHOTO III-B-56

PHOTO III-B-57

PHOTO III-B-58

PHOTO III-B-59

PHOTO III-B-60

PHOTO III-B-61

Approximately 9'-9" above the ground floor level is the first of five landings that are part of the circular metal stair assembly. Removable plywood panels, as seen in Photo III-B-62, are fastened to the underside of the landing to catch falling sand from visitors walking up the tower. All components of the metal stair appear in sound condition. There are some locations throughout where the paint finish is in poor condition and some rust is present. The paint finish is in generally good condition.

PHOTO III-B-62

Conditions are similar throughout all levels of the tower with plaster walls and the circular metal stair. Plaster and paint finish on the walls is in poor condition in many areas. Views of the interior tower are shown in Photos III-B-63, III-B-64, III-B-65 and III-B-66. The vertical rise between the landings at Levels Two through Six is a consistent 16'-9 1/2". A 1 5/8" diameter metal pipe handrail follows the curvature of the stair and terminates at each landing, as seen in Photo III-B-67. The metal handrail is mounted to the masonry wall with metal brackets, Photo III-B-68, and is solid throughout. The paint finish on the handrail is deteriorated in some areas, as seen in Photo III-B-69.

PHOTO III-B-63

PHOTO III-B-64

PHOTO III-B-65

PHOTO III-B-66

PHOTO III-B-67

PHOTO III-B-68

PHOTO III-B-69

At all landing levels there is a small recess at the window openings, or the louver opening at Level Two. These recesses measure 3'-2" wide and have an arched top, as seen in Photo III-B-70. The depth of the recess varies from 3'-1" at Level Two to 1'-8" at Level Five due to the tapered exterior walls. The floor in all of the recesses is concrete with a paint finish, as seen in Photo III-B-71. These concrete floors are raised approximately 4" above the metal landing floor surface, presenting a trip hazard. They are marked with a striped caution tape.

PHOTO III-B-70

PHOTO III-B-71

As seen in many of the previous photos, there is damaged wall plaster and paint throughout the tower. There is some severe plaster deterioration at the window recess at Level Four, as seen in Photos III-B-72 and III-B-73. At Level Three a masonry crack is located at the apex of the arch above the window recess, as seen in Photo III-B-74.

PHOTO III-B-72

PHOTO III-B-73

PHOTO III-B-74

Throughout the tower there are caution signs and the step numbers stenciled onto the plaster wall surfaces as seen in Photos III-B-75, III-B-76 and III-B-77. Various photos and other graphics describing the history of Little Sable Point Light Station are located at the various landing levels. An example is seen in Photo III-B-78.

PHOTO III-B-75

PHOTO III-B-76

PHOTO III-B-77

PHOTO III-B-78

The open circular metal stair transitions to a solid metal floor at Level Six. Entry to Level Six is through a 2'-2" wide metal floor hatch, as seen in Photos III-B-79 and III-B-80. A 3/16" thick hinged metal hatch cover is secured in the "open" position. A modern stainless steel vertical grab bar is attached to the wall at the hatch for the safety and convenience of visitors.

PHOTO III-B-79

PHOTO III-B-80

A number of unique features are found at Level Six of the tower which is the level where the arch top windows are located. At the east window opening, the wall recess is similar to those in the lower levels of the tower, as seen in Photo III-B-81. At the south window opening a small wood bench with a built-in storage unit is located in the recess. Refer to Photos III-B-82 and III-B-83. Hinges and a latch are found on one of the doors. The paint finish is in fair condition on the wood surfaces. Adjacent to the bench is a small built-in wood cabinet with three open shelves, as seen in Photo III-B-84. Holding various artifacts, a fixed plexiglass cover is located over the cabinet. The original curved 1'-7" wide x 2'-6" high wood cabinet door is mounted on the wall nearby, as seen in Photo III-B-85.

PHOTO III-B-81

PHOTO III-B-82

PHOTO III-B-83

PHOTO III-B-84

PHOTO III-B-85

Remnants of the pulleys and cables from the navigation light counterweight mechanism are located overhead. These are shown in Photos III-B-86 and III-B-87. The center column of the circular stair has been notched to allow for clearance where the cable passes this point, Photo III-B-88, before entering the opening into the wall cavity, Photo III-B-89. The metal door is missing at this wall opening which measures 10" wide x 1'-4" high. Directly below this wall opening is a counterweight rest. This object is a small wood board that slides into the wall to support the counterweight when not in use, thus relieving stress on the cable and various components. Refer to Photos III-B-90 and III-B-91. This object is in good condition.

PHOTO III-B-86

PHOTO III-B-87

PHOTO III-B-88

PHOTO III-B-89

PHOTO III-B-90

PHOTO III-B-91

Material and finishes in the Watch Room include a metal floor with a paint finish and plaster walls, also with a paint finish. Paint finishes at this level are in fair condition with some minor areas of deterioration.

