SOCIETY FOR INDUSTRIAL ARCHEOLOGY
NEWSLETTER

Volume 51 Summer 2022 Number 3

Pacific Northwest IA Portland 2022 Conference Review

Around 80 SIA members and guests gathered for the SIA's 50th Annual Conference, June 9–12, 2022, in Portland, Ore. The conference headquarters was **The Benson Hotel**, a 1913 Baroque Revival-style historic hotel in downtown Portland, conveniently located for wide-ranging exploration of IA in the Pacific Northwest. This was the SIA's first return to the Northwest since the 40th Annual Conference, held in Seattle in 2011.

Returning to a standard format, the conference included pre-conference tours on Thursday, Friday process and historic site tours (followed by a Pearl District pub crawl on Friday night with opportunities for Special Interest Groups to gather), paper sessions and annual business meeting on Saturday, and post-conference historic site tours on Sunday. Thursday's opening reception was held in the Benson's former London Grill space. The London Grill was a well-known fine dining restaurant from 1955 until 2011 when it was remodeled as an event space. The remodel included restoring original details of the Fountain Grill, as it was called in the hotel's earliest days. The opening reception included a welcome to Portland by conference chair Rebecca Burrow.

Many thanks to our volunteer correspondents, who generously submitted the following reports and photographs from the conference for the benefit of *SIAN* readers.

Thursday Tour 1: Antique Powerland visited several of the 15 independent museums at the 62-acre **Powerland Heritage Park**, located about 40 mi. south of Portland. Powerland displays vintage cars and motorcycles, fire service, logging, rail, and gas- and steam-powered equipment. (A complete museum list can be viewed at *www.antiquepowerland.com/antique-powerland-museum*.) The entrance building contained a selection of historic apparatus, largely farming-related, along with a diorama of farming practices in the

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Steven Walton

The Modern Industry tour group at the bottom of the oldest drydock at Vigor.

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1930s, the latter crafted by Percy L. Dezotell, grandfather of our guide, Tim Dezotell. Along the tour, we saw an operating wood-burning 1909 Case steam engine, and the Antique Implement Society's collection of large gas- or diesel-powered engines, many of which are operable.

Featured stops for our tour were the **Oregon Electric Railway Museum** and the **Pacific Northwest Truck Museum**. Historically, Portland had a trolley line to Springfield, about 110 mi. south, with many branch lines serving other communities. The trolley museum offers rides within the park, but our visit focused on the vintage trolleys housed in the museum. The truck museum is the largest on the site and encompasses three buildings, one of which is used for educational programs, while the others house about 80 trucks roughly divided into pre- and post-1945 model years. Most of the post-1945 trucks are in running condition.

At the **Antique Caterpillar Machinery Museum**, we learned that Caterpillar began with the merging of Holt Mfg. Co. and C.L. Best Tractor Co., both manufacturers of crawler tractors. The crawler tractor had an advantage over wheeled tractors in softer soils. The museum contains several examples of the grey, gas-powered 1925–1931 Caterpillars. Beginning in 1931, the tractors were painted yellow and utilized diesel power. The early diesels included a two-cylinder gas engine to warm up and provide starting power for the diesel. The collection includes a mid-1950s D9 tractor with a bulldozer blade so large it has to be displayed outside because the assembled machine would be too large for the building.

Thursday Tour 2: Walking Tour of Portland began with our hotel, The Benson. Timber magnate and philanthropist Simon Benson spared no expense in his effort to build a first-class hotel in Portland. Led by Around Portland Tours, our group then walked by some banks that were similarly grand. Our guide explained the grandeur as an attempt by Portland's leading businesses to make the city look older and more prosperous than it actually was in the early years of the 20th c. We also saw **Pioneer Courthouse Square**, a large, beautiful, open public space created in 1984 after local opposition stopped the construction of an 11-story parking garage.

In addition to a general history of Portland, the guides offered up many funny anecdotes. For instance, as we walked by newer buildings, we learned that part of the city's permit process involves setting aside money for publicly accessible art. This usually means a sculpture. For those old enough to remember a popular "Expose Yourself to Art" poster, the photograph of a man "flashing" a statue is in Portland. And the man later became mayor!

Thursday Tour 3: Timber Old and New. Thirteen SIA members ventured south from Portland to explore one of Oregon's oldest industries and ended the day learning about some new high-tech uses of wood products. After a 100-mi. drive to Monroe, we were greeted by Don Wagner, our tour guide at the National Register of Historic Places (NRHP)-listed **Hull-Oakes Lumber Co.** sawmill. Wagner began working there in 1963 and is now a retired forester. The sawmill, which specializes in timbers measuring up to 85 ft., was rebuilt with recycled equipment on the ashes of the original mill follow-

John Reap

1955 Caterpillar D9 at Powerland Heritage Park.

The *SIA Newsletter* is published quarterly by the Society for Industrial Archeology. It is sent to SIA members, who also receive the Society's journal, *IA*, published biannually. The SIA through its publications, conferences, tours, and projects encourages the study, interpretation, and preservation of historically significant industrial sites, structures, artifacts, and technology. By providing a forum for the discussion and exchange of information, the Society advances an awareness and appreciation of the value of preserving our industrial heritage. Annual membership: individual $50; household (joint) $55; full-time student $20; institutional $75; contributing $100; sustaining $150; corporate $500. For members outside of North America, add $10 surface-mailing fee. Send check or money order payable in U.S. funds to the Society for Industrial Archeology to SIA-HQ, Dept. of Social Sciences, Michigan Technological University, 1400 Townsend Drive, Houghton, MI 49931-1295; (906) 487-1889; email: *sia@siahq.org*; website: *www.sia-web.org*.

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The *SIA Newsletter* welcomes material and correspondence from members, especially in the form of copy already digested and written! The usefulness and timeliness of the newsletter depends on you, the reader, as an important source of information and opinion.

TO CONTACT THE EDITOR: Marni Blake Walter, Editor, *SIA Newsletter*, 11 Esty Rd., Westmoreland, NH 03467; *sianeditor@siahq.org*.

ing a fire in 1936. It is known for providing Douglas fir beams and masts for the restoration of the USS *Constitution* and schooner C.A. *Thayer*, as well as timbers for multiple covered bridges. We also met owner Todd Nystrom, the grandson of Ralph Hull, part of the family that founded the mill. Once part of a bustling logging industry in the 1960s that included 15 sawmills in the region, there are now only two. Wagner told us that Hull-Oakes had long used steam power fueled by wood waste products but stopped 10–15 years ago. "We couldn't find parts [to maintain our equipment], he added, "so you needed to make them yourself!"

We first visited a shop where Hull-Oakes's enormous band saw blades are sharpened. Then we were able to get up close to view the process, which begins at a log pond, one of a few still in use. A rare surviving wigwam burner—outlawed in the 1970s due to adverse air quality—sat across from the log pond. The "pond bronc" operates a small tug-like boat that guides each log onto a chain-driven lift. To start the process, each log's small end must be oriented towards the debarker, capable of handling 72-in.-diam. logs and installed in 1972. Logs continue on a conveyor past the sawyer—the highest-paid employee—who directs the process of breaking down the log on a laser-guided gang saw by rotating it with the assistance of a ratchet setter, cutting off various inch-width sections, until a large, rectangular timber remains. Humans, not computers, make all decisions in the mill, allowing maximum product flexibility. A hydraulic boom (originally steam-powered) helps power the carriage as it moves through the saw. Smaller timbers go through an edger and a trimmer and are cut to marketable dimensions. The green chain follows, where various timber sizes are hand sorted. Large timbers are sent to a timber saw and cut to specified lengths. Some timbers are sent to the belt-driven planer to be sized to exact customer specs. All timbers, large and small, are stacked in the outside lumberyard, awaiting pick up.

After lunch by the Willamette River in downtown Corvallis, Oregon DOT's Chris Bell led us across the **Van Buren Bridge**, a 1913 pin-connected Pratt truss with a Warren truss swing span, scheduled for replacement. Near the Oregon State Univ. (OSU) campus, we examined the **Irish Bend Covered Bridge** (37-02-09#2). Here Benton County engineer Laurel Byer explained the history of the 60-ft.-long Howe truss, built in 1921 to standard plans developed by the Oregon DOT for rural crossings. Oregon has the largest collection of 20th-c. wooden Howe trusses in the country. The bridge was relocated to Irish Bend Road near Monroe in 1954. After OSU students labeled all timbers and connections for reassembly, it was moved in 1989 to the present Oak Creek location adjacent to OSU. After languishing for several years, funding was found to rehabilitate the bridge in 2021, including a replacement 12 × 12 stringer from Hull-Oakes.

Our final stop was the **Tallwood Design Institute**, a partnership of OSU's Forestry Dept. and the Univ. of Oregon's College of Design. Its mission is to advance the use of mass timber through applied research, industry collaboration, and life-cycle analysis. OSU's Evan Schmidt displayed examples of cross-laminated timber (CLT) and laminated plywood (mass ply, MPP). He noted how building codes have evolved to allow for 18-story mass timber structures capable of withstanding earthquakes. Evan then showed off the locally grown and processed mass timber uses in the architecture of the Emmerson Advanced Wood Products Laboratory and the neighboring Peavy Forest Science Center, which both feature Douglas fir glulam columns and beams, western red alder siding, CLT walls and acoustic panels, and an MPP roof.

The *Friday Tour 1: Early Industry* group headed south along the Willamette River to the town of West Linn, at the **Willamette Falls**, and home of the **Willamette Falls Locks, T.W. Sullivan Hydroelectric Plant,** and the **Willamette Falls Paper Co.** Some of us quickly discovered that we weren't pronouncing the name of the river correctly, which is a problem because everything is named after it. It's Will-**am**-ette, dammit! (Emphasis on the second syllable.)

The falls themselves are 40 ft. high and are considered the second largest in North America, after Niagara, as measured by volume (cubic ft. per second). For millennia indigenous people have gathered here to worship, trade, and celebrate.

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Christopher Marston

The wigwam burner at Hull-Oakes with the log pond boat in the foreground.

David Simmons

A 60-ft. timber being craned at Hull-Oakes.

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The drop has been heightened by about 10 ft. with a concrete weir-type dam that follows the horseshoe-shaped crest for all of its 2,950 ft. It is even equipped with inflatable rubber bladders which can be used to increase the amount of water moving through the central portion of the falls. The bladders are used during low water periods to maintain a constant flow for fish passage downstream. Fish ladders and fishways help the creatures that are headed upstream.

The locks are part of a canal built by private interests in the 1870s to move people and goods—especially logs—around the falls. The Army Corps of Engineers took over management of it in 1915, as it was critical at the time to commerce and travel in the Willamette valley. Amazingly, the fuselage of Howard Hughes's Spruce Goose was locked through on its way to a museum in McMinnville. But by 2011 commercial traffic in the canal was reduced to the point where it was no longer economically viable, and the Corps closed the canal. Since that time the Army Corps has provided only basic maintenance. Our guide was Sandy Carter, a member of the WF Heritage Foundation, and we covered every inch of those locks. Her group has been working on saving the locks for over 20 years. In 2021, the state approved a new WF Locks Authority, which hopes to take ownership of the canal from the Corps in 2024. The Authority has been successful in obtaining funding for the canal's rehabilitation under an innovative state-sponsored Public Corporation model. Sandy's group hopes that these moves will result in the eventual reopening of the canal to pleasure craft.

The canal creates an island in the Willamette immediately downstream of the falls. Hydroelectric generation started opposite the island in 1889. Transmission of electricity to Portland, a distance of 14 mi., was a first in the U.S. (Niagara Falls to Buffalo didn't start until 1896). The growing demand for electrical power, and flooding at the site of the first plant, resulted in a new plant being constructed at the present location on the island in 1895. The T.W. Sullivan Hydroelectric Plant is now owned by Portland General Electric (PGE) and still going strong. Knowledgeable PGE staff provided a thorough tour. An ingenious scheme has been implemented to ensure fish can travel safely downstream, and 99% of them do. The water in the forebay can enter any of the penstocks, as in a conventional run-of-the-river plant, but an extra fast current is maintained by allowing some water to travel past the penstocks to a bypass chute. Fish are inclined to follow the fast-moving water down the unobstructed channel and thereby avoid the turbines.

