



A NEW EXHIBIT EXPANDS THE STORIES AT SPLIT ROCK LIGHTHOUSE

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SPLIT ROCK LIGHTHOUSE provided a short-lived but crucial aid to navigation on Lake Superior's North Shore. Active for just 59 years, the station is now a historic site managed by the Minnesota Historical Society. A new exhibit is opening at the Split Rock Lighthouse Visitor Center in May 2023.

The need for a lighthouse in the vicinity of the Split Rock River, 20 miles north of Two Harbors, Minnesota, was evident long before it became a reality. With the opening of the Mesabi, Vermilion, and Cuyuna iron ranges in the mid-1800s, traffic on Lake Superior exploded. Freight traffic passing through the Soo Locks at Sault Ste. Marie, Michigan, carried less than 1.6 million tons in 1881; by 1905 the total haul had surpassed 44.2 million tons. The estimated value of the iron ore traveling through the locks nearly doubled in the three years between 1897 and 1900, from \$31.9 million to almost \$61.7 million.¹

The exponential growth of shipping on the lake correlated with a steep rise in accidents and shipwrecks, necessitating more land-based navigation aids. On November 28, 1905, a massive storm system underscored this need, as it ravaged Lake Superior and many of the boats on their last run of the shipping season. The *Duluth News Tribune* reported, "Howling winds tearing

along at the speed of an express train, falling temperatures and snow that cut into the skin. . . . Weather experts made no mistake in predicting one of the worst storms ever seen at the head of the lakes at this time of year." Twenty-nine vessels were damaged and more than two dozen mariners died during the storm.²

In the aftermath, several companies, represented by the Lake Carriers Association, lobbied in Washington, DC, for funding of more land-based navigation on Lake Superior, with the goal of decreasing the number of vessels damaged on the lake. Congress appropriated funds for several lighthouses on the Great Lakes, including \$75,000 for a lighthouse 20 miles north of Two Harbors on the North Shore of Lake Superior.

Construction on Split Rock Lighthouse began in 1909 and took less

than a year to complete, despite the lack of easy proximity to supplies and the difficulty maintaining a steady workforce. The first head keeper, Orren Pete Young, inaugurated the lighthouse with its first lighting on July 31, 1910. For the first 30 years, the US Lighthouse Service operated Split Rock; later, when the US Coast Guard absorbed the Lighthouse Service in 1939, the station transitioned to a Coast Guard operation along with all other lighthouses in the country. The Coast Guard staffed the lighthouse until it was decommissioned in 1969 due to the development of better navigational aids on board vessels.³

The impact of a single light station is difficult to quantify, but no major incidents took place in the vicinity of Split Rock Lighthouse after its construction, which speaks to its usefulness as a navigational aid and