A continuation of the circular metal stair provides access to the Watch Room. Entry to the Watch Room is through a 2'-2" wide floor hatch, as seen in Photos III-B-92 and III-B-93. Finishes in the Watch Room include a solid metal floor with a paint finish and 2 ¼" wide vertical wood paneling with a natural finish. The wood paneling and finish are in good condition. The underside of the metal floor panels of the Lantern form a partial ceiling for the room, as seen in Photo III-B-94. The underside of this deck has a paint finish that is in good condition. A very unique feature and focal point of this room is the base support and rotational mechanism of the Third Order Fresnel Lens. Refer to Photos III-B-95 and III-B-96.

PHOTO III-B-92

PHOTO III-B-93

PHOTO III-B-94

PHOTO III-B-95

PHOTO III-B-96

PHOTO III-B-97

A curved ship's ladder style stair, Photos III-B-97 and III-B-98, provides access from the Watch Room to the Lantern. Security bars, controlled by the U. S. Coast Guard, are placed over the Lantern floor opening, preventing the public from accessing this area of the tower. A small wood bench, wall mounted cabinets with artifacts and photos are also placed in the Watch Room, as seen in Photos III-B-99 and III-B-100. Five vents are located in the wall, with metal frames and rotating covers on the interior, Photo III-B-101, and metal bell shaped covers set in the masonry, Photo III-B-102, on the exterior. All vents are in good condition and operating order.

PHOTO III-B-98

PHOTO III-B-99

PHOTO III-B-100

PHOTO III-B-101

PHOTO III-B-102

The Third Order Fresnel Lens, Photo III-B-103, is housed in a ten-sided lantern with glass panels measuring 2'-8 ½" wide x 5'-10" high. The 2'-0" wide interior lantern floor deck is located 6'-10 ¼" above the Watch Room floor and surrounds the navigation light. An interior view of the glazing is shown in Photo III-B-104. The lower edge of the glass, condensation gutter and checkered floor deck are shown in Photo III-B-105. All components are in good condition, however, paint finish is in poor condition on most surfaces, as seen in Photo III-B-106. Some "J" hooks remain at the bottom edge of the ceiling, once used to support curtains that protected the lens. The Lantern ceiling is metal with a paint finish, all of which are in good condition, as seen in Photo III-B-107. The ventilation opening at the top appears unrestricted.

PHOTO III-B-103

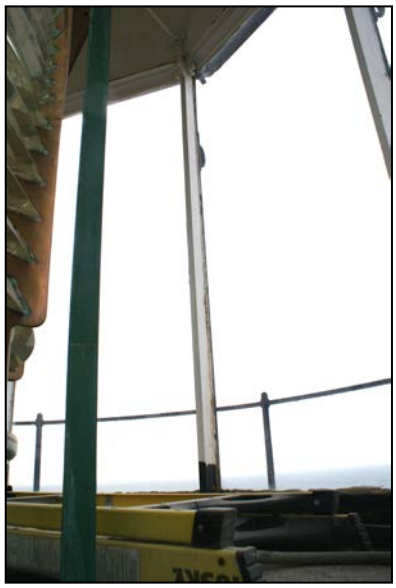


PHOTO III-B-104

PHOTO III-B-105

PHOTO III-B-106

PHOTO III-B-107

MECHANICAL AND ELECTRICAL SYSTEMS AND ANALYSIS

The Light Tower at Little Sable Point Light Station has electrical service, but does not have any plumbing or mechanical systems. Passive ventilation is provided by the fixed louver at the second level and vents near the top of the tower. There is no water source at the tower or in near proximity at the site.

Underground electrical service extends to the Light Tower from overhead power lines along the east edge of the parking lot. A 100 Amp, 120/240 volt, single phase service panel is located in the small room at ground level. Refer to Photo III-B-108. Surface mounted PVC conduit, lighting, switches and duplex receptacles are located throughout the tower. Typical utility type incandescent lights are shown in Photos III-B-109, III-B-110 and III-B-111. Duplex receptacles are seen in Photo III-B-90 and III-B-110. A simple intercom system, Photo III-B-112, allows communication between volunteer staff in the tower and at the ground level.

PHOTO III-B-108

PHOTO III-B-109

PHOTO III-B-110

PHOTO III-B-111

PHOTO III-B-112

A lightning grounding bar runs from the Lantern down the exterior face of the tower on the north wall. Refer to Photos III-B-113, III-B-114 and III-B-115. This grounding bar appears in good condition, however, the continuity is not known.

PHOTO III-B-113

PHOTO III-B-114

PHOTO III-B-115

At the time of this inspection the navigation light was decommissioned by the U. S. Coast Guard and turned off. The Sable Points Lighthouse Keepers Association is in the process of obtaining permission to activate the light.

LIFE SAFETY SYSTEMS CONDITIONS AND ANALYSIS

No life safety systems, such as alarms or detectors, of any type are present in the Light Tower.

C) NON-EXTANT BUILDINGS AND STRUCTURES

Historic photographs, drawings and other records show a number of buildings, structures and other elements that were once a part of the light station, but were removed by the U. S. Coast Guard in the 1950s. These include:

1) Keeper's Dwelling
The Keeper's Dwelling was a two story wood frame and brick structure originally constructed in the late 1870s. Modifications in 1910 – 1911 appear to be the conversion of the attic into additional living quarters with the addition of two dormers and the single-story addition constructed on the east side.