The hydroelectric plant shares the island with the Willamette Falls Paper Co., which originally also used the abundant water resources. Paper-making operations started here in 1889 and shipping and receiving activities primarily used the Willamette, including the adjoining canal. Now everything goes by trucks. All of the raw materials and finished product now pass over a small, one-lane, bascule bridge spanning the canal. Not a big problem now that the canal is closed, but when it reopens the bridge will need to be re-evaluated since frequent openings during the pleasure boat season could disrupt mill operations. The paper mill originally used pulp made by grinding logs floated down the Willamette. Now pulp is trucked in and pulped wheat straw is used but all the massive machinery for handling and grinding the logs is still there. Unfortunately, we didn't get to see the machinery since it is in a building that is rapidly deteriorating and unsafe. But we did see commercially successful paper making in action in this historic mill.

Once we had covered the early industry at the falls we headed back downstream to Oswego Creek, a tributary of the Willamette halfway between West Linn and Portland. Here we were treated to a delicious lunch, which we ate in a park pavilion that was the site of an 1888 iron furnace and

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Christopher Marston

Univ. of Oregon Architecture Prof. Don Peting discussing the history of the Irish Bend Covered Bridge.

Brian Gallagher

Willamette Falls locks and paper mill.

Louise Trottier

2022 General Tools Award Recipient

Louise Trottier has been a long-time promoter of industrial archeology in Canada, especially through her work as Curator of Energy and Natural Resources at the Canada Science and Technology Museum in Ottawa, where from 1988 to 2008 she worked on exhibitions, publications, and added enormously to the museum's collections from the mining, hydro, and forest industries.

Louise was introduced to industrial technologies early in life. She was born in Quebec to the industrial family who owned the Trottier Foundry. After earning an undergraduate degree in history at Laval Univ., Quebec City, in 1970, she received an M.A. in history at the Univ. of Toronto the following year and followed that with a second master's in museum studies from the National School of Conservation at the National Institute of Anthropology and History in Mexico City.

Louise's first project out of grad school was at the Univ. of Man (now Canada Museum of History) in Ottawa, conducting historical research over two years to help interpret artifacts from the mining and forestry industries. She then worked for three years as a historian with Parks Canada, where she researched the technical and social evolution of St. Maurice Iron Works, a site dating back to 1730. Her work there began just two years after the site became a National Historical Site, and it was also the first Parks Canada site to be designated an Industrial Heritage Site. During this period, she also worked as a professor at the Univ. of Quebec in Montreal, teaching courses in history of architecture, cultural properties conservation and interpretation, industrial heritage, science and technology collections, and the art of the Canadian First Nations, as well as serving as a consultant on cultural and industrial heritage projects for the Province of Quebec.

After joining the Canada Science and Technology Museum in 1988 as Curator of Energy and Natural Resources, Louise made artifact acquisition a primary objective. The more than 4,000 artifacts she eventually acquired range from a miner's lipstick to a nuclear fusion reactor—the world's only fusion reactor known to exist in a public collection. She also added more than 350 pieces of trade literature to the museum's library. Inclusivity in the work of the museum was another major theme, for which she worked tirelessly. As a French Canadian, she sought balanced representation of technologies from both French and English Canada. While overseeing the development of an exhibition called *Love, Leisure, and Laundry*, she made sure the voices of First Nation Canadians and Chinese Canadians were included. Trottier's exhibition, *Beyond the Trees*, interpreted Canada's forestry industry from numerous perspectives. From her position at the national museum, she also helped provincial museums work with Canada's indigenous communities when developing exhibitions.

While at the Canada Science and Technology Museum, Louise continued the career as an educator she had begun at the Univ. of Quebec in the 1980s, giving guest lectures at various universities. In the late 1990s and early 2000s, she engaged West Virginia Univ.'s industrial archeology program to help the Univ. of Western Ontario develop a training program in industrial archeology for employees of Parks Canada and museum professionals across Canada.

Many of Trottier's colleagues credit her with bringing industrial archeology to Canada. She co-founded the Canadian Chapter of The International Committee for the Conservation of Industrial Heritage (TICCIH) and was the main organizer of the 1994 TICCIH Congress in Montreal. She also served as scientific program advisor and editor of *From Industry to Industrial Heritage*, the proceedings of the Congress. She also co-founded the Quebec Association for Industrial Heritage in 1988.

While at the Canada Science and Technology Museum, Louise helped to organize the SIA Annual Meetings in Quebec City and Montreal and served a term on the SIA Board of Directors. Her term on the board was long before virtual meetings, and most meetings were held in Washington, D.C. Occasionally board members, including Louise, arranged to host a meeting at their facilities. Being a proud Canadian, she wanted the SIA Board to be able to experience Ottawa in the middle of winter, touting the joys of ice-skating along the Rideau Canal, which some Board members took her up on. She also arranged an excellent behind-the-scenes tour of her Museum for the SIA Board. As program chair for the SIA's Annual Meeting in Montreal, Louise arranged for it to be a bilingual conference, encouraging researchers to make their presentations in French, and providing simultaneous translations in both French and English.

At the Canada Science and Technology Museum, Trottier supervised the research, writing, and publication of ten projects, called Historical Assessments, on various facets of Canadian industry, ranging from coal mining to post-1960s hydroelectric megaprojects. Among them was "The History of the Petroleum Industry in Canada to 1947," by SIA Past President, Chris Andreae.

In addition to her promotion of industrial archeology in Canada and her work with museums and historic sites, Trottier has an impressive publication record as a scholar. Her publications include multiple peer-reviewed articles and two books on Canadian industrial heritage. In fact, Louise wrote the first book on Quebec's industrial heritage. Her exceptional knowledge of the subject prompted the Quebec government to commission her to produce a study that resulted in the monograph *Le patrimoine industriel au Québec*, complete with regional overviews and explorations of their development. Her presentations on Canadian street lighting, coal mining in Canada, and representations of energy in Canada's industrial heritage were highlights of the SIA

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General Tools *(continued from page 5)*

conferences at Savannah, Sacramento, and Baltimore. In addition, she wrote sections on industrial archeology in the *Blackwell Encyclopedia of Industrial Archaeology* (Oxford, 1992), edited by Barrie Trinder.

Taking a curatorial position at the national science and technology museum made Trottier a pioneer. She was the only female in that position, and she remained alone in that regard for many years. There are now numerous women working in the field of industrial heritage in Canada, who all credit Louise with "creating an inclusive and supportive environment in which [they] can flourish."

Canada's Governor General appointed Louise Trottier to the Order of Canada in Dec. 2021. She was nominated by a group of women who work in scientific and technological literacy and in Canadian technological heritage. In their nomination, they affirmed that "Louise—a former Curator, Energy and Natural Resources at the Canada Science and Technology Museum Corporation—has been a friend, a mentor, a teacher, a relentless supporter of women in a male-dominated workplace, and a role model that moulded two generations of Canadian historians of technology and museum professionals." Furthermore, "she patiently explained workings of difficult technologies and their roles in the transformation of Canadian society to less experienced employees of the museum. She stood up for younger scholars, when the new socio-technical methodologies that [they] brought to the workplace were questioned or dismissed. She would forgo her own travel and pay for the younger staff to attend international conferences and enjoy professional development. For those of us directly mentored by Louise, she became a role model, which guides the ways in which we support another generation of science and technology heritage professionals in Canada. Her impact will have a lasting effect on the work environment in the field."

Throughout Louise Trottier's remarkably diverse professional career, she has demonstrated command of numerous aspects of industrial heritage and has given sustained, distinguished service to the cause of industrial archeology, interpreting the material culture of Canadian industry to broader publics and helping to bring new generations of practitioners into our field.

Prepared by Fredric L. Quivik and David A. Simmons, with assistance from Susan Appel, James Bouchard, Patrick Malone, Pat Martin, Daniel Trottier, and Helena Wright.

The General Tools Award is the highest honor that the SIA can bestow. The award recognizes individuals who have given sustained, distinguished service to the cause of industrial archeology. The General Tools Award was established in 1992 through the generosity of Gerald Weinstein [SIA], chairman emeritus of the board of General Tools & Instruments, LLC of New York City, and the Abraham and Lillian Rosenberg Foundation. The Rosenbergs founded General Hardware, the predecessor to General Tools. The award consists of an engraved sculpture ("The Plumb Bob") and a cash prize. The recipient of the award is determined by the members of the General Tools Award committee, appointed by the President of the SIA, who serve three-year overlapping terms.

Criteria for selection are as follows: (1) the recipient must have given noteworthy, beyond-the-call-of-duty service, over an extended period, to the cause of industrial archeology; (2) the type of service for which the recipient is recognized is unspecified, but must be for other than academic publication; (3) it is desirable but not required that the recipient be, or previously have been, a member of the SIA; and (4) the award may be made only to living individuals.

Save the Date! June 7–11, 2023
SIA's 51st Annual Conference, Grand Rapids, Mich.

The 2023 SIA Annual Conference will take place in Grand Rapids, Mich., June 8–10, with pre- and post-conference tours June 7 and 11. Tours will highlight West Michigan's rich legacy of furniture production, maritime history, and manufacturing. Our conference venue along the Grand River, Embassy Suites Downtown Grand Rapids, provides access to industrial sites, museums, a diverse restaurant scene, and of course, a variety of breweries and distilleries befitting Michigan's "Beer City." We look forward to seeing you in 2023. Details to follow in the *SIAN*, on the SIA website, and in email announcements.

Detroit Pub. Co., Library of Congress

Grand Rapids Chair Co., ca. 1910.

Robert Gordon—2022 Vogel Prize Recipient

That the trophy itself evokes American iron is especially appropriate for the author of this year's winner of the Vogel Prize; he has literally written the book on American iron. The committee is pleased to have selected Robert Gordon's "Building Sewell's Bridge: Colonial American Structural Engineering," which appeared in Vol. 42, no. 1, of *IA* (2016).

Gordon provides us with a well-balanced and nicely illustrated narrative that puts a structure from colonial America into historical context, with consideration of social and political issues, as well as technological. His description of the engineering is thorough, yet readable. Moreover, he uses thoughtful speculation to bridge the gaps in the limited documentation, notably a single drawing that Samuel Sewall made of the bridge. Gordon steps back to identify a chronological era of structural engineering development populated by several other similar bridges. He takes a step forward to look at the preservation efforts that this remarkable bridge inspired.

Bob Gordon was not present this year at the Portland meeting, and therefore he sent the following message: "Robert Vogel is a mentor I've admired since I attended my first SIA meeting some forty years ago. My colleague, Carolyn Cooper, had just discovered mysterious graphite crucibles at the site of Eli Whitney's armory, and we needed help figuring out why they were there. It turned out Whitney's son had made pistols with cast-iron frames, a technique later copied by Remington. Further exploration of industrial sites and artifacts followed with Carolyn, Mike Raber, Pat Malone, Greg Galer, and others. This industrial experience proved valuable later as I catalogued the metal artifacts Hiram Bingham recovered from Machu Picchu; objects seen by others as symbolic, I saw as tools. Today it is a joy to follow the work of a new generation of scholars such as Brian Schmult, with his recently published artifact-based study of foundry labor at Hopewell Furnace, and Christopher Fennell's industrial-archeology interpretation of antebellum craft and plantation labor. Perhaps this Vogel Prize will encourage some of you to venture into the IA of colonial and early republic sites and artifacts. Thank you, Robert and the SIA."

Each year, the SIA highlights outstanding scholarship in the field of industrial archeology with the Vogel Prize. Named in honor of SIA co-founder and distinguished member, Robert M. Vogel, the award recognizes the author of the best article to appear within the last three years of the Society's peer-reviewed journal, IA: The Journal of the Society for Industrial Archeology. *The Vogel Prize consists of a cash award and a unique, genuine wooden foundry pattern mounted on a plaque, engraved, with the recipient's name—easily one of the most distinctive trophies in the scholarly world.*

SITES & STRUCTURES

Two elements of New York City IA were recently featured in *Untapped New York*. View photos of the **Glenwood Power Plant** in its abandoned state and read a summary of its history and future in "Go Inside the Glenwood Power Plant in Yonkers" (*untappedcities.com/2022/05/18/*). The Goren Group plans to redevelop the complex into "The Plant," a "global home for climate solutions." The coal burning plant was designed by the architectural firm of Reed & Stem, most famous for designing Grand Central Terminal. It first went online when railroads in the region were electrified in 1900. In the 1930s the railroad sold off the building to Con Edison, which used it until 1963. Decaying since then, the new development includes plans to restore all of the buildings, along with four rotary convertors, as well as the steel arcade structure of the former turbine room and other elements. Meanwhile, read all about a **Kawasaki New York City subway car** that floats above Wells Ave., repurposed as a pedestrian bridge connecting two buildings on a dead end street in "Why Is an NYC Subway Car Floating above a Yonkers Street?" (*untappedcities.com/2022/05/19/*). ■

NOTES & QUERIES

Hagley Museum & Library (Wilmington, Del.) has opened the **Batten, Barton, Durstine & Osborn** collection to researchers. The legendary New York City advertising firm was founded in 1928 and created many famous promotional campaigns for American manufacturers and retailers. For example, BBDO was the firm behind DuPont's "Better Things for Better Living," Campbell Soup's "Mmm mmm Good," Unilever's "Ring Around the Collar," and Burger King's "Have It Your Way" campaigns. BBDO was among the first ad firms to organize a radio department, producing programs such as *Cavalcade of America* on the CBS radio network beginning in 1935. The collection includes documentation of BBDO's efforts to leverage radio and television as new media outlets for their clients. The files contain a wealth of information about American business practices and their executives' views on how to influence the American public and consumers. The collection includes advertisements, market research reports, correspondence, biographical files, newspaper clippings, photographs, and motion pictures. Finding aid: *findingaids.hagley.org/bbdo.—Hagley Magazine (Summer 2022)* ■

PORTLAND (continued from page 4)

pipe foundry, but almost nothing is left of these.