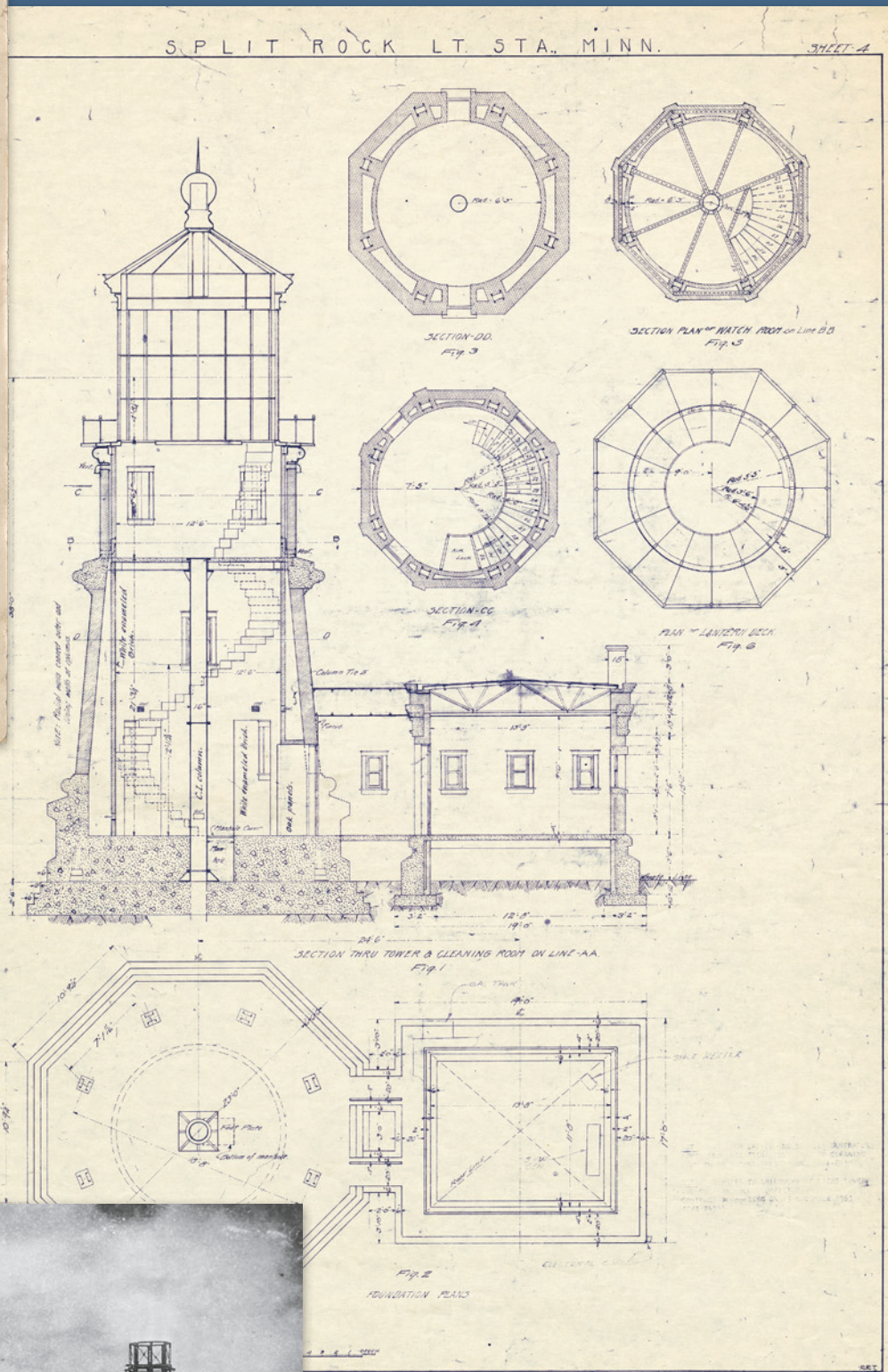


Period postcard showing the wreck of the SS Mataafa—the ship after which the great storm of 1905 was named.

FACING: Split Rock Lighthouse, one of Minnesota's most popular destinations, debuts a new exhibit in its visitor center.



The future site of Split Rock Lighthouse above Lake Superior, pre-1909.



Laborers worked on the lighthouse's construction into December 1909 before returning to Duluth for the winter.



The architectural plans for Split Rock Lighthouse, circa 1909.

to the dedication of the keepers who worked there. After the light's decommissioning, the state recognized the importance of preserving the station for future generations, and in 1971 the land and buildings were transferred from the federal government to Split Rock Lighthouse State Park to operate as a historic site under the Department of Natural Resources (DNR; then called the Department of Conservation). The DNR immediately stabilized the lighthouse roof, ceiling, and walls, but further restoration was not a priority for the DNR. In 1976, the DNR transferred the historic site's management to the Minnesota Historical Society (MNHS).⁴

MNHS had already invested in preserving Split Rock station's history several years before taking over its management. Just months after the lighthouse was decommissioned, MNHS nominated it to the National Register of Historic Places, and it was added to the register on June 23, 1969. Since assuming management in 1976, MNHS has taken many steps to ensure the site's preservation and



Orren Pete Young was the first keeper at Split Rock Lighthouse. He worked there for 16 years before retiring at age 70.



The first dwelling required extensive restoration before it could be opened to the public in 1981.

to enhance the visitor experience. With the goal of restoring the site to its 1910–24 appearance, restoration efforts began with the fog signal building in 1979, followed by one of the historic dwellings in 1980. The dwelling was opened to the public in 1981. In 1986, the Visitor Center opened, providing site visitors with an educational film, an exhibit hall, and a retail store.⁵

The lighthouse building itself also underwent several restorations following MNHS's acquisition of the site. In 1984, the exterior of the lantern room (also known as the lens room) at the top of the lighthouse tower was repainted in its original color, black. From 1990 to 1992, an intense restoration was completed on the roof, ceiling, and trim of the cleaning room (the entry point of the lighthouse where the keepers stored supplies for cleaning the lens and the rest of the building). The lantern room interior was also repainted, and the building's storm panes, windows, door, and exterior concrete steps were replaced. Another major restoration (2008–09) was undertaken in preparation for the

lighthouse's centennial celebration in 2010 and included replacing some of the interior and exterior bricks of the building as well as extensive painting. A year after the centennial celebration, Split Rock Lighthouse was designated a National Historic Landmark on June 23, 2011.⁶

Now, in 2023, the Minnesota Historical Society is excited to announce another addition to the visitor experience: a new exhibit gallery. The previous exhibit at the Visitor Center had been mounted in 1986 and had undergone only minor updates since that time. The leadership team at Split Rock Lighthouse wanted to improve the visitor experience by creating an exhibit space that broadens the scope of the site's history, focuses on firsthand accounts and primary sources, and improves accessibility. Although ideas about a new exhibit had been floating around for several years, it wasn't feasible until a generous donation was made to the site in 2021 (see inside back cover). Hayes Scriven, the site manager of Split Rock Lighthouse, said that his vision for the new exhibit was to let "the

primary sources do the storytelling” and to broaden the story to include the people who were there before the lighthouse was built. He hopes that visitors who experience the new exhibit will come away with a better understanding of the Indigenous people who have lived there, their way of life, and why the site was important to Native peoples. Scriven added, “Most people know the Split Rock story, but finding a way to tell the story through an updated lens and bringing in new information will help us tell a more complete story of Minnesota’s favorite landmark.”⁷

The process of developing and building a new exhibit is lengthy

and involved. Rich Rummel, a lighting designer with MNHS’s exhibit production team, explained that an exhibit of this size and scope typically takes anywhere from 18 months to three years to complete. The timeline for the new exhibit at Split Rock was a bit tighter, with just one year from the planning stages to grand opening. How does one begin to develop a new exhibit? According to Rummel, the starting point for the Split Rock exhibit was a hallway conversation between him and MNHS’s head of exhibits at the time, Karen Johnson. She told him that the site had received a donation to refurbish the existing exhibit, which was more

than 20 years old. “The next step,” Rummel added, “was a conversation with Hayes to determine what stories to tell and why.”⁸