2) Privy
A small brick structure constructed east of the Keeper's Dwelling. A 1930 U. S. Light House Service report indicates that two privies were present at the site. Estimated size is 6' x 6'.

3) Stable/Barn
A one and one-half story wood frame structure, noted as 18'-3" x 24'-3" in a Lighthouse Inspection Report dated April 1911.

4) Coal/Wood Shed
A single story wood frame structure located north of the Keeper's Dwelling. Estimated size is 12' x 14'.

5) Oil House (rectangular/masonry)
A small brick structure, rectangular in plan, located southwest of the Light Tower. This was the closest building to the shoreline. Estimated size is 7'6" x 9'-6". A fuel tank was located on the east side of this Oil House.

6) Oil House (cylindrical/metal)
A small cylindrical structure located northeast of the Light Tower. Estimated size is 8' in diameter.

7) Small Shed (with lean-to style roof)
A small wood frame structure located southeast of the Keeper's Dwelling. Estimated size is 10' x 12'.

8) Large Shed (with gable roof)
A small wood frame structure located south of the Keeper's Dwelling. Estimated size is 12' x 16'.

9) Well
Indicated as a "drive well" on drawings and in reports, this was a small enclosure for the "driven" well located approximately 20 feet south of the Keeper's Dwelling.

10) Crib Structure
Constructed as a means to control the constantly shifting sand, a concrete "crib" structure was constructed around the Light Tower and Keeper's Dwelling. Drawing and photographs indicate that this may have been constructed in the 1910 – 1911 period when other renovations were completed on the Keeper's Dwelling. This structure consisted of poured concrete footings, walls, and beams which were then capped with a

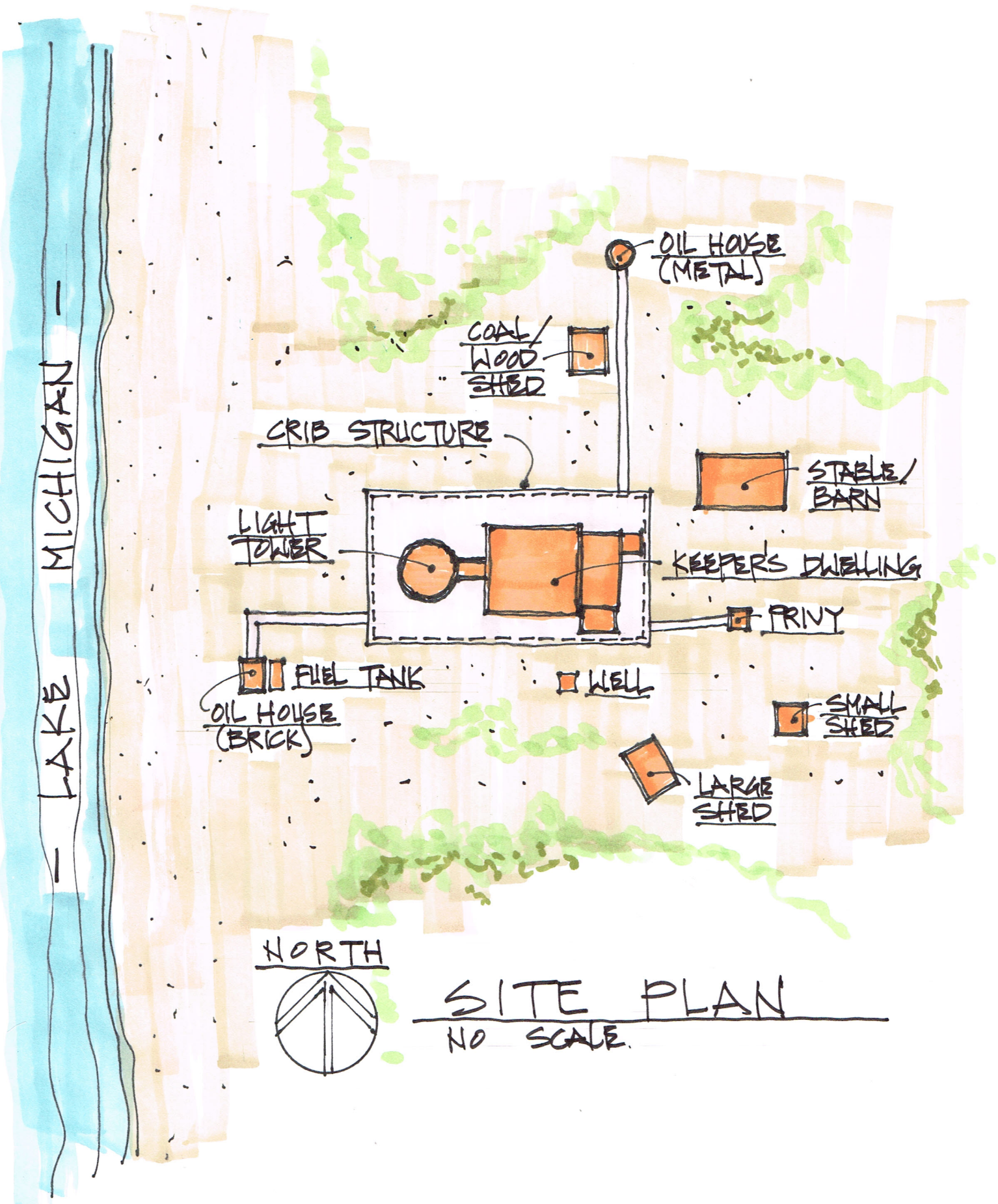
concrete slab, forming a concrete “sidewalk” all around the structures. Deterioration and settlement of these “sidewalks” is seen in a number of the historic photographs.