The afternoon tour started at a restored cottage, one of many built by the Oregon Iron Co. for its workers. Owned by the City of Lake Oswego in what is now a high-end residential neighborhood, it houses the excellent **Iron Workers Museum**, devoted to the **Oswego Iron Furnace—**the first on the Pacific Coast, built in 1866. From there we walked, as the workers would have, to the beautifully restored (2010) stack and foundation of the blast house of the furnace, listed on the NRHP in 1974. A nice touch for park visitors were the BBQ grills designed as mini replicas of the furnace stack. Waterpower from the Oswego Creek and the location on the Willamette River attracted the early industrialists. The fact that all of the iron used on the West Coast prior to the creation of this furnace had to be shipped around Cape Horn at great expense was also a powerful incentive. We sheltered from the downpour inside the stack as our host, Lake Oswego resident Susanna Kuo, told us the story of the operation of the furnace and its restoration. She and archeologist Rick Minor were instrumental in the preservation and interpretation of this important resource. (See the Vogel Prize-winning article in *IA*: Susanna C. Kuo and Rick Minor, "The Oswego Furnace: Industrial Archaeology at the First Iron Works on the Pacific Coast," *IA* 42, No. 1 [2016]: 37–54.)

For such a newly developed part of the country the industrial archeological resources were wonderful. Of special interest was the fact that at two of the sites our guides were women with encyclopedic knowledge of the industrial archeology of their projects. In a field often dominated by men, this was refreshing and encouraging.

Friday Tour 2: Modern Industry visited three sites that reflect the 20th- and 21st-c. evolution of Portland industry. Our first stop was **Cascade Steel** in McMinnville, an electric arc furnace (EAF) mini mill that takes scrap steel and turns it into a wide range of hot rolled products, mostly rebar and rod, which are sold to distributors and fabricators throughout the U.S. Cascade is fully owned by Schnitzer, a scrap metal company, and the mill we visited employs over 400 workers. Seeing (and hearing) an EAF in operation really makes one's day. It's sure working hard, because each of its 10-T electrodes needs to be changed every 24 hours. Next step is the linear refractory furnace (LRF), where the steel chemistry is fine-tuned, and the melt reheated on its way to a five-lane caster. One peculiarity of this mill is that the melt shop out-produces the rolling mill and therefore runs only five days a week. Hot metal operations normally do not like start-ups and shutdowns, so the sequences are precise and delicate. Then on to the rolling mill, which on that day was rolling reinforcing bars for use in concrete slabs and beams. Each red-hot bar looked like a flash of lightning as it sped down the roller table and into its cradle to cool. And then on to the shear where a collection of many bars was cut to length all at once and then moved on to be bundled and shipped. Too bad no photos were allowed!

Next the group visited **VintageTEK: A Museum of Vintage TEKTRONIX Equipment**, which was founded in 2010 in an effort to preserve some of the artifacts and history

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James Bouchard

A square wave generator and first oscilloscope by Tektronix.

John Reap

Model CA Plugin unit at Tektronix, introduced in 1959. Plugin accessory units were used to increase the scope's versatility. Note vacuum tubes and other components of the era in well-organized cage-type construction. The red knobs in the voltage selector switches fine-tune the values.

Susanna Kuo

The Oswego Furnace, informational kiosk, and 13,000 lb. salamander from the hearth of the furnace.

Burden Iron Works Museum Acquires Steam Engine and Dynamo

On July 8, 2022, a vintage steam engine and General Electric dynamo combination was moved to its new home at the Hudson Mohawk Industrial Gateway's Burden Iron Works Museum in Troy, N.Y. This equipment, believed to date from the late 19th or early 20th c., was originally installed at the Ludlow Valve Co. factory in Troy. Ludlow in turn had taken over the facilities of the old Rensselaer Iron Works and successor iron and steel companies. The Rensselaer Iron Works complex was included in the first HAER study in 1973, *A Report of the Hudson-Mohawk Area Survey*. Ludlow closed in 1968, and the building which housed the steam engine and dynamo was lost to arson in the early 2000s. The fire did not substantially damage this equipment, but it was left largely unprotected, and key components of the steam engine were lost to vandals and scrappers.

The City of Troy, the current owner of the Ludlow site, offered the steam engine and dynamo to the Gateway in May 2021 for $1—with the provision that it be removed from the site within one year. The Gateway was very fortunate that local businessman and Gateway supporter Peter A. Grimm financed this project, which included the construction of a concrete display pad and the expense of moving the equipment. A professional rigging company disassembled the equipment, estimated to weigh 70 tons, moved it approximately one mile from the Ludlow Valve Co. site to the Burden Iron Works Museum grounds, and reassembled it on the new pad.

The Gateway is currently working on display signage for this new outdoor exhibit, which joins a ladle car acquired in the 1980s. It is also trying to find a contractor able to repurpose original wrought-iron fencing from the Burden Iron Co. (currently in storage) to enclose the exhibit. Although there will be some conservation of the steam engine, the Gateway does not have plans to restore the original equipment's appearance using salvaged or recreated parts.

Steve Muller

Steve Muller

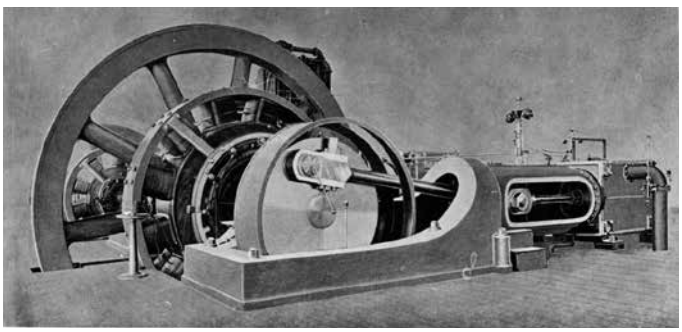
The engine and dynamo at the Ludlow site prior to the move.

John Pattison

Completed installation.

Steve Muller

Engine and dynamo on trailer awaiting installation at Burden Iron Works Museum.



Museum of Science and Innovation (MiSci), Schenectady, N.Y.

Illustration of a similar but complete steam engine and dynamo.

CHAPTER NEWS

The **Northern Ohio Chapter** (NOCSIA) toured the small industrial city of Orrville, Ohio on Wed., June 29. Orrville is best known as the headquarters of Smuckers, one of the world's leading purveyors of coffee, peanut butter, jam, and other packaged foods. We found that this city of around 8,000 people, set amid the open farmland of agrarian Wayne County, is home to a surprisingly large number of world-class manufacturers.

After meeting for morning coffee, NOCSIA members visited Schantz Organ Co., America's oldest and largest pipe organ builder, still operated by the family that founded it in Orrville in 1873. Schantz hand-builds, installs, restores, and services distinguished pipe organs, mostly for churches, colleges, and arts institutions across North America. The NOCSIA group watched a craftsman repair a bank of tin pipes, each about the diameter of a ballpoint pen, and saw several important restoration projects in various stages of completion. Schantz can do everything from casting metal pipes in a wide range of sizes, to carving intricate woodwork, to manufacturing the sound-proof electric blowers that give an organ its voice.

NOCSIA next traveled north along Main Street to the headquarters and manufacturing facilities of the Will-Burt Co., the world's leading producer of telescoping masts for communications and military uses. There the NOCSIA group saw the most up-to-date metalworking equipment producing components to precisely control the masts used by on-location TV news trucks.

After lunch in a local restaurant, the NOCSIA group examined artifacts in Orrville's rail yard and toured the 1840s homestead of Orrville's founder, Judge Smith Orr, before driving to the nearby village of Smithville. There the group toured Mishler Mill, which was built in 1887 and is still

(continued on page 14)

Rebecca Johnson photos

Will-Burt turns these steel pipes into telescoping masts.

The organ assembly room at Schantz.

Traditional weaving is still practiced at the 1887 Mishler Mill.

SOCIETY FOR INDUSTRIAL ARCHEOLOGY
NEWSLETTER

PUBLICATIONS OF INTEREST

Vol. 51, No. 3 Summer 2022

COMPILED BY

Mary Habstritt, New York, N.Y., Patrick Harshbarger, Wilmington, Del., and Marni Blake Walter, SIAN *editor, Westmoreland, N.H.*

GENERAL INTEREST

- **IA News**, No. 192 (Spring 2020) includes Tony Crosby, *Stortford Lime Works* (renewed efforts to preserve long-abandoned works in Hertfordshire); Helen Martin, *Snowy River Floodplain Rail Viaduct, Orbost, Victoria, Australia* (timber viaducts, a hallmark of Australian RR engineering, their history, as well as recent losses to wildfires); Chris Barney, *Kolkata Elevated Reservoir Under Repair* (remarkable 110-ft.-high, 9-million-gal. overhead reservoir, built in 1909 by British engineers of the Calcutta Municipal Corp.); Charlotte Goudge, *The Gamble Plantation, Ellenton, Florida* (built using enslaved labor in 1845, it is regarded as the only standing plantation house in South Florida with associated structures and industrial sugar factory); and Chris Barney, *Early Electrically Powered Canal Boats* (beginning in the early 20th c., mostly in France and to a lesser extent in Germany, Belgium, and the U.S.).
- **IA News**, No. 193 (Summer 2020) includes *New Hope for Leeds Temple Works* (efforts to save the remarkable Egyptian Revival-style weaving shed, which when completed in 1843 was said to be the single largest room in the world); Anthony Pilling, *John Pilling & Sons—200th Anniversary, Lancashire Loom and Machine Makers* (detailed history of firm noted as loom designers and makers, founders, joiners, spindle makers, millwrights, and textile machinists); Tegwen Roberts, *Elsecar—A Model Industrial Village* (a model industrial village in the heart of South Yorkshire housed workers of local ironworks and collieries from the 1790s to the 1980s); Peter Strong, *Wetheriggs Pottery, Clifton, Cumbria* (the complex of buildings and kilns may be the only example of a complete country pottery left in Great Britain); and David Rollinson, *The Albion Mines Iron Foundry, Newfoundland* (archeological excavation of an eastern Canadian foundry, operating in a company town at the Albion coal mines from the late 1820s to the 1860s).
- Ronald Ladouceur. **The Rise of White Flour**. *SCA Journal* (Spring 2020), pp. 6–11. Outdoor advertising between 1900 and 1915 often used stylized white lettering painted on the sides of red brick buildings to sell flour, bread, cereal, and soap. The author offers observations regarding the potential cultural significance of these now-faded "ghost signs," including the intent of advertisers to abate concerns about the purity and cleanliness of their products, as well as appealing to the white racial makeup of the intended audience. Also, John Autry, **Faded Glory**, *Preservation* (Winter 2020), pp. 36–42. Muralists restore ghost signs in Mooresville, N.C.
- Clive Thompson. **Fueling the Future**. *Smithsonian* (July/Aug. 2022), pp. 14–20. Compares present-day efforts to promote alternative fuels to the arguments Americans made against coal in the 19th c. Prominent citizens denounced coal stoves as "un-American" and sources of poisoning and cultural decline since families would no longer gather around the "flickering hearth."
- **TICCIH Bulletin 96** (2nd Quarter, 2022) includes Maria Mavroidi, *Vida, Reclaiming Industrial Heritage in Greece*; Hongtao Bo and Boying Liu, *Shougang Steelworks Regeneration for the Beijing Winter Olympics*; Rafael Garcia Garcia, *Preservation of Madrid's Industrial Heritage*; Florence Hachez-Leroy, *Éppeville Sugar Refinery*; Morihira Masato, *Sado Island Gold Mines UNESCO Inscription;* Zrinka Barišić Marenić and Tina Bilić, *Duga Resa, Rise and Decay of an Industrial Town*; Robert Carr, *Preston Bus Station Prize*; Francesco Antoniol and Miguel Ángel Álvarez Areces, *New Perspectives on Business Archives*; updates on the TICCIH Montreal Congress: Alain Gelly, *Industrial Heritage in Canada II*; James Douet, *National Reports: Who Is Writing Yours?*; conservation & interpretation reports: Z.P. Liollio, *The Rivers of Steel Heritage Area*; Asma Mehan, *Iranian Petroleum Industry Museums*; TICCIH news: Marion Steiner, *Shape TICCIH's Future—2022 General Assembly in Montreal*; Miles Oglethorpe, *Agreement between TICCIH and FIVA*; Massimo Preite and Miles Oglethorpe, *Towards a TICCIH Europe*; Obituary: Rene Boretto; Book Reviews: *Landscapes of Extraction: The Art of Mining in the American West*, by Betsy Fahlman [SIA], reviewed by Nicholas Pevzner; and *Fabbriche Ritrovate—Rediscovered Factories*, by Massimo Preite and Gabriella Maciocco, and *Industrialni Situace—Industrial Contexts*, by Benjamin Fragner, reviewed by James Douet.