To outline the goals of the new exhibit, Scriven and Nicholas Jensen, then the program manager at Split Rock, put together a Visitor Experience Plan. Next, they worked to identify goals and key messages for the exhibit. The exhibit-development process can vary from exhibit to exhibit, but for the Split Rock exhibit, Rummel said the obvious place to start was the old museum. “We started with the existing exhibit and [analyzed] what it did well and what it didn’t. Visitor feedback, both

STORIES FROM THE SHORES OF GICHI-GAMIING

Many people are familiar with Split Rock Lighthouse and its iconic stance overlooking Lake Superior. Less familiar are the stories of the Indigenous people who have lived here for millennia. The name Minnesota comes from the Dakota language, Mni Sota Makoce, where the waters reflect the sky. The importance of water in this region can be seen throughout cultures and time. While the history of the lighthouse attracts visitors to this place, the lighthouse is only a small part of the story. One goal for the new exhibit was to offer visitors an opportunity to hear and see contemporary Native people in this place.

As the MNHS exhibit team considered what information would fit in the dedicated space, they enlisted colleagues in the Native American Initiatives (NAI) department. Since its creation in 2016, NAI’s goal has been to help develop and implement a vision and strategy for Native American programs and services throughout MNHS in partnership with tribal nations.

NAI’s involvement with the new Split Rock Lighthouse exhibit provided many opportunities. The big question was how best to represent Indigenous history among the larger story of that place. Taking a cue from the *Our Home: Native Minnesota* exhibit at the Minnesota History Center (opened 2019), we decided to gather contemporary voices by recording video interviews with Ojibwe community members.

The next question: What does one ask Indigenous people about their history here in Mni Sota Makoce? One obvious topic involved water, specifically Lake Superior—Gichi-gamiing in Ojibwemowin (the Ojibwe language). We asked interviewees: Why is this lake so important? What does it represent?

To coordinate the interviews, we drew on the connections of MNHS’s Indian Advisory Committee (IAC), whose members provide guidance and critiques related to Indigenous content at MNHS—and have done so for more than three decades. Long-time IAC member Rick Smith was instrumental in this process, and we are grateful for his generous assistance. Enrolled in the Bad River Reservation, which is located on the southern shore of Gichi-gamiing, Smith identified individuals who could speak about the lake and also served as a liaison between MNHS staff and community members.

We worked with the talented multimedia team at MNHS to record interviews alongside Gichi-gamiing on two beautiful summer days. Connecting (and reconnecting) with community members while listening and learning about the important aspects of water, the Anishinaabe migration story, and their own personal recollections was such a gift. Hearing their words while being so close to the waters created a whole new connection to Gichi-gamiing for me—and I hope the video in the new exhibit will likewise teach and inspire others.

Featuring contemporary Native voices talking about water, specifically Gichi-gamiing, these video stories connect people from all cultures and backgrounds and create a sense of community. And with this audiovisual display, we achieve our intention that visitors leave that space knowing it is an Indigenous place and has been since time immemorial.

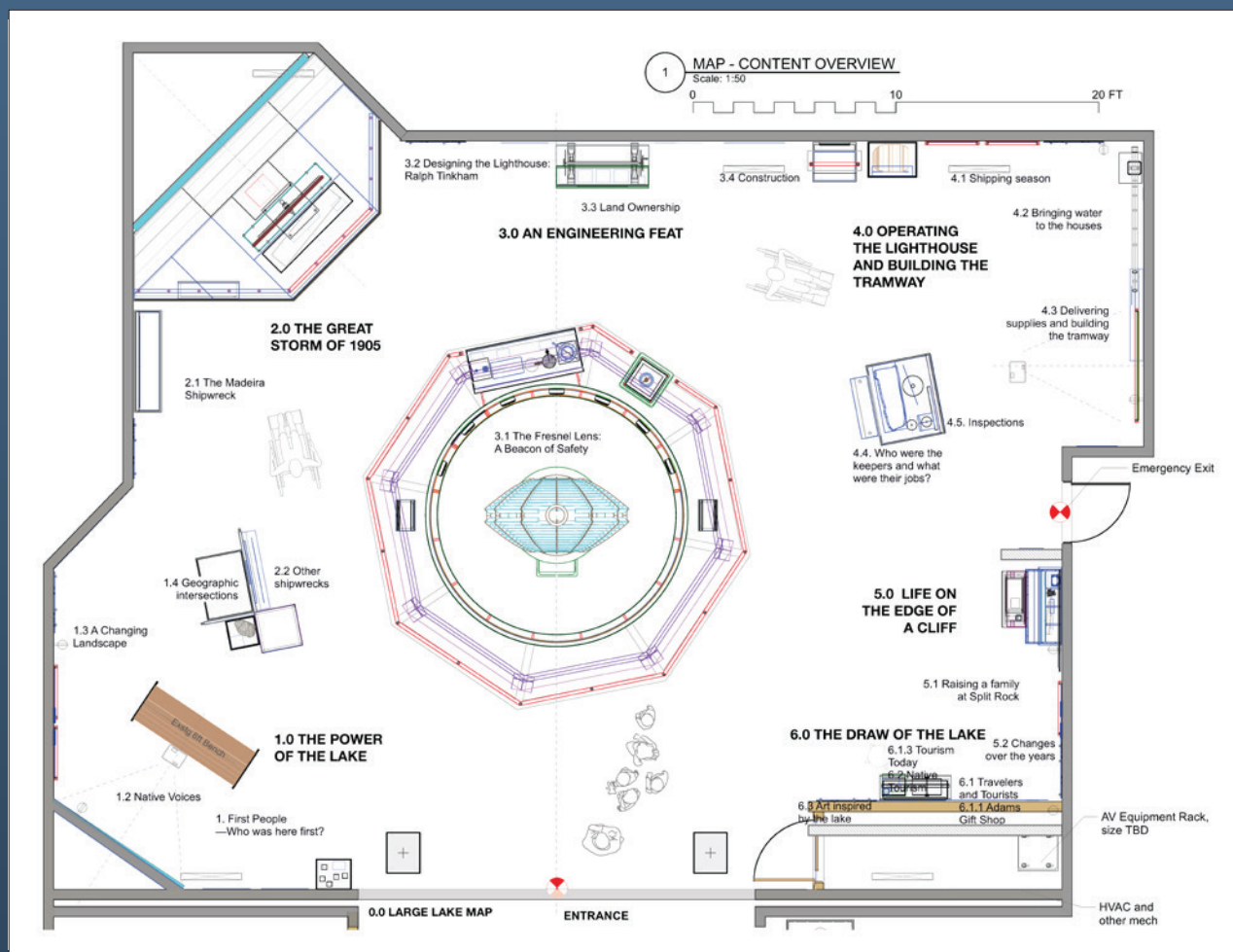
—Rita Walaszek Arndt (Polish descent and White Earth Ojibwe), program and outreach manager for Native American Initiatives