11) Sidewalks
Both concrete sidewalks on grade and elevated wood walkways are seen in many of the historic photographs.

13) Flagpole(s)
Flagpoles are seen in many photographs in different locations including adjacent to the masonry Oil House and on top of a high sand dune located south of the Light Tower.

14) Docks
Remnants of small docks are seen in historic photographs.

The Site Plan on the following page indicates the approximate location of these non-extant buildings and structures. Because of the shifting sand at this site, the elevation of the dunes adjacent to the Light Tower is considerably higher than years ago. Remnants of any former buildings and structures, if any, are buried. There was no visible evidence of any of these structures except for some sections of the concrete foundation wall of the crib structure along the west side of the Light Tower.



SITE PLAN

NO SCALE

PART IV – TREATMENT AND USE RECOMMENDATIONS

Overview

The Little Sable Point Light Station continues to serve as an important landmark in the local region and is a significant maritime historical site. As part of the very popular Silver Lake State Park under the jurisdiction of the State of Michigan Department of Natural Resources, and with improved access to the site, the public is able to experience this once very remote light station. Although the Period of Significance is identified in the National Register Listing as 1866 through 1900, undoubtedly the most significant change to the site occurred in the late 1950s with the demolition of all structures with the exception of the Light Tower. A second important change at the site is one of nature and the growth of the sand dunes surrounding the Light Tower. With the exception of the construction of the parking lot and concrete sidewalks leading to the Light Tower, there has been little change since the late 1950s. The recommended Period of Interpretation is 1955 to 1960, reflecting this last time period of significant activity and change at the Little Sable Point Light Station.

The treatment of historic properties is guided by a series of principles formulated by the Secretary of the Interior to help protect cultural resources through consistent preservation practices known as the Secretary of the Interior's Standards for the Treatment of Historic Properties. These Standards are divided into four distinct, interrelated approaches: Preservation, Rehabilitation, Restoration and Reconstruction (refer to Appendix D). Many factors determine the choice of treatment including a property's current physical condition, its proposed use and historic significance. The treatment standards are applied as follows:

> Preservation, as defined by the Secretary of the Interior's Standard is "…the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment, however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project."

- No buildings or structures are considered for preservation.

> Restoration, as defined by the Secretary of the Interior's Standard is "…the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project."

Buildings and structures for which restoration is the recommended treatment:

- Light Tower – Interior and Exterior

> Rehabilitation, as defined by the Secretary of the Interior's Standard is "…the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values."

Buildings and structures for which rehabilitation is the recommended treatment:

- Site

  Reconstruction, as defined by the Secretary of the Interior's Standard is "…the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time in its historic location."

Buildings and structures recommended for reconstruction:

- Stable/Barn
- Keepers Dwelling
- Metal Oilhouse
- Brick Oilhouse
- Privy
- Large and Small Sheds
- Coal/Wood Shed
- Crib Structure surrounding Dwelling
- Sidewalks

GENERAL TREATMENT AND USE RECOMMENDATIONS

Recommendations for the use of the Light Tower and site are discussed in this section. With no further involvement at the site by the United States Coast Guard all responsibility for restoration and ongoing maintenance rests with the State of Michigan Department of Natural Resources, assisted by the Sable Points Light Keepers Association. As an easily accessible publicly owned site within the boundaries of Silver Lake State Park, the Little Sable Point Light Station offers an opportunity for the public to experience an important element of local Great Lakes maritime history.

It is the intent of the Department of Natural Resources, along with Sable Points Light Keepers Association, to promote public access and visitation of the light station site. When open and staffed by volunteers, the public has the opportunity to climb the stairs of the Light Tower, observe the original 3rd Order Fresnel Lens and its mechanisms, and walk the exterior of the lantern deck, over 90 feet above the surrounding landscape and Lake Michigan. This opportunity is not available at many lighthouses and light stations and is a major attraction at this site.

Site improvements, including the parking area with universally accessible parking spaces, a universally accessible sidewalk approach to the Light Tower, and vault toilets, made in the recent past by the Department of Natural Resources has also greatly contributed to the usability of the site. Maintenance and upkeep of these site improvements should continue.