IRON & STEEL

- Alejandro de la Garza. **Green Steel from Sweden**. *TIME*, Vol. 199, Nos. 17–18 (2022), pp. 14–15. Steelmakers in Lulea have successfully produced the world's first steel using no fossil fuels, opening a technological pathway to decarbonizing the steel industry. SSAB's HYBRIT plant uses hydrogen separated from water by renewable energy. The hydrogen is heated and then injected into a furnace containing iron ore to form water vapor, leaving behind sponge iron, which can then be melted with scrap to make steel. While still in its pilot stage with many technical and economic hurdles to overcome before being

scaled up and commercially viable, "green steel" is judged to hold great promise in the battle against climate change.

Mines & Mining

- Mark Aldrich. **FDR, the New Deal, and the Great Nineteen Thirties Gold Rush**. *MHJ*, Vol. 26 (2019), pp. 71–86. The public policy behind the gold mining boom of 1934, which was set off when the currency of the U.S. was taken off of the gold standard on April 19, 1933 and the price of gold shot up. The late 1930s witnessed an all-time peak in gold production in the U.S., much of it driven by investment in new and larger capacity technologies such as massive dredging machines.
- Khaled Bloom. **"Why Didn't They Do Something about It?": Gold Versus Grain in Post-World War II California**. *MHJ*, Vol. 27 (2020), pp. 66–76. Examines the conflict between gold dredgers and commercial farmers in the Sierra foothills with a special focus on the Feather River in Butte County. The behemoth dredging machines churned up thousands of acres, creating gravelly tailings wastelands that had no fertility and were nearly impossible to reclaim. Butte County passed restrictive ordinances in 1946–47, which the gold dredgers successfully fended off in court. Ironically, the court decision, although in favor of the dredgers, also laid out arguments that would eventually provide a legal basis for stronger environmental laws culminating in a statewide ban on dredging in 1975.
- Rudy Davison. **An Overview of Four Significant Adirondack Mining Centers**. *MHJ*, Vol. 26 (2019), pp. 35–54. Observations from a survey of the remote Tahawus, Port Henry, Lyon Mountain, and Benson iron mines in the northern half of Adirondack Park, N.Y. Much of the survey was undertaken by seaplane with excellent aerial views of surviving mine buildings and other surface features.
- Erie Mining Company History Project Team. **Taconite: New Life for the Minnesota Iron Range, The History of Erie Mining Company**. Donning Co. 2019. $45. *www.thehistorypeople.org/product-page/erie-mining-book-1*. Written by former employees, this book tells the story of Erie Mining from its formation in 1940 to its closure in 2001. A specific focus is the technological and commercial development of taconite, turning a low-grade ore into a high-quality product that ensured the Mesabi Range's continued prominence as a major ore supplier. Oral histories provide insight into the Erie Preliminary Taconite Plant and the Commercial Plant where the fine iron particles were separate from the ore and turned into taconite pellets. Covers plant operations, growth and expansion, workers and unions, and the closure of the facility. Rev.: *Mining History News* (Winter 2020).
- James L. Fairchild and David T. Robinson. **John W. Searles: California Mining Pioneer**. Searles Valley Historical Society, 2018. After failing at silver mining, Searles (b. 1828—d. 1897) was the first person to exploit borates on an industrial scale from the dried-up lakebeds in the Death Valley region. Production skyrocketed from the mid-1870s to the 1890s about the same time that Searles became legendary for the "twenty-mule-team" borax wagons that delivered product to the railhead at Mojave. A detailed and thoroughly research biography. Rev.: *MHJ* (2019), pp. 103–4.
- Sarah E. M. Grossman. **Mining the Borderlands: Industry, Capital, and the Emergency of Engineers in the Southwest Territories, 1855–1910**. Univ. of Nev. Pr., 2018. 183 pp., illus., maps. Follows several generations of mining engineers, from the early engineers of the 1850s and 1860s who were trained in Europe, to the next generation of adventurers of the 1870s and 1880s who were committed to their role as representatives of investors, to later generations of graduates from American mining schools who saw themselves as technical experts and consultants. Rev.: *MHJ* (2019), pp. 106–8.
- John R. Henris. **"Trout Fishing Must Eventually Give Way to Mining": Cyanide Mills and Recreation on Spearfish Creek in the South Dakota Black Hills, 1898–1910**. *MHJ*, Vol. 26 (2019), pp. 55–70. A federal fish hatchery and cyanide-process gold mills established at Spearfish at about the same time in the late 1890s and early 1900s find it impossible to coexist due to the poisoning of the stream. Proponents of recreational sports fishing found some success using litigation to delay mining but in the end the mining interest laid claim to the main branch of the creek. The author frames this as a foreshadowing of later 20th-c. environmental activism.
- R. Damian Nance. **Cornish Mining Technology in Eastern Pennsylvania: The Perkiomen and Wheatley Mines**. *MHJ*, Vol. 26 (2019), pp. 1–20. Two mines near Valley Forge, the first copper and the second lead, associated with Charles M. Wheatley, an American-trained mine manager who developed the mines on the Cornish system with assistance from emigrant miners from Cornwall during the late 1840s to the 1850s. Today, two stone Cornish stacks remain as ruins to mark the mine locations.
- Cynthia Ackley Nunn. **Abandoned California: King Solomon Mine**. Arcadia, 2019. 96 pp., illus. Richly illustrated history of the mine, established in the 1890s in the Rand gold-mining district in the Mojave Desert. Rev.: *MHJ* (2019), p. 102.
- Eric C. Nystrom [SIA]. **Witnessing the Alaska Gold Rush: Finding Mining History in Court Records**. *MHJ*, Vol. 26 (2019), pp. 21–34. With Alaska as a case study, discusses the ways that judicial records, especially unpublished transcripts and briefs, can shed light on the mining operations and working conditions, and capture detail about the everyday lives and business travails of the people occupied by mining.
- Eleanor Herz Swent. **One Shot for Gold: Developing a Modern Mine in Northern California**. Univ. of Nev. Pr., 2021. 278 pp. $45. Described as one of the first mining histories set entirely after 1980, this narrative follows the development of Napa County's McLaughlin Mine, which produced about 3.4-million ounces of gold between 1985 and 2002, making it the Golden State's most productive mine of the 20th c. The narrative includes extensive discussion of the impact of environmental regulations on operations and the closing of the mine, which ended with the land's transformation into a nature reserve. Rev.: *MHN* (Spring 2021).
- Christian Wright. **Carbon County USA: Miners for Democracy in Utah and the West**. Univ. of Utah Pr., 2019. 469 pp., illus. $45. With a focus on labor history, this book has chapters on the development of coal mining in Utah in the 1930s and the influence of the United Mine Workers of American (UMWA), Utah Fuel's Sunnyside Mine explosion in 1945, the development of strip mining in the late 1940s and 1950s, anti-unionism in the 1960s, the Wilberg Mine fire of 1984, the recruiting of ethnic minorities and women as miners, and the decline of unionism in the 1980s. Rev.: *MHJ*, Vo. 27 (2020), pp. 98–100.

Water Transport

- Christine Rae Henry. **Another Kind of Blue Highway, 60 Miles across Lake Michigan**. *SCA Journal* (Spring 2020), pp. 18–23. The history and transportation context of the S.S. *Badger*, the last Great Lakes' car ferry, which continues to operate as a link in U.S. Route 10 and a designated National Historic Landmark as of 2016 (see *SIAN*, Spring 2014).

Railroads

- Terrence Monmaney. **The Long Haul**. *Smithsonian* (July/Aug. 2022), pp. 52–61. Highlights the photography of Stephen Mallon, who creates striking portraits of freight cars and locomotives. His technique involves isolating one car, composing it as if it were a still life.
- Max Scott. **See the Freight Tracks that Could Become the Interborough Express**. *Untapped New York* (May 31, 2022). *https://untappedcities.com*. A new proposal to re-purpose an underutilized freight line in Brooklyn and Queens for express passenger service looks to be on track. The line has been thoroughly documented by a local photographer who made a short film about it.
- Matt Stirn. **Making the Connection**. *Smithsonian* (Apr./May 2022), pp. 62–73, 122. Archeologists investigate Terrace, Utah, a railroad town in western Utah founded in 1869 as a stop on the new transcontinental RR. In 1903, Terrace burned in a fire and the railroad rerouted 50 mi. to the south straight across the Great Salt Lake. A stunning modern-day aerial photograph shows the footprint of the town's turntable and roundhouse, but of most interest to archeologists is Terrace's Chinatown. Material culture demonstrates strong connections to trade networks linking back to the immigrants' home villages in China. The descendant community and archeologists are working to better protect the site from looting.

Agriculture & Food Processing

- **The Nicoll Mill on Connetquot River**. *OMN* (Spring 2022), p. 10. Brief history of a historic gristmill in Great River, Long Island, N.Y. Describes machinery (cleaner, smutter, bolter) dating to the 19th c. and recent efforts to preserve the mill, which is open for tours.

Buildings & Structures

- Heather M. David. **Mid-Century Modern Blockheads**. *SCA Journal* (Spring 2022), pp. 6–11. A guide to precast-concrete blocks with decorative open patterns, often used as sunscreen walls. Various patterns described including the Empress, Maltese, Radiant, Starburst, Vista-Vue, Shell Oil, and Mayan.
- Diane DeBlois. **Ephemera, Roadside Tree Houses**. *SCA Journal* (Spring 2020), pp. 24–27. A brief survey of early automobile tourist attractions with structures incorporating large trees and tree stumps.
- Lyle Miller. **A Good Night's Sleep: The Evolution of the Motel Room**. *SCA Journal* (Fall 2020), pp. 18–25. By the 1950s, the motel room offered luxuries perhaps not found at home including wall-to-wall carpeting, Hi-Fi music, cross-ventilation and screened windows, and later, individually controlled heat and air-conditioning. Illustrations from period advertising and postcards show how motel room furnishings evolved from, and upgraded on, those found in earlier tourist cabins.
- Mark Reinberger. **Research Notes: Using Dendrochronology to Date First-Period Houses in the Georgia Backcountry**. *B&L*, Vol. 27, No. 1 (Spring 2020), pp. 65–78. Tree-ring dating from 11 houses located northwest of Augusta, Ga., suggest dates of construction from the 1790s to the 1820s, in some cases several decades later than local history sources.
- Joe Sugarman. **Industrial Evolution, An Old Baltimore Lithography Factory Became a Source of Hope for the Surrounding Community**. *Preservation* (Summer 2020), pp. 34–42. The former A. Hoen & Co. complex, six separate brick buildings, closed since the early 1980s, redeveloped as a hub for community service organizations in the Collingswood Square neighborhood.
- Logan Ward. **In the Vault, Seven Places That Showcase Spectacular Guastavino Tile Vaulting**. *Preservation* (Summer 2020), pp. 47–50. Highlights the vaults and domes of the R. Guastavino Co. of New York City, which built several thousand structures from the 1880s to the 1960s. Featured buildings are the Boston Public Library, the Queensboro Bridge approach spans arcade (New York), Penn Museum (Philadelphia), the Basilica of St. Lawrence (Asheville, N.C.), Nebraska State Capitol (Lincoln), West Side Market (Cleveland), and Hearst Memorial Mining Building (Berkeley, Calif.).