The previous exhibit in the Split Rock Lighthouse Visitor Center was installed in 1986.



Computer rendering of the new Radzak Family Gallery at Split Rock Lighthouse.



The floor plan for the gallery allows space for telling a variety of stories and space to interact with the exhibits.



A section on operating the lighthouse includes a display of keeper Young's hat and an authentic keeper's uniform.

anecdotal and formal, helped us determine the themes, topics, stories, and objects we would use in the new exhibit," Rummel explained. The exhibit team then expanded on the Visitor Experience Plan and identified key action items, which included researching related content in order to understand how the new exhibit themes fit into the larger historical context, identifying the key moments in history that the exhibit would focus on, and determining which resources could best tell the stories that would be included. According to Mary Weiland, an exhibit developer who worked with the MNHS team on writing content and translating information into exhibit components, the exhibit team chose to focus on firsthand accounts to bring the stories and themes to life.⁹

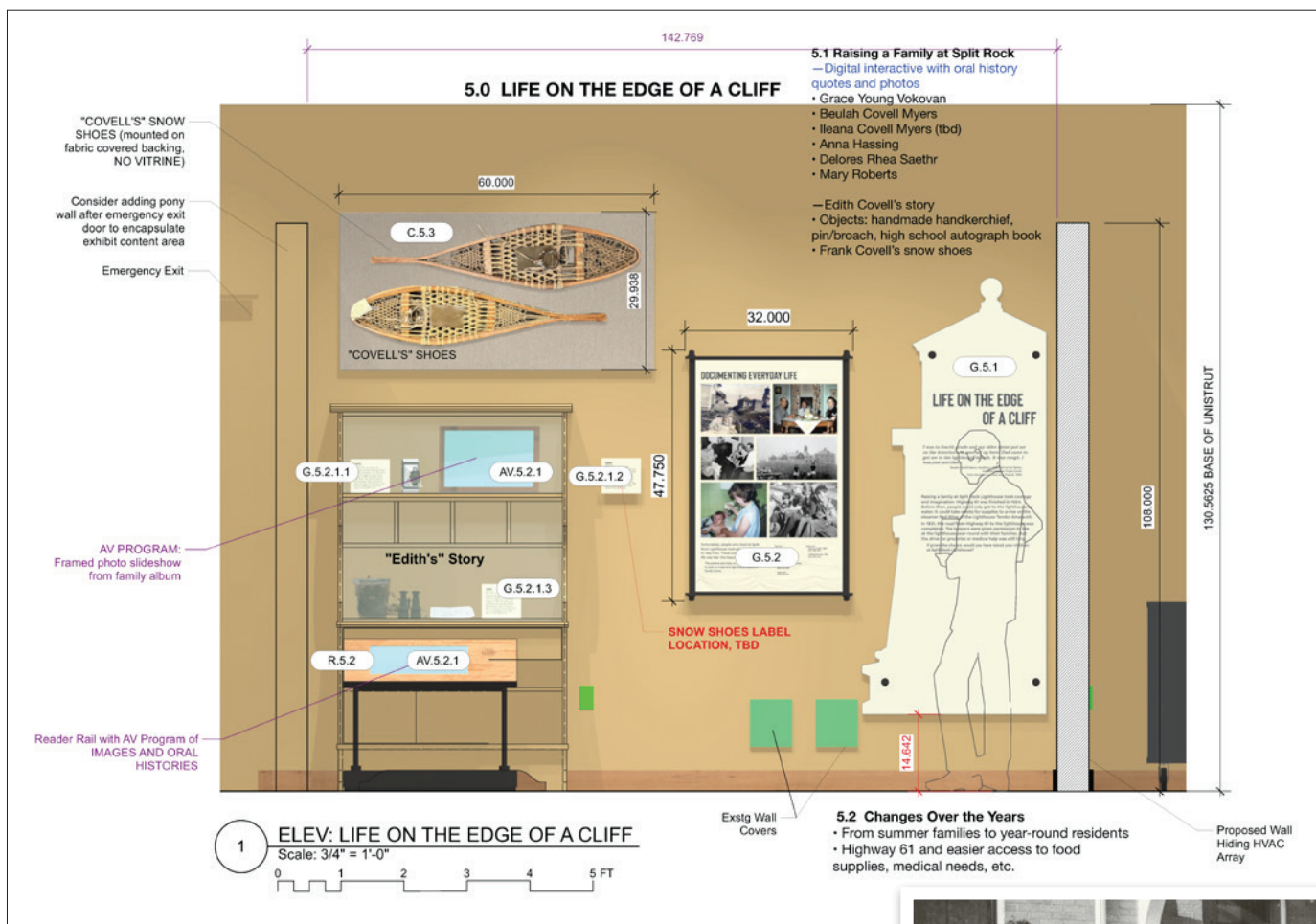
One of the most exciting parts of building a new exhibit is choosing