Perhaps one of the major limitations at the site is the lack of indoor space for both volunteers and the visiting public while waiting to access the light tower. The ground floor level of the tower is a very small space with limited room, and it is often the case that visitors and volunteers must stand outside while waiting for others to come down from the tower, a problem during inclement weather. Additional enclosed space at the site would allow for visitor gathering and queuing prior to tower climbs and the opportunity to view additional interpretive material about the light station site. Such space would also benefit the staff and volunteers by providing a sheltered work space and secure space for storage. It is therefore recommended that a number of buildings be reconstructed to provide this additional space and also to provide interpretation of the 1955 to 1960 light station site. Recognizing budget concerns, the implementation of reconstruction requires a phased approach. The proposed site plan shows the initial phase with reconstruction of the stable/barn for use as a visitor orientation center.

Recommendations are as follows:

A) SITE

1) Interpretive signage should be installed throughout the site. Buildings and structures no longer remaining should be identified.

2) Vegetation, including trees and bushes, around the light tower should be cleared and not allowed to grow near the structure.

3) Reconstruct the stable/barn, to serve as a visitor orientation center and waiting area. This small building would be located in close proximity to its original location east of the Light Tower. Extend sidewalks to this building. Refer to the proposed site plan sketch.

4) Conduct an archeological investigation of the site to identify footing and foundation remnants of non-extant buildings and structures and to identify the specific locations of the stable/barn.

B) LIGHT TOWER

1) The interior of the Light Tower is small, along the length of the circular stair, at landings and at the upper Watch Room and Watch Deck with limited space for displays or information. The public should be allowed full access because the experience of climbing the tower and accessing the exterior Watch Deck is one not obtained at many light station locations. Because barrier free access to this structure is not possible, and climbing the tower stairs is only for the physically fit, interpretation of the Lantern and Fresnel Lens should be included elsewhere. The Light Tower should be restored and maintained to reflect the 1955 to 1960 Period of Interpretation.

C) OTHER STRUCTURES

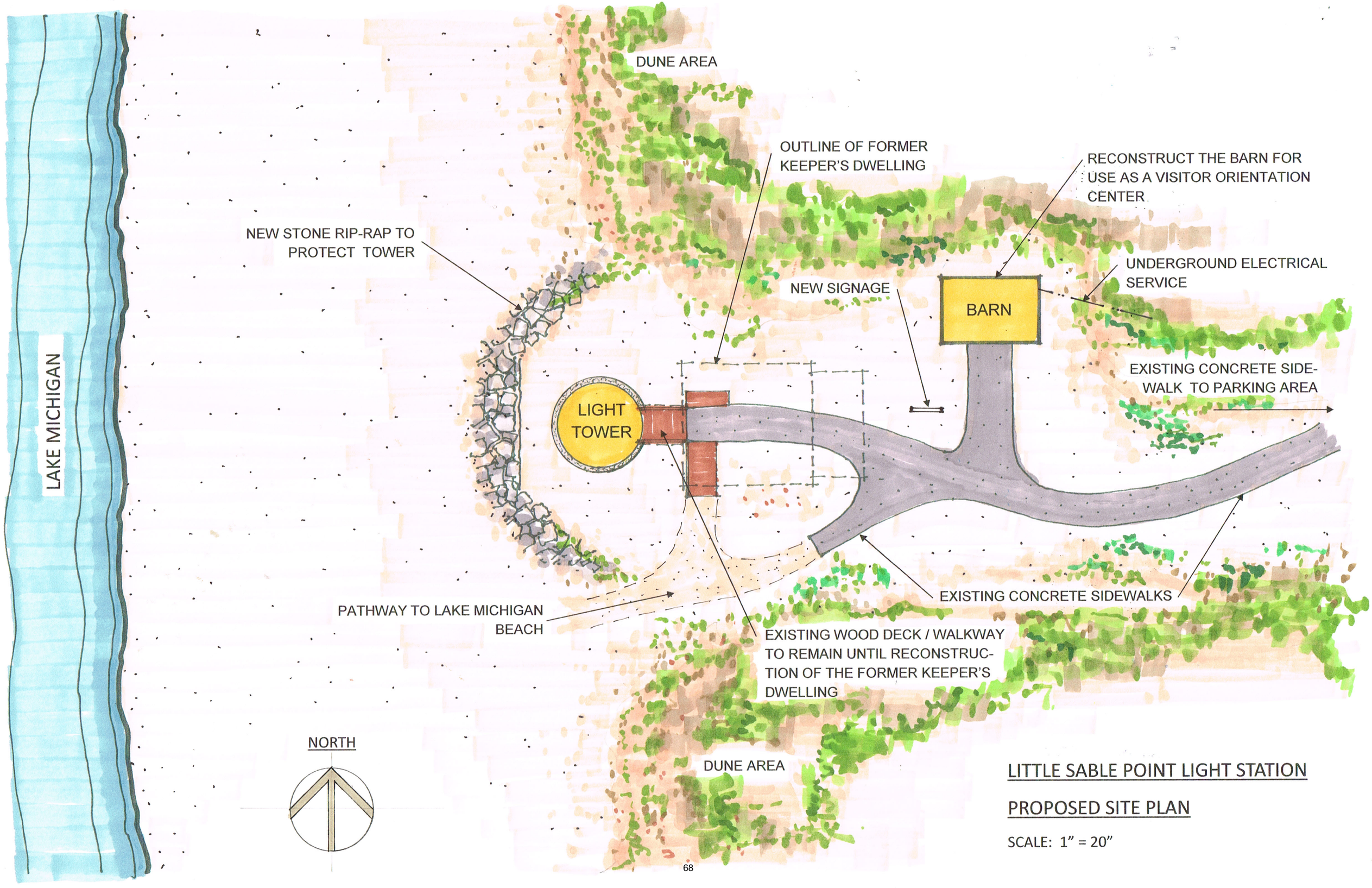
1) Reconstruct the non-extant stable/barn for use as a visitor orientation center. General information about the light station site and information about the Light Tower for those unable to climb the stairs would be available. In addition to providing shelter for staff, volunteers and the public, this small building would also be used for storage.