Bridges

- R. Scott Bomboy. **Wooden Treasures: The Story of Bucks County's Covered Bridges**. Bridgetown Communications, 2022. 220 pp., illus. $29.99. *coveredbridgebook.com*. This Pennsylvania county was the location of Theodore Burr's landmark covered bridge over the Delaware River at Morrisville, Pa.-Trenton, N.J. At one time, it had 51 covered bridges. Each is treated in this thorough history.
- Rebecca Burrow [SIA]. **When Concrete Isn't Concrete: Preserving the Dry Canyon Bridge**. *ASPIRE: The Concrete Bridge Magazine* (Summer 2020), pp. 38–40. Summary of project to preserve an open-spandrel arch bridge, constructed in 1920–21, on the Historic Columbia River Highway. Work included repairs to low-strength concrete, re-alkalization of the superstructure, application of cementitious render, and an experimental deck overlay.
- **Covered Bridge Topics**, Vol. LXXVIII, No. 4 (Fall 2020) includes short histories of lost covered bridges: Whitehouse Bridge (1840–1933) over the Hoosick River in Hoosick, N.Y.; Two Bayou Bridge (ca. 1860–1945) near Camden, Ark.; Jordan's Point Bridges (ca. 1834–1870) over the North River in East Lexington, Va.; and two covered bridge overpasses of the Boston & Maine RR in Troy, N.Y. and East Deerfield, Mass.
- Douglas MacLeod. **Hazeal Williams & Sons, Mid 19th Century Virginia Bridge Builders from Amherst County**. *CBT*, Vol. 78, No. 3 (Summer 2020), pp. 3–9. The family constructed many noteworthy bridges including aqueducts for the James River Kanawha Canal Co.
- Terry E. Miller [SIA]. **Defining a "Covered Bridge": Challenges from Europe and China**. *CBT*, Vol. 79, No. 1 (Winter 2021), pp. 3–11. Comparative discussion of American, European, and Chinese covered bridges: American with numerous competing timber truss designs, Europe with much older but fewer varieties of truss design, and China with by far the most numerous covered bridges in the world but all built for pedestrians rather than vehicles and using beam, cantilever, and arch (i.e., non-truss) structural systems.
- Monica Schultz. **Midwestern Family Mindset Drives Safety and Self-Performance**. *ASPIRE: The Concrete Bridge Magazine* (Fall 2020), pp. 6–9. Overview of Ames Construction, established in 1962 as one man and a bulldozer, is now the 74th ranked contractor in the U.S. at work on major highways and bridges in Minnesota, Colorado, Arizona, and Utah.
- James Sindelar. **Hopkinton New Hampshire's Rowell Bridge**. *CBT*, Vol. 78, No. 2 (Spring 2020), pp. 3–7. Analysis of the wood trusses erected in 1853 by three brothers—Horace, Enoch, and Warren Childs—who were prolific N.H. bridge builders. The trusses are described as double-web Paddleford trusses with integral arches.
- Scott Wagner. **Lost Bridges of Steuben County, New York**. *CBT*, Vol. 78, No. 2 (Spring 2020), pp. 8–15. Historical data and photographs of covered bridges that once stood in the southern tier county. Includes Indian Hill Road Bridge over

the Canisteo River near Erwin, Main Street Bridge in Adison, Knoxville Bridge over the Chemung River between Knoxville and Corning, and the Pennsylvania RR over the Canisteo River in Canisteo.

- Scott Wagner. **Roberts Bridge**. *CBT,* Vol. 79, No. 1 (Winter 2021), pp. 12–16. History and commentary on a "double-barrel" (two-lane with three lines of trusses) bridge built by Oristus Roberts in 1829. The bridge is located in Gasper, Ohio.
- Scott Wagner. **Whitewater Canal and the Duck Creek Aqueduct**. *CBT,* Vol. 78, No. 3 (Summer 2020), pp. 10–16. The covered wood-truss aqueduct in Metamora, Ind. is likely the last of its kind in the nation and the world. Overview history, drawing heavily from HAER documentation (HAER No. IN-108).
- Timothy R. Wyatt. **Evolution of the Buy America Requirements for Highway Bridge Projects**. *ASPIRE: The Concrete Bridge Magazine* (Fall 2020), pp. 12–13. Originally enacted in 1978, the Buy America provision requires the Federal Highway Administration to use domestic materials and manufactured products for all projects exceeding $500,000. It has proven very effective ensuring that all iron and steel construction materials used on FHWA-funded projects are entirely U.S.-made; however, in practice, it has not prevented the use of foreign-manufactured products that are non-ferrous.

Power Generation

- Steve Chiles. **Ainsworth Abbott's Huge Semi-Diesel Engine**. *OMN,* Vol. 47, No. 4 (Fall 2020), pp. 14–15. Describes restoration and operation of a Fairbanks, Morse & Co. engine at the Abbott's grist mill near Farmington, Del. The main difference between a semi-diesel and a standard diesel is a semi-diesel has a low compression ratio and uses a bulb in the cylinder head that must be preheated with a kerosene torch for about 20 minutes. The engine is run for a couple of hours on the third Saturday of each month. A video is also on *youtube.com,* search on "1919 Fairbanks Morse 20 hp engine."
- Ana Preger Hart. **Two Centuries of Gore Mill**. *OMN* (Spring 2022), pp. 18–19. Located about 35 miles north of Baltimore, Md., the mill produced paper from 1824 to 1938. It was subsequently converted to support a small generator used to electrify the owner's home and to power a cider press and a hobby shop for restoring vintage tractors, automobiles, and steam engines. The new owners are in the process of returning the mill to working condition. It has been idle since 1985.
- Elizabeth Royte. **There's Plenty of Juice on Block Island**. *Smithsonian* (Apr./May 2022), pp. 36–47. Nearly five years after Block Island switched from 89-year-old diesel generators to wind turbines for electricity, most residents are satisfied, including environmentalists. It is still the only community in the U.S. fully powered by offshore wind.
- Debra Jane Seltzer. **Reddy and Willie Signs**. *SCA Journal* (Spring 2020), pp. 28–31. History of the "Reddy Killowatt" and "Willie Wirehand" trademarks used to promote electrical power safety and reliability. Reddy Killowatt—a stick-figure man with a lightning-bolt body and light-bulb head—was developed by Ashton B. Collins of the Alabama Power Co. in 1926 and used widely under license throughout the U.S. from the late 1920s to the 1960s. Willie Wirehand had an electric cable body, a light-socket head, and a push-button nose. Willie was used to promote rural electrification from the 1950s to the 1960s. The article locates several outdoor signs that survive as examples of Reddy and Willie advertising.
- **Windmillers' Gazette**. Vol. 41, No. 2 (Spring 2022) includes T. Lindsay Baker, *Pumping with Small-Diameter Wooden-Wheel Windmills*; *The Mystery of Broken-Off Windmill Governor Weights*; and *Jacob R. "Windmill Jake" Friesen and His Sons: Kansas Windmillers, 1915–96*; Christopher Gillis, *South Africa's Aermotor* and *Windmill Tanks with Old-School Appeal*; plus book list and advertisements. Avail: $20/yr., published quarterly. Christopher Gillis, Editor, P.O. Box 788, Buckeystown, MD, 21717; *www.windmillersgazette.org*.

Abbreviations:

B&L	= *Buildings & Landscapes*, Journal of the Vernacular Architecture Forum
CBT	= *Covered Bridge* Topics, published by the National Society for the Preservation of Covered Bridges
IA News	= Bulletin of the Association for Industrial Archaeology (U.K.), *www.industrial-archaeology.org*.
MSC	= *Modern Steel Construction*, published by the American Institute of Steel Construction
MHJ	= *Mining History Journal*, published by the Mining History Assn.
SCA	= Society for Commercial Archeology
TICCIH	= *The International Committee for the Conservation of the Industrial Heritage, ticcih.org*.

Publications of Interest *are compiled from books, articles, and digital media brought to our attention by you, the reader. SIA members are encouraged to send citations of new and recent books, articles, CDs, DVDs, etc., especially those in their own areas of interest and those obscure titles that may not be known to other SIA members. Publications of Interest,* c/o Marni Blake Walter, Editor, SIA Newsletter, 11 Esty Rd., Westmoreland, NH 03467; *sianeditor@siahq.org*.

Chapter News *(continued from page 10)*

weaving cheesecloth, rugs, and other products on traditional looms, many powered by hand. The group also viewed a collection of Model T vehicles and artifacts housed in the mill's adjacent garage.

After spending eight hours off the beaten track in Orrville, Ohio, NOCSIA members left with many valuable insights into the past and future of American manufacturing.

Ron Petrie

NOCSIA members visiting Schantz Organ Co.

WW&F Railway Museum Opens Mountain Extension

The Wiscasset, Waterville & Farmington (WW&F) Ry. Museum recently celebrated the opening of its Mountain Extension narrow gauge line. Officially 0.88 mi. long, the extension represents over five years of planning, design, fund raising, in-kind services, and mostly volunteer labor to complete the 2-ft.-wide right of way in Alna, Maine.

Beginning in 2017, HAER Architect Christopher Marston (SIA) and Bill Caswell, president of the National Society for the Preservation of Covered Bridges (NSPCB) worked with the WW&F to arrange a donation of the former Moose Brook Bridge (HAER NH-48). The 48-ft.-long Howe boxed pony truss was originally built by the Boston & Maine in Gorham, N.H., by famed Boston & Maine RR engineer Jonathan Parker Snow in 1918. The span, part of the 18-mi.-long Presidential Range Rail Trail which opened in 1997, was burned by arson in 2004. Under then-president David Wright, the NSPCB worked with Tim Andrews of Barns & Bridges of New England to move the charred remains off its abutments, hoping to someday rebuild the bridge and reuse the original hardware. After HAER received funding from the FHWA's National Historic Covered Bridge Preservation Program (NHCBP), Prof. Dario Gasparini of Case Western Reserve Univ. proposed an extensive engineering analysis of a Howe truss and needed a full-sized bridge to study. When Caswell and Andrews suggested the Moose Brook span, Marston worked out an agreement with the FHWA and NSPCB and the project took off. Andrews needed to order all-new Douglas fir timbers, some as long as 50 ft., which were cut at the Hull-Oakes Sawmill in Monroe, Ore. (SIA tour site, 2022), and began the process of reconstructing two trusses utilizing historically accurate methods while reusing the original hardware, including the wrought-iron rods and cast-iron shoes. Vern Mesler (SIA) and Kevin Whitford of Lansing Community College, Mich., agreed to devise a brazing technique to repair several castings that had cracked in the fire. The trusses were completed and shipped to Cleveland for study from 2011–2014 (HAER NH-48). However, it took three more years to find a partner willing to accept and reuse the restored trusses and save them from the scrap heap.

David Buczkowski, President of the WW&F, was an early supporter of the idea to bring the bridge to Maine. The museum celebrates the history of the the last narrow gauge ry. built in Maine. It extended 60 mi. due north from the town of Wiscasset and operated from 1894–1933. The museum quickly saw the bridge as a catalyst for extending their 2.6-mi. excursion line nearly a mile over their historic right of way. The extension would cross a high ridge called Top of Mountain, then span Trout Brook before ending at Trout Brook Station where it adjoins the Midcoast Conservancy's Trout Brook Preserve. With the support of the WW&F's board, an MOU was signed between the NPS, NSPCB, and WW&F in 2017, and then the museum began a fundraising campaign which eventually raised over $100,000. After the truss members were delivered to the WW&F's Sheepscot Station campus, Tim Andrews began reassembling the trusses one last time with the help of WW&F volunteers in fall of 2017. By summer of 2018, the volunteers completed sheathing the bridge and constructing the timber piles and abutments that would accommodate the 48-ft. pony truss over an environmentally sensitive area. A board member and local contractor donated equipment to transport the bridge on a 4-mi. journey over local roads to Trout Brook

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WW&F

The first WW&F Ry. train crosses the Trout Run Bridge.

Julia Marston

Bridgewright Tim Andrews and Christopher Marston stand beside a kiosk describing their project to document and rehabilitate the Moose Brook Bridge and how it came to have new life in Maine.

WW&F Railway (continued from page 15)

Station, where the truss was placed atop the timber piles on Sept. 8, 2018. Work continued on clearing and grading the right of way so that by Dec. 2019, the first steam locomotive could cross the bridge, pulling a work train.