objects and artifacts to include. When asked about the objects in the new exhibit, Rummel said it was "perhaps the first time I've worked on a show that has objects with such powerful and direct connections to a historic site." The exhibit team worked with curatorial staff at MNHS's St. Paul offices to choose objects that would enhance the first-person accounts they were focusing on. One of the items they chose was a uniform hat owned by keeper Orren Pete Young. The hat features the emblem of the United States Lighthouse Service, a lighthouse encircled by a laurel wreath. Young would have worn this hat any time he had to be in uniform, including when the district inspector visited the station for inspections.¹⁰

Another item—one that demonstrates some of the challenges of living at an isolated light station such as Split Rock—is keeper Franklin

Covell's snowshoes. The snowshoes, which were donated by Covell's grandson Stanley Myers, represent a transitional period of the site's history. Split Rock was originally a seasonal station; the keepers would live there during the shipping season but leave during the off-season months. Highway 61 made the station more accessible by land, and in the 1930s the keepers began living onsite year-round. Despite the highway, much of the station's immediate surroundings were still wilderness and difficult to navigate on foot in the winter. Snowshoeing would have been both a necessity and a pastime at Split Rock.

Also on display are items from MNHS's Walter F. Beyer papers, which serve to illustrate the construction phase of the lighthouse. This collection includes some original cost calculations and architectural sketches, in pen and pencil, presumably made



ABOVE: Keeper Franklin Covell's snowshoes are displayed in a section of the exhibit that explores life at the lighthouse. RIGHT: Keeper Covell and family at Split Rock Lighthouse, 1942. Covell served a total of 25 years at the station as an assistant keeper and head keeper.



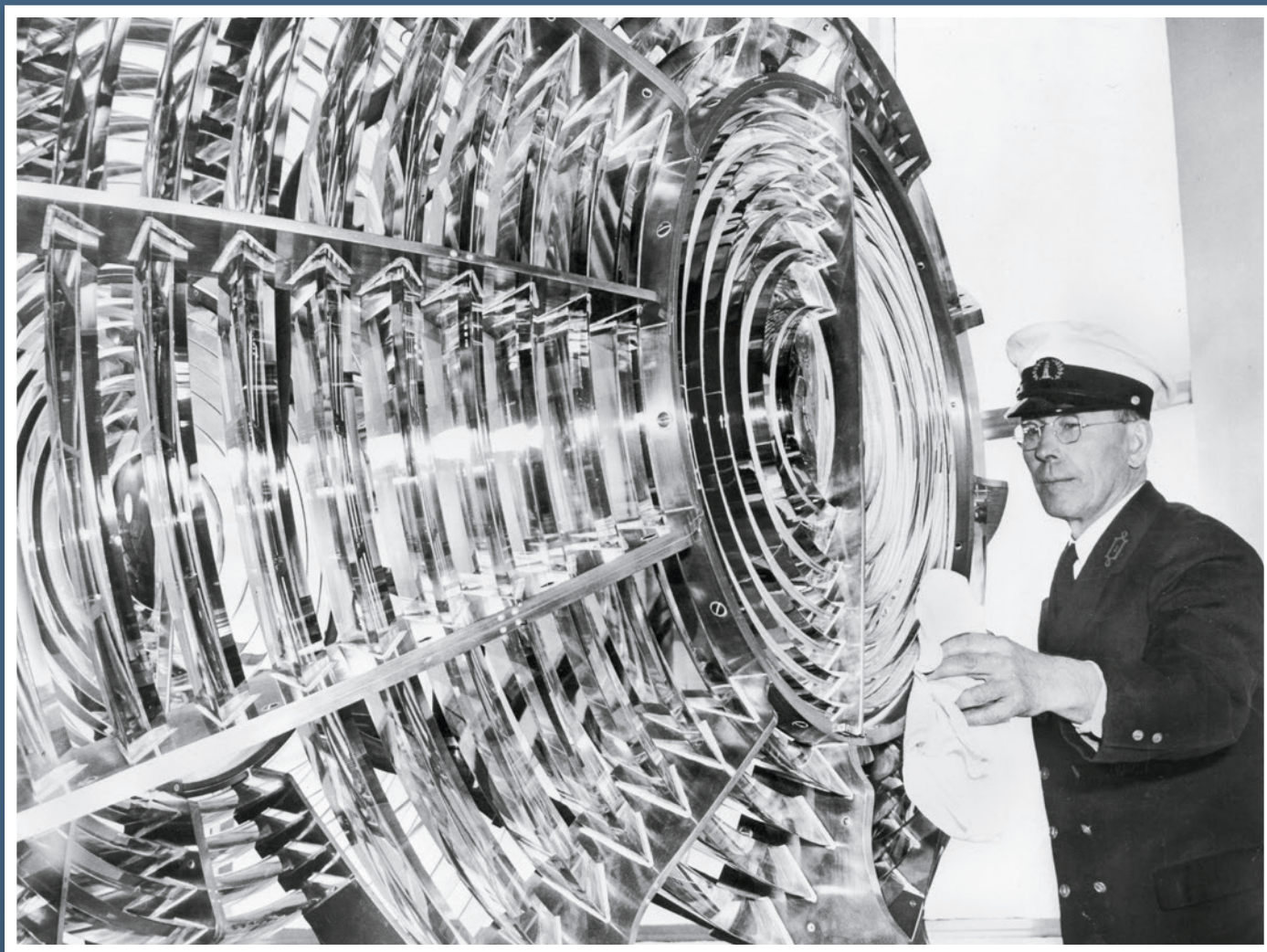
by Walter Beyer, who was an assistant engineer in the Lighthouse Service, and Ralph Russell Tinkham, the head engineer on the Split Rock Lighthouse project. Some of the pages in the collection include rough sketches of the various elements of both the lighthouse's structure and the lens. Discovered somewhat by accident by staff members at Split Rock Lighthouse in 2022, the Walter F. Beyer papers have never before been put on public display.