2) Reconstruct the non-extant Keepers Dwelling for use as museum space. This larger structure could serve as the visitor orientation center with the stable/barn returned to use as storage or additional museum space.

3) Reconstruct other non-extant buildings including the metal oilhouse, brick oilhouse, privy, large and small sheds, coal/wood shed and the crib structure.

Because of the number of buildings and site elements recommended for reconstruction, a priority ranking for reconstruction is established as follows:

Priority #1: Stable/Barn
Priority #2: Keeper's Dwelling
Priority #3: Metal Oilhouse
Priority #4: Privy
Priority #5: Coal/Wood Shed
Priority #6: Large and Small Sheds
Priority #7: Crib Structure surrounding the Dwelling
Priority #8: Brick Oilhouse



LITTLE SABLE POINT LIGHT STATION

PROPOSED SITE PLAN

SCALE: 1" = 20"

DETAILED TREATMENT AND USE RECOMMENDATIONS

A) SITE

A.1) REMOVE VEGETATION

Remove vegetation that is growing near the base of the light tower. Maintain this area free of vegetation.

A.2) INSTALL NEW LANDSCAPE MATERIAL

Selectively place new native plantings, such as Dune Grass, in various areas around the light tower to control wind scouring and erosion.

A.3) CONSTRUCT SIDEWALKS

Construct new sidewalks to connect existing structures with new reconstructed buildings. Although all original sidewalks on the site have been removed, reconstructed sidewalks shall match the size and configuration shown on Drawing #3 in Appendix B.

A.4) CONDUCT ARCHEOLOGICAL STUDY

Conduct an archeological investigation of the site to identify footing and foundation remnants of non-extant buildings as well as providing more specific information about the location of past structures.

A.5) INSTALL INTERPRETIVE SIGNAGE

Install interpretive signage at various locations throughout the site to guide visitors around the site and to describe the history of the once busy light station and various buildings and structures that once occupied the site.

A.6) MONITOR LAKE MICHIGAN WATER LEVEL

Monitor the water level of Lake Michigan, and subsequent distance of the shoreline to the base of the tower. Upon rising water levels, consider the placement of additional stone rip-rap around the tower base to protect the tower.

B) LIGHT TOWER

B.1) RESTORE EXTERIOR MASONRY WALLS

Restore the minor damage occurring on the exterior brick and stone masonry walls by repointing damaged and deteriorated mortar joints and replacing damaged brick. Match replacement brick with the existing brick in terms of size and color. Match mortar used for repointing with the existing mortar in terms of strength, color and texture. Existing mortar shall be tested by an appropriate testing laboratory to determine these properties. Mortar samples for testing shall include surface mortar and inner, concealed mortar to verify that original mortar is being tested. Clean all repaired masonry surfaces with a mild masonry cleaning detergent using bristle brushes and low water pressure. Power washing/blasting is not permitted.

B.2) PAINT EXTERIOR WALLS

Paint the exterior brick surfaces “white” to return the tower to its painted appearance in 1955-1960. A breathable masonry paint that allows vapor penetration shall be used.

B.3) RESTORE WOOD WINDOWS

Restore all existing wood windows throughout the various levels of the tower. Restore all damaged frame and sash components; replace missing and deteriorated glazing material; replace broken glass and missing hardware. Paint all window frames and sash and restore to operating condition.

B.4) INSTALL NEW WINDOW AT GROUND LEVEL

Remove the brick masonry from the former window opening at Level L-1/ground level in the small electrical room. Install a new wood window matching other tower windows.

B.5) REPLACE ENTRY DOOR

Remove the existing steel watertight door and frame and replace with a steel plate door and frame replicating the original door when the Keeper’s Dwelling was intact. Match the design of metal doors at similar Poe-designed lighthouses if accurate records are not available. Install a weatherproof louver in the door for tower ventilation.

B.6) REMOVE VENTILATION LOUVER

Remove the metal louver at the window opening on the east face directly above the tower entry door. Replace with a new wood window matching other tower windows.

B.7) REMOVE SHELF

Remove the small wood shelf located on the south wall directly inside the tower entry door.

B.8) INSTALL CABINET DOOR

Remove the plexiglass cover from the small storage compartment on Level L-6 and install the wood door that is wall mounted adjacent to the cabinet. Replace plexiglass to protect historic artifacts.