It took over three more years, delayed by a pandemic, for the grading, ballast, and track work to be completed for the 0.88 mi.-long-Mountain Extension to be ready for service for weekend excursions. The grand opening event on Sat., Aug. 6, 2022, featured 200 guests including a busload of Massachusetts Bay RR Enthusiasts. Two restored steam locomotives pulled nine coaches the 3.5-mi. ride each way. These included No. 7, a 33-ton Baldwin-built, modified Forney-style locomotive, built 1913, on loan from Maine Narrow Gauge RR Co. & Museum; and No. 9, an 18-ton Forney-style, built 1891 and restored by WW&F. The excursion made stops for a ceremony with speeches by President Buczkowski and other partners (including Marston), and a red flag removal ceremony, performed by WW&F Ry. Superintendent Jason Lamontagne at Top of Mountain, to officially open the line. Then the special train descended through the woods, crossed the Trout Brook Bridge, and stopped at the new terminus, Trout Brook Station, where a new small wooden station was nearing completion. Here passengers detrained, some visited the Trout Brook Bridge kiosk where the saga of the former Moose Brook Bridge and how it ultimately got to its current location is explained. Meanwhile, the two steam engines entered a small turntable where four volunteers pushed the locomotives around so that they could switch to other end of the train and return southbound to Sheepscot Station for the conclusion of the event. The day marked a celebration of a major accomplishment for the 1,200-member ry. museum and was a testament to the hard work and determination of its staff, volunteers, generous members, and partners.

Christopher Marston

CONTRIBUTORS TO THIS ISSUE

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With Thanks.

IA EXHIBITS

Bernd & Hilla Becher. On view through Nov. 6, 2022 at The Met Fifth Avenue, New York, N.Y. The renowned German artists Bernd and Hilla Becher (1931–2007; 1934–2015) changed the course of late-20th-c. photography. Working as a rare artist couple, they focused on a single subject: the disappearing industrial architecture of Western Europe and North America. Their seemingly objective style recalled 19th- and early 20th-c. precedents but also resonated with the serial approach of contemporary Minimalism and Conceptual art. Equally significant, it challenged the perceived gap between documentary and fine-art photography. Using a large-format view camera, the Bechers methodically recorded blast furnaces, winding towers, grain silos, cooling towers, and gas tanks with precision, elegance, and passion. Their rigorous, standardized practice allowed for comparative analyses of structures that they exhibited in grids of between four and 30 photographs. They described these formal arrangements as "typologies" and the buildings themselves as "anonymous sculpture." This posthumous retrospective celebrates the Bechers' remarkable achievement and is the first ever organized with full access to the artists' personal collection of working materials and their comprehensive archive. Info: *https://www.metmuseum.org/exhibitions/listings/2022/becher*.

Left Behind in the Mines runs through Feb. 25, 2023 at the Western Museum of Mining & Industry (Colorado Spring, Colo., *www.wmmi.org*). Curated by Bryan Kahtava from his personal collection, the exhibit showcases clothing, food cans, bottles, boxes, improvised tools, and other "stuff" discarded by workers in now-abandoned underground mines. Some of the artifacts are unexpected finds that challenge assumptions about working conditions, particularly what miners might have been eating or doing during work breaks.—*Mining History News* (Summer 2022) ■

IA IN PHILATELY

USPS

The U.S. Postal Service has issued a new commemorative stamp featuring the Bollinger Mill State Historic Site to celebrate the bicentennial of Missouri statehood in 2021. The four-story brick gristmill illustrated by the stamp was built in 1867, replacing an earlier mill that was destroyed during the Civil War. Adjacent to the mill is the Burfordville Covered Bridge, a 140-ft.-long Howe truss, completed in 1868 to span the Whitewater River. The historic site became a state park in 1967.—*USPS Press Release (Aug. 10, 2021)* ■

Minutes of the 51st SIA Annual Business Meeting June 11, 2022

Call to Order. President Saul Tannenbaum called the Annual Business Meeting to order at 1:05 p.m. Pacific Daylight Time with about 85 people present either in person at the Bentley Hotel, Portland, Ore., or online by Zoom webinar.

President's Report. President Tannenbaum noted that this was the 51st Annual Business Meeting and the 50th Annual Conference of the SIA. He went on to say that this conference was happening due to the extraordinary efforts of many: Rebecca Burrow and her local team, Courtney Murtaugh, Steve Walton for the paper sessions, and Daniel Schneider for registration.

He lauded Daniel Schneider's work in getting the SIA Online sessions organized and running. He stated that our former president, the late Jay McCauley, would be happy to see that we now have an online presence, and especially that we have a YouTube channel where you may view the sessions if you missed them when they happened live.

He stated that he missed standing here before the meeting last year, but he was in the hospital and unable to attend. He expressed a special thanks to those who stepped up last year and helped make the event a success in his absence. He said, "it's nice to know that you're replaceable in that sense, and I mean that sincerely."

Secretary's Report. Secretary James Bouchard stated that the minutes of the previous year's Annual Business Meeting were published in *SIAN*, Vol. 50, No. 4 (Fall 2021). He asked for amendments or corrections; none were forthcoming. President Tannenbaum called for a motion to approve the 2021 Annual Business Meeting minutes as published. David Simmons so moved, Fred Quivik seconded the motion, and it passed unanimously.

Treasurer's Report. Treasurer Nanci Batchelor read her report: "The Society maintains its books and records on a cash basis and a calendar year for tax and reporting purposes. SIA is classified as tax-exempt under the IRS Code 501(c)(3) as an educational organization, and we file a Form 990 tax return yearly. The following report is for the year that ended Dec. 31, 2021.

We began 2021 with a total fund balance of $267,495. Cash receipts for the year totaled $85,390. Most of our annual income comes from membership dues. In 2021, the total dues received were $56,910. This matches the total dues received in 2020. The remaining balance is comprised of interest income, contributions to both the general and restricted funds, publication sales, and excess proceeds from tours and conferences. The Society members continue to be very generous, and the total contributions to the various funds were $18,147 in 2021.

Total expenses for the year were $60,472. The production costs of our publications, the newsletter and the journal, combined for a total of $19,480. $31,664 went towards labor, postage was $1,347, and insurance, prizes, and awards were $2,389. There were no scholarships awarded in 2021. Office overhead and a few miscellaneous items made up the balance.

The Society closed 2021 with excess revenue over expenses of $24,918. The total fund balance was $294,915, of which $54,796 is in restricted funds. We produced both a journal and newsletter in Jan. 2022, which generated $12,471.

Through March 2022, the Society has had a total of $43,477 in cash receipts and has spent $24,334.

If anyone has any questions regarding the Society's financial data, please feel free to contact me."

Headquarters Report. SIA Headquarters Manager Daniel Schneider started by saying a few things he likes about the city of Portland: It is pretty much a botanical garden, and he has really liked walking around and seeing the trees and plants, and he has been able to fully activate cultural capital that he had not really used since he was in college when he was a little bit of a hippie. So, much love to Portland, and thank you, Rebecca, for putting this together, and thank you, everybody else.

Daniel reported that membership for this year was 854 members as of a week or so ago, which is above where we were at that time last year. He noted that we had only 140 people who had not yet renewed, and if we get another 40 people renewed as active members, we will match last year. He said that he thinks we will hit that target and is enthusiastic about our potential for bringing in new members as time goes on.

He presented a brief word on SIA Online, which is something that people are always really excited about. He said that everything has been extremely easy for him to do because people have been eager to present, and he will be bringing it back in the fall.

He reported on another exciting element that has come together in the past few months at headquarters: reenergizing our online directory of consultants. He stated that we have 33 consultants now listed on the website that the world can utilize. He explained that what started the rejuvenation was a gentleman from an EPA district giving a presentation to a national conference of the EPA stating that they were always being confronted with structures and sites that they really didn't know what to do with, so he was very excited to be able to tap into our knowledge base for the specific expertise that we have in those realms. Daniel stated that this is something that as a general principle he is pretty excited about because it relates to our ability to make ourselves relevant to the world at large, which is something we really need to focus on as a Society to keep SIA out in the world, helping people understand the industrial past.

Executive Secretary Steve Walton noted that most of what happens in the executive zone is done by Daniel Schneider. He thanked Daniel for keeping things running remarkably smoothly in these difficult times. He stated that

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the MTU department remains very supportive of SIA and that we have another four years to go on our support agreement with them. He stated that none of his other MTU colleagues are here this year, but he expects a better showing in Grand Rapids next year.

He said that one thing he wants to address, which is really the academic side of IA in a broad sense, is the big conference coming up: The International Committee for the Conservation of the Industrial Heritage (TICCIH) conference in Montreal in late Aug. and early Sept. He noted that it is drawing a lot of excitement from his colleagues and other people on the academic side of things. He explained that TICCIH exists as a sort of umbrella organization for all sorts of national organizations, and SIA provides the North American representative to TICCIH. He assumes that Paul White, our new representative, will be there, along with a number of other members. He stated that forging the role for SIA as the North American representative for IA on this continent is high on his agenda and he thinks on some of his colleagues' agendas as well. He noted that there will be some role for the executive team.

Steve mentioned a few other small things from headquarters: He noted that we have the nice new banner, which was displayed on the registration desk. Daniel will be getting a new laptop, and HQ has lots of foundry patterns in stock for the Vogel Prize.

He stated that one of the things that you hear a lot more about these days is industrial "heritage," which is a broader term covering more than archeology. This is particularly being driven, he thinks, by European usage and the way that the industrial profession exists over there. He suggested that one of his projects, particularly for the journal, is that he is hoping to open it up and make it a bigger tent. It always has been a big tent, as those of you who are here and online know. However, he thinks it's important to do that to draw new interest, draw new members, and keep our organization strong.

IA Journal. Steve Walton started by saying, "I hate to be a broken record from last year, but I'm going to lead with this again, we are not getting submissions."

He said that he needs people who are presenting papers at our conference to turn them into papers because he cannot produce issues if he does not have articles. He noted that the unsolicited hopper is basically empty. However, the planned solicited hopper, which he says exists largely thanks to Fred Quivik, our former editor for some theme issues, has some things coming.

The first issue you will see is the 50th Anniversary issue, which is a reprint of some of the relatively early Vogel prize winners. Next is a single issue with an assortment of items, and another single issue, which is the brass and copper theme issue. He noted that their order depends on how soon he gets both those issues together. Also in the hopper is a "World War Two on the Home Front" theme issue, which will probably be a double issue. He said that some of you may remember that there was a call for an issue on Atomic IA; he has a couple of things in, but the rest is just not coming.

He said that Covid has really sapped people's production ability and that this is certainly a problem. He noted that a second comment he hears from authors regarding a topic they presented at SIA is, "I don't really have enough to make this a full peer-reviewed article." He recognizes that and wants to reiterate that shorter articles are fine if they're robust and contextualized. He says to reach out to him and that he is frankly going to reach out to every single person presenting here directly.

He stated that one area where there is great material, but very little representation in terms of journal articles, is cultural resource management (CRM) practitioners. He will try to reach out to them through various state agencies. He is thinking of calling it something like "notes from the field," which are not intended to be full, multi-thousand-word, research articles, but documentation projects; for example, many National Register nominations can be repackaged as a journal article; he will work on that.

He stated that having all that material up on JSTOR is wonderful and brings us money. He said that we made $4,021 last year from JSTOR downloads of our past issues. The Society pays $300 back to JSTOR, so all members have access to the articles. Hence, if you have forgotten that login, contact HQ. We now have a common login password that changes every six months, so if you need a new password, contact Daniel at headquarters.

He announced that we have arranged a little bit of reciprocal advertising between ourselves and the Association for Industrial Archaeology in the U.K. to cross-advertise each other.

As he closed out on JSTOR topics, he gave a shout-out to Charlie Hyde. Charlie has the most downloaded article ever from *IA* on JSTOR: "Assembly-Line Architecture: Albert Kahn and the Evolution of the U.S. Auto Factory, 1905–1940," in *IA* 22 (1996), which has been downloaded 3,809 times. Steve added that the next highest one (1,373 downloads) is Sonia Melnikova-Raich's "The Soviet Problem with Two 'Unknowns': How an American Architect and a Soviet Negotiator Jump-Started the Industrialization of Russia, Part I: Albert Kahn," *IA* 36.2 (2010).

Steve concluded by presenting a world map to the camera. The red dots indicated the global reach of our journal; the dots are the download sites, and North America is slightly empty because the geocoding did not know where to locate the universities. However, we have a global reach, and JSTOR is getting our product out there, but as journal editor he still needs product, and he will be in touch. Thank you.