The largest object in the new exhibit, and perhaps the item that has caused the most excitement among Split Rock staff members, is not original to the site at all. Dan Spinella, of Artworks Florida Classic Fresnel Lenses, was commissioned to build

an exact scale replica of Split Rock's third order Fresnel lens to be the centerpiece of the new exhibit hall. The original lens, which still resides in the lighthouse tower, was built by Barbier, Benard, et Turenne in Paris, France, and is just under six feet tall and about five feet in diameter. The prisms, which work to bend and reflect the light from the light source in a single direction, were made out of a special glass called crown glass. The frame that holds the prisms in place was made out of bronze, which when coupled with the glass prisms made the lens extremely heavy—nearly a whole ton.¹¹

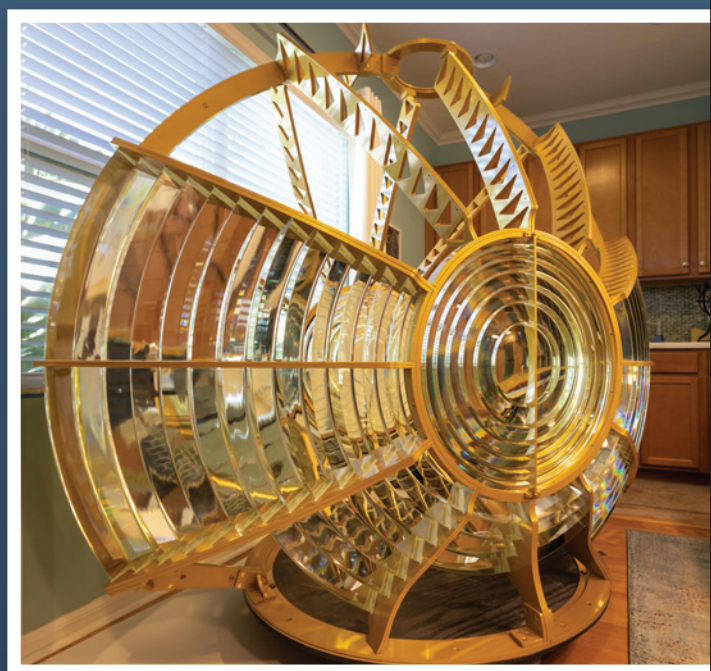
For practical purposes, the replica was made from lighter, but equally durable, materials. Spinella

explained, "The reproduction lens prisms are made of acrylic. Acrylic performs optically the same as glass, but [is half] the weight and far less expensive to produce. I did work on a number of historic restorations where we manufactured glass prisms. The cost is approximately [seven] times as expensive." In addition, the frame that holds the lens is made from coated aluminum, which is not only easier to maintain than the traditional bronze or brass, but also



Seen here being polished by keeper Tom Hassing in 1946, the Fresnel lens at Split Rock is a sophisticated piece of engineering.

RIGHT: Dan Spinella of Artworks Florida Classic Fresnel Lenses created a 3D computer rendering of the lens and frame before fabricating the replica for the exhibit. FAR RIGHT: Spinella assembled the replica lens in his shop and then transported it by van from Florida to northern Minnesota.



has the added benefit of being about a third of the weight.¹²

Though much lighter than the original, the reproduction lens was still labor intensive to create. The lens is composed of 252 prisms and two bullseye prisms; these all had to be converted into a 3D computer model to create a point-by-point numerical map. A computer numerically controlled (CNC) machine then followed the map to cut each individual prism. After the machining process, each prism had to be sanded by hand with progressively finer sandpaper in order to remove the machine marks and create a smooth surface. Scratches in the prisms would interfere with optical performance, so the prisms had to be polished first with standard acrylic polishers and then with a chemical process called vapor polishing. Vapor polishing removes even microscopic scratches from the surface of the prisms, creating a flawless finish. The final step was to tint the acrylic prisms, which are naturally clear, with green to match the hue of the originals.

The 214 original frame pieces were also converted into 3D computer

models to guide the reproduction. A CNC high-pressure waterjet was used to cut the coated aluminum pieces, which were then machined to add 550 tapped and countersunk holes. After being cut and machined, each frame piece was also sanded by hand. Fully assembled, the lens consists of 24 panels bolted together to hold the 252 prisms and two bullseyes.