B.9) INSTALL COUNTER-WEIGHT COMPARTMENT DOOR

Install a new metal door at the counter-weight compartment at Level L-6 where the door is missing. Match the door style of the counter-weight compartment door at Level L-1/Ground Level.

B.10) RESTORE LANTERN

Restore all interior and exterior components of the Lantern. Remove deteriorated paint on all metal components by lightly blasting to white metal. Install sealant in all exterior seams. Clean, properly prepare and paint all metal surfaces.

B.11) RESTORE METAL AT WATCH DECK AND LANTERN DECK

Restore all exterior metal components including the deck surfaces and guardrails. Remove deteriorated paint on all metal component by lightly blasting to white metal. Install sealant in all exterior seams of the floor deck. Clean, properly prepare and paint all metal surfaces.

B.12) RESTORE EXTERIOR DOOR AT WATCH DECK

Replace damaged door hinges on the outward swinging metal door that allows entry to the exterior Watch Deck.

B.13) INSPECT AND TEST LIGHTNING PROTECTION SYSTEM

Retain a certified company specializing in lightning protection systems to inspect and test the existing lightning protection system for proper continuity and grounding.

B.14) PAINT FLOOR AT GROUND LEVEL

Remove deteriorated paint. Clean, properly prepare and paint the concrete floor slab at the Ground Floor entry level.

B.15) PAINT METAL STAIRS/LANDING IN TOWER

Remove deteriorated paint on all metalwork including the stair treads, landings, hatchways, and handrails throughout all levels of the tower. Clean, properly prepare and paint all metal surfaces.

B.16) RESTORE PLASTER WALL SURFACES

Remove damaged and deteriorated plaster throughout the tower and replace with new plaster matching the composition and surface texture of the existing. Perform minor masonry repairs as needed in accordance with Item B.1. Clean, properly prepare and paint all wall surfaces.

C) OTHER STRUCTURES

C.1) RECONSTRUCT STABLE/BARN

Reconstruct the small structure identified as the stable or barn, for use as a visitor orientation center. This building would be the starting point of a visit to the light station site potentially containing interpretive displays and other material related to the light station, providing an alternative for visitors unable to ascend the tower. It would offer much needed shelter for visitors and volunteers as well as storage. The design and materials of the exterior of the building would match historic photographs, while the interior space would be an adoptive re-use.

C.2) RECONSTRUCT KEEPER'S DWELLING

Reconstruct the large Keeper's Dwelling originally connected to the light tower based on historic photographs and drawings. This large building would provide significant space for interpretive displays, artifacts and other information about the light station and region, offering an alternative for visitors unable to ascend the tower.

C.3) RECONSTRUCT OTHER NON-EXTANT STRUCTURES

Reconstruct the various missing structures that once comprised the light station. These structures include the metal Oilhouse, Privy, Coal/Wood Shed, Large and Small Sheds, Crib Structure surrounding the Dwelling and the brick Oilhouse. All structures would be used for period displays as well as storage and would be open to visitors.

PRIORITY RANKING FOR TREATMENT AND USE RECOMMENDATIONS

In order to prioritize the Treatment and Use Recommendations, all items are ranked with a "high", "medium", or "low" priority, so that the Sable Points Lighthouse Keepers Association and the State of Michigan, Department of Natural Resources may give priority to critical items needing immediate attention. Priority rankings can be defined as follows:

HIGH	Work requiring immediate attention in order to prevent further deterioration and/or loss of historic components and work that impacts the Period of Significance.
MEDIUM	Work that should be completed in a period of 3 to 5 years. If not addressed in this time period, items may likely be moved to a "high" priority classification.
LOW	Work that is primarily of cosmetic nature or desirable to complete, in order to enhance the interpretation of the Period of Significance.

ITEM NO.	DESCRIPTION	PRIORITY RANKING		
		HIGH	MEDIUM	LOW
A) SITE				
A.1	Remove vegetation	•		
A.2	Install new landscape material	•		
A.3	Construct sidewalks			•
A.4	Conduct archeological study		•	
A.5	Install interpretive signage		•	
A.6	Monitor Lake Michigan water levels		•	
B) LIGHT TOWER				
B.1	Restore Exterior Masonry Walls		•	
B.2	Paint Exterior Walls			•
B.3	Restore Wood Windows		•	
B.4	Install New Window at Ground Level			•
B.5	Replace Entry Door			•
B.6	Remove Ventilation Louver			•
B.7	Remove Shelf			•
B.8	Install Cabinet Door			•
B.9	Install Counter-weight Compartment Door			•
B.10	Restore Lantern		•	
B.11	Restore Metal at Watch Deck and Lantern Deck		•	
B.12	Restore Exterior Door at Watch Deck	•		
B.13	Inspect and Test Lightning Protection System		•	
B.14	Paint Floor at Ground Level		•	
B.15	Paint Metal Stairs/Landing in Tower			•
B.16	Restore Plaster Wall Surfaces		•	
C) OTHER STRUCTURES				
C.1	Reconstruct Stable/Barn		•	
C.2	Reconstruct Keeper’s Dwelling			•
C.3	Reconstruct Other Structures			•

PART V – CONSTRUCTION COST ESTIMATES

Construction cost estimates for all of the work identified in Part IV – Treatment and Use Recommendations are included in this section. All cost estimates are projected for work to be completed in 2016; escalation factors for future labor and material cost increases must be applied to all figures when projecting beyond that time period. All estimates may vary considerably depending on the scope of the specific work and the efficiency of scale.