SIA Newsletter. *SIAN* Editor Marni Blake Walter was absent, so her report was read by Steve Walton: Since last year's business meeting, the SIA *Newsletter* has continued its quarterly publication schedule. The current issue (Spring 2022) is now with our graphic designer for layout and will head to the printer soon. The Summer 2022 issue is already in the works, thanks to the many of you who volunteered to cover the events at this conference. I'm looking forward to your reports and photos! Thanks also to everyone who helps throughout the year, whether contributing articles, news

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of mid-20th-c. technology. They have received many donations and today have more than 2,000 Tektronix products on display. A strong focus is maintained on encouraging upcoming generations to learn about science and technology. Many of the volunteers are former Tektronix employees and users of their equipment. Tektronix was founded in Portland after WWII and pioneered their Model 511 oscilloscope in 1948. The 511 was the first time-based, automatically triggered scope. Tektronix became Oregon's largest employer by the 1970s and 1980s. As they grew and diversified, they spun off operations or discovered suppliers to which they outsourced previously in-house production of components and materials, thus cultivating an entire industrial ecosystem.

The third stop was **Vigor Shipbuilding** on Portland's Swan Island, which has been used for building and maintaining ships since 1942 when Kaiser Industries established a wartime shipyard to build tankers. More recently, they have focused on repairs to government, cargo, and cruise ships. The "new side" with floating drydocks was established in 1979. By the 1990s, business was down, and the site was shared among several struggling companies. Vigor took over in 1995, turned the facility around, and acquired several other shipyards in the Northwest. The smallest floating drydock was built during WWII for the U.S. Navy, originally as 10 sections to contain the Navy's largest ships and enable it to be towed to make repairs at forward bases. In 2006, Vigor purchased four of the sections and refurbished them to make a 329-ft.-long drydock. The sections are hollow, each with its own crew and control system, originally underneath the deck, but now controlled from a single hut on the top of the dock. The sides fold flat for towing to decrease wind resistance. They were equipped with gun mounts and armor plate. On land, the facility offers 150,000 sq. ft. of fabrication bays, each 300 ft. long.

Friday Tour 4 (there was no Tour 3): Historic Columbia River Highway. On a cloudy and misty day, led by Oregon DOT's Robert Hadlow, a group of SIAers traveled the century-old **Historic Columbia River Highway** into the **Columbia River Gorge**. Geologist Lloyd DeKay, of the Ice Age Floods Institute, explained the stunning geological forces at work: a large portion of the basin's soils lie atop basalts from the most recent and most intact continental flood basalt flow in the world. Not surprisingly, road construction and maintenance were—and are—difficult in these conditions. The original engineer, Samuel Lancaster, sought to create a highway that met high design standards and was still sensitive to the surrounding landscape. Today's engineers are working to restore this very popular place to visit. The highway was designated a National Historic Civil Engineering Landmark in 1984 and a National Historic Landmark in 2000. At our first stop, **Chanticleer Point**, we were treated to a spectacular view of the gorge, its vulcanism and rare plants on display. We also stopped at the **Vista House**, a sandstone-clad, domed concrete observation building at Crown Point. It is a memorial to Oregon pioneers.

Next we viewed the 620-ft. **Multnomah Falls**, a popular destination for centuries. Several of the group decided to take the trail up to a pedestrian-scale reinforced-concrete deck arch from 1914 that spans the lower of the two drops. The spray from the 542-ft. upper falls and its plunge pool was very impressive! The group next toured the **Bonneville Lock and Dam**, designated a National Historic Landmark in 1987. Originally built in 1937, a second powerhouse was added in 1981, and a larger navigation lock in 1993. The turbines are

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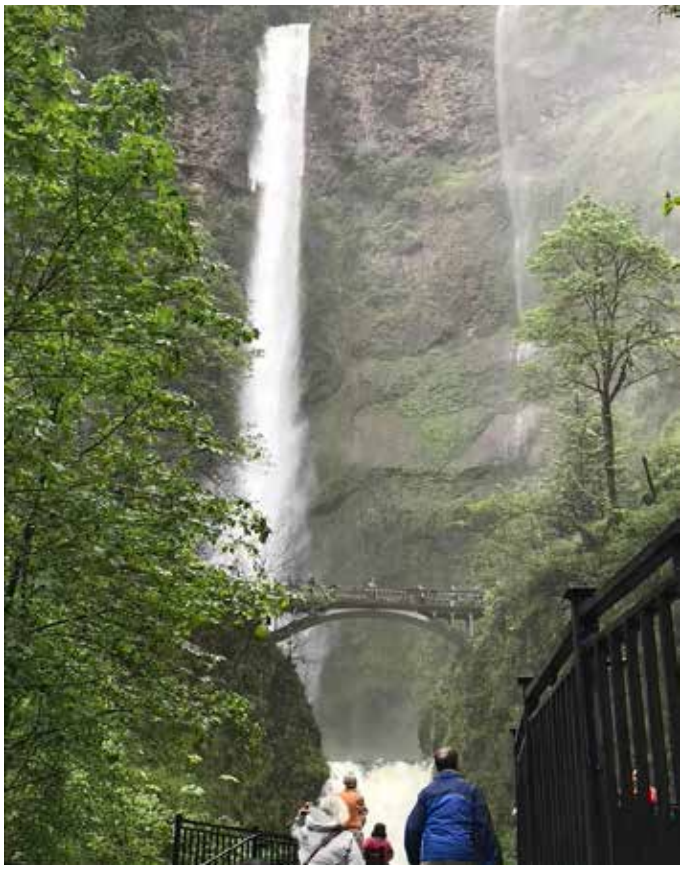
Brian Gallagher

SIA members gather in front of the paper mill.



Mary Durfee

The bridge at Multnomah Falls from below.

to be replaced with modern ones that generate power more efficiently and are less harmful to fish.

In the final stop of the day, the group entered the pitch black of the new **Mitchell Point Tunnel** construction project. Mitchell Point was the site of an iconic tunnel on the Historic Columbia River Highway. It was 390 ft. long with five arched windows overlooking the Columbia River and based on a three-windowed tunnel on the Axenstrasse, which is a carriage road that overlooks Lake Lucerne in Switzerland. Completed in 1915, the Mitchell Point Tunnel was closed in 1953 because it could no longer accommodate the increasing traffic volumes and vehicle sizes. It was destroyed in 1966 to widen the water-level highway, now Interstate 84. Oregon DOT and FHWA have partnered to create the new 655-ft.-long tunnel at Mitchell Point with five arched windows. It will become the last link in a 15-mi.-long segment of the Historic Columbia River Highway State Trail, a pedestrian/bicycle trail that reconnects many pieces of the original highway between Troutdale and The Dalles that were lost to the construction of I-84.

Sunday Tour 1: Rail Heritage. A group of 17 SIA members, led by Rebecca Burrow (local planning committee chair), boarded the Portland Trolley System line for a streetcar ride to **Portland Union Station**. Robert Hadlow, senior historian for the Oregon DOT, provided a guided tour. The station was built in 1896 and is beautifully preserved. The exterior of red brick, textured concrete, and pebble accents contrasts with the more modern marble interior, which dates from a 1927–30 renovation by Pietro Belluschi. Van Brunt & Howe designed Union Station in the Queen Anne style with a Romanesque-style tower. The tower has four clock faces and features neon signs (added in 1948) with Union Pacific on two sides and "Go By Train" on the others. We saw the upper offices in the station, including the Amtrak regional dispatcher's (not open to the public), as well as the public facilities which were quite busy at the time. In its peak year, 1945, five million people traveled via the station. The station has five tracks and once had as many as eleven, serving four railroads. It presently serves Amtrak with freight trains passing through the yard. Portland streetcars and TriMet light rail, and Greyhound have stops nearby. Portland Union Station was listed on the NRHP in 1975. Recently, the Federal Railroad Administration developed a project that will stabilize and rehabilitate the historically significant station and associated buildings and structures to meet current building, life-safety, and seismic standards, and improve the building and tracks to accommodate future passenger rail traffic. Portland Union Station is believed to be the oldest metropolitan train station on the Amtrak system.

Anthony Meadow

Bonneville Dam.

Anthony Meadow

SIA members venture into the darkness of the Mitchell Point Tunnel.

The group left Portland Union Station by TriMet light rail and crossed the Willamette River over the 1912 Steel Bridge (described below in Sunday's Bridges tour summary). Our destination was the **Oregon Rail Heritage Foundation's Rail Heritage Center**. The Center was dedicated in Sept. 2012 and is located 1.5 mi. south of Union Pacific's Brooklyn Yard and Intermodal Terminal. The group (all purported railfans) entered, and there staring back was "the most famous face in the history of American diesel engines," (*Trains* magazine), the Nickel Plate #190, an Alco PA1 passenger diesel built in 1948 for the Santa Fe RR. This is the only example of a PA1 in existence; according to one SIA railfan even the famous SP Daylight Northern 4449 has to take a back seat to #190.

The #190 along with three large steam locomotives are housed on two tracks inside a spacious, well-lit, and clean facility. The steam locomotives include two 4-8-4 passenger engines: the Southern Pacific 4449 which pulled the 1976 Freedom Train, and the Spokane, Portland & Seattle Ry. (SP&S) 700. Both engines are operable and have pulled excursions in recent years. Currently, the Center's major project is installation of the 102-ft. turntable dating to 1924 and moved to the Center from the nearby Brooklyn Yard, where it served a roundhouse. Excavation for foundation construction is underway. Members explored the museum and grounds and caught a few UP freights going by on the former Southern Pacific mainline before boarding the trolley back to the hotel.

Sunday Tour 2: Bridges of Portland. Seventeen individuals (including one eight-year-old) participated in a rainy bridge tour. Our tour guides were Sharon Wood Wortman, retired bridge tour guide; Ed Wortman, PE, retired bridge engineer

(co-authors of *The Portland Bridge Book*, 3rd ed. [Urban Adventures Pr., 2006]); and Nathan Hoover, an active bridge tour leader for Portland area school groups.

Our first bridge of the day was the **Thurman Street Bridge/ Balch Gulch Bridge** as viewed from Forest Park below. Built for the 1905 Lewis and Clark Fair, the city-owned bridge is a hanging, pin-linked truss. The pin-linked construction would make the truss relatively easy to move to another location if needed. It was rehabilitated most recently in 2013.

The **Burnside Bridge** opened in 1926 as a replacement for an earlier swing-span bridge that opened in 1894. Burnside Street is the longest thoroughfare in Portland and divides the city north to south. The bridge has three deck trusses with a double-leaf, Strauss-patent, bascule, center span. The original design was by Hedrick & Kremers of Portland. However, because of some concern about the contract letting process, Gustav Lindenthal of New York City completed the design and supervised construction. The bridge has a Mediterranean-style architectural design to its operators' houses. While it has two towers for operators, the bridge is always operated from the west tower. Its piers rest on Douglas-fir pilings. Unlike many bascule bridges, the Burnside Bridge has a concrete deck, greatly increasing the weight that must be managed with bascule openings. High winds, more than eight inches of snow, and hot weather all make openings problematic. The tour was treated to an opening of the bridge. (See SIA's YouTube channel for a video.)

The **Hawthorne Bridge** was designed by Waddell and Harrington of Kansas City, Mo., and opened in 1910. It consists of six, fixed, through-truss spans plus one vertical-lift span. The Willamette River at the time of the tour was running at about 15 ft., which is relatively high. The Hawthorne's center span is 49 ft. above water in normal conditions. The elevated water level was noticeable as we walked along the riverbank. The Hawthorne is the oldest surviving vertical-lift bridge in the U.S.; its most recent rehabilitation was in 1998. It is operated at least once each eight-hour shift to maintain good lubrication of its moving parts.

Portland has an extensive streetcar system and the **Tillikum Bridge**, which opened in 2015, carries the Orange Line over the Willamette. It is one of a few concrete bridges in the Portland-Vancouver area. The **Broadway Bridge** dates to 1911–1912 with revisions to its approaches and rehabilitation in 1999–2005. The double-leaf bascule was the longest in the world when it opened for traffic. Today, it carries automobile, streetcar, bicycle, and pedestrian traffic. Ralph Modjeski supervised the overall design, with Strobel Engineering (Chicago) undertaking the Rall-type bascule. The bridge superstructure rests on concrete-filled, wooden, compressed-air-type caissons. The two leaves of the bascule can open to near vertical, allowing very tall ships to pass. Its opening and closing takes about 20 min., which is significantly longer than the other Portland movable bridges on the Willamette.