After completing all the components, Spinella assembled the entire lens in his shop before packing it all into individual boxes and transporting it to Minnesota in a cargo van. In all, Spinella spent more than 500 hours working on the replica lens, in addition to the numerous hours of work by the vendors he used to cut the pieces of the lens. A pedestal, built by Kurt Fosburg of Superior Lighthouse Restoration, as well as a separate clockwork mechanism and reproduction lamp, are also part of the installation.

The Fresnel lens installation is a central and vital piece of the new exhibit. Scriven noted that the replica is also important because it provides an opportunity for people of all abilities to access the lens: “We wanted

to provide alternate accessibility options for visitors who cannot climb the lighthouse tower. This was one of the main driving points for getting a full-scale replica lens created. Now everyone can experience it when they visit the site.”¹³

The new exhibit at Split Rock Lighthouse Visitor Center has been a major cooperative process. Weiland said, “This has been one of the most collaborative projects I have worked on over the years. The entire team is focused on creating the best visitor experience with these amazing resources. We all bring different expertise to the team, and we support and challenge each other to make the project even better.” Scriven added, “Going through this exhibit process has been unlike anything I have ever experienced in my professional career. I have never been surrounded by so many talented people in my life.” Hundreds of hours from a wide array of experts have been poured into the creation of the new exhibit, and the staff at Split Rock Lighthouse and the Minnesota Historical Society look forward to sharing the final product with the public.¹⁴ ■

Notes

1. *Annual Report of the Chief of Engineers, United States Army, Part I* (1906), 669; *Blue Book of American Shipping: Marine and Naval Directory of the United States* (Marine Review Publishing Company, 1907), 401.

2. “Duluth Finds Itself in Grasp of Fierce Storm,” *Duluth News Tribune*, Nov. 27, 1905.

3. Ralph Russell Tinkham, “The Building of Split Rock Light Station, Minnesota,” unpublished report (1953), 8.

4. MNHS Library, “Split Rock Lighthouse Overview,” libguides.mnhs.org/splitrock/ov; Quinn Evans Architects, *Split Rock Lighthouse Historic Site Cultural Landscape Report* (Madison, WI: Quinn Evans Architects, 2018), 2–88; Russ Brandt, letter to U. W. Hella regarding visit to Split Rock Lighthouse State Park, Mar. 24, 1972, on file at Split Rock Lighthouse Historic Site, folder: DNR 1971–1974.

5. Split Rock Lighthouse National Register

nomination form (1969), npgallery.nps.gov/GetAsset/d7c050c2-a961-47ab-a6ed-822b70276a91; Quinn Evans Architects, *Cultural Landscape Report*, 2–95; “Split Rock Lighthouse Historic Site Major Restoration / Stabilization / Construction Projects” (2016), on file at Split Rock Lighthouse; Leonard Parker Associates, “Split Rock Lighthouse Visitor Center,” Minneapolis (1985), on file at Split Rock Lighthouse Historic Site.

6. Quinn Evans Architects, *Cultural Landscape Report*, 2–104; “Split Rock Lighthouse Historic Site Major Restoration / Stabilization / Construction Projects”; National Register of Historic Places, data downloads, www.nps.gov/subjects/nationalregister/data-downloads.htm.

7. Hayes Scriven, interview with author, Jan. 31, 2023.

8. Rich Rummel, interview with author, Jan. 21, 2023.

9. Rummel interview; Mary Weiland, interview with author, Jan. 22, 2023.

10. Rummel interview.

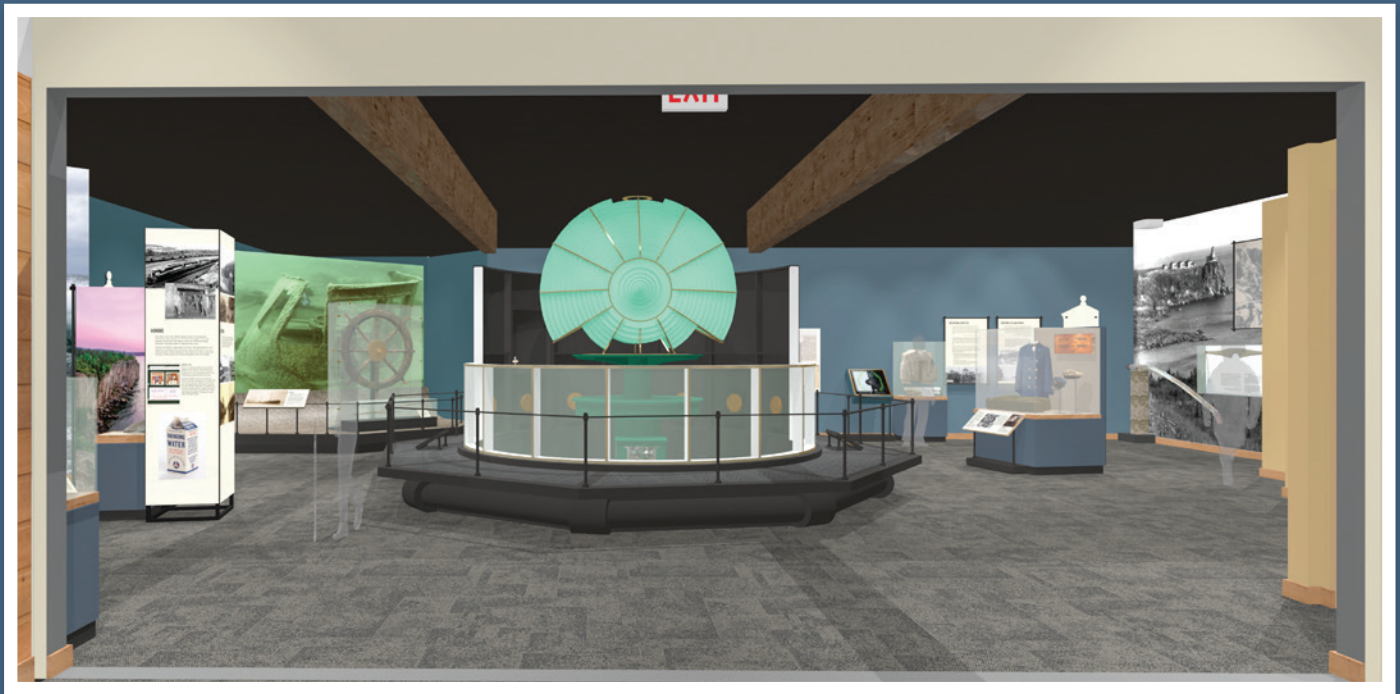
11. A Fresnel lens is a type of composite lens used in lighthouses that was developed by French physicist Augustin-Jean Fresnel in the early nineteenth century. In the United States, lens sizes are classified as first through sixth order; a third order lens is mid-sized.