PROJECT: **LITTLE SABLE POINT LIGHT STATION**
GOLDEN TOWNSHIP (OCEANA COUNTY), MICHIGAN

BUILDING OR COMPONENT NAME: **SITE**

DATE: **JULY 2015**

Sanders & Czapski Associates, PLLC
architecture / landscape architecture / historic preservation

ITEM NO.	DESCRIPTION	QUANTITY	UNIT OF MEASURE	LABOR AND MATERIAL		EQUIPMENT COST	TOTAL COST	REMARKS
				UNIT PRICE	COST			
A.1	Remove Vegetation	1	Lump Sum				1,000	
A.2	Install New Landscape Material	1	Lump Sum				5,000	
A.3	Construct Sidewalks	1	Lump Sum				15,000	
A.4	Conduct Archeological Study	1	Lump Sum				20,000	
A.5	Install Interpretive Signage	1	Lump Sum				25,000	
A.6	Monitor Lake Michigan Water Levels	1	Lump Sum				1,000	
	SUBTOTAL						67,000	
	CONTINGENCY @ 10%						6,700	
	TOTAL						73,700	

PROJECT: **LITTLE SABLE POINT LIGHT STATION**
GOLDEN TOWNSHIP (OCEANA COUNTY), MICHIGAN

BUILDING OR COMPONENT NAME: **LIGHT TOWER**

DATE: **JULY 2015**

Sanders & Czapski Associates, PLLC
architecture / landscape architecture / historic preservation

ITEM NO.	DESCRIPTION	QUANTITY	UNIT OF MEASURE	LABOR AND MATERIAL		EQUIPMENT COST	TOTAL COST	REMARKS
				UNIT PRICE	COST			
B.1	Restore Exterior Masonry Walls	1	Lump Sum				105,000	
B.2	Paint Exterior Walls	4,450	Sq. Ft.	$10			44,500	
B.3	Restore Wood Windows	5	Each	$1,500			7,500	
B.4	Install New Window at Ground Level	1	Each	$4,000			4,000	
B.5	Replace Entry Door	1	Each	$9,500			9,500	
B.6	Remove Ventilation Louver	1	Each	$3,000			3,000	
B.7	Remove Shelf	1	Each	$200			200	
B.8	Install Cabinet Door	1	Each	$300			300	
B.9	Install Counter-Weight Compartment Door	1	Each	$1,500			1,500	
B.10	Restore Lantern	1	Lump Sum				70,000	
B.11	Restore Metal at Watch and Lantern Decks	1	Lump Sum				45,000	
B.12	Restore Exterior Door at Watch Deck	1	Each	$2,500			2,500	
B.13	Inspect and Test Lightning Protection System	1	Lump Sum				3,500	

PROJECT: **LITTLE SABLE POINT LIGHT STATION**
GOLDEN TOWNSHIP (OCEANA COUNTY), MICHIGAN

BUILDING OR COMPONENT NAME: **LIGHT TOWER**

DATE: **JULY 2015**

Sanders & Czapski Associates, PLLC
architecture / landscape architecture / historic preservation

ITEM NO.	DESCRIPTION	QUANTITY	UNIT OF MEASURE	LABOR AND MATERIAL		EQUIPMENT COST	TOTAL COST	REMARKS
				UNIT PRICE	COST			
B.14	Paint Floor at Ground Level	1	Lump Sum				1,200	
B.15	Paint Metal Stairs/Landing in Tower	1	Lump Sum				20,000	
B.16	Restore Plaster Wall Surfaces	2,240	Sq. Ft.	$12			26,900	
	SUBTOTAL						$344,600	
	CONTINGENCY @ 10%						34,460	
	TOTAL						$379,060	

PROJECT: **LITTLE SABLE POINT LIGHT STATION**
GOLDEN TOWNSHIP (OCEANA COUNTY), MICHIGAN

BUILDING OR COMPONENT NAME: **OTHER STRUCTURES**

DATE: **JULY 2015**

Sanders & Czapski Associates, PLLC
architecture / landscape architecture / historic preservation

ITEM NO.	DESCRIPTION	QUANTITY	UNIT OF MEASURE	LABOR AND MATERIAL		EQUIPMENT COST	TOTAL COST	REMARKS
				UNIT PRICE	COST			
C.1	Reconstruct Stable/Barn	1	Lump Sum				$200,000	
C.2	Reconstruct Keeper's Dwelling	1	Lump Sum				750,000	
C.3	Reconstruct Other Structures	1	Lump Sum				440,000	
	SUBTOTAL						$1,390,000	
	CONTINGENCY @ 10%						139,000	
	TOTAL						$1,529,000	