The **Steel Bridge** dates from 1912 and is a replacement for the original Steel Bridge that was built in 1888. The Steel Bridge is a double-decked, vertical-lift bridge with independently operating decks—a unique design developed by Waddell & Harrington of Kansas City. The upper deck carries streetcars, automobiles, bicycles, and pedestrians. The lower deck carries Union Pacific freight and Amtrak traffic to Portland Union Station in addition to a River Walk for pedestrians and cyclists. Both decks can be lifted to allow passage of taller ships. For ships that do not require as much clearance, the bottom deck can be lifted independently of the upper deck so that streetcar and vehicular traffic is not interrupted. The machinery room sits in a house above the

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Tom Koller

The Nickel Plate #190 at the Oregon Rail Heritage Center.

William McNiece

Both decks lifted on the 1912 Steel Bridge.

items, or publications and websites of interest, or helping with proofreading, layout, and mailing. Please keep all of the news and notes coming in. Thank you!

Tours & Conferences. SIA Events Coordinator Courtney Murtaugh stated that it was good to be in Portland and reported on some of her activities.

She worked with the local Portland committee to plan and implement this conference in the face of post-pandemic challenges: responding to emails, returning calls, and dealing with supply chain issues, staffing shortages, and rising prices, to name a few.

She met monthly with the leadership team to determine conference status, logistics, and Covid protocols. She worked with the hotel and vendors in a post-pandemic environment to finalize logistics and orders.

She worked on a Maine fall tour, but it turned out to not be feasible due to room rates coming in at over $200.

She is working on a fall tour for Western Pa., Sept. 15 to 17 with a room rate of $119 at the Quality Inn in Franklin, Pa.

She is securing the hotel and contract bid process and negotiations for the 2023 Conference in Grand Rapids, Mich. The room rate will be $169, June 8–12, 2023, at the Embassy Suites.

Next was a video presentation on Grand Rapids by Matthew Daley. Matt is a professor of history at Grand Valley State College in Grand Rapids and is the Vice Chair of the historical association and former Chair of the Historical Commission, so he is incredibly well connected with site resources in the area. He concluded his presentation by welcoming everyone to Grand Rapids next year.

Eric DeLony Industrial Heritage Preservation Grants Committee. The DeLony Industrial Heritage Preservation Grants Committee report was read by Duncan Hay from Germany where he is waiting out a Covid infection:

SIA started awarding grants to support industrial heritage preservation projects in 2004. Since then, the Society has awarded more than 40 grants to support projects in 16 states in amounts ranging from $1,000 to $3,000. In 2018, the program was renamed to honor former HAER Chief and longtime SIA member, Eric DeLony.

This year's selection committee included Paul White, Suzanne Wray, and me, with support from Daniel Schneider at SIA headquarters. We received three applications and recommended two to the Board for funding. The Board ratified that recommendation at Wednesday's meeting, and I am pleased to announce that SIA will be awarding grants to two projects in California: The Mineral King Preservation Society of Three Rivers, and the Nevada-California-Oregon Ry. of Alturas.

The $3,000 grant to the Mineral King Preservation Society will go toward conservation treatment of a mining artifact—a well-travelled riveted iron water jacket, built in Baltimore around 1870, that served to cool copper and silver smelters at several locations in Nevada and California's southern Sierra Mountains. After conservation, the artifact will become the centerpiece of a new outdoor exhibit. Gold and silver mining in the Mineral King district tapered off during the 1890s, and former miners' cabins in the high alpine glen saw new uses as summer homes for Californians trying to escape the oppressive heat of the San Joaquin valley. In 1976, the Mineral King Valley became part of Sequoia-Kings Canyon National Park. The grant committee was impressed by the level of cooperation and support for the Mineral King Preservation Society expressed by the park, the NPS Western Archeological and Conservation Center (WACC), the neighboring Three Rivers Historical Society, and the College of the Sequoias, which offered time and materials from their welding program to fabricate a base for the artifact.

A $1,500 grant to the Nevada-California-Oregon Ry. will be used to analyze and characterize the woods used to construct three narrow-gauge cars that were built by the N-C-O at Reno, Nev. between 1891 and 1901. The N-C-O had 275 mi. of track and operated from 1880 until 1929, when it was absorbed by the Union Pacific and converted to standard gauge. The boxcar, refrigerator car, and mail and express car are each the last known survivors of their type built by the N-C-O. After railroad service, they served various purposes as bunkhouses, residences, sheds, and chicken coops before being acquired by the newly formed N-C-O Ry. Historical Society in 2020 and 2021. Wood analysis will be conducted by the Oregon State Univ. College of Forestry, with the goals of guiding plans for restoration and providing insights into the sources of materials used for railroad car construction in the mountain West at the turn of the 20th c.

I'd like to ask members to help get the word out about SIA's grant program. Applications are due by March 1 each year. Further details and application forms are under the "activities" tab on the SIA website. You can help extend the program's reach with an earmarked donation when you renew your membership.

Vogel Prize. Before naming the winner of the 2022 award, Committee chair Fred Quivik acknowledged last year's winners of the Vogel Prize, Susanna Kuo and Rick Minor, and their article about the Oswego Furnace, which they showed us on yesterday's tour. They live in Oregon and were not able to be with us last year in Bethlehem, but they are with us today (they both stood and were recognized). Quivik also thanked this year's Vogel Prize Committee: Martha Mayer, Bob Newbery, Lynn Rakos, and Bill Vermes, all of whom diligently read and evaluated the eligible articles and recommended the articles they believed to be most deserving of the award.

Mr. Quivik noted the fact that the trophy itself evokes American iron is especially appropriate for the author of this year's winner of the Vogel Prize; he has literally written the book on American iron. The committee is pleased to have selected Robert Gordon's "Building Sewell's Bridge: Colonial American Structural Engineering," which appeared in *IA* Vol. 42, No. 1 (2016). He read the citation, which is printed elsewhere in this issue.

General Tools Award. David Simmons started by saying there have been years in the past when the recipient of this award was not aware that they were receiving this award. That is not the case this year, but there are people in the

SIA who ordinarily would know the awardee that do not this year.

He went on to state that having been involved in the selection of General Tools awardees for several years since receiving it himself in 2019, this awardee is quite remarkable for the number of wildly enthusiastic broad letters of recommendation that were received with the nomination. He is very pleased to be a part of acknowledging a very outstanding practitioner of industrial archeology. He then read the General Tools Award citation, awarded to Louise Trottier (printed elsewhere in this issue).

Chapter Recognition. Vice President Kotlensky did the traditional roll call of chapters but asked people to raise their hand instead of standing. He then went on to recognize the members from the Pacific Northwest, especially Rebecca, who did such a good job organizing this conference, and hopes they will form a chapter.

He then announced that the SIA Board will be considering a motion at its Sept. meeting to help chapters defray the cost of insurance for their events. It will be in the form of a grant to the chapter once the chapter has identified the cost of insurance.

Nominations Committee. Chair Diana Bouchard read her report:

The SIA Nominations Committee met yesterday to count the paper ballots, review the electronic results, and thus determine the outcome of the election.

Four posts were filled by acclamation: Ron Petrie, Nominations Committee member, 2022–25; Nanci Batchelor, Treasurer, 2022–25; James Bouchard, Secretary, 2022–25; and Arron Kotlensky, President, 2022–24.

Two Directors were elected for three-year terms: Martha Mayer and Tim Tumberg.

The successful candidate for SIA Vice President was Fred Quivik.

I would like to thank all those who presented themselves as candidates for their willingness to serve SIA. Many thanks are due also to my fellow committee members: Marc Belanger, Rebecca Burrow, and Christopher Marston, and to the members of SIA staff who provided vital support to the election process.

This ends my term of service on the Nominations Committee. Thank you all for giving me this opportunity.

Recognition to Outgoing Board Members. President Tannenbaum recognized outgoing board members: Past President Christopher Marston and Board members Bob Newberry and Seth Price. He also thanked all those who ran for office.

Passing the Gavel. President Tannenbaum said that this is the time when the gavel is passed to the new President, but that nobody could find it. So, he and Arron talked to the ever-helpful hotel staff, who had engineering provide a substitute. Saul then presented Arron with a claw hammer as his sign of office and turned over the presidency to him.

Arron thanked Saul for his time as President during probably one of the most challenging times in SIA history. He thanked Christopher, the outgoing Past President, but noted that you never get away that easily, so his help with organizing future endeavors and whatnot will be greatly appreciated if he wants to.

Adjournment. At 2:18 p.m. Pacific Daylight Time, President Kotlensky asked for adjournment, which was moved by Saul Tannenbaum, seconded by Bob Newbery, and carried.

Respectfully submitted,
James Bouchard, Secretary

PORTLAND *(continued from page 21)*

center of the top deck. The operator's room is suspended below the machinery room. The total moving load (decks plus counterweights) is about 9,000,000 lbs.

A host of other bridges rounded out our tour. The **Fremont Bridge** opened in 1973 to complete the I-405 loop. At 1,255 ft. between supports, it is the longest span in the Oregon highway system. Its lower deck is 175 ft. above water level. The bridge is double-decked and carries four lanes of vehicular traffic in each direction. There are four Portland area bridges that carry rail traffic only. **BNSF 5.1** (5.1 mi. from Portland Union Station) provides access to areas north of Portland and across the Columbia River. The Ralph Modjeski-designed bridge was constructed with a center swing section of about 520 ft. and operated in that manner until 1989 when the swing section was replaced with a vertical lift section. The lift provides a clearance of 200 ft. above low water. The **St. Johns Bridge** is the only major suspension bridge in the Willamette valley. Opened in 1931, it is a fixed-span bridge located about 7 mi. downriver from downtown Portland. It carries four lanes of traffic plus two sidewalks. Its center height is 205 ft. to water. Travel in Portland is a challenge for those with gephyrophobia.

The SIA recognizes and thanks the many organizations and volunteers who made this conference possible. Thanks to the local planning committee, chaired by Rebecca Burrow, with Sandy Carter, Robert Hadlow, Susanna Kuo, and Anthony Meadow; the presentations committee, chaired by Steven Walton, with Christopher Marston and Paul White; the SIA National Leadership Committee: Saul Tannenbaum, President; Arron Kotlensky, Vice President; Christopher Marston, Past President; Steve Walton, Executive Secretary; Courtney Murtaugh, Events Coordinator; Daniel Schneider, SIA Headquarters Manager; SIA Tour Debriefing Crew: Fred Quivik and Robert Newbery. SIA would like to thank the following sponsors for assistance in making this conference a reality: Willamette Falls Paper Co. (paper for the program), TriMet (transit passes), Travel Portland (maps), and our many tour guides and the organizations and companies that opened their doors to welcome us.

With contributions by Diana Bouchard, James Bouchard, Rebecca Burrow, Mary Durfee, Kathryn Fox, Brian Gallaugher, Robert Hadlow, Tom Koller, Susanna Kuo, Christopher Marston, Bill McNiece, Anthony Meadow, Martin Owen, John Reap, David Simmons, and Suzanne Wray.

SOCIETY FOR INDUSTRIAL ARCHEOLOGY

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CALENDAR

2022

Nov. 7–12: **Assn. for Preservation Technology Annual Conference, Detroit, Mich.** Info: *www.aptdetroit2022.org.*

Nov. 10–13: **Society for the History of Technology (SHOT) Annual Conference, New Orleans, La.** Info: *www.historyoftechnology.org.*

2023

Jan. 4–7: **2023 Conference on Historical and Underwater Archaeology—Revisiting Global Archaeologies, Lisbon, Portugal.** Info: *https://sha.org.*

Apr. 12–15: **National Council on Public History Conference, Atlanta, Ga.** Info: *https://ncph.org.*

Apr. 12–16: **Society of Architectural Historians 76th Annual International Conference, Montréal, Canada,** followed by virtual sessions, Sept. 20–22. Info: *https://www.sah.org/2023.*

May 16–21: **Railway and Locomotive Historical Society Annual Meeting, Sparks, Nev.** Info: *https://rlhs.org/WP/.*

May 17–20: **Vernacular Architecture Forum Annual Conference, Plymouth, Mass.** Info: *https://vafweb.wildapricot.org.*

May 22–25: **2nd International Conference of Mining and Underground Museums, Cracow Saltworks Museum, Wieliczka and Zabrze, Poland.** Info: *www.icmum.pl.*

June 7–11: **SIA 51st ANNUAL CONFERENCE, GRAND RAPIDS, MICH.** Info: *www.sia-web.org.*

June 8–11: **Mining History Assn. Conference, Socorro, N.M.** Info: *www.mininghistoryassociation.org.* ■