12. Dan Spinella, interview with author, Jan. 27, 2023.

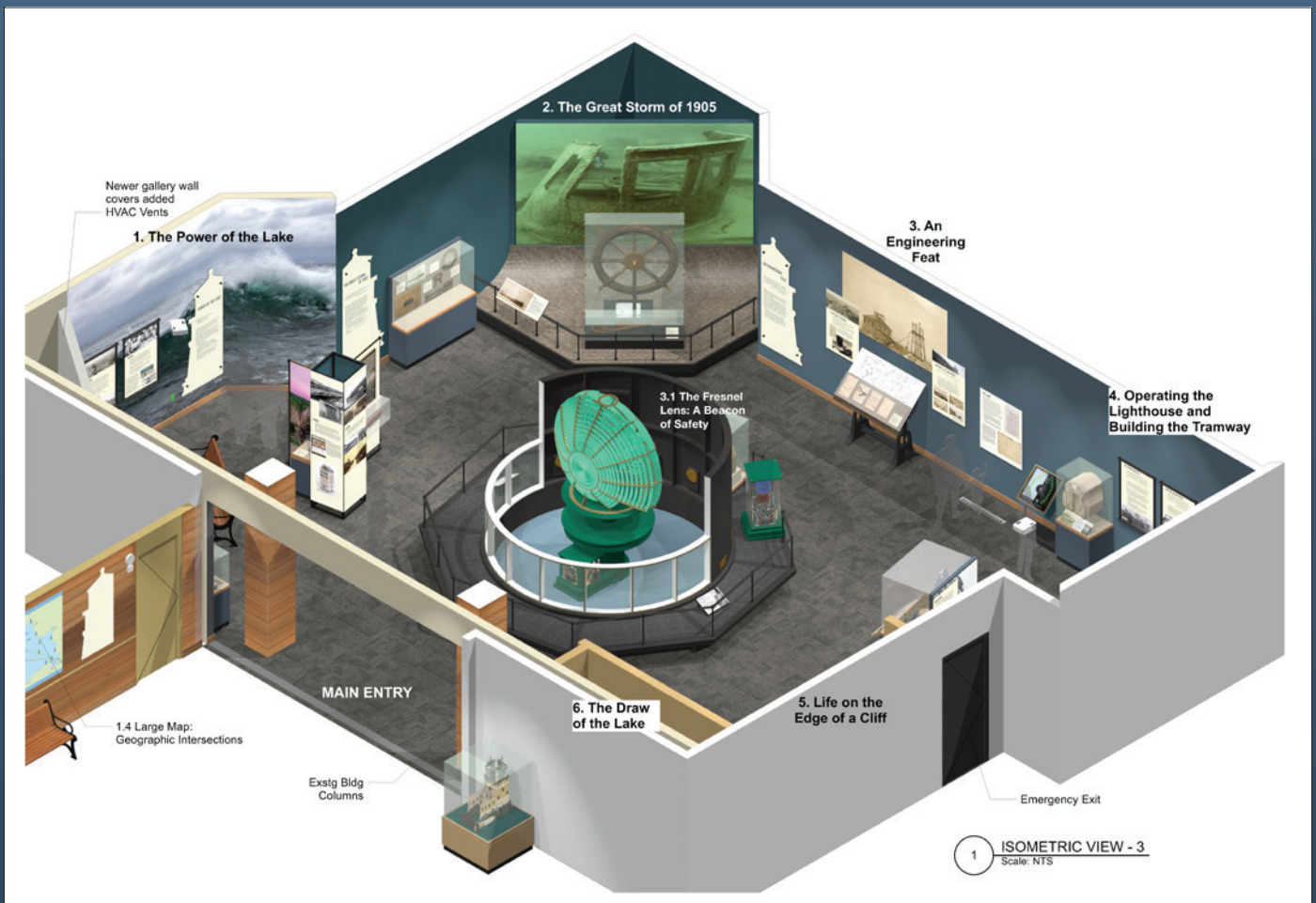
13. Scriven interview.

14. Weiland interview; Scriven interview.

Images on p. 158 and 167 (bottom right) by Hayes Scriven; p. 163 (top left) by Karley Fransen; p. 167 (bottom left) courtesy of Dan Spinella. All others from MNHS collections.



The replica Fresnel lens is a centerpiece of the Radzak Family Gallery at Split Rock.



Design drawing showing the exhibit layout.